



REPORT

Annual Air Quality Report - 2018

Richards Bay Clean Air Association (RBCAA)

Submitted to:

Sandy Camminga

P O Box 10299, Meerensee, 3901

Office A6-A7, Smart Plan Building, 95 Dollar Drive, Richards Bay

Submitted by:

Golder Associates Africa (Pty) Ltd.

Barinors Vineyard North, The Vineyards Office Estate, 99 Jip de Jager Road, Bellville, 7530, South Africa

P.O. Box 6331, Welgemoed, 7538

+27 21 912 1060

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1.0 INTRODUCTION

This 21st annual air quality report summarises the meteorology, and fine particulate (PM₁₀), sulphur dioxide (SO₂), and total reduced sulphur (TRS) monitoring conducted by the Richards Bay Clean Air Association (RBCAA) during 2018. The monitoring network consists of 9 stations (Figure 1 and Table 1). In addition, measured SO₂ concentrations over various time scales are compared to concentrations predicted by the CALPUFF air pollution dispersion model. Simulated SO₂ concentrations are based on ambient meteorological conditions and the regional emission inventory. The objective of this report is to highlight certain incidents and exceedances of the applicable PM₁₀, SO₂ and TRS ambient air quality standards.

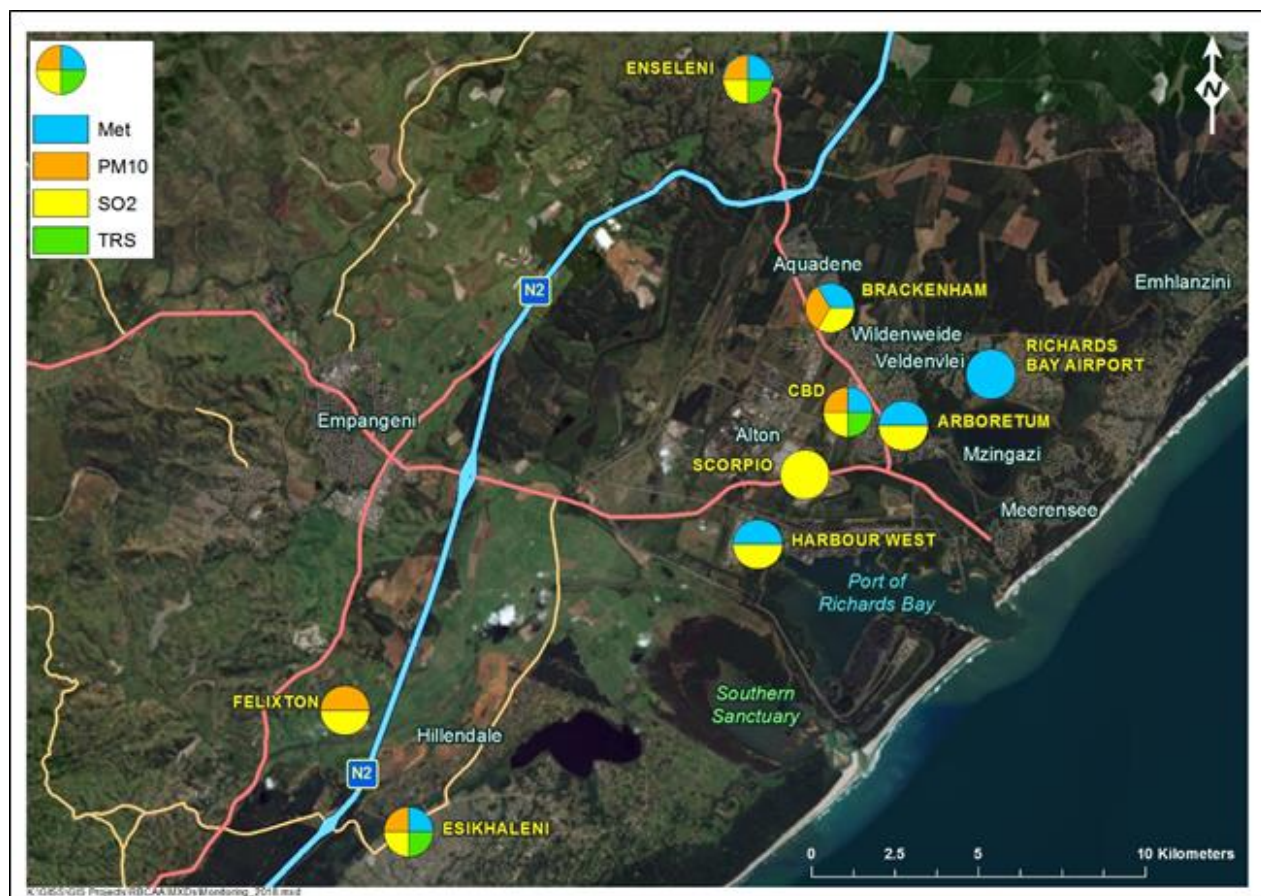


Figure 1: Locality map.

Table 1: Station co-ordinates.

Station	Latitude (°)	Longitude (°)
Airport	-28.738138	32.093333
Arboretum	-28.752380	32.062786
Brackenhams	-28.731359	32.039108
CBD	-28.744803	32.054844
eNseleni	-28.662944	32.017770
eSikhaleni	-28.865283	31.911679
Felixton	-28.829261	31.893636
Harbour West	-28.787300	32.027160
Scorpio	-28.769696	32.034291

2.0 METEOROLOGY

2.1 Wind Roses

MM5¹ modelled and measured annual wind roses for 2018 at Arboretum are presented in Figure 2. They indicate that wind blew predominantly along the NE and SW axis. NE wind is generally associated with fair weather, while SW wind is usually associated with the passage of coastal lows, cold fronts and inclement weather.

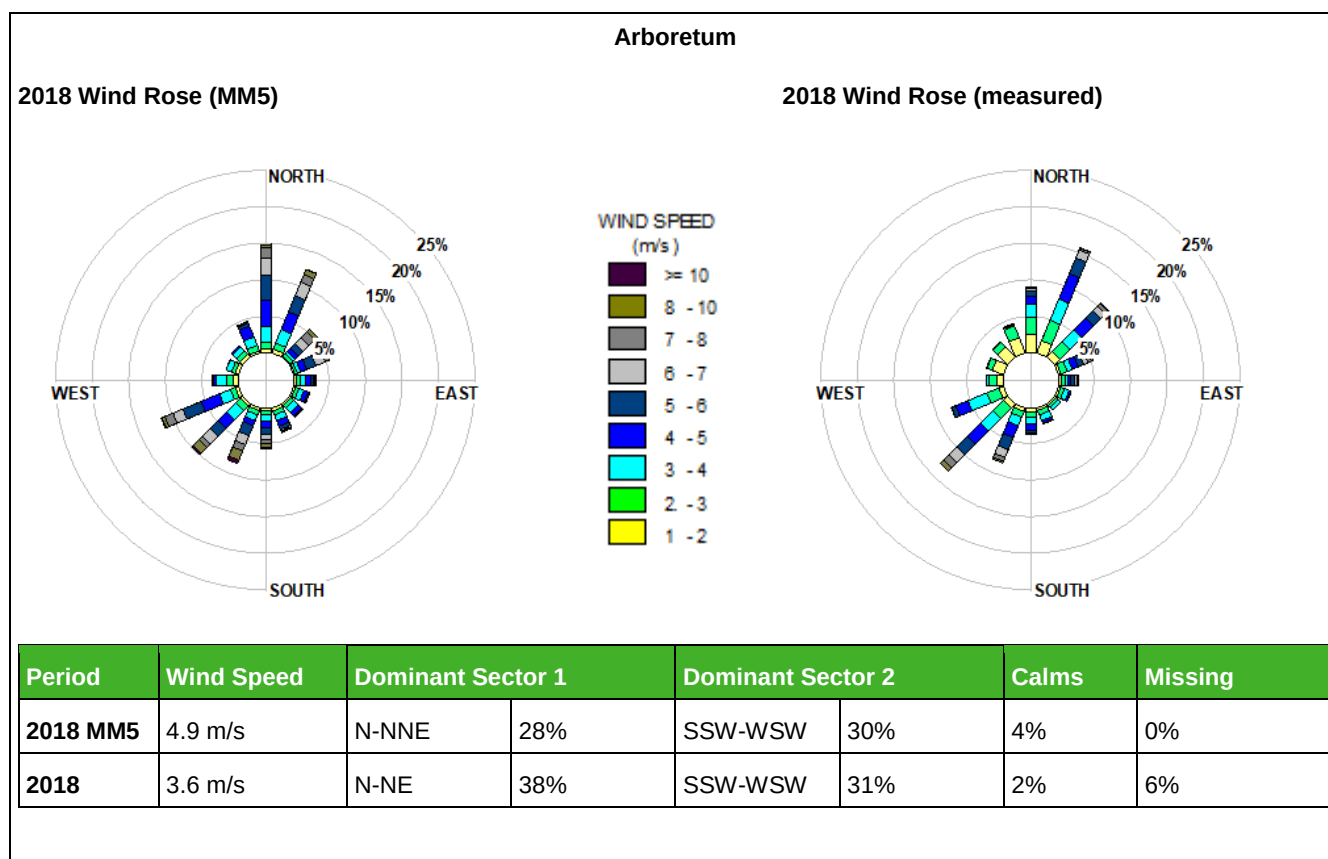


Figure 2: Annual wind roses.

2.2 Seasonal and Diurnal Wind Roses

Seasonal and diurnal wind roses for 2018 can be seen in Figure 3 and Figure 4. Note the increase in light (1 to 3 m/s) to moderate (3 to 6 m/s) wind from the NNW during winter (and the seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during periods that include spring and early summer. Strong southerly to SSW wind occurs throughout the year, typically associated with the arrival of coastal lows and cold fronts. Coastal lows tend to be more frequent during the summer months; hence the slightly higher proportion of these winds (Figure 3 and Figure 4).

Arboretum – MM5 Seasonal Wind Roses 2018	
Summer (Dec, Jan, Feb)	Autumn (Mar, Apr, May)

¹ The Penn State University (PSU) / National Centre for Atmospheric Research (NCAR) meso-scale model is a limited-area, non-hydrostatic or hydrostatic (Version 2 only), terrain-following sigma-coordinate model designed to simulate or predict meso-scale and regional-scale atmospheric circulation. It has been developed at PSU and NCAR as a community meso-scale model and is continuously being improved by contributions from users at several universities and government laboratories. The Fifth-Generation PSU / NCAR Meso-scale Model is known as MM5.

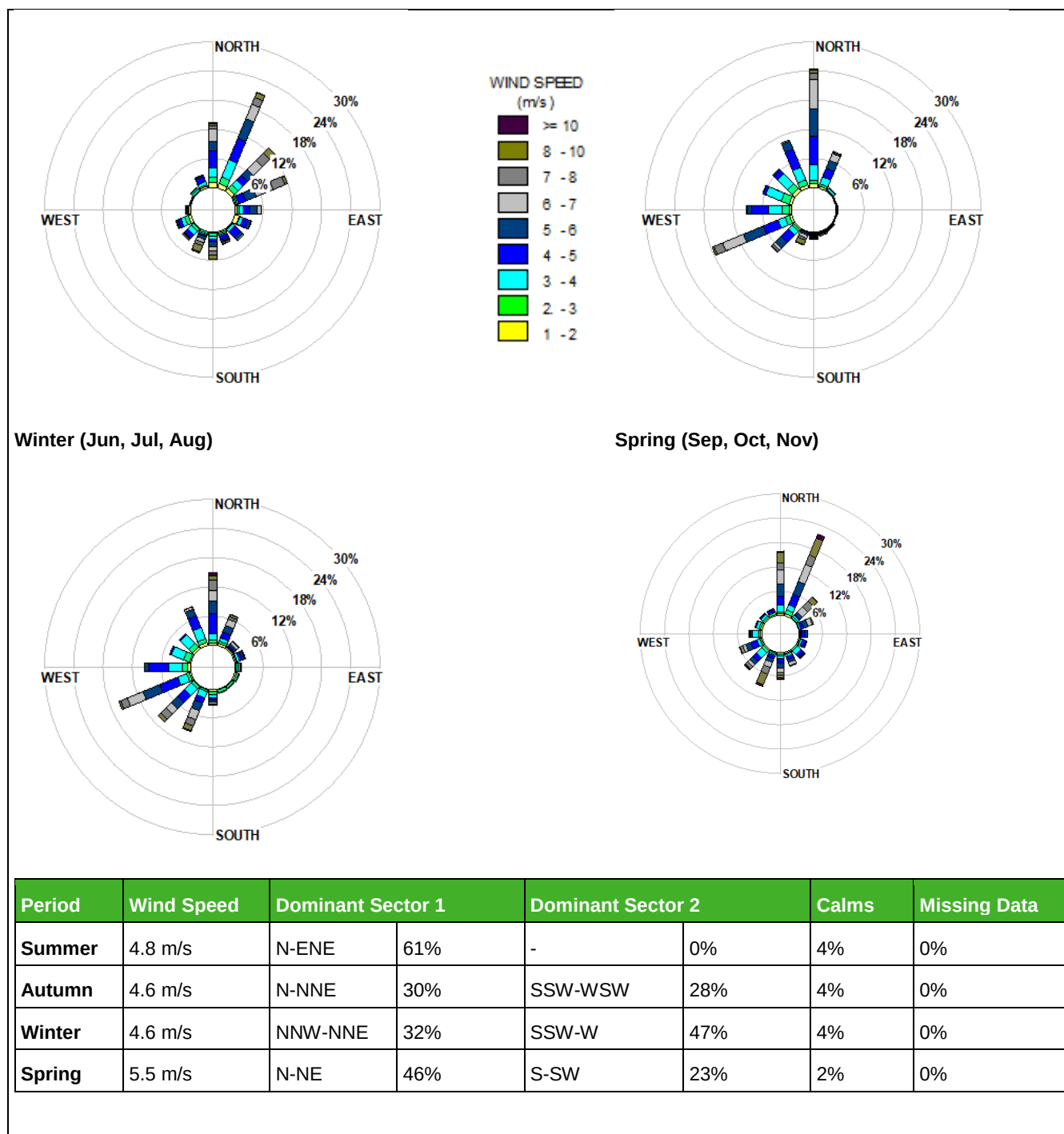


Figure 3: MM5 Seasonal wind roses.

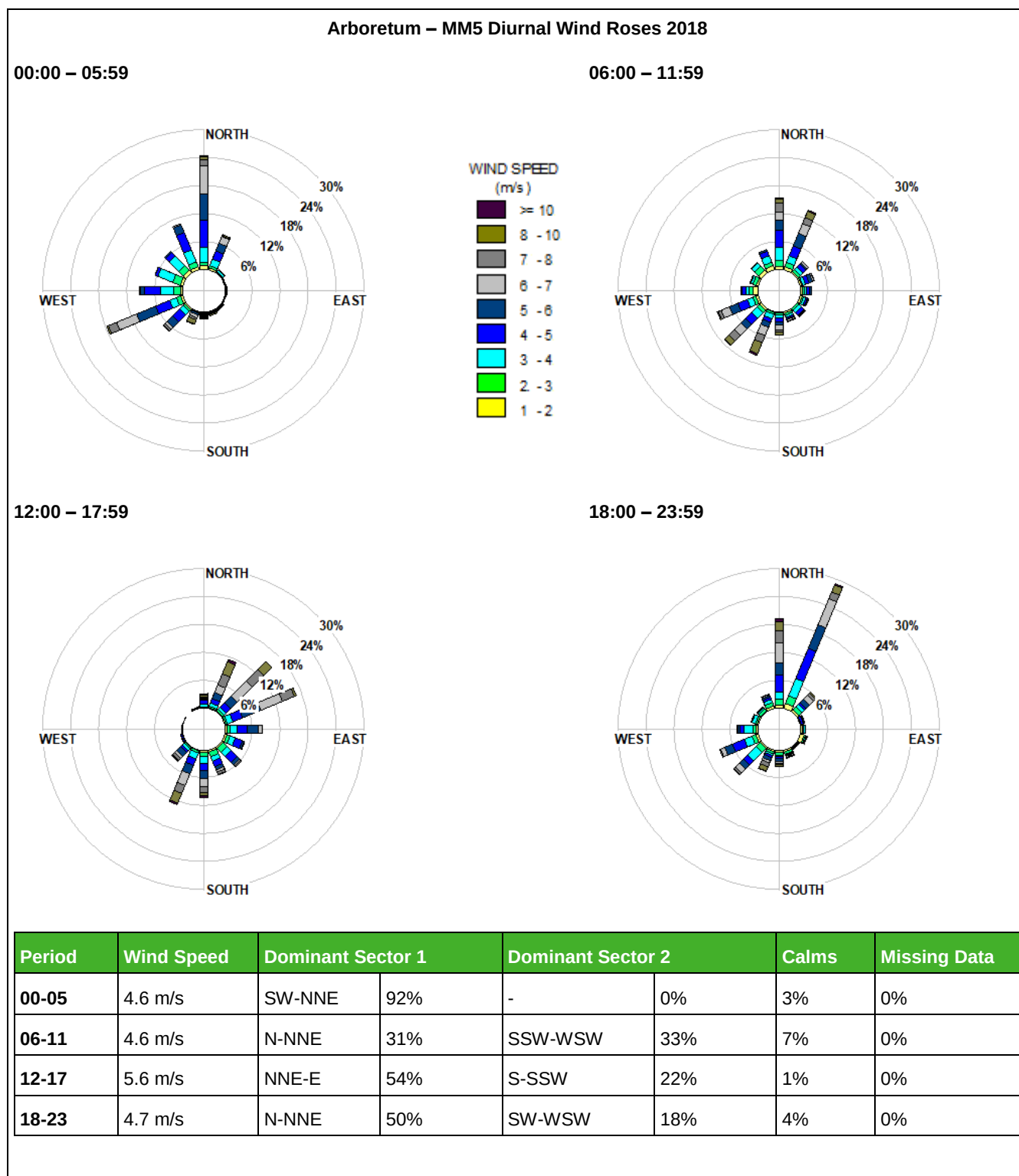


Figure 4: MM5 Diurnal wind roses.

2.3 Rainfall

Rainfall measured at various locations is summarized in Figure 5, Figure 6 and Figure 7 (See APPENDIX E for tables).

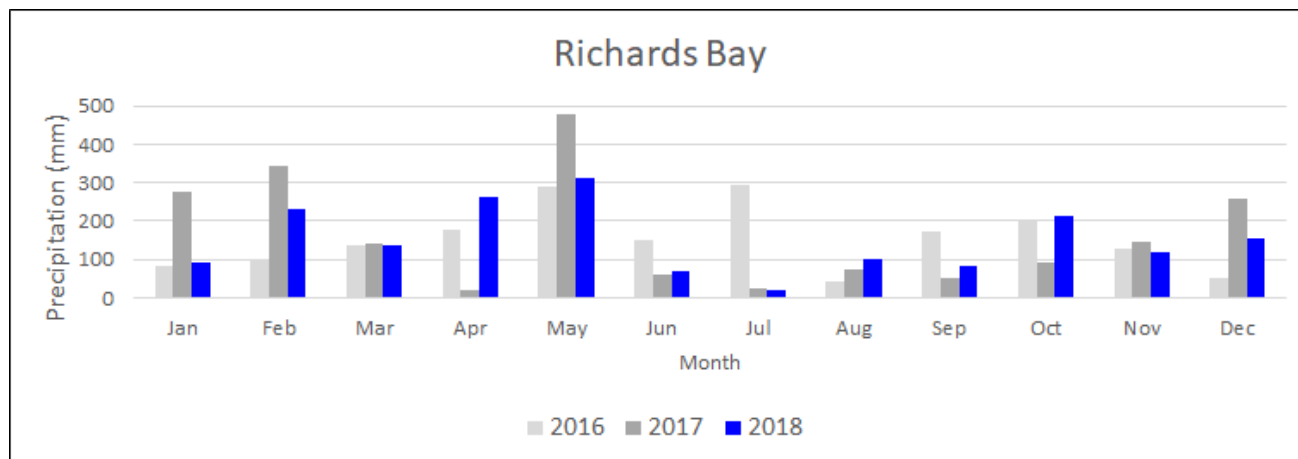


Figure 5: Rainfall – historical data for Richards Bay.

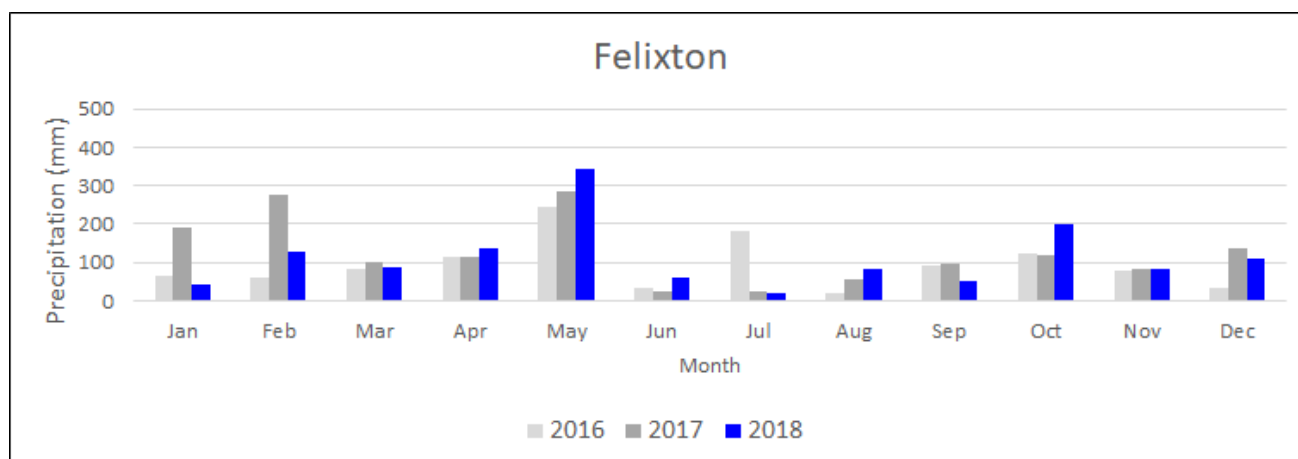


Figure 6: Rainfall – historical data for Felixton.

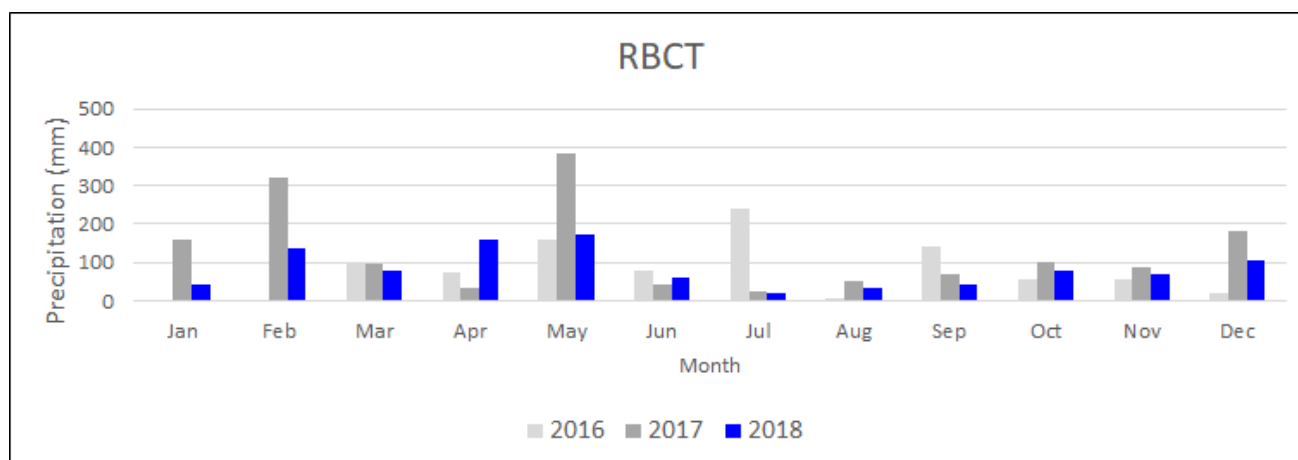


Figure 7: Rainfall – historical data for RBCT.

3.0 AIR QUALITY COMPLAINTS

Detailed complaint records are maintained, updated and distributed to the RBCAA's complaints mailing list on a weekly basis. The following sections summarise and analyse the complaints received during 2018. Please see APPENDIX D for the Complaints Log.

3.1 Field Observations

The historical count of complaints per month for the last five years is reflected in Figure 8, before 2018 the maximum number of complaints received in a single year was 397 (in 2004), this stabilised at approximately 200 between 2010 and 2015, and decreased to 100 in 2017. The trend has however reversed for 2018, 418 complaints were received. A large portion of the complaints were received in March and September and were attributed to Mondi Richards Bay (abnormal visible emissions, and, odour and clinical symptoms). Of note is an incident that occurred on the 14th of September as a result of operational upsets and unfavourable meteorology that resulted in 417 complaints. If not for this incident the number of complaints for 2017 and 2018 would be similar. (Figure 9).

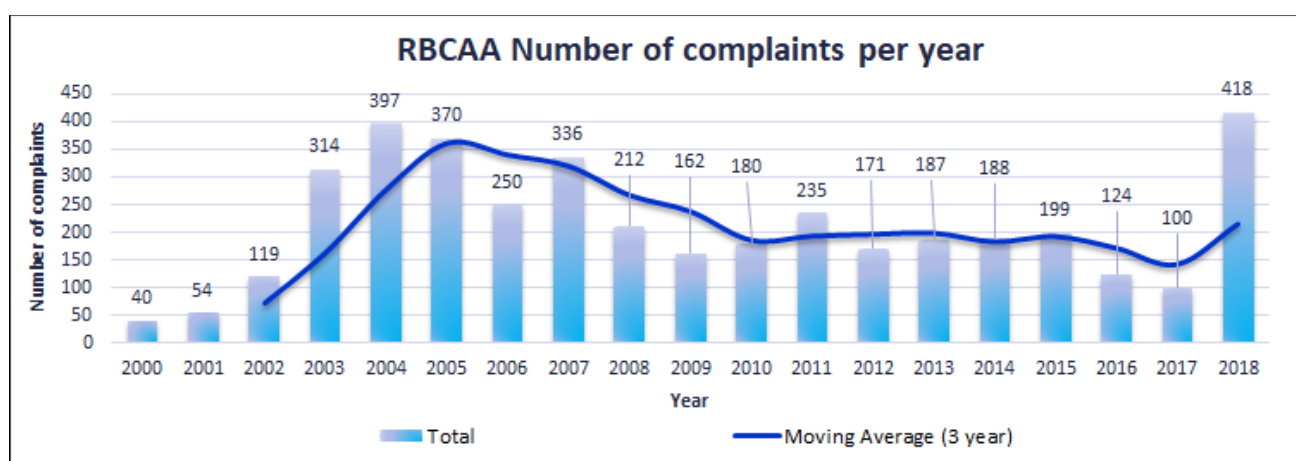


Figure 8: Complaints - historical annual comparison.

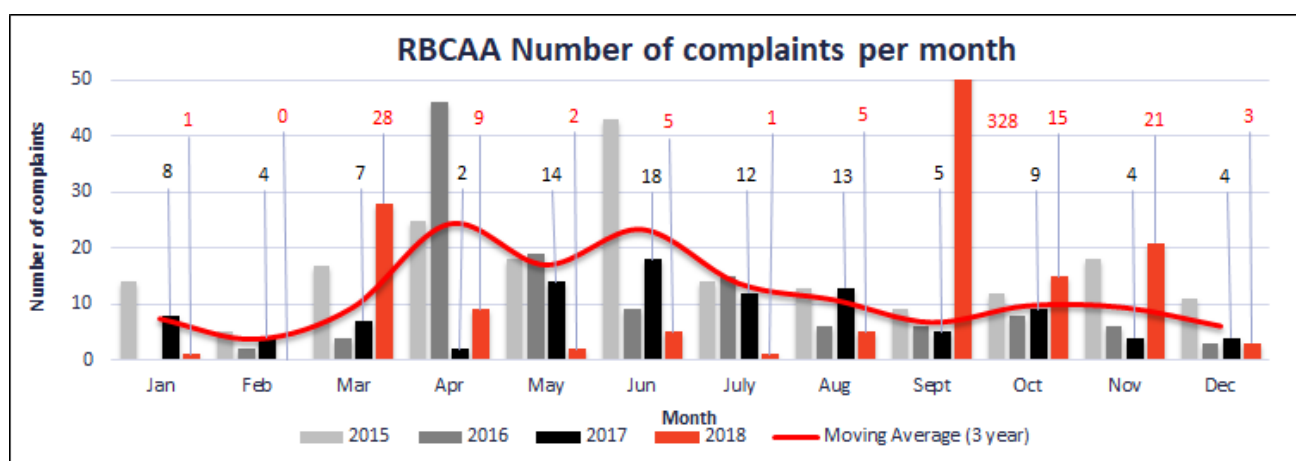


Figure 9: Complaints - historical monthly comparison.

3.2 Complaints distribution

The distribution of complaints in 2018 by region, source and type are presented in Figure 10, complaints received were allocated as follows: Mondi Richards Bay (383, 92%); Foskor (21, 5%); Unresolved and Others (14, 2%). Distributions for 2017 are included for comparison.

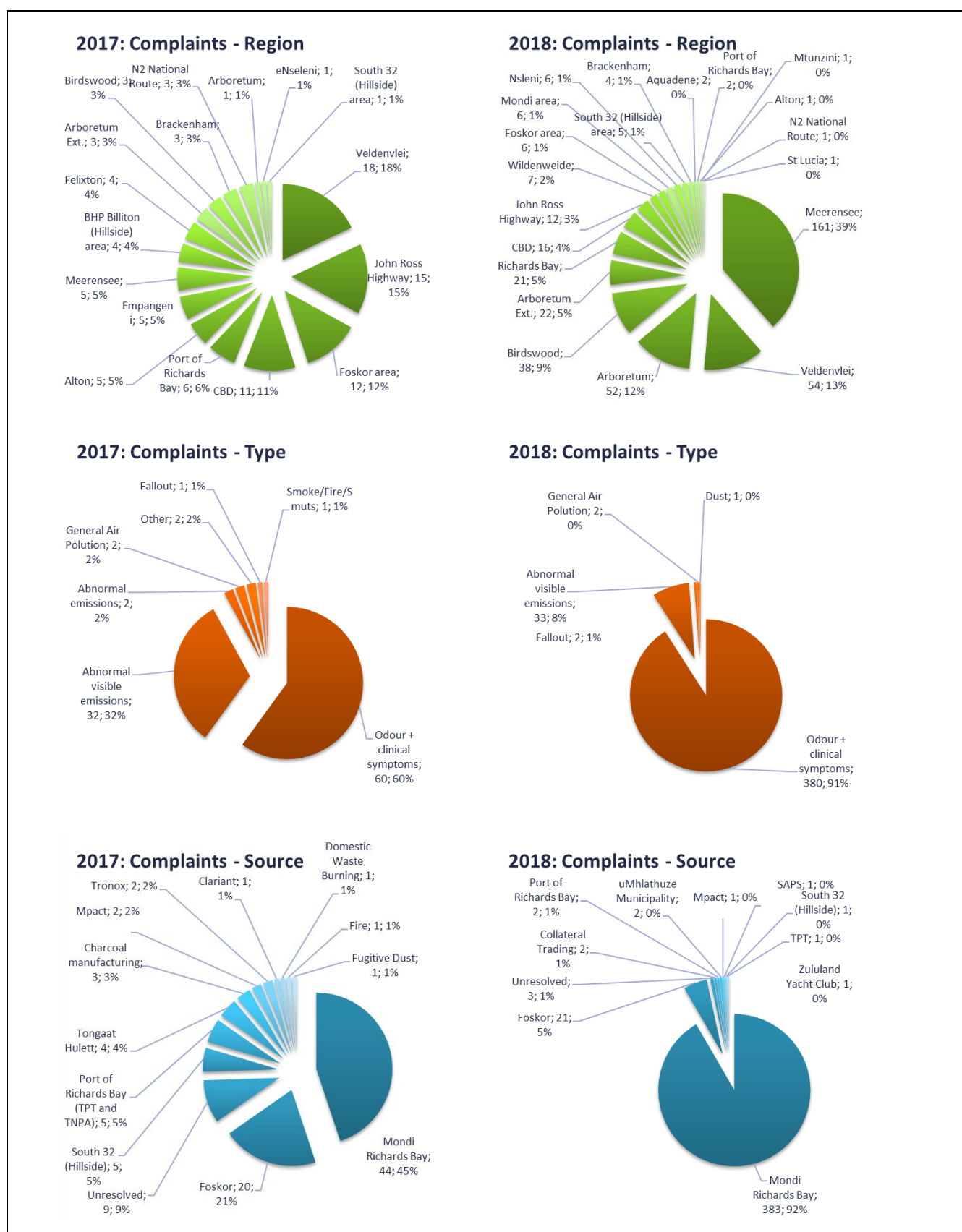


Figure 10: Complaints - region, type and source.

4.0 FINE PARTICULATE MONITORING

The term "particulate matter" (PM) refers to both solid particles and liquid droplets found in the atmosphere. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. These solid and liquid particles can vary in size. Particles less than 10 micrometres (μm) in diameter are classified as PM₁₀.

PM₁₀ can be inhaled and accumulate in deep within the respiratory system. Exposure to sustained high concentrations may result in:

- Reduced lung development in children;
- Allergy related inflammatory reactions of the airway;
- Asthma, nasal congestion and sinus problems;
- Increase in symptoms associated with the lower respiratory tract; and
- In severe cases, reduction in life expectancy.

TEOM's (particulate analysers) at Brackenham, CBD, Mtunzini and eSikhaleni stations measure PM₁₀ data continuously. PM₁₀ monitoring undertaken at Felixton is done so with the use of an E-Sampler; an alternative sampling methodology to that used at the other stations.

4.1 PM₁₀ Ambient Air Quality Standards

Ambient air quality standards for PM₁₀ are listed below (Table 2).

Table 2: PM₁₀ ambient air quality standards.

Variable	Organisation	Daily average	Annual average
PM ₁₀	NEM: AQA [a]	75 $\mu\text{g}/\text{m}^3$ [b]	40 $\mu\text{g}/\text{m}^3$ [c]
	WHO/IFC [d]	50 $\mu\text{g}/\text{m}^3$ [b]	20 $\mu\text{g}/\text{m}^3$ [c]
Notes: a) A Government Gazette 32816 (24th December 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015 (RSA-NEMAQA, 2009) b) Not to be exceeded more than 4 times in one year c) Not to be exceeded d) World health Organisation / International Finance Corporation (WHO, 2005) (IFC, 2007)			

4.2 PM₁₀ Compliance

A summary of the PM₁₀ exceedances and breakdown per station is presented in Table 3. Maximum and annual average concentrations for PM₁₀ are provided in Table 4.

Table 3: PM₁₀ station exceedance summary.

Standard / Guideline / Target	Station	Count
NEM: AQA Annual Standard (40 $\mu\text{g}/\text{m}^3$)	Not exceeded	
WHO Annual Guideline (20 $\mu\text{g}/\text{m}^3$)	Brackenham	1
	CBD	1

Standard / Guideline / Target	Station	Count
	eNseleni	1
	eSikhaleni	1
	Felixton	1
NEM: AQA Daily Standard (75 µg/m³)	Brackenham	6
	Felixton	1
WHO Daily Guideline (50 µg/m³)	Brackenham	16
	CBD	1
	eNseleni	4
	eSikhaleni	3
	Felixton	5

Table 4: PM₁₀ maximum and annual average concentrations.

Station		National NEM: AQA Daily Standard (75 µg/m³)	International WHO Daily Guideline (50 µg/m³)	National NEM: AQA Annual Standard (40 µg/m³)	International WHO Annual Guideline (20 µg/m³)
Brackenham	% of guideline	171%	256%	80%	160%
	µg/m³ TEOM	128	128	32	32
	Date	2018/08/17	2018/08/17	2018/08	2018
CBD	% of guideline	67%	100%	60%	120%
	µg/m³ TEOM	50	50	24	24
	Date	2018/10/02	2018/10/02	2018/10	2018
eNseleni	% of guideline	87%	130%	63%	125%
	µg/m³ TEOM	65	65	25	25
	Date	2018/07/26	2018/07/26	2018/07	2018
eSikhaleni	% of guideline	96%	144%	60%	120%
	µg/m³ TEOM	72	72	24	24
	Date	2018/07/26	2018/07/26	2018/07	2018
Felixton	% of guideline	147%	220%	63%	125%
	µg/m³ E-sampler	110	110	25	25
	Date	2018/07/26	2018/07/26	2018/07	2018

Notes: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard)

4.3 PM₁₀ Annual Averages

Annual average concentrations and trends dating back to 2004 are illustrated in Figure 11 and Figure 13. A decreasing trend is noticeable from 2009 to 2012; this has reversed and stabilised since then, it is particularly noticeable at Brackenham, CBD, Felixton, and eSikhaleni. The reversal could be as a result of the proliferation of stockpiles in the area as well as the reduction in amount of rainfall. During 2018 the NEM: AQA PM₁₀ Annual Limit (40 µg/m³) was not exceeded, the WHO PM₁₀ Annual Guideline (20 µg/m³) was exceeded at Brackenham, CBD, eNseleni, eSikhaleni, Mtunzini, and, Felixton.

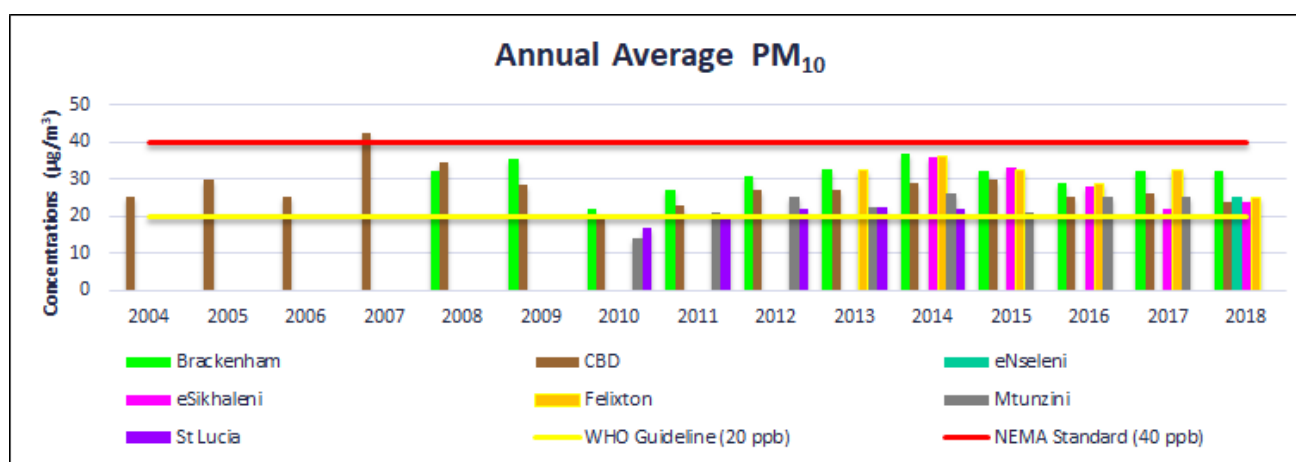


Figure 11: PM₁₀ annual average concentrations.

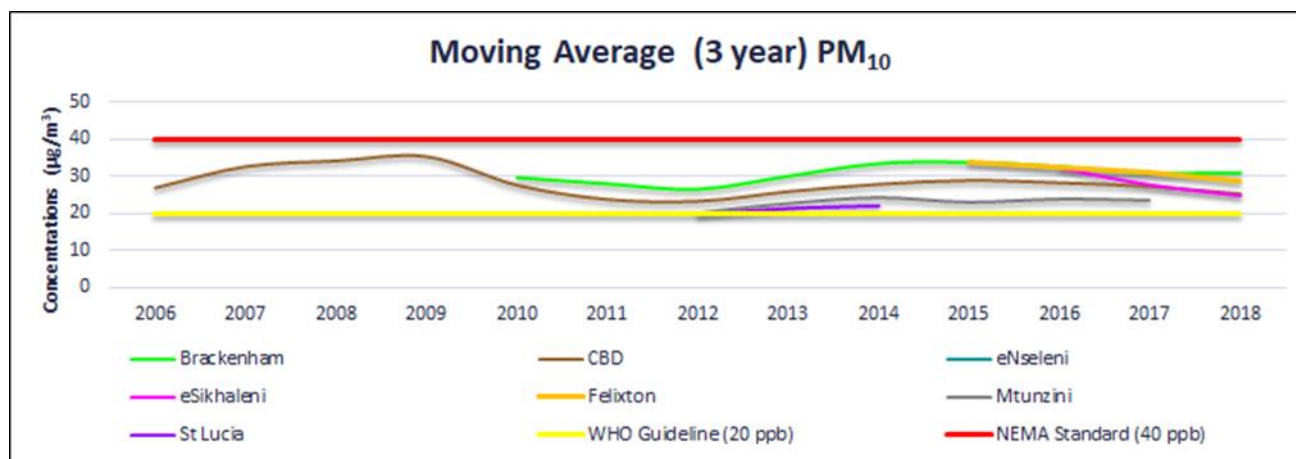


Figure 12: PM₁₀ 3 year moving average.

4.4 PM₁₀ Seasonal Concentrations

Seasonal PM₁₀ concentrations for 2018 are provided in Figure 13. The NEM: AQA and WHO annual standard / guideline is included for comparative purposes.

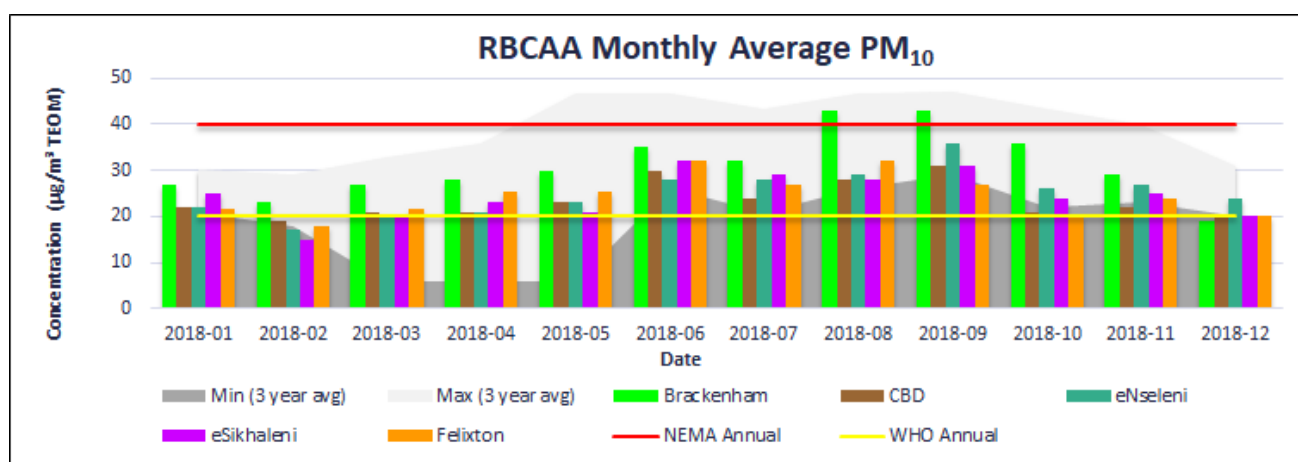


Figure 13: PM₁₀ seasonal concentrations.

4.5 PM₁₀ Diurnal Averages

Diurnal PM₁₀ concentrations are shown below (Figure 14).

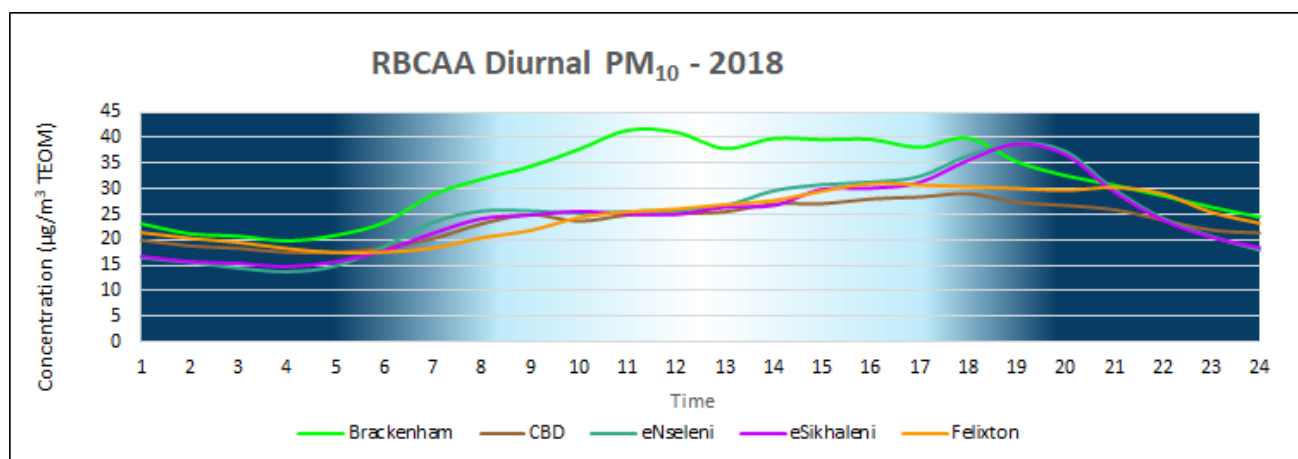


Figure 14: PM₁₀ diurnal concentrations.

4.6 PM₁₀ Daily Averages

Daily average PM₁₀ concentrations are shown below (Figure 15). There were 7 measured exceedances of the NEM: AQA PM₁₀ Daily Limit (75 µg/m₃), and 29 of the WHO Daily Guideline (50 µg/m₃) (see APPENDIX D).

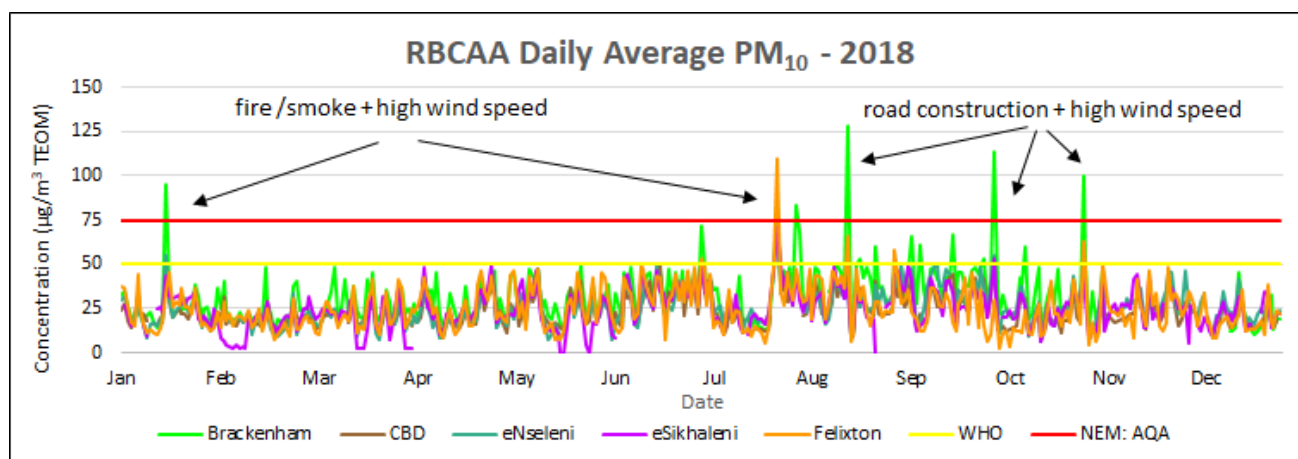


Figure 15: PM₁₀ daily average concentrations.

5.0 SULPHUR DIOXIDE MONITORING

Sulphur dioxide (SO₂) is one of a group of highly reactive gasses known as “oxides of sulphur.” Anthropogenic sources include; fossil fuel combustion (particularly coal burning power plants) industrial processes such as wood pulping, paper manufacture, petroleum and metal refining, metal smelting (particularly from sulphide containing ores, e.g. lead, silver and zinc ores) and vehicle tailpipe emissions. Natural sources of SO₂ emissions include; geothermal activity (including hot springs and volcanic activity), and the natural decay of vegetation on land, in wetlands and in oceans.

SO₂ is linked with adverse effects on the respiratory system as it is highly soluble and thus readily absorbed by the mucous membranes of the nose and upper respiratory tract. Exposure to high concentrations may result in:

- Reduction in lung function (especially in asthmatics and children)
- Wheezing and coughing
- In severe cases, reduction in life expectancy

5.1 SO₂ Ambient Air Quality Standards

South African ambient air quality standards for SO₂ are listed below (Table 5).

Table 5: SO₂ ambient air quality standards.

Variable	Organisation	10-min average	Hourly average	Daily average	Annual average
SO ₂ Standard	NEM: AQA ^[a]	500 µg/m ³ ^[b]	350 µg/m ³ ^[c]	125 µg/m ³ ^[d]	50 µg/m ³ ^[e]
		191ppb ^[b]	134 ppb ^[c]	48 ppb ^[d]	19 ppb ^[e]
SO ₂ Interim Target 1	WHO / IFC ^[f]	-	-	125 µg/m ³	-
		-	-	48 ppb	-
SO ₂ Interim Target 2	WHO / IFC ^[f]	-	-	50 µg/m ³	-
		-	-	19 ppb	-
SO ₂ Guideline	WHO / IFC ^[f]	500 µg/m ³	-	20 µg/m ³	-
		191ppb	-	8 ppb	-

Notes:

- a) SA Government Gazette 32816 (published 24th December 2009) in terms of the National Environmental Management: Air Quality Act 39 of 2004 (RSA-NEMAQA, 2009)
- b) Not to be exceeded more than 526 times in one year
- c) Not to be exceeded more than 88 times in one year
- d) Not to be exceeded more than 4 times in one year
- e) Not to be exceeded
- f) World health Organisation / International Finance Corporation (WHO, 2005) (IFC, 2007)

5.2 SO₂ Compliance

A summary of the SO₂ exceedances and breakdown per station is presented in Table 6. SO₂ exceedances can be associated with emissions as a result of process upsets (i.e. planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or a particular event (e.g. fires or emergency shutdowns). Maximum and annual average concentrations for SO₂ are provided in Table 7.

Table 6: SO₂ station exceedance summary.

Standard / Guideline / Target	Station	Count
NEM: AQA Annual Standard (19 ppb)	Not exceeded.	
NEMAQA Standard / WHO Daily Interim Target 1 (48 ppb)	Harbour West	4
	Scorpio	1
WHO Daily Interim Target 2 (19 ppb)	CBD	2
	Harbour West	40
	Scorpio	38
WHO Daily Standard (8 ppb)	Arboretum	3
	CBD	55
	Harbour West	136
	Scorpio	139
NEM: AQA Hourly Standard (134 ppb)	Harbour West	22
	Scorpio	12
NEM: AQA 10-minute Standard / WHO 10-minute Target (191 ppb)	Harbour West	46
	Scorpio	45

Table 7: SO₂ maximum and annual average concentrations.

Station		National & International NEM: AQA / 10-minute Standard WHO 10-minute Standard 500 µg/m ³ 191 ppb	National NEM: AQA 1-hour Standard 350 µg/m ³ 134 ppb	National NEM: AQA 24-hour Standard 125 µg/m ³ 48 ppb	International WHO 24-hour Guideline 20 µg/m ³ 8 ppb	National NEM: AQA Annual Standard 50 µg/m ³ 19 ppb
Arboretum	% of guideline	44%	47%	26%	156%	14%
	(ppb)	84	63	13	13	3
	Date & time	2018/08/02 06:10	2018/08/03 07:00	2018/08/02	2018/08/02	2018
Brackenham	% of guideline	8%	10%	14%	84%	7%
	(ppb)	15	14	7	7	1
	Date & time	2018/08/02 06:10	2018/08/03 07:00	2018/08/02	2018/08/02	2018
CBD	% of guideline	80%	56%	43%	260%	21%
	(ppb)	154	75	21	21	4
	Date & time	2018/09/24 00:00	2018/09/20 08:00	2018/07/14	2018/07/14	2018
eNseleni	% of guideline	68%	25%	14%	86%	6%
	(ppb)	130	33	7	7	1
	Date & time	2018/08/16 11:40	2018/11/08 16:00	2018/11/08	2018/11/08	2018
eSikhaleni	% of guideline	51%	15%	16%	94%	11%
	(ppb)	97	20	8	8	2
	Date & time	2018/11/27 10:50	2018/11/27 10:00	2018/12/17	2018/12/17	2018

Station		National & International NEM: AQA / 10-minute Standard WHO 10-minute Standard 500 µg/m ³ 191 ppb	National NEM: AQA 1-hour Standard 350 µg/m ³ 134 ppb	National NEM: AQA 24-hour Standard 125 µg/m ³ 48 ppb	International WHO 24-hour Guideline 20 µg/m ³ 8 ppb	National NEM: AQA Annual Standard 50 µg/m ³ 19 ppb
Felixton	% of guideline	84%	53%	24%	145%	13%
	(ppb)	161	71	12	12	3
	Date & time	2018/06/06 12:40	2018/10/31 14:00	2018/10/31	2018/10/31	2018
Harbour West	% of guideline	268%	279%	220%	1321%	47%
	(ppb)	512	374	106	106	9
	Date & time	2018/07/29 14:50	2018/04/26 20:00	2018/04/26	2018/04/26	2018
Scorpio	% of guideline	567%	371%	113%	676%	46%
	(ppb)	1083	497	54	54	9
	Date & time	2018/10/15 14:20	2018/08/02 19:00	2018/10/15	2018/10/15	2018
Notes: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).						

5.3 SO₂ Annual Averages

Annual average SO₂ concentrations and trends are illustrated in Figure 16 and Figure 17. There was a decrease in concentrations from 2006 to 2010, this trend reversed from 2010 to 2014 but seems have stabilised (from 2014 to 2018). The decrease in SO₂ concentrations from 2014 to 2016, could be linked to numerous shutdowns at Fiskor, the Fiskor A-plant had a long shut in 2015, that overlapped with the 2016 annual shut. During 2017 NEM: AQA SO₂ Annual limit (19 ppb) was not exceeded.

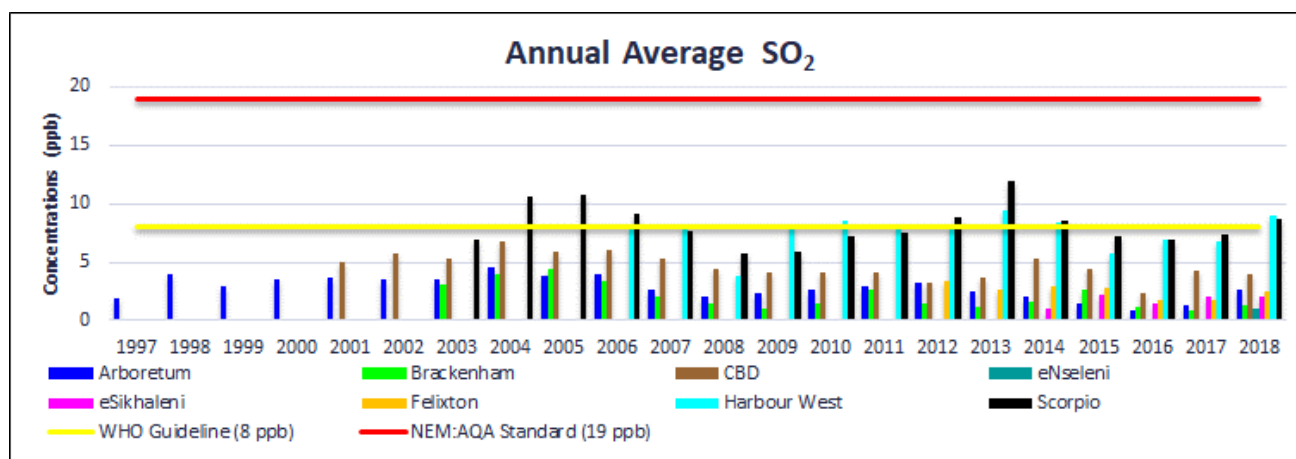


Figure 16: SO₂ annual average concentrations.

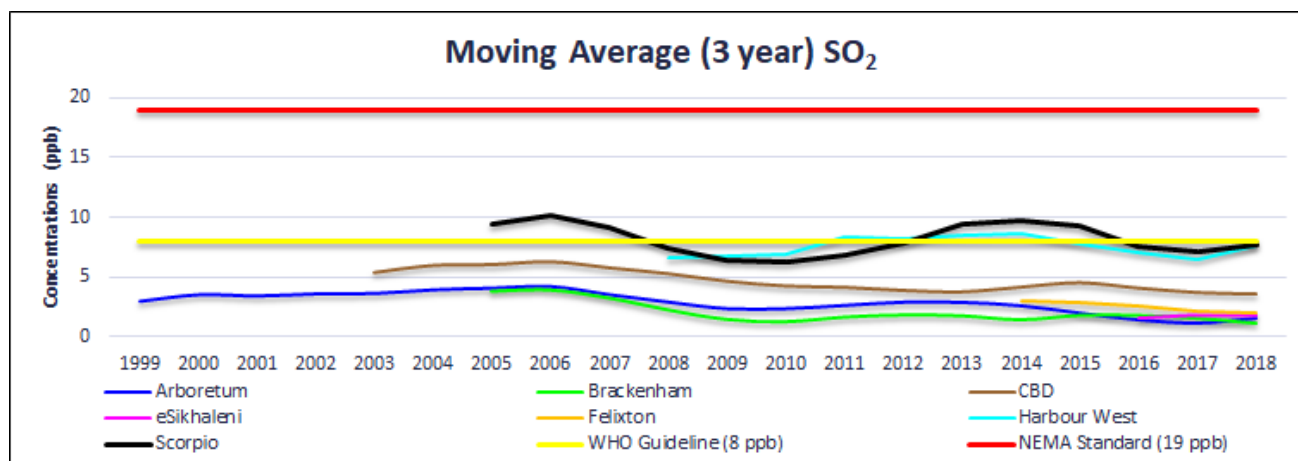


Figure 17: SO₂ 3 year moving average.

5.4 SO₂ Seasonal Concentrations

The seasonal SO₂ concentrations for 2017 are provided in Figure 18.

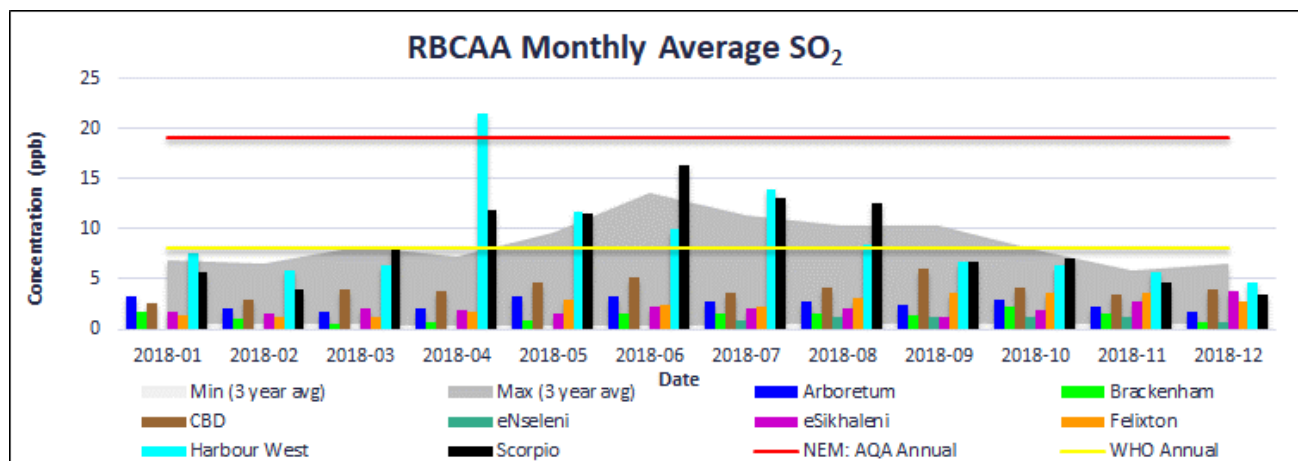


Figure 18: SO₂ seasonal concentrations.

5.5 SO₂ Diurnal Average

Diurnal SO₂ concentrations are shown below (Figure 19).

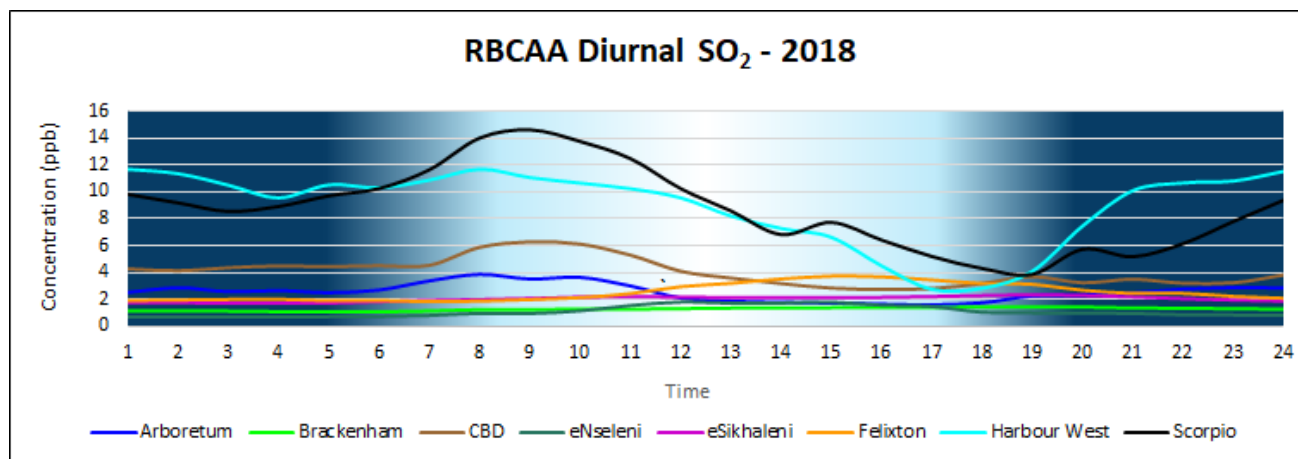


Figure 19: SO₂ diurnal concentrations.

5.6 SO₂ Daily Averages

The daily average SO₂ concentrations are shown below (Figure 20). There were 5 exceedances of the NEM: AQA SO₂ Daily Limit (48 ppb), the WHO Daily Guideline (8 ppb) was exceeded 333 times (see APPENDIX E).

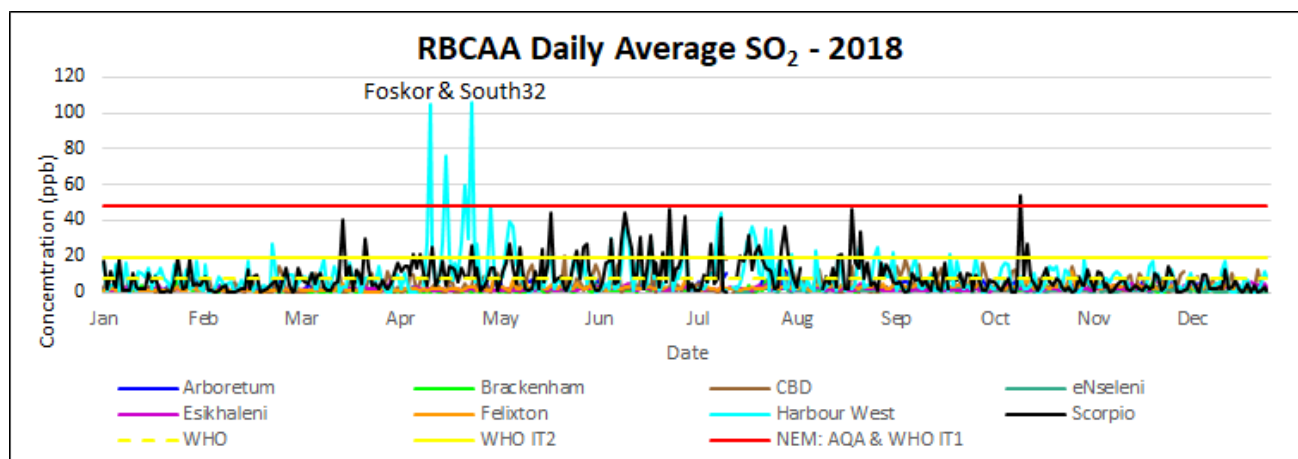


Figure 20: SO₂ daily average concentrations.

5.7 SO₂ Hourly Averages

Hourly average SO₂ concentrations are shown below (Figure 21). There were 34 measured exceedances of the NEM: AQA Hourly Standard (134 ppb).

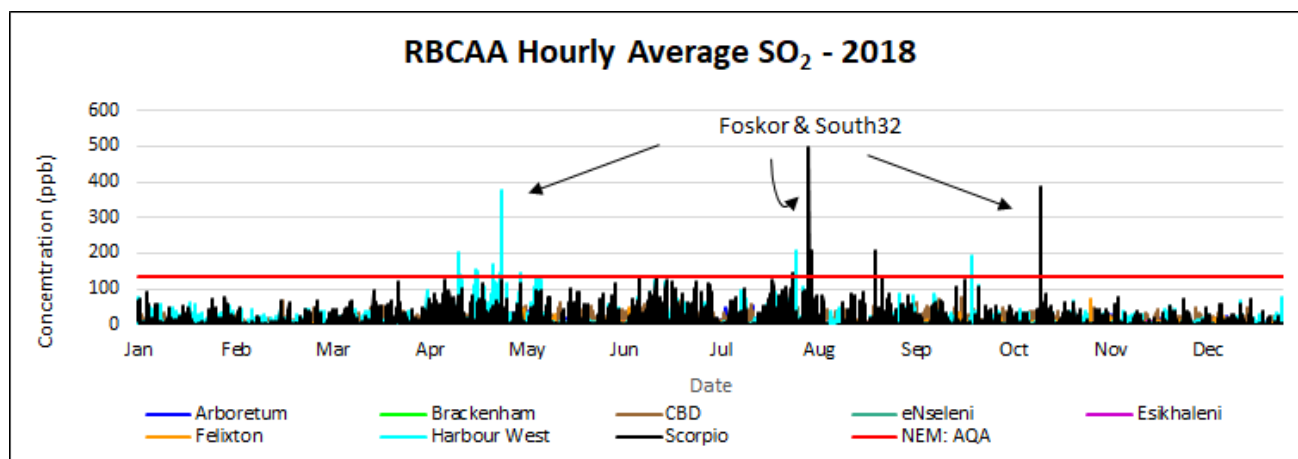


Figure 21: SO₂ maximum hourly average concentrations.

5.8 SO₂ 10-minute Averages

10-minute average SO₂ concentrations are shown below (Figure 19). There were 91 measured exceedances of the NEM: AQA and WHO/IFC 10-minute Standards (191 ppb).

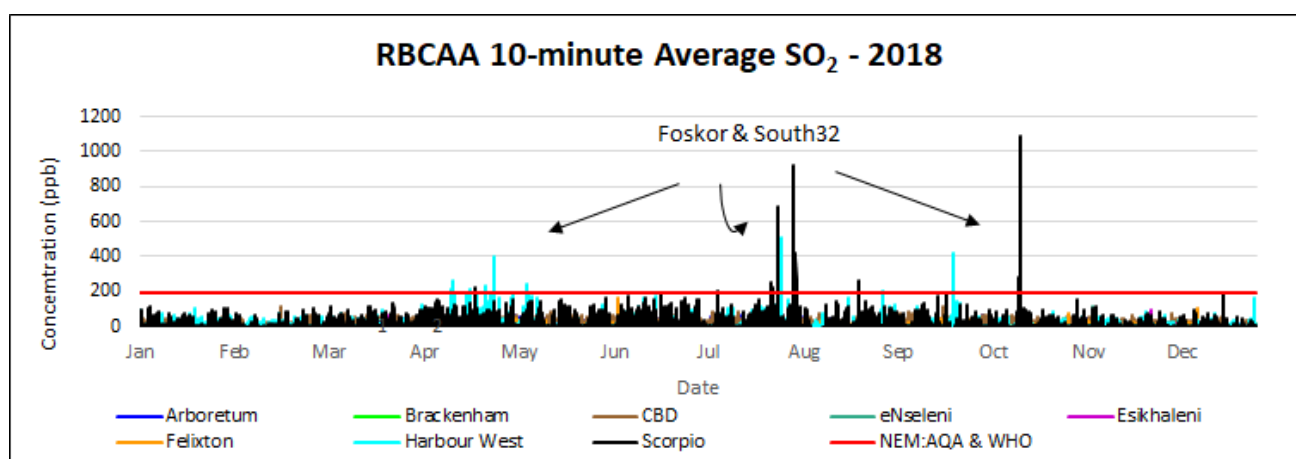


Figure 22: SO₂ 10-minute average concentrations.

5.9 SO₂ Dispersion Simulations

5.9.1 SO₂ Model Correlation

Annual average SO₂ concentration measured at each of the RBCAA stations, and the CALPUFF predicted average for the month are shown in Figure 23. The annual average for the same period the previous year is also provided. Compared to the previous year annual average SO₂ concentrations at all stations with the exception of Harbour West were similar (within 10% of the NEM: AQA annual standard). Annual average predicted values at most stations were within accepted dispersion modelling norms (-50% to 200%), Harbour West and Scorpio were under-predicted, the cause of the under predictions at these stations is most likely as a result of a combination of local fugitive emissions unaccounted for in the model, and the model's tendency to under predict in the near field. Compared to the measurements predicted values at Harbour West and Scorpio were lower, and at Arboretum, Brackenham, CBD, eNseleni, eSikhaleni, and Felixton similar (within 10% of the standard).

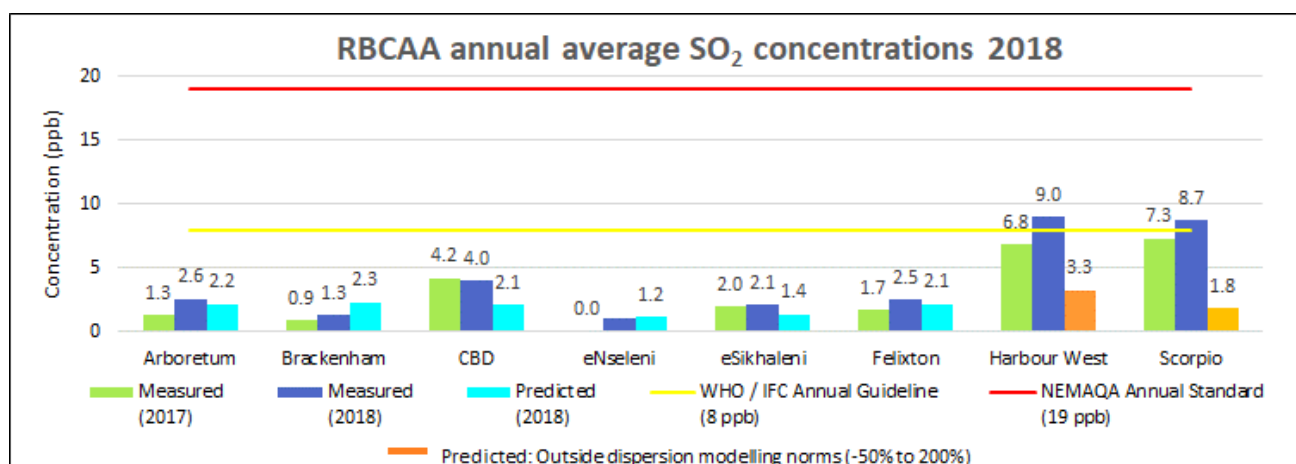


Figure 23: SO₂ annual average concentration and prediction.

5.9.2 SO₂ Dispersion Simulation Results

A summary of the predicted SO₂ impacts at various locations, according to national standards and international guidelines is presented in Table 10, the table is colour code according to the Air Quality Index (AQI) shown in Table 8 and Table 9. The colour scale ranges from blue (indicating a low concentration relative to the standard / guideline), to red (indicating an exceedance of the standard / guideline).

Table 8: Air quality index (percentage of NEMA: AQA SO₂ limit value).

Air Quality Rating	Percentage of NEMA: AQA SO ₂ limit value	Effects
Good	0% - 25%	No known harmful effects to soil, water, vegetation, animals, visibility or human health.
Fair	26% - 50%	Adequate protection against harmful effects to soil, water, vegetation, animals, visibility or human health.
Poor	51% - 100%	Not all aspects of the environment are adequately protected from adverse effects. Long-term control action may be necessary, depending on the frequency, duration and circumstances of the readings.
Very Poor	>100%	In this range, further deterioration of air quality and continued high readings could pose a risk to public health.

Table 9: Air quality index (percentage of WHO SO₂ limit value)

Air Quality Rating	Percentage of WHO SO ₂ limit value
Good	0% - 25%
Fair	26% - 50%
Poor	51% - 100%
Very Poor	>100%

Table 10: SO₂ Prediction Summary.

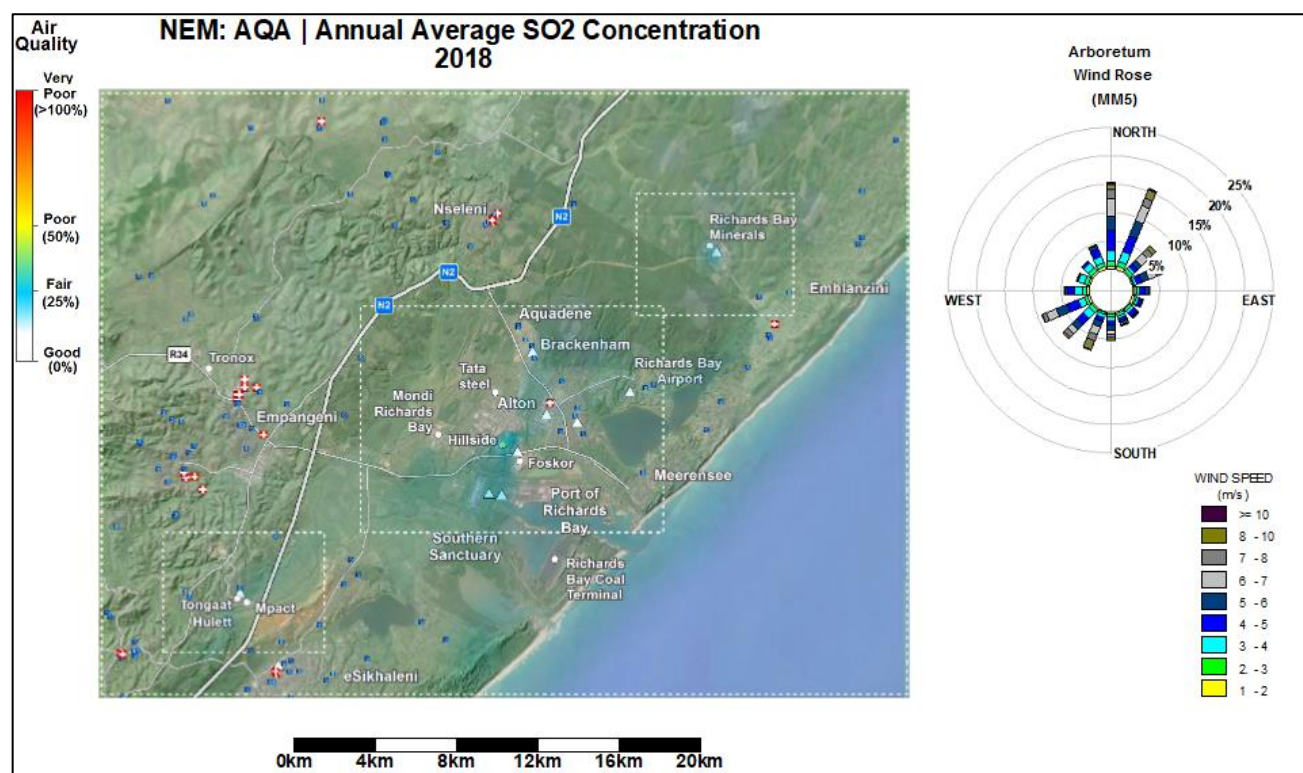
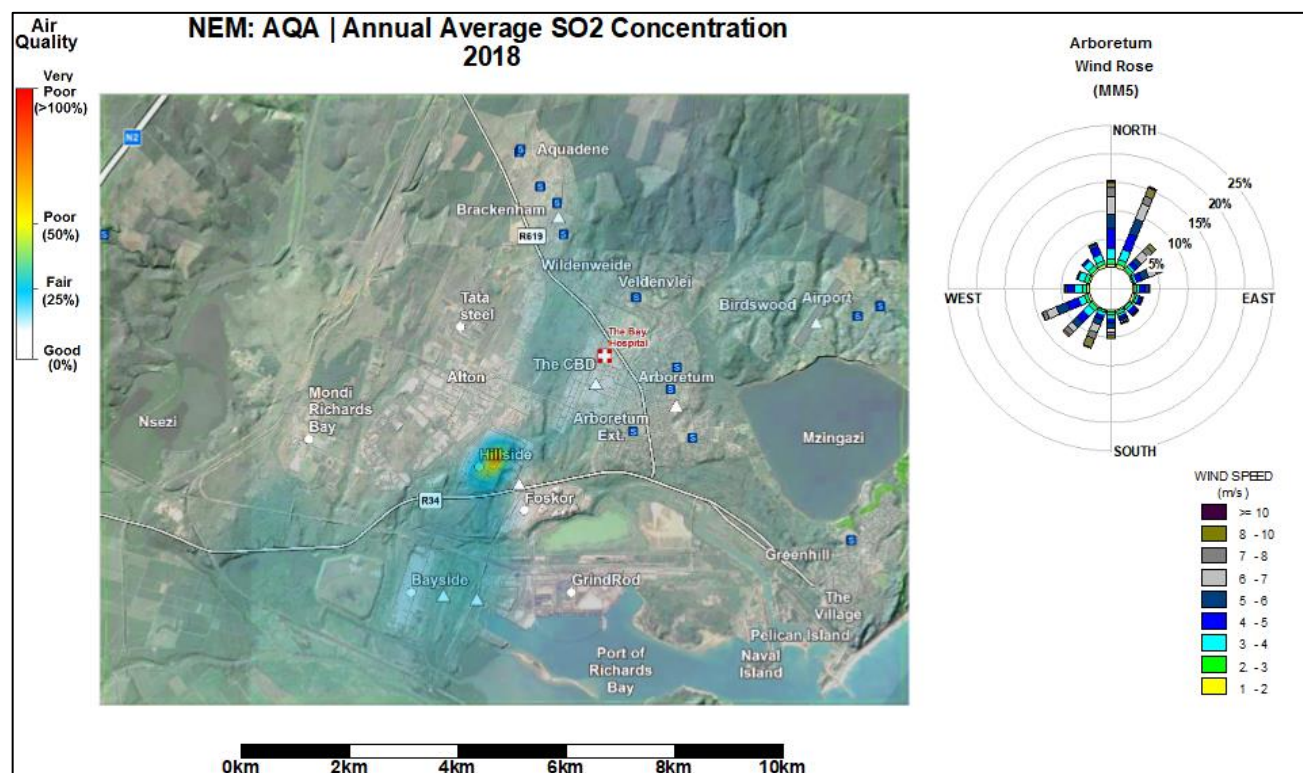
Area	Percentage of NEM: AQA Standard				Percentage of WHO Guideline			Frequency of exceeding WHO Guideline	
Standard	Annual	Daily	Hourly	10-minute	Annual	Daily	10-minute	Daily	10-minute
Limit Value	19	48	134	191	8	8	191	0	0
Alton	8%	24%	24%	17%	18%	146%	17%	12	0
Aquadene	8%	19%	20%	15%	20%	114%	15%	10	0
Arboretum	10%	23%	21%	15%	23%	136%	15%	14	1
Arboretum Extension	8%	22%	21%	15%	20%	135%	15%	18	4
Bayside Aluminium	16%	23%	26%	18%	37%	136%	18%	29	0
Birdswood	13%	31%	28%	20%	31%	184%	20%	36	5
Brackenham	11%	31%	24%	17%	27%	186%	17%	25	0
CBD	12%	20%	22%	16%	28%	123%	16%	20	1
Empangeni	3%	10%	9%	6%	6%	58%	6%	0	0
Esikhawini	9%	20%	22%	16%	22%	119%	16%	7	1
Tronox	2%	7%	6%	4%	4%	43%	4%	0	0
Felixton	9%	21%	25%	19%	22%	124%	19%	9	0
Foskor	10%	23%	22%	15%	24%	139%	15%	10	0
Greenhill	4%	16%	12%	8%	10%	95%	8%	3	0
Hillside Aluminium	41%	47%	30%	21%	96%	280%	21%	182	5
Mandlazini Agri-Village	13%	42%	39%	29%	31%	253%	29%	37	17
Meerensee	4%	18%	11%	8%	10%	105%	8%	5	1
Mondi Richards Bay	6%	21%	21%	15%	14%	127%	15%	10	0
Mzingazi Agri-Village	9%	42%	25%	17%	21%	250%	17%	21	29

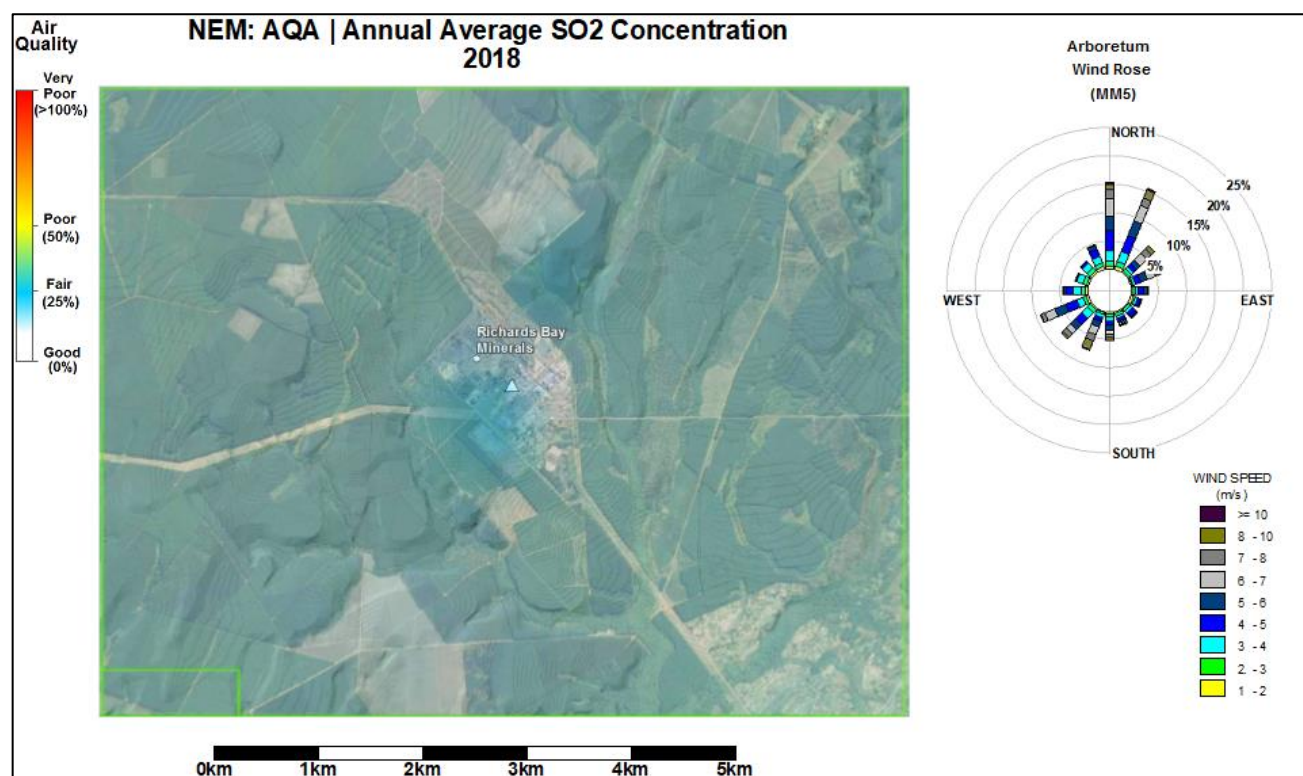
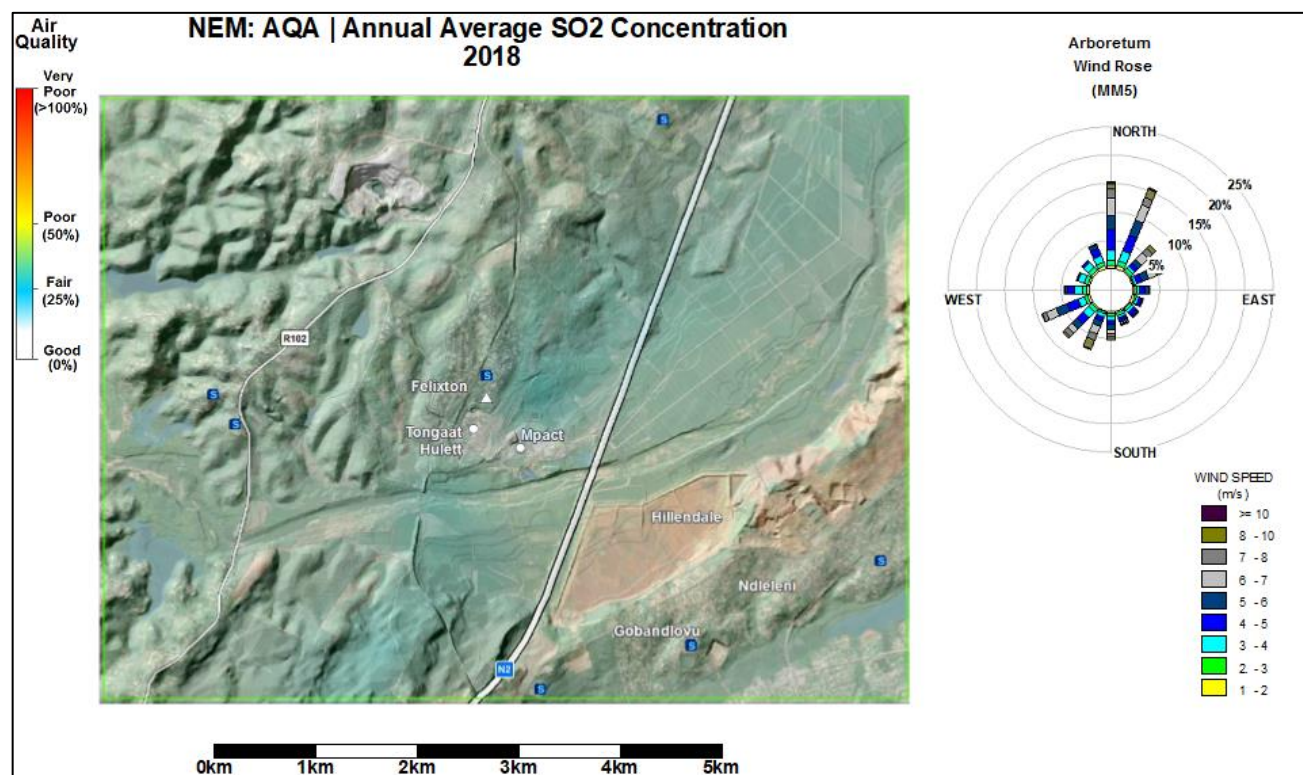
Area	Percentage of NEM: AQA Standard				Percentage of WHO Guideline			Frequency of exceeding WHO Guideline	
Standard	Annual	Daily	Hourly	10-minute	Annual	Daily	10-minute	Daily	10-minute
Limit Value	19	48	134	191	8	8	191	0	0
Nseleni	6%	15%	14%	10%	15%	91%	10%	2	0
Port of Richards Bay	8%	20%	23%	17%	19%	121%	17%	12	2
Richards Bay Coal Terminal	5%	14%	15%	10%	13%	85%	10%	3	0
Richards Bay Minerals	12%	27%	23%	19%	29%	161%	19%	10	0
Southern Sanctuary	12%	19%	18%	13%	28%	113%	13%	11	0
Richards Bay Alloys	8%	23%	24%	17%	20%	138%	17%	12	0
Veldenvlei	11%	23%	20%	15%	27%	140%	15%	17	1
Vulindlela	7%	19%	21%	15%	18%	115%	15%	8	0
Wildenweide	14%	29%	24%	17%	33%	177%	17%	49	0

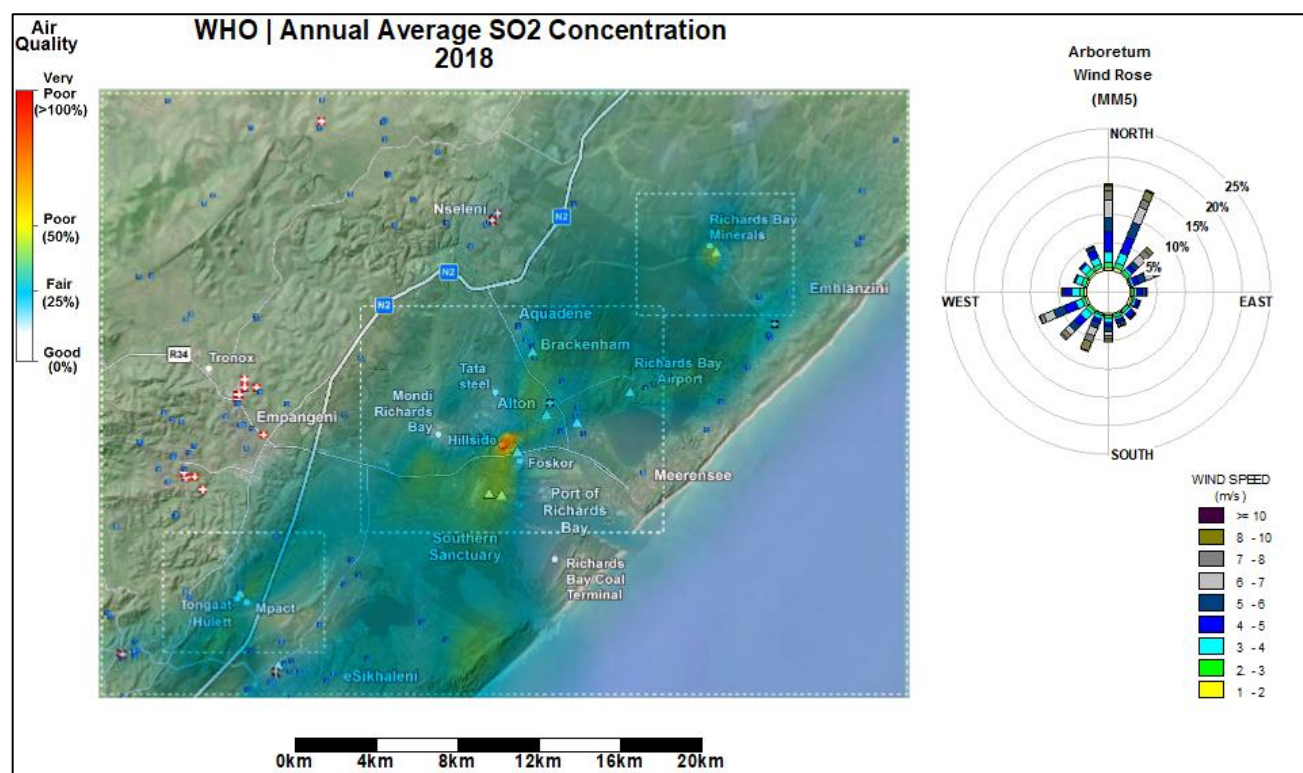
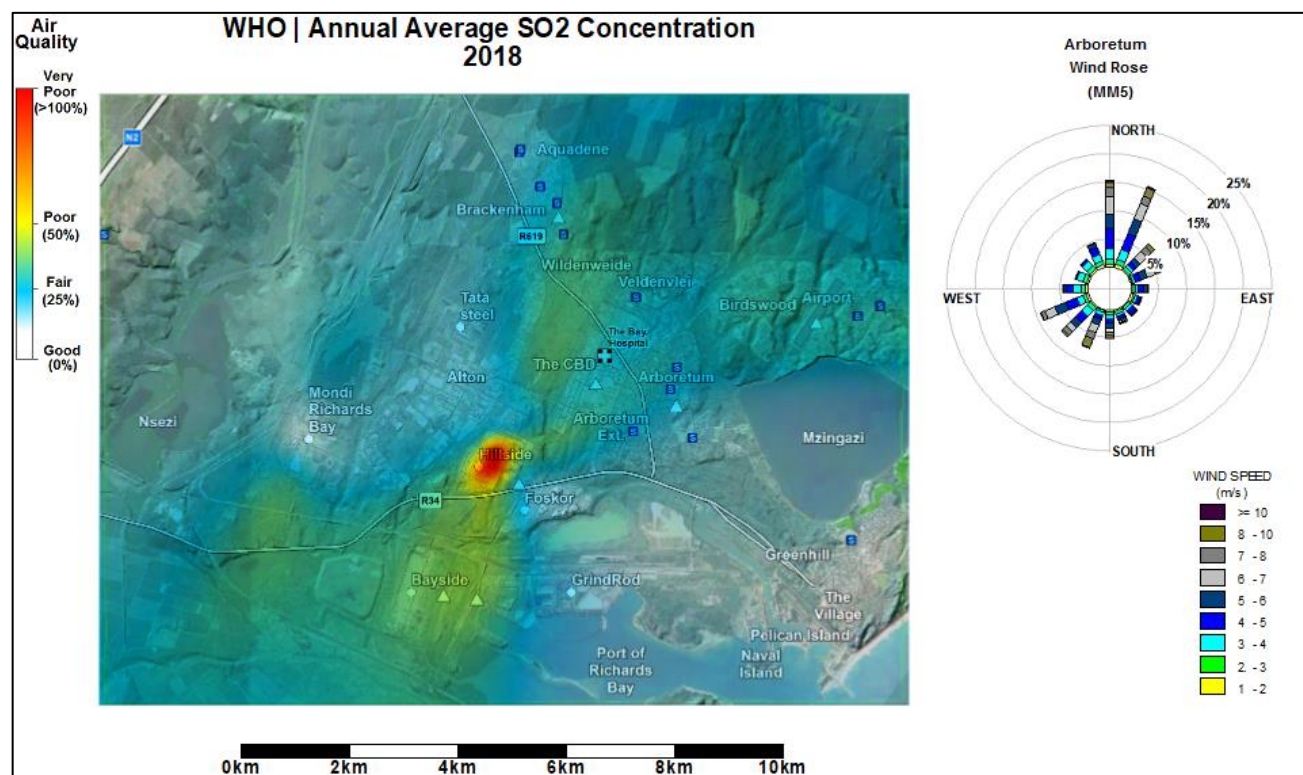
The following plots of SO₂ concentrations are provided:

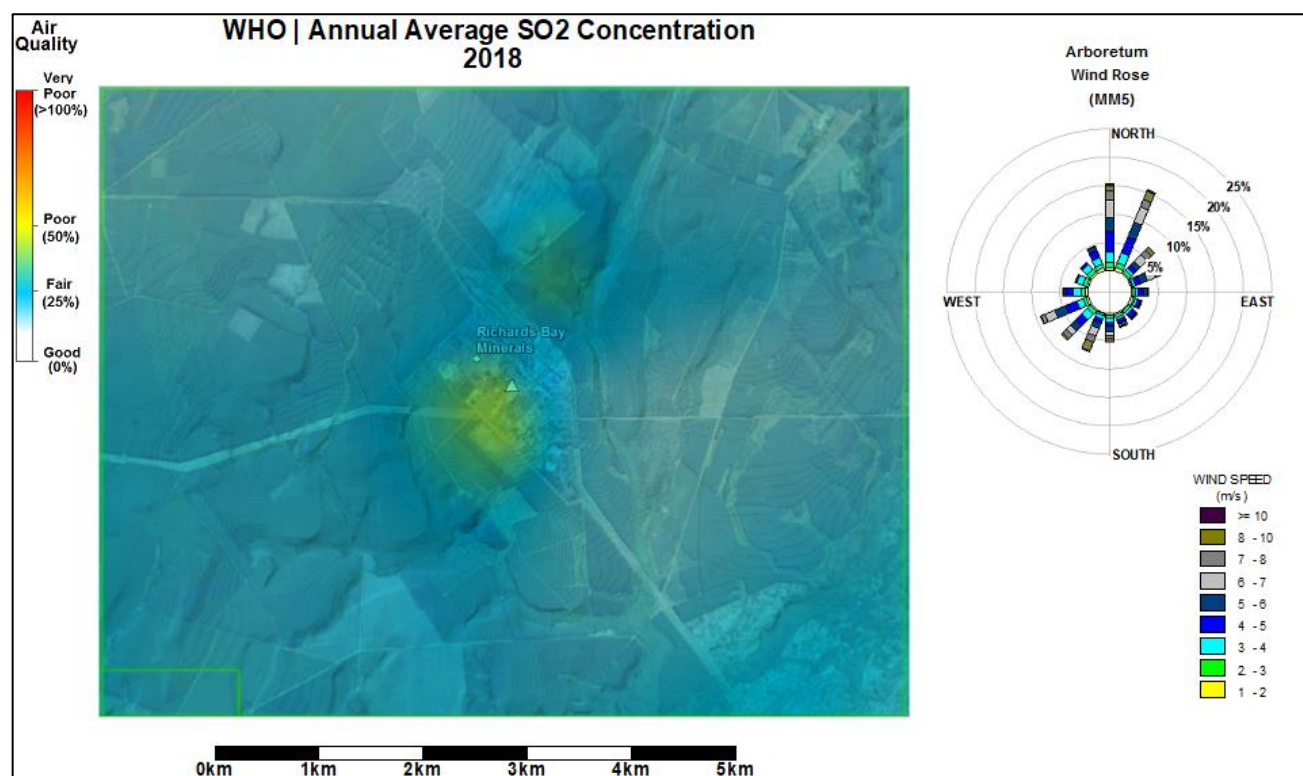
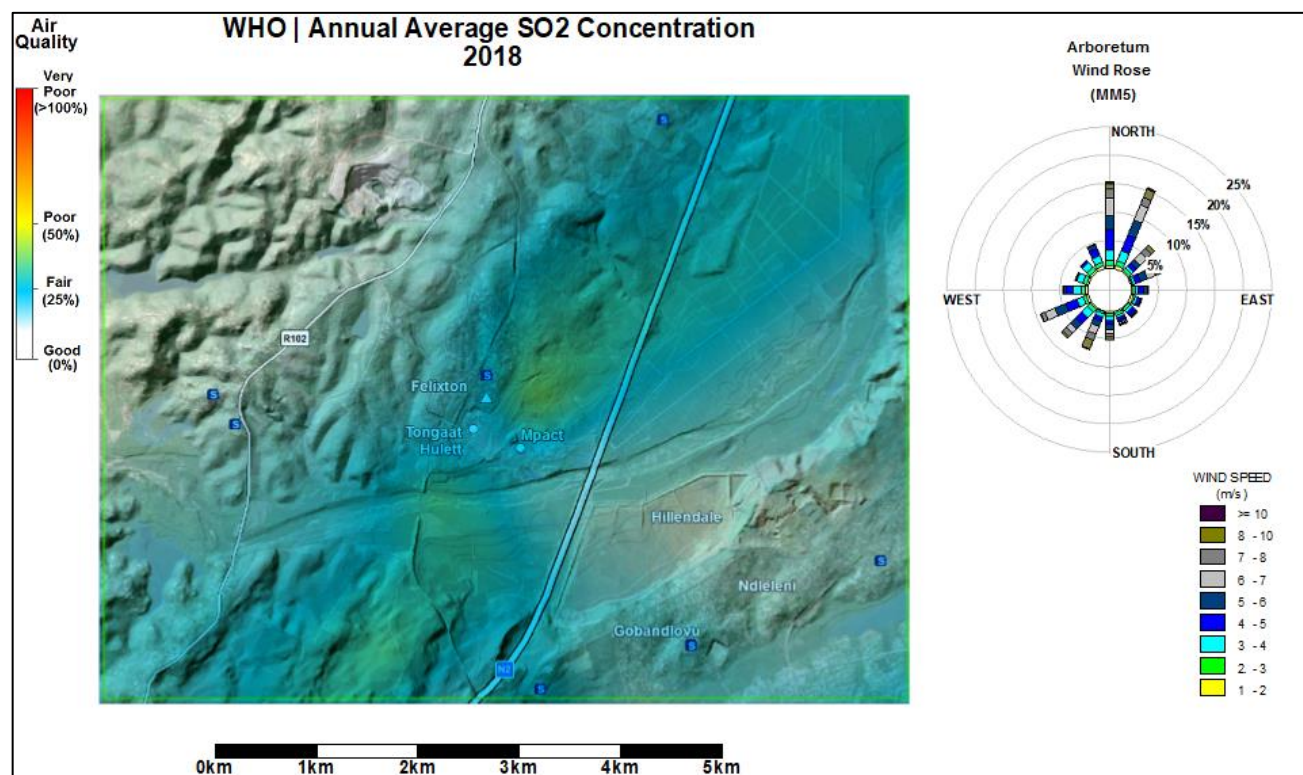
- SO₂ Annual Average Prediction (NEMA):
 - Regional (Figure 24)
 - Richards Bay (Figure 25)
 - RBM (Figure 26)
 - Felixton (Figure 27)
- SO₂ Annual Average Prediction (WHO):
 - Regional (Figure 28)
 - Richards Bay (Figure 29)
 - RBM (Figure 30)
 - Felixton (Figure 31)
- SO₂ Daily Predicted Maxima (WHO):
 - Regional (Figure 32)
 - Richards Bay (Figure 33)
 - RBM (Figure 34)
 - Felixton (Figure 35)
- SO₂ Hourly Predicted Maxima (NEMA):
 - Regional (Figure 36)
 - Richards Bay (Figure 37)
 - RBM (Figure 38)
 - Felixton (Figure 39)
- SO₂ 10-minute Predicted Maxima (NEMA & WHO):
 - Regional (Figure 40)
 - Richards Bay (Figure 41)
 - RBM (Figure 42)
 - Felixton (Figure 43)

The plots are colour coded according to the Air Quality Index (AQI) in Table 8 and Table 9.

Figure 24: SO₂ annual average prediction (regional map).Figure 25: SO₂ annual average prediction (Richards Bay map).

Figure 26: SO₂ annual average prediction (RBM map).Figure 27: SO₂ annual average prediction (Felixton map).

Figure 28: SO₂ annual average prediction (regional map).Figure 29: SO₂ annual average prediction (Richards Bay map).

Figure 30: SO₂ annual average prediction (RBM map).Figure 31: SO₂ annual average prediction (Felixton map).

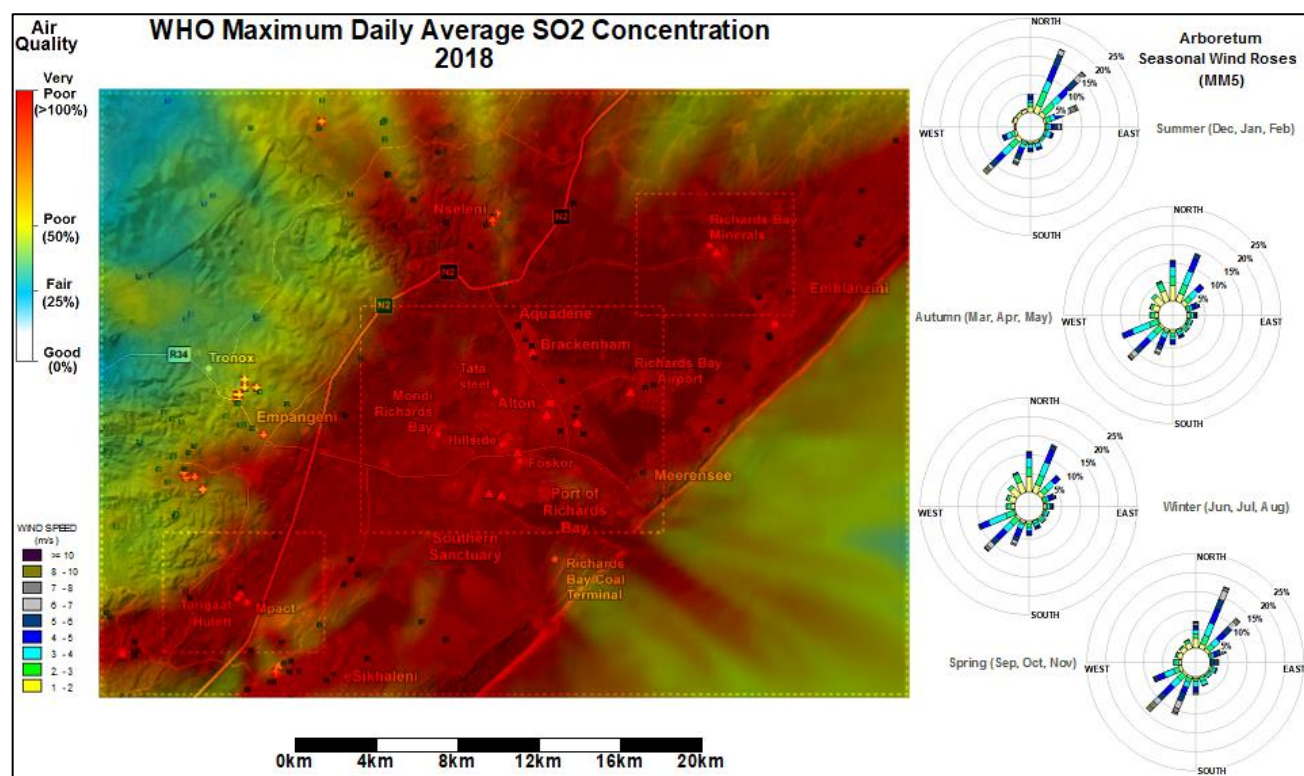


Figure 32: SO₂ daily average prediction (regional map).

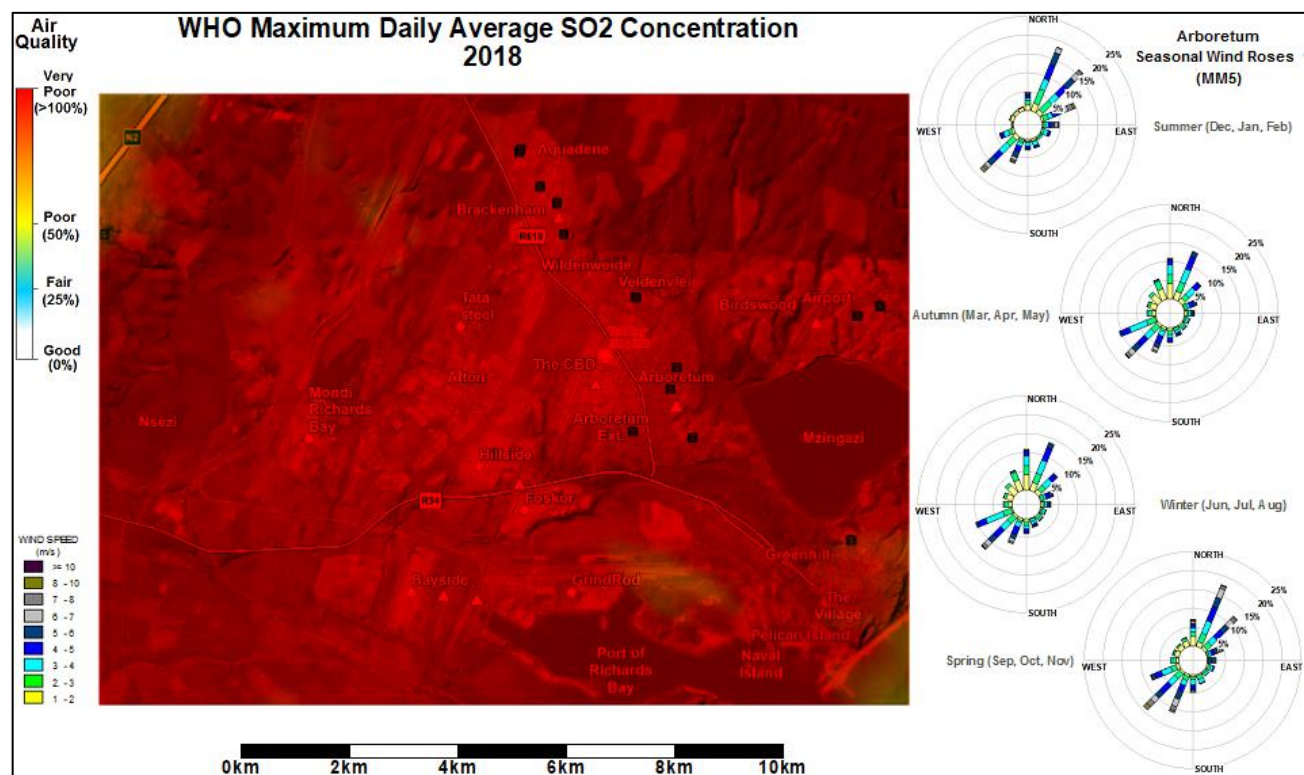
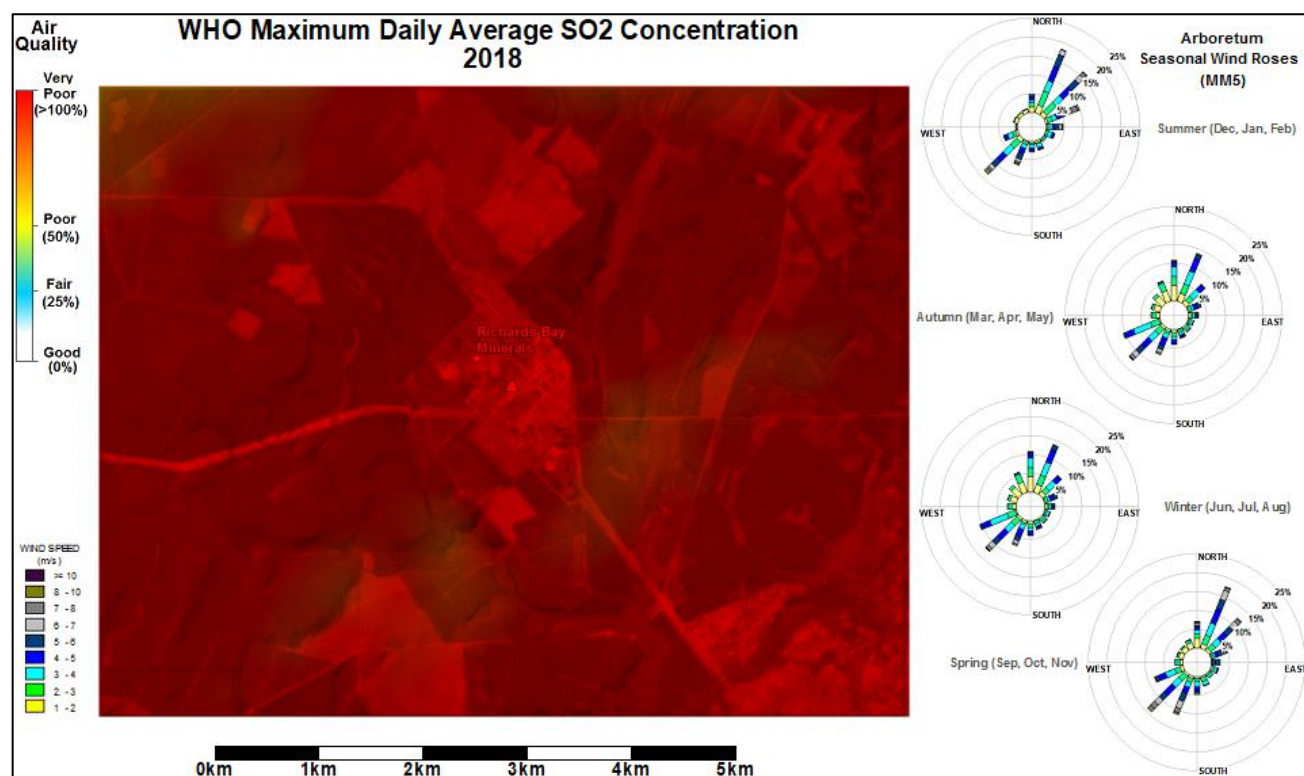
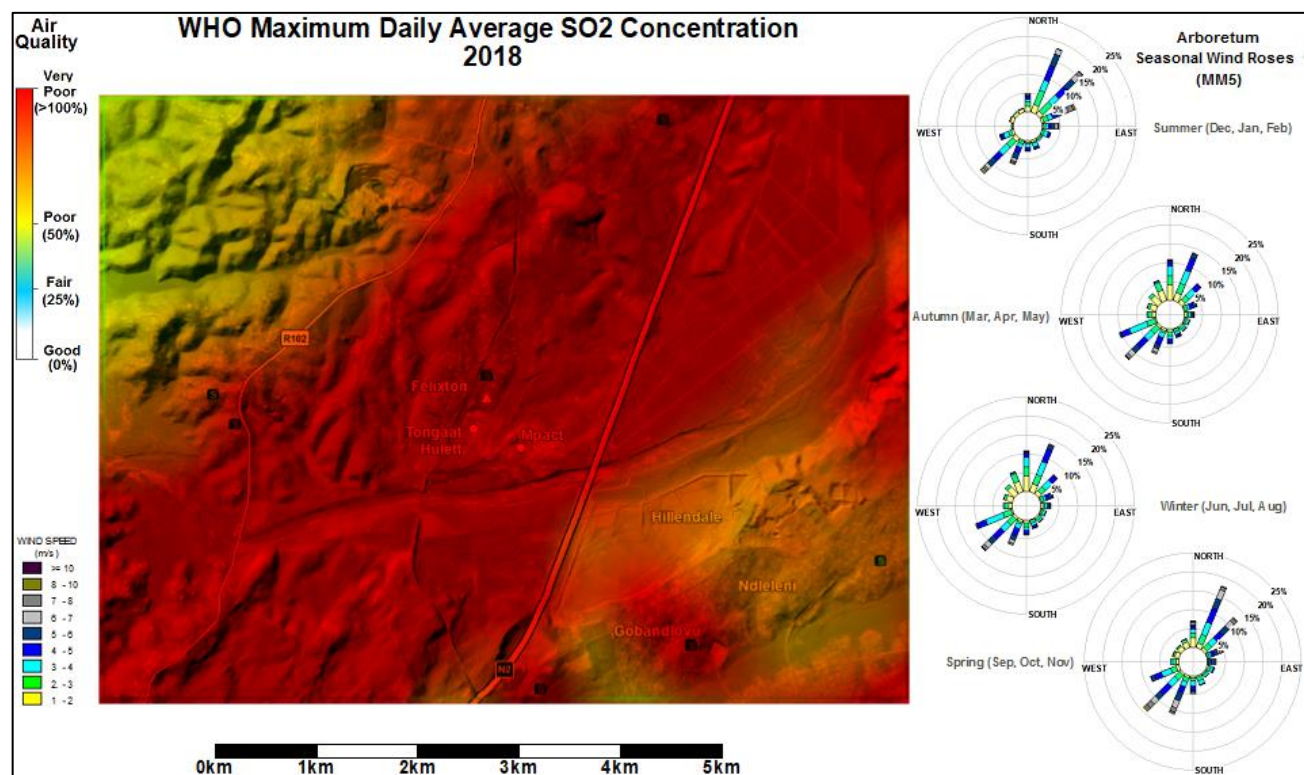
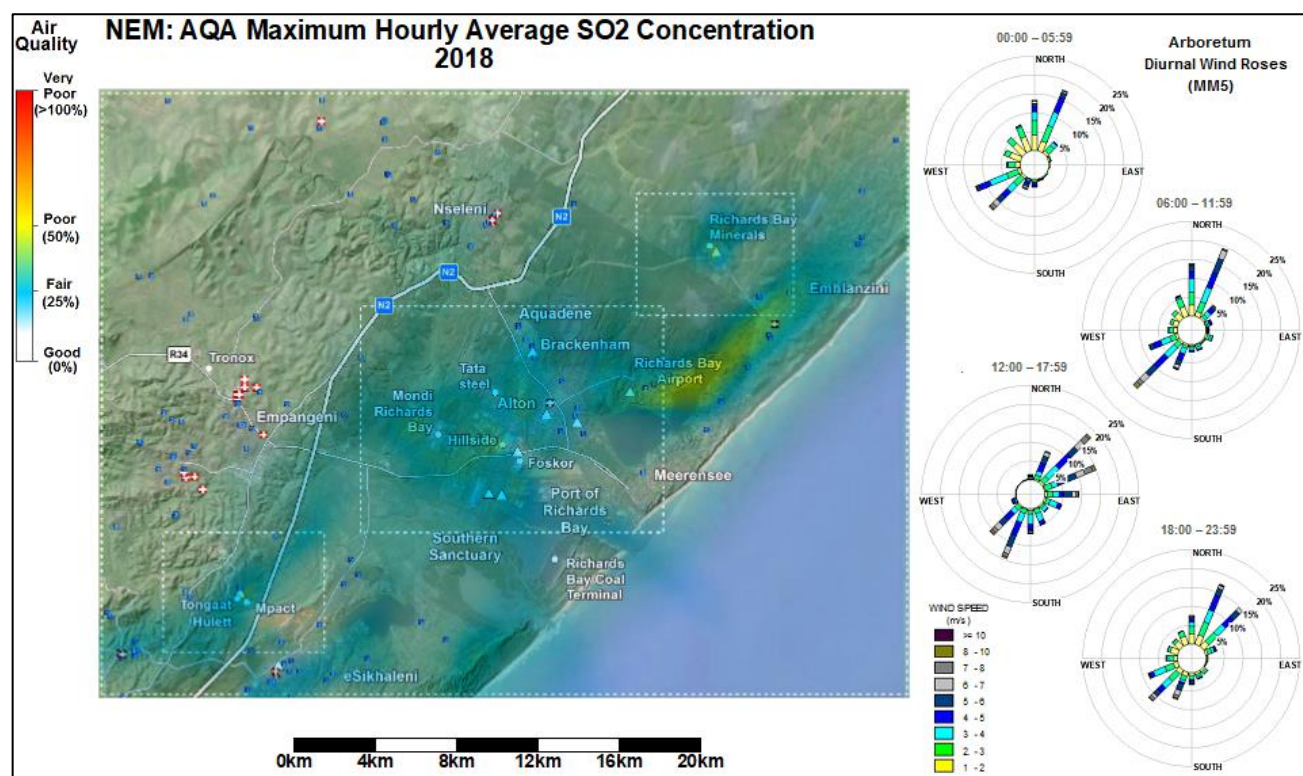
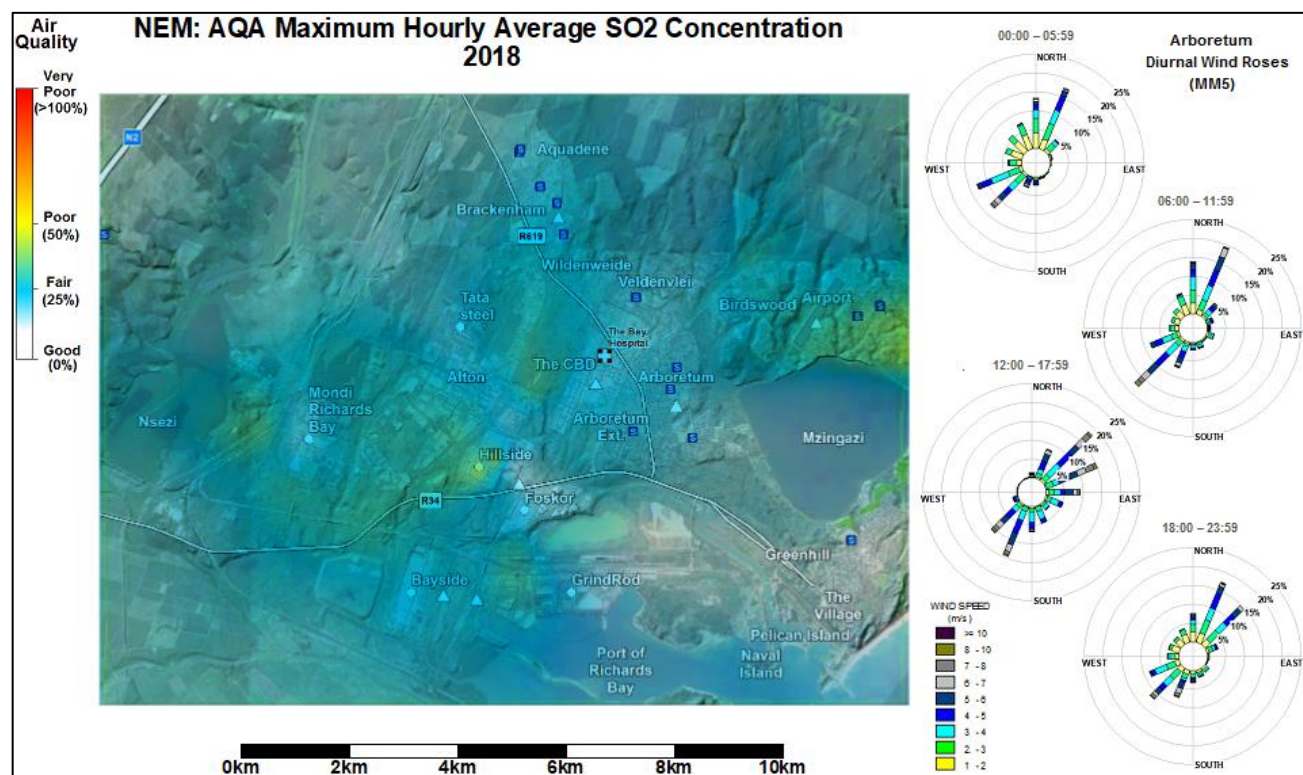
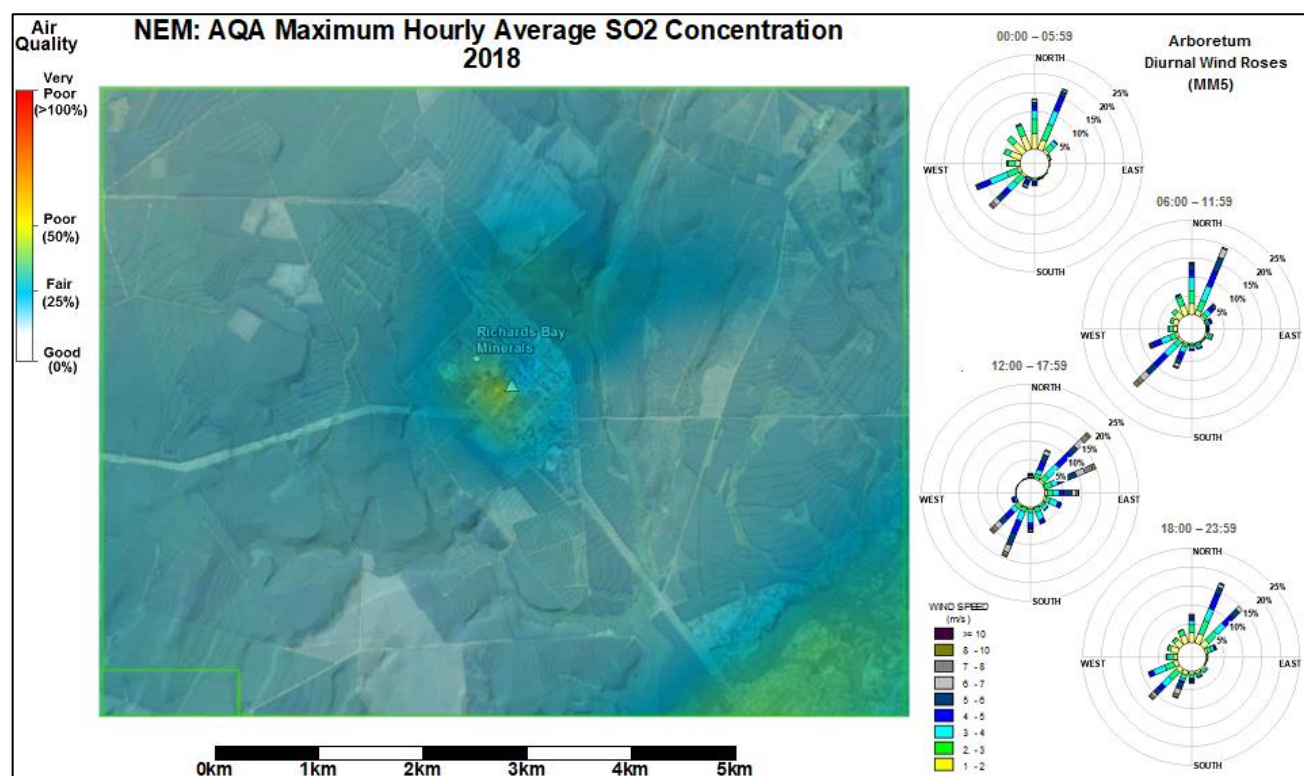
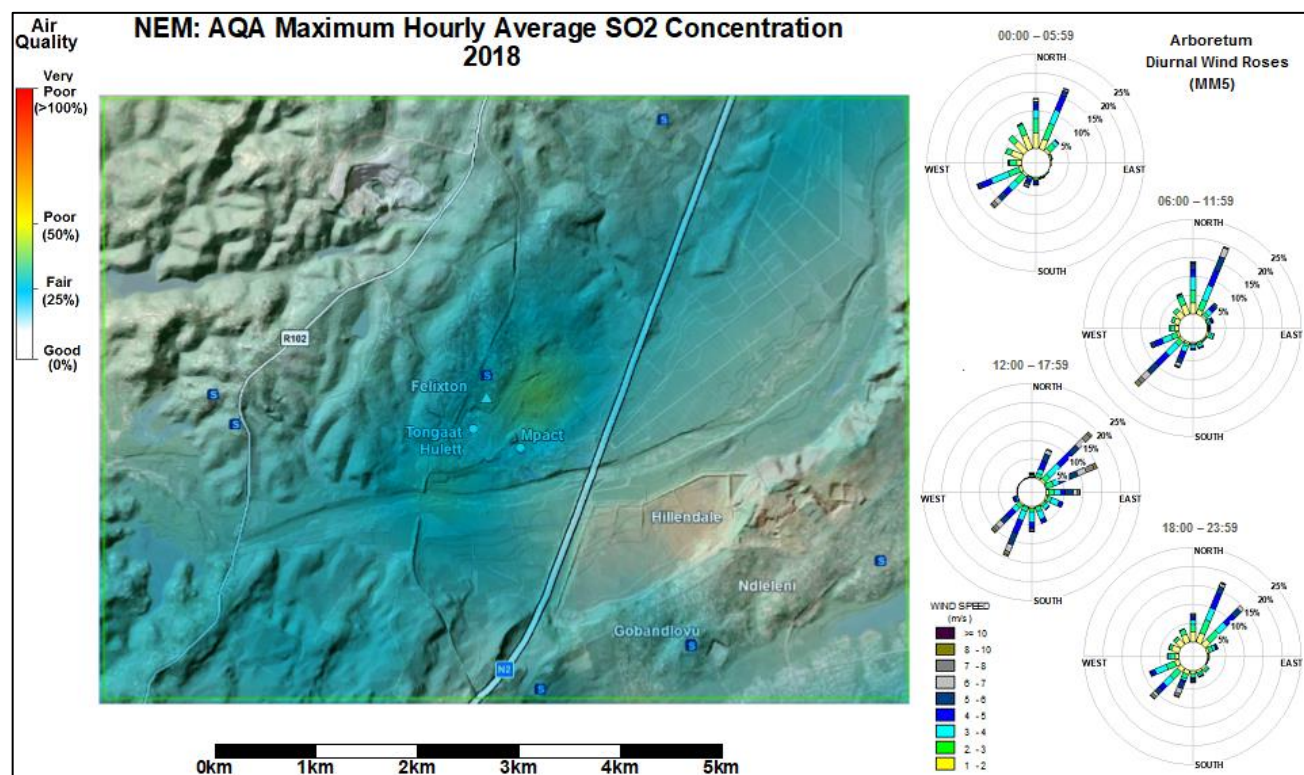
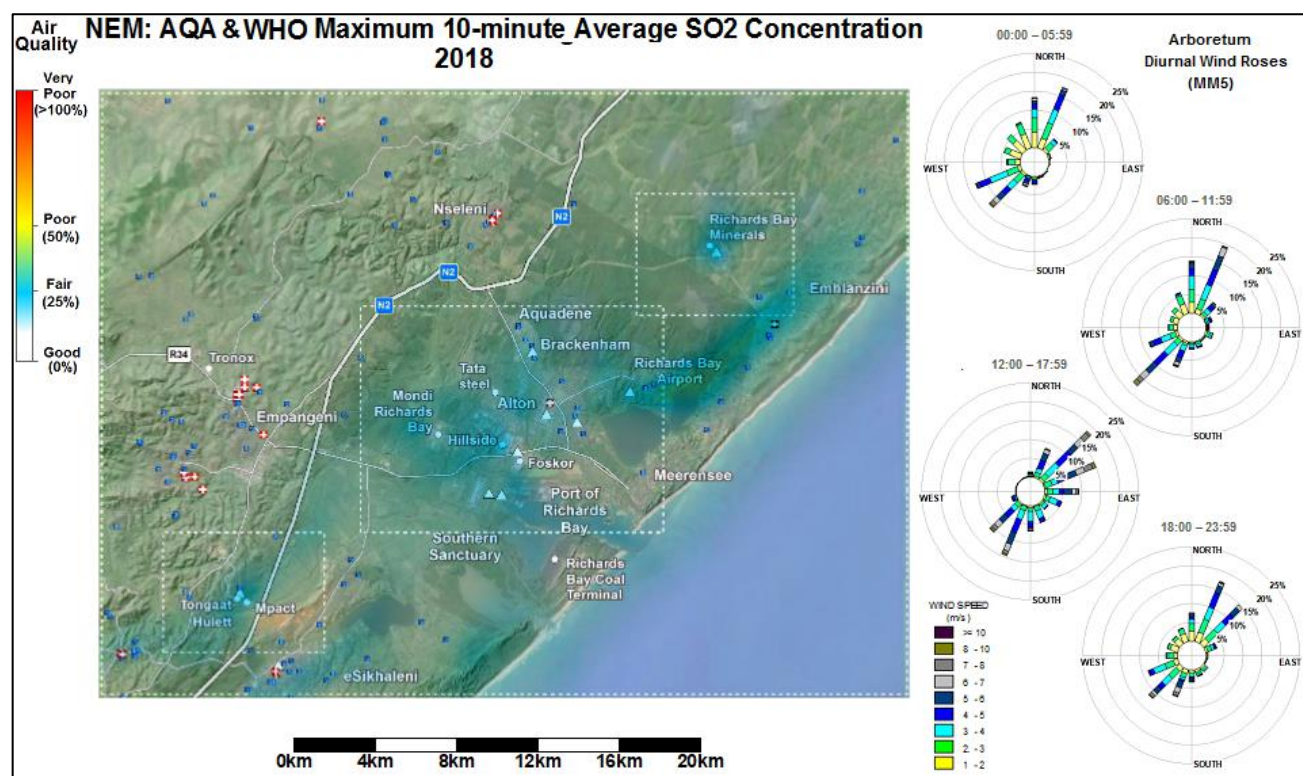
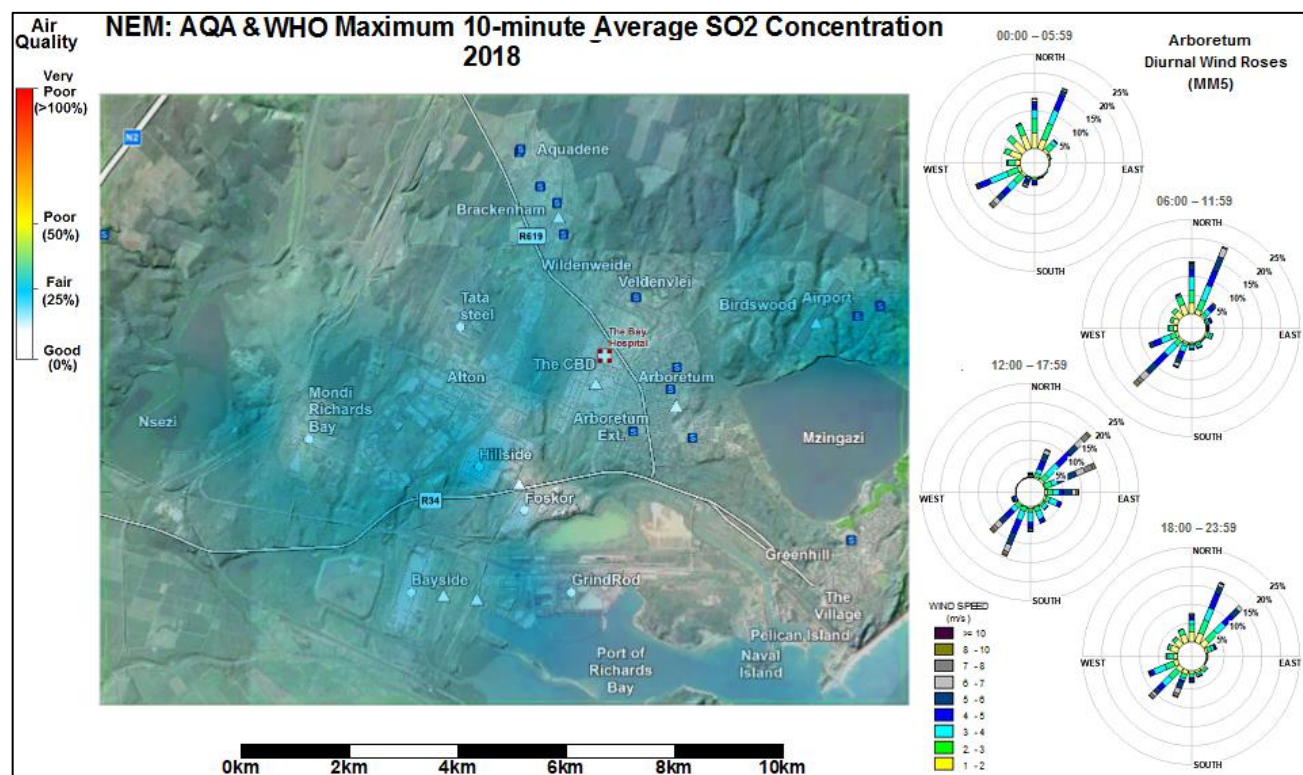


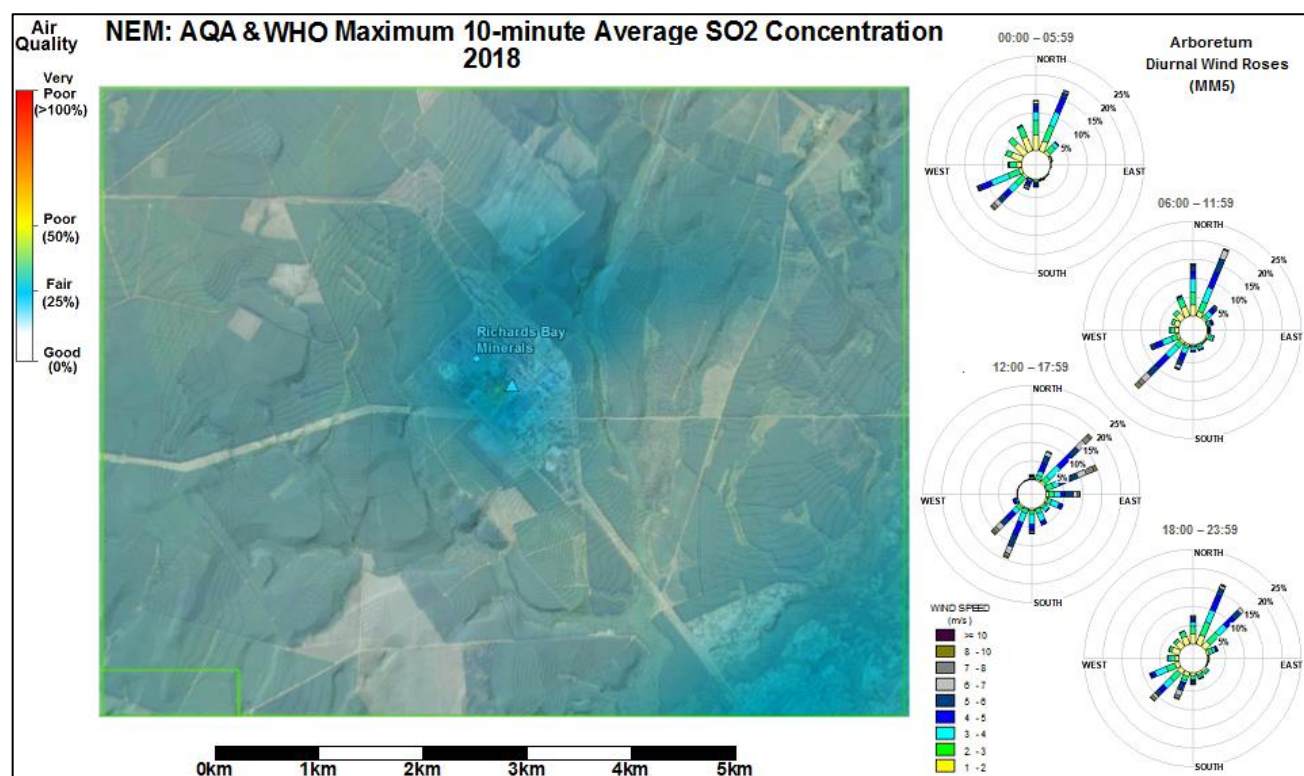
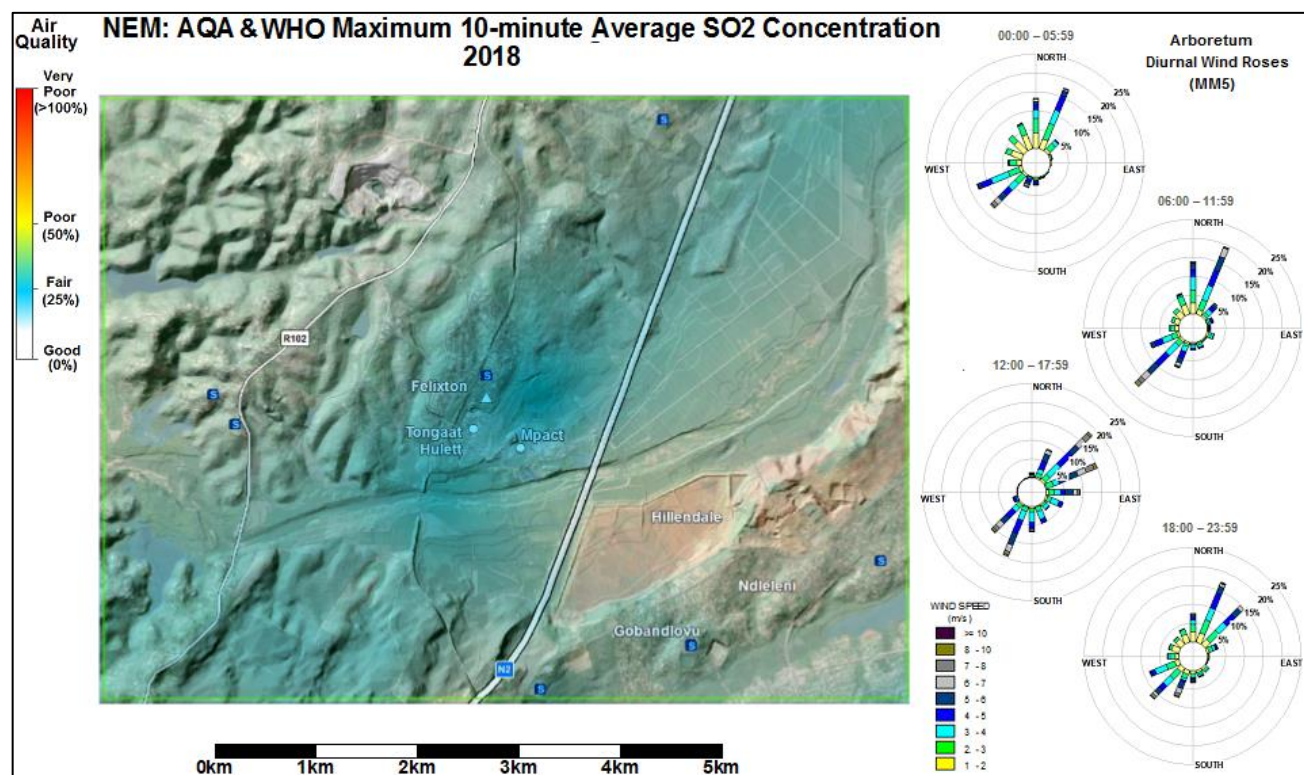
Figure 33: SO₂ daily average prediction (Richards Bay map).

Figure 34: SO₂ daily average prediction (RBM map).Figure 35: SO₂ daily average prediction (Felixton map).

Figure 36: SO₂ maximum hourly average prediction (regional map).Figure 37: SO₂ maximum hourly average prediction (Richards Bay map).

Figure 38: SO₂ maximum hourly average prediction (RBM map).Figure 39: SO₂ maximum hourly average prediction (Felixton map).

Figure 40: SO₂ maximum 10-minute average prediction (regional map).Figure 41: SO₂ maximum 10-minute average prediction (Richards Bay map).

Figure 42: SO₂ maximum 10-minute average prediction (RBM map).Figure 43: SO₂ maximum 10-minute average prediction (Felixton map).

6.0 TOTAL REDUCED SULPHUR MONITORING

Total Reduced Sulphur (TRS) is measured by at CBD. Total reduced sulphur compounds, often associated with rotten egg or cooked cabbage odour, refer to a gaseous mixture of compounds consisting mainly of hydrogen sulphide (H_2S), methyl mercaptan ($\text{CH}_3\text{S-H}$), dimethyl sulphide ($\text{CH}_3\text{-S-CH}_3$) and dimethyl disulphide ($\text{CH}_3\text{-S-S-CH}_3$). While there are other ambient TRS compounds, these four are the most common, abundant and the ones generally referred to in discussions about TRS. Once released into the atmosphere, oxidation products of TRS compounds, such as sulphuric acid, contribute to the acidity of the environment.

The most commonly reported health concerns related to TRS substances are nausea and headaches, although each component has its own characteristics and effects.

6.1 TRS Ambient Air Quality Standards

There are no South African standards for TRS.

The World Health Organization (WHO) recommends that to avoid substantial complaints about odour annoyance among the exposed population, hydrogen sulphide concentrations should not be allowed to exceed $7 \mu\text{g}/\text{m}^3$ (5 ppb), with a 30-minute averaging period (WHO, 2000).

The Ontario Ministry for the Environment (OME) has derived the following standards for TRS for the Pulp and Paper sector (OME, 1999):

- A 24-hour average Ambient Air Quality Criterion (AAQC) of $14 \mu\text{g}/\text{m}^3$ (10.1 ppb) for TRS, based on the adverse effects on the respiratory system (nasal lesions) of this mixture
- A 10-minute average AAQC of $13 \mu\text{g}/\text{m}^3$ (9.3 ppb) for TRS, based on odour effects
- A 30-minute standard of $10 \mu\text{g}/\text{m}^3$ (7.2 ppb) for TRS; based on both odour and health effects of this mixture

For all other sectors (including sectors such as Iron & Steel; Petroleum Refineries, Municipal Sewage Treatment Plants):

- A 24-hour average AAQC of $7 \mu\text{g}/\text{m}^3$ (5.0 ppb) for TRS based on the adverse effects on the respiratory system of this mixture
- A 10-minute average AAQC of $13 \mu\text{g}/\text{m}^3$ (9.3 ppb) for TRS based on odour effects
- A 30-minute standard of $10 \mu\text{g}/\text{m}^3$ (7.2 ppb) for TRS; based on both odour and health effects of this mixture

The RBCAA has decided to implement the:

- WHO 30-minute H_2S Guideline
- OME daily and 10-minute standards for Pulp and Paper sector
- RBCAA established a correlation between TRS concentrations exceeding 4.5 ppb and the number of complaints received, the RBCAA has therefore set this as its own 10-minute target

6.2 TRS Compliance

A summary of the TRS exceedances and breakdown per station is presented below (Table 11). TRS exceedances can be associated with emissions as a result of process upsets (i.e. planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or particular events (e.g. fires or emergency shutdowns). Most of the TRS exceedances recorded during 2018 were allocated to

Mondi. Problems in the Lime Kiln required the introduction of Methanol into the Flare, resulting in burner temperature instability. This resulted in emissions of un-combusted concentrated non-condensable gases (CNCG) which led to the odour complaints. Maximum and Annual average concentrations for TRS are provided in Table 12.

Table 11: TRS station exceedances summary.

Standard / Guideline / Target	Station	Count
WHO 30-minute H ₂ S Guideline (5.0 ppb)	CBD	103
	eSikhaleni	50
OME 10-minute TRS health standard (9.3 ppb)	CBD	87
	eSikhaleni	46
RBCAA 10-minute Target (4.5 ppb)	CBD	450
	eSikhaleni	208

Table 12: TRS maximum and annual concentrations.

Station		Local RBCAA 10-minute Guideline 5.9 µg/m ³ 4.5ppb	Local OME 10-minute Guideline 13 µg/m ³ 9.3ppb	Local WHO 30-minute Guideline 7 µg/m ³ 5.0 ppb	Local OME Daily Guideline 14 µg/m ³ 10.1 ppb	Annual Average
CBD	% of guideline	736%	356%	360%	27%	-
	(ppb)	33.1	33.1	18.0	2.7	0.6
	Date & time	2018/04/08 22:10	2018/04/08 22:10	2018/08/24 06:00	2018/11/01	2018/04
eNseleni	% of guideline	20%	10%	18%	5%	-
	(ppb)	0.9	0.9	0.9	0.5	0.1
	Date & time	2018/12/08 00:00	2018/12/08 00:00	2018/12/08 00:00	2018/12/04	2018/12
eSikhaleni	% of guideline	564%	273%	288%	28%	-
	(ppb)	25.4	25.4	14.4	2.8	0.1
	Date & time	2018/08/17 03:00	2018/08/17 03:00	2018/08/17 03:00	2018/08/08	2018/12
Notes: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).						

6.3 TRS Annual Average Concentration

Annual average TRS concentrations are illustrated in Figure 45. There was a marked decrease in annual average TRS concentrations from 2008 to 2011, concentrations seem to have stabilised since then though. In 2010 Mondi Richards Bay commissioned Phase 1 of their Odour Abatement Project, this involved installing carbon filters on all their odorous venting points. This would have resulted in a decrease in ambient TRS and does not explain the increase between 2010 and 2012 as Mondi continued with various smaller odour

abatement projects during this time which should have resulted in a further decrease in TRS. It is possible that weather conditions may have played a role. In 2012 Mondi Richards Bay commissioned Phase 2 of the Odour Abatement Project which successfully reduced TRS emissions from their Chip Bin. However, during the winter of 2012, they experienced a problem of fugitive odour from their effluent plant due to a turpentine tube condenser that was taken out of service for repairs, the odour impact was unknown at the time. This was addressed in 2012 and as a result 2013 TRS decreased. Ambient TRS increased again in 2014 due to mill power instability, 2015 to 2017 also proved to be difficult years with an increase in fugitive emissions from the effluent plant because of decreased water consumption.

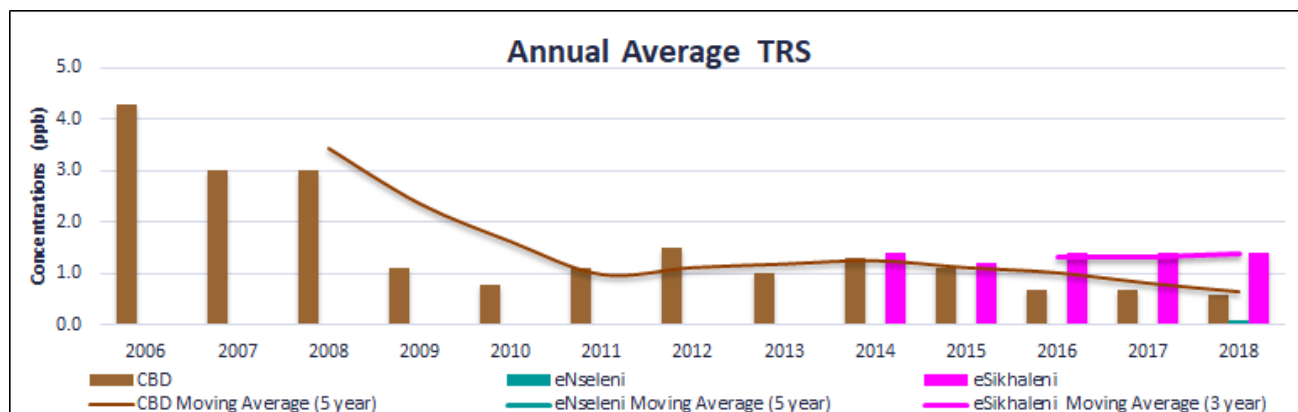


Figure 44: TRS annual average concentrations.

6.4 TRS Seasonal Concentrations

The seasonal TRS concentrations in 2018 are provided in Figure 45.

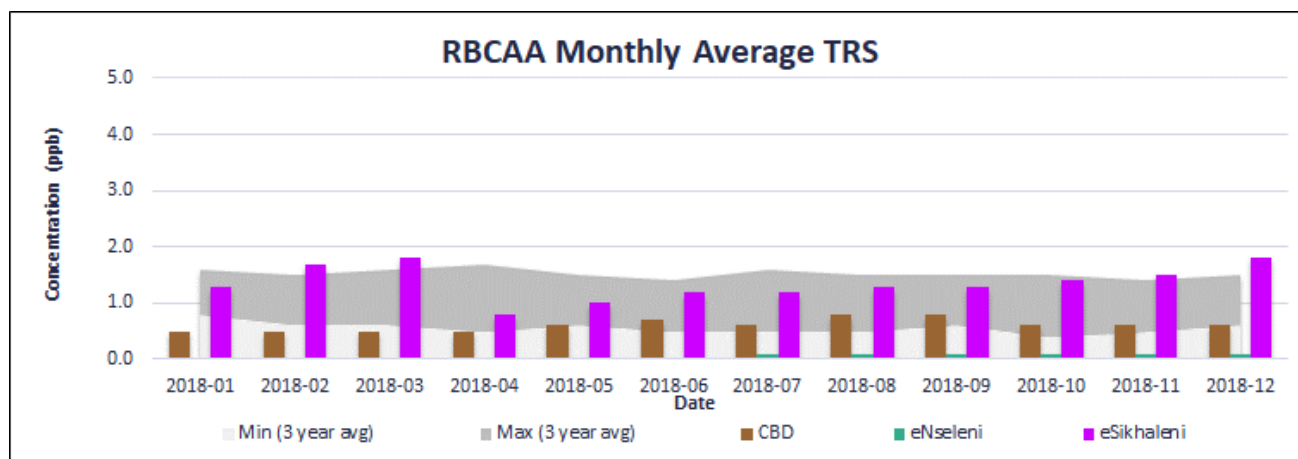


Figure 45: TRS seasonal concentrations.

6.5 TRS Diurnal Concentrations

The diurnal TRS concentrations are shown below (Figure 46).

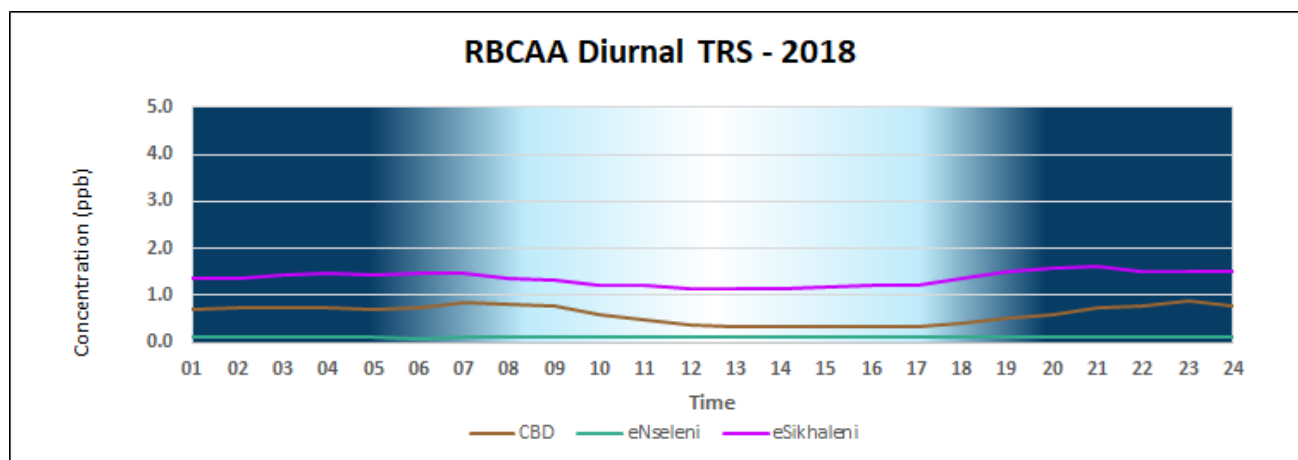


Figure 46: TRS diurnal concentrations.

6.6 TRS Daily Averages

Daily average TRS concentrations at CBD are shown below (Figure 47). There were no measured exceedances of the OME daily TRS Standard (10.1 ppb).

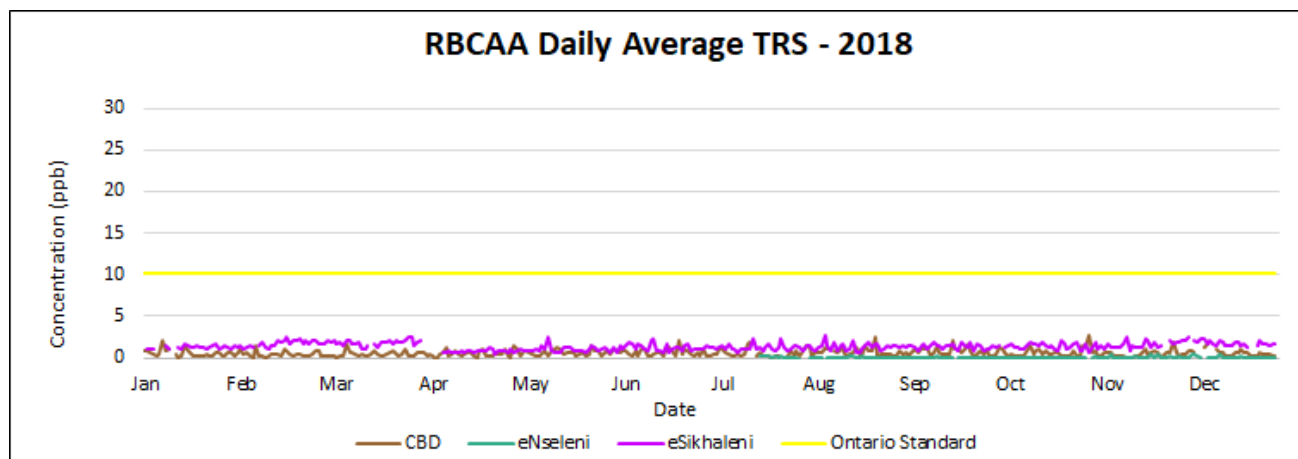


Figure 47: TRS daily average concentration.

6.7 TRS 30-minute Averages

The 30-minute average TRS concentrations at CBD are shown below (Figure 48). There were 153 measured exceedances of the WHO 30-minute H₂S Guideline (5.0 ppb).

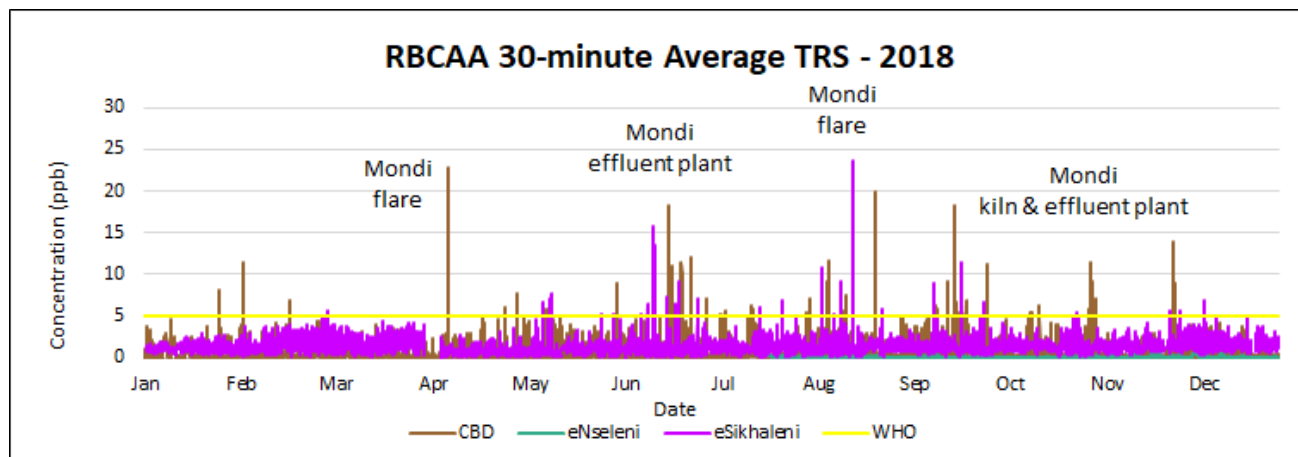


Figure 48: TRS 30-minute average concentration.

6.8 TRS 10-minute Averages

The 10-minute average TRS concentrations are shown below (Figure 50). There were 658 measured exceedances of the RBCAA 10-minute Target (4.5 ppb), and 133 measured exceedances of the OME 10-minute TRS Standard (9.3 ppb).

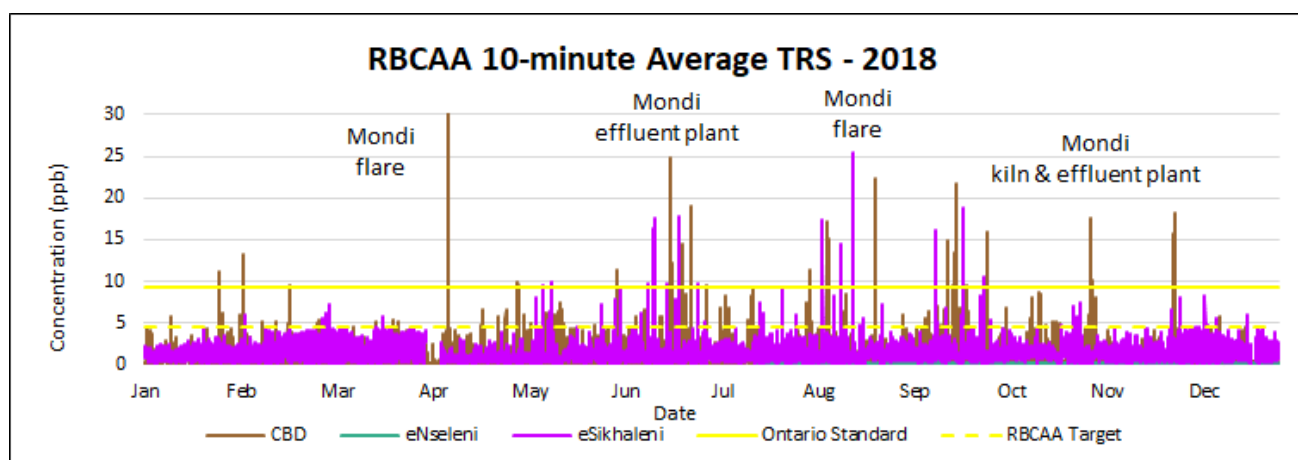


Figure 49: TRS 10-minute average concentrations.

7.0 AIR QUALITY (2017 – 2018)

Where possible the RBCAA assesses data collected by its network against National Standards, International Guidelines, and Local Targets. The WHO air quality guidelines (AQGs) are intended for worldwide use but have been developed to support actions to achieve air quality that protects public health in different contexts. Air quality standards and local targets, on the other hand, are set by each country or region to protect the public health of their citizens and as such are an important component of national risk management and environmental policies. National standards and local targets will vary according to the approach adopted for balancing health risks, technological feasibility, economic considerations and various other political and social factors, which in turn will depend on, among other things, the level of development and national capability in

air quality management (WHO, 2005). Areas where no exceedances are measured may be considered to have relatively good air quality according to the relative AQI (Table 8 and Table 9).

7.1 Comparison of Annual Averages

Annual averages for 2017 and 2018 are shown in Figure 50, Figure 51, and Figure 52. Compared to the previous year annual average PM₁₀ concentrations measured at Felixton were lower, concentrations measured at the other stations were similar (within 10% of the NEM: AQA PM₁₀ Annual Standard). It should be noted that all stations exceeded the WHO Annual Guideline.

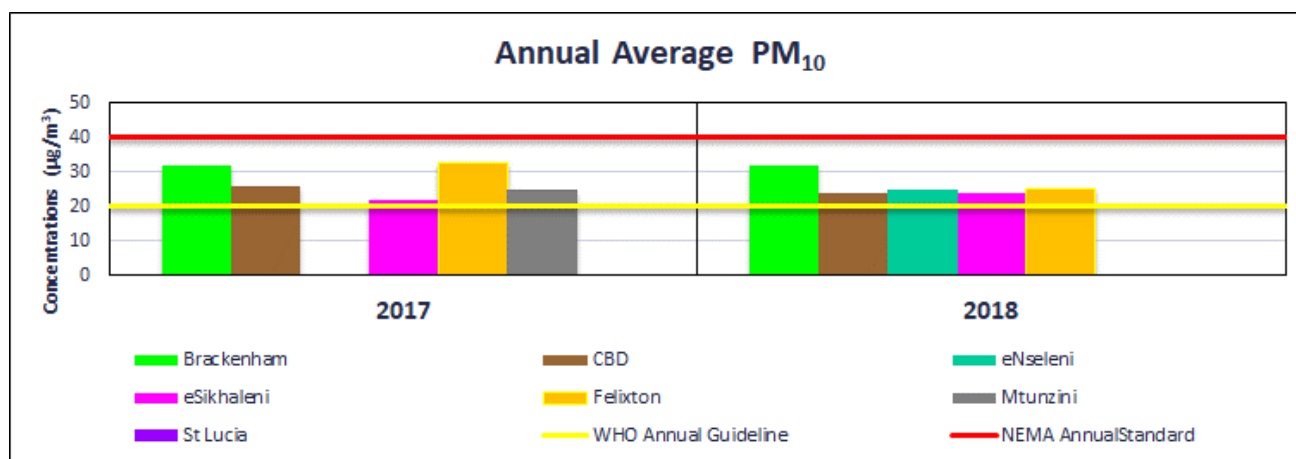


Figure 50: PM₁₀ annual average 2017 - 2018.

Compared to the previous year annual average SO₂ concentrations measured at Harbour West were higher, concentrations measured at the other stations similar (within 10% of the NEM: AQA SO₂ annual standard). The WHO daily guideline was exceeded at Harbour West and Scorpio.

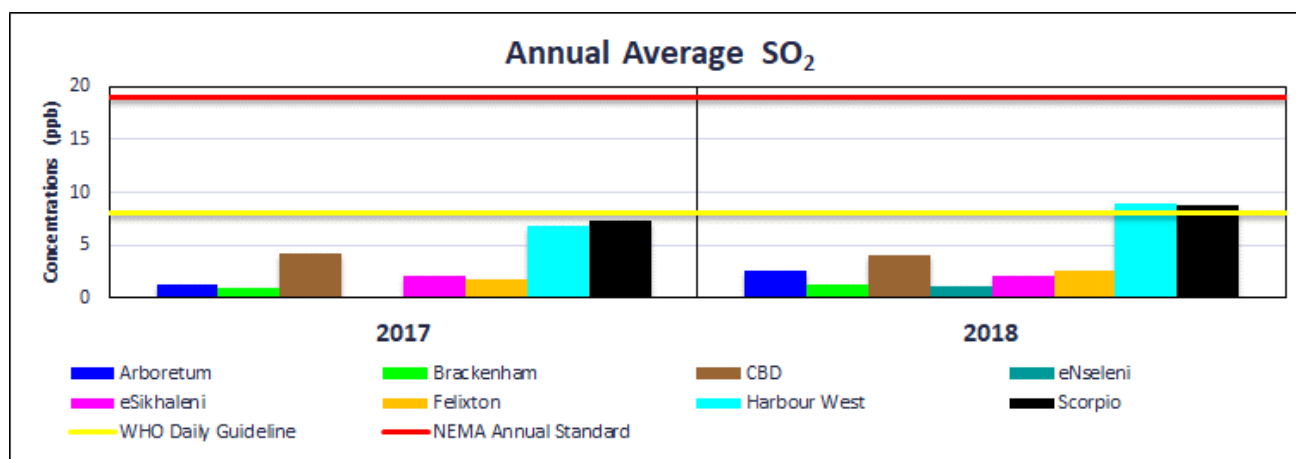


Figure 51: SO₂ annual average 2017 - 2018.

Compared to the previous year annual average measured TRS concentrations were similar (within 10% of the RBCAA 10-minute standard [4.5 ppb]).

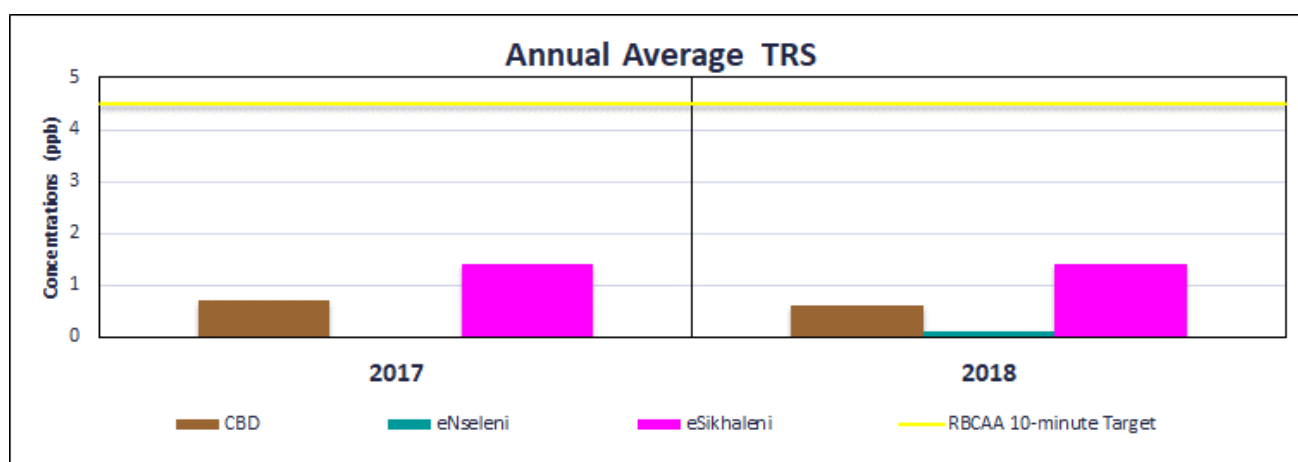


Figure 52: TRS annual average 2017 - 2018.

7.2 Comparison of Exceedances

The percentage of days on which exceedances were measured during 2017 and 2018 are shown in Figure 53 and Figure 54. Compared to 2017, 2018 had 23% more PM₁₀, 11% more SO₂ and 8% more TRS exceedances.

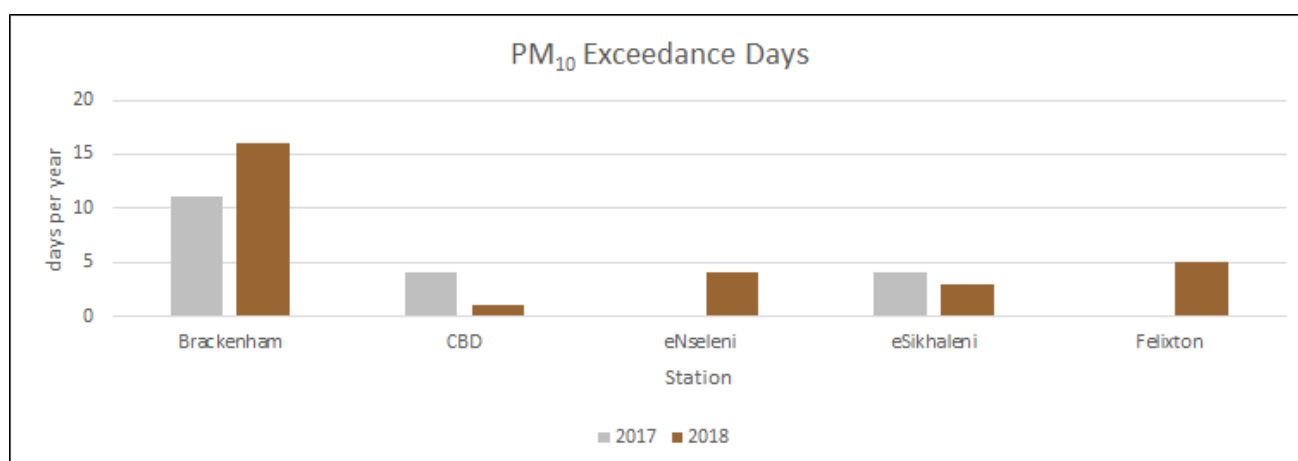


Figure 53: Number of days on which PM₁₀ exceedances occurred 2017/2018.

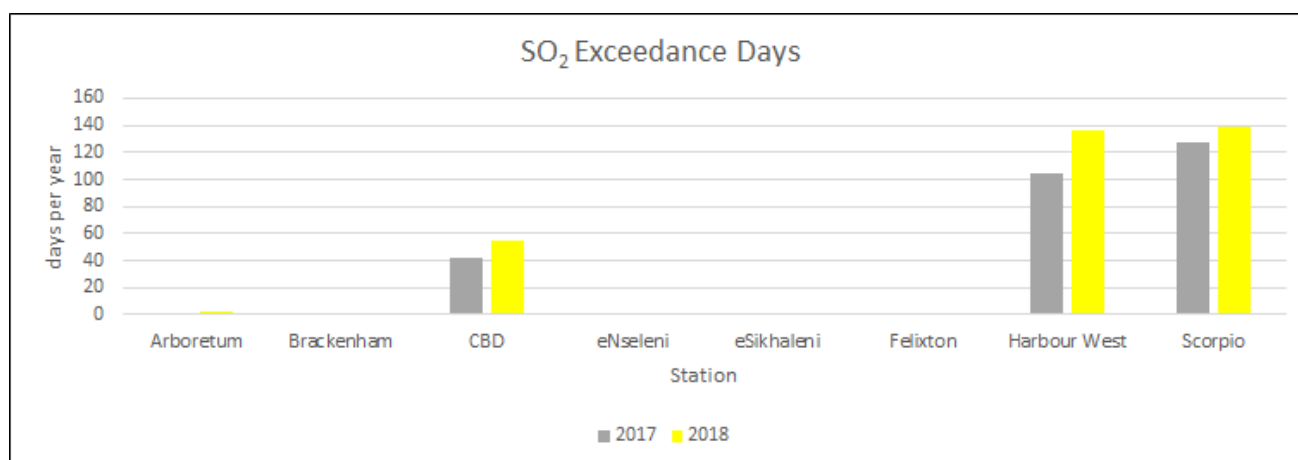


Figure 54: Number of days on which SO₂ exceedances occurred 2017/2018.

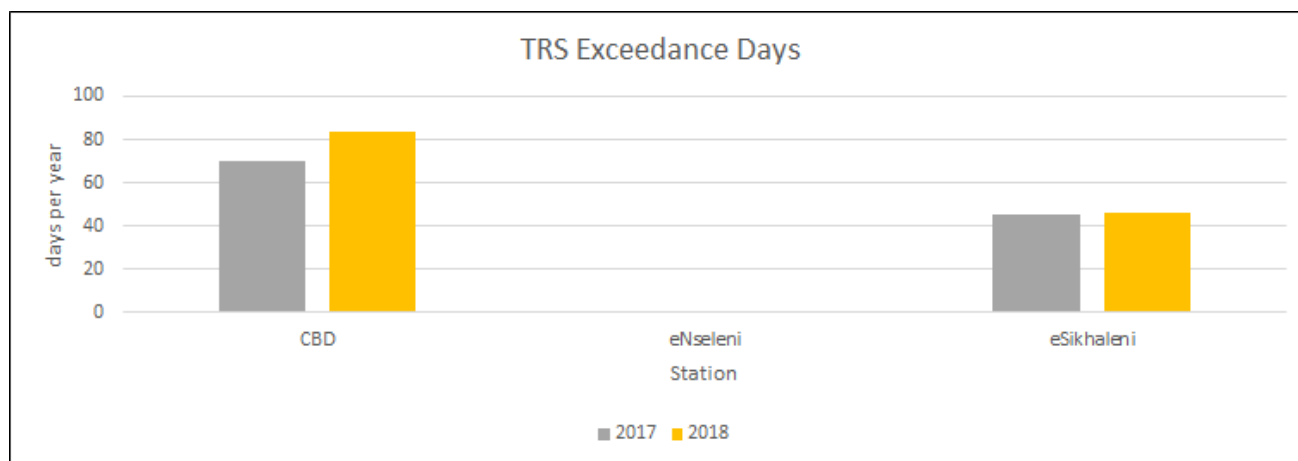


Figure 55: Number of days on which TRS exceedances occurred 2017/2018.

7.3 Conclusion

Golder concludes that based on:

- Annual concentrations and the health guideline:
 - PM₁₀ is of concern at all stations
 - SO₂ is of concern at Harbour West and Scorpio
- Exceedances of the health guideline:
 - Air quality was compromised during 2018 at all stations
 - Air quality experienced during 2018 may be considered to be worse than that experienced during 2017

8.0 REFERENCES

- ASTM. (2017). *Designation: D1739 – 98 (Re-approved 2017) Standard Test Method for Collection and Measurement of Dust Fall (Settleable Particulate Matter)*. American Society for Testing and Materials.
- EC. (2015). *Air Quality Standards*. Retrieved from European Commission: Environment: <http://ec.europa.eu/environment/air/quality/standards.htm>
- IFC. (2007). *Environmental, Health, and Safety Guidelines, General EHS Guidelines: Environmental Air Emissions and Ambient Air Quality*. World Bank Group, International Finance Corporation.
- OME. (1999). *Rationale for the Development of Ontario Air Standards for Total Reduced Sulphur (TRS) & Compounds: hydrogen sulphide (H₂S), mercaptans (as methyl mercaptan), dimethyl sulphide (DMS), and dimethyl disulphide (DMDS)*. Retrieved from Ontario Ministry of the Environment: <http://www.ebr.gov.on.ca>
- RSA-NEMAQA. (2002). *National Environmental Management: Air Quality Act 39 of 2004*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004.
- RSA-NEMAQA. (2009). *National Ambient Air Quality Standards*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 32816, 24 December 2009.
- RSA-NEMAQA. (2012). *List of activities which results in atmospheric emissions which have or may have a significant detrimental effect on the environment, including human health, social conditions, economic conditions, ecological conditions or cultural heritage*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 35894, November 2012.

RSA-NEMAQA. (2012). *National Ambient Air Quality Standard for Particulate Matter with Aerodynamic Diameter Less Than 2.5 Micron Metres (PM_{2.5})*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004.

RSA-NEMAQA. (2012). *National Ambient Air Quality Standard for Particulate Matter with Aerodynamic Diameter Less Than 2.5 Micron Metres (PM_{2.5})*. National Environmental Management: Air Quality Act 39 of 2004.

RSA-NEMAQA. (2013). *Declaration of a small boiler as a controlled emitter and establishment of emission standards*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 36973, November 2013.

RSA-NEMAQA. (2013). *National dust control regulations*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 36974, November 2013.

RSA-NEMAQA. (2014). *Regulations Regarding Air Dispersion Modelling*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 36974, November 2013.

RSA-NEMAQA. (2015). *Amendments to the list of activities which results in atmospheric emissions which have or may have a significant detrimental effect on the environment, including human health, social conditions, economic conditions, ecological conditions or cultural herit*. Republic of South Africa, National Environmental Management: Air Quality Act 39 of 2004, Government Gazette no, 38863, June 2015.

US-EPA. (2017). *NAAQS Table*. Retrieved from United States - Environmental Protection Agency: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

WHO. (2000). *Air Quality Guidelines for Europe, Second Edition*. World Health Organisation.

WHO. (2005). *WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide and Sulfur Dioxide, Global update 2005, Summary of Risk Assessment*. World Health Organisation.

WHO. (2005). *WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide and Sulfur Dioxide, Global update 2005, Summary of Risk Assessment*. World Health Organisation.

Golder Associates Africa (Pty) Ltd.



François Nel
Operations Manager



Lance Coetzee
Project Manager

FN/LC/nbh

Reg. No. 2002/007104/07

Directors: RGM Heath, MQ Mokulubete, SC Naidoo, GYW Ngoma

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APPENDIX A

Quality Assurance.

The SO₂ concentrations reported are determined by a United States Environmental Protection Agency (US EPA) equivalent method EQSA-0193-092. SO₂ and TRS measurements allow for a maximum precision error of 10% of the reported value. A tolerance around the zero point of plus or minus 5 ppb is allowed. All effort is made to reduce the error to a minimum. In terms of quality assurance standards, data collection must be above 90% to be valid for statistical analysis.

Table A1: Quality Assurance

Test	Range	Action
Zero	Zero 0 to 2 ppb	Leave as is.
	-2 to 0 ppb	Set to zero.
	-5 to -2 ppb and 2 to 5 ppb	Adjust data set to re-zero all data
	Outside above limits invalidate and recalibrate.	If specific reason can be identified for deviation, data can be adjusted.
Span	Span Plus or minus 3% deviation.	Leave as is.
	-10 to -3% and 3 to 10% deviation.	Scale data set by opposite corresponding percentage.
	Outside above limits invalidate and recalibrate.	If specific reason can be identified for deviation, data can be adjusted.

APPENDIX B

Emission Inventory.

Table B1: SO₂ Emission inventory 2018

Industry	Description	SO ₂ Emission 2018 (t)	SO ₂ Emission 2018 (t)	SO ₂ Contribution (%)
Foskor	Acid Plant	2390	2401	13%
	Boiler	11		
Tongaat Hulett	Boiler	185	185	1%
Mondi	Flume 1	1417	3080	17%
	Flume 2	836		
	Power Boiler	795		
	Incinerator	8		
	Bleach Plant	24		
Mpact	Babcock	281	816	5%
	JT Boiler	524		
	Oil Burner	11		
RBM	Char Plant	468	542	3%
	Miscellaneous	34		
	MSP (Drier)	38		
	Smokers	1		
South32	FTC	1885	10561	59%
	GTC 1	1955		
	GTC 2	1680		
	GTC 3	1579		
	GTC 4	1579		
	GTC 5	1630		
	Potrooms	254		
Tronox	Tank 1	251	251	1%
Total		17836	17836	100%
Notes: Tongaat Hulett shuts down during the 1st quarter and last month of the year.				

APPENDIX C

Operational Report.

Table C1: Data Capture 2018

Station	Station Availability (%)	PM ₁₀ (%)	SO ₂ (%)	TRS (%)
Arboretum	95		94	
Brackenham	100	89	99	
CBD	99	97	99	99
eNseleni	97	97	97	98
eSikhaleni	96	96	95	97
Felixton	99	99	97	
Harbour West	100		99	
Scorpio	100		98	
Average	99	96	98	98
Notes: Red - Not acceptable for statistical purposes (<80%); Yellow – Acceptable for statistical purposes but does not meet SANAS data capture requirements (<90%); White – Meets SANAS data capture requirements (>=90%); and, Blue - RBCAA Target (>=98%). Missing data: Brackenham (PM₁₀) – analyser faulty (Nov & Dec).				

Table C2: Network maintenance.

Action	Dates
Particulate Calibrations (TEOM)	1 to 2 February 2018 20 to 21 August 2018
Particulate Calibrations (E-sampler)	3 May 2018 (flow calibrations and k factor) 1 November 2018 (flow calibrations)
Trace Gas Calibrations	5 to 8 March 2018 18 to 20 July 2018 19 to 21 November 2018
Meteorological Calibrations	1 and 2 June 2018
Mtunzini Decommissioned	19 September 2017
eNseleni Commissioned	12 December 2017
eNseleni SO ₂ and TRS Commissioned	16 July 2018
Other: 1. Brackenham monitoring station - AC stolen off the roof on 25 July 2018 2. Coalfields CC – Monitoring station maintenance (Paint and corrosion protection)- September 2018 3. ELTEK - Monitoring stations electrical compliance certificates – October /November 2018 4. All RBCAA signage/stickers replaced - November 2018 5. Brackenham monitoring station - AC stolen off the roof on 14 December 2018.	

Table C3: Particulate analyser status.

Serial	Purchased	Age	Type	Site	Status
248970311	Jan 2004	15 years	PM ₁₀	eSikhaleni	OK
274100812	Dec 2008	10 years	PM ₁₀	eNseleni	OK
273580810	Feb 2009	9 years	PM ₁₀	CBD	OK
206850912	Jan 2010	9 years	PM ₁₀	Brackenham	OK
E-sampler	Mar 2012	6 years	PM ₁₀	Felixton	OK

Table C4: Trace gas analyser status.

Serial	Purchased	Age	Type	Location	Status
165 (T102)	Apr 2018	0 years	SO ₂	eNseleni	Installed at eNseleni 15 June 2018 as TRS
3020	May 2017	1 years	SO ₂	Arboretum	Installed as main analyser 30 Jan 2018
2793	Jan 2017	2 years	SO ₂	Harbour West	Removed from eSk and installed at HW 16 May
85B	Jan 1997	22 years	SO ₂	C&M	Written off, to be used for spares for the RBCAA
92B	Mar 1997	21 years	SO ₂	Brackenham	OK
M2015-M736	Mar 1997	21 years	SO ₂	Scorpio	OK (installed on 28 October 2016)
M714	Oct 2005	13 years	SO ₂	C&M	Written off, to be used for spares for the RBCAA
M2812	Sep 2006	12 years	SO ₂	Harbour West	Written off, to be used for spares for the RBCAA
1980	Jul 2008	10 years	SO ₂	Felixton	Installed at Felixton after repairs. 29 March 2018
3055	May 2011	7 years	TRS	CBD TRS	OK
253	Mar 2012	6 years	SO ₂	eNseleni	Installed at eNseleni 16 July 2018
593	Apr 2013	5 years	SO ₂	CBD	OK
1049	Feb 2014	4 years	TRS	eSikhaleni	Received back 11 May install at eSikhaleni TRS
1540	Mar 2015	3 years	SO ₂	eSikhaleni	OK

APPENDIX D

Complaints Log.

Table D1: Complaints Log – January 2018.

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	Siyabonga Ziqubu	30/01/2018 16:00	Hillside - Area	Black smoke from the stacks (closer to the Training centre) - photographs attached	South 32 05/02/2018 Alison Gerber responded: Source and Nature of Emissions: On the 30 January at 16:00 both Fume Treatment Centre's (FTCs) tripped due to a loss in compressed air. This resulted in visible black smoke from both stacks. Root Cause of Incident: Piping on the inline filter pulled loose on a glued joint which resulted in the loss of cooling water to compressors on sub system 2. This caused the two compressors feeding from sub system 2 to trip. After completion of the repairs to the water pipe, the compressors on sub system 2 were restarted and the plant pressure normalised at 8bar. Thereafter, the Utilities maintenance team members proceeded to close the bypass valves without confirming that the non-critical valves were in the open position. The non-critical valves shut off automatically at a pressure below 680kpa and are required to be manually opened when the air pressure is restored above 680kpa. Corrective Actions: • Replace the compressed air inline cooling water filter piping with stainless steel piping. Preventative Actions: • Fit signage on the bypass valve "ensure noncritical valve is open before closing the bypass valve"	Resolved - South 32 (Hillside)

No complaints were received during February 2019

Table D2: Complaints Log – March 2018.

No.	Complainant	Date	Location	Description	Results	Resolution
1	Ilana 0828778017	01/03/2018 07:15	John Ross Highway	Excessive emissions emanating from the Mondi plant.	Mondi 01/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: Emission of a dark visible plume from Recovery Boiler 2 (CRU2). Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations. Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					Corrective Action: Mondi Richards Bay Mill has been on shutdown mode due to Digester maintenance work that needed to be conducted, which in turn resulted to the Mill unplanned shut since 14.02.2018. Given the time required for the digester repairs, a decision was made by the mill Management that the plant operations will not start up before the initially planned annual shut date of the 4th of March 2018, hence the mill has gone straight into the planned annual shut work execution from the 27th of February 2017. However, this decision necessitated the Recovery Boiler 2 (CRU2) to burn HFO in preparation of the Power and Recovery operating units for the annual shut work commencement, thus causing the emission of a dark visible plume from the stack. Actions taken: CRU2 is currently being capacitated to reach the temperature and pressure of 360 Degrees Celsius and 7mPa respectively as planned. This will change over from HFO burning to the firing of black liquor, which will effectively allow the dark plume to disappear.	
2	R Camminga 083 251 4969	01/03/2018 08:23	John Ross Highway	Excessive emissions emanating from the Mondi plant.	Mondi 01/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: Emission of a dark visible plume from Recovery Boiler 2 (CRU2). Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations. Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action: Mondi Richards Bay Mill has been on shutdown mode due to Digester maintenance work that needed to be conducted, which in turn resulted to the Mill unplanned shut since 14.02.2018. Given the time required for the digester repairs, a decision was made by the mill Management that the plant operations will not start up before the initially planned annual shut date of the 4th of March 2018, hence the mill has gone straight into the planned annual shut work execution from the 27th of February 2017. However, this decision necessitated the Recovery Boiler 2 (CRU2) to burn HFO in preparation of the Power and Recovery operating units for the annual shut work commencement, thus causing the emission of	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					a dark visible plume from the stack. Actions taken: CRU2 is currently being capacitated to reach the temperature and pressure of 360 Degrees Celsius and 7mPa respectively as planned. This will change over from HFO burning to the firing of black liquor, which will effectively allow the dark plume to disappear.	
3	D Savides 072 392 0511	01/03/2018 10:00	Vicinity of Mondi	Excessive emissions emanating from the Mondi plant.	Mondi 01/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: Emission of a dark visible plume from Recovery Boiler 2 (CRU2). Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations. Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action: Mondi Richards Bay Mill has been on shutdown mode due to Digester maintenance work that needed to be conducted, which in turn resulted to the Mill unplanned shut since 14.02.2018. Given the time required for the digester repairs, a decision was made by the mill Management that the plant operations will not start up before the initially planned annual shut date of the 4th of March 2018, hence the mill has gone straight into the planned annual shut work execution from the 27th of February 2017. However, this decision necessitated the Recovery Boiler 2 (CRU2) to burn HFO in preparation of the Power and Recovery operating units for the annual shut work commencement, thus causing the emission of a dark visible plume from the stack. Actions taken: CRU2 is currently being capacitated to reach the temperature and pressure of 360 Degrees Celsius and 7mPa respectively as planned. This will change over from HFO burning to the firing of black liquor, which will effectively allow the dark plume to disappear.	Resolved - Mondi Richards Bay
4	S Camminga	15/03/2018 13:50	Mondi Area	Excessive emissions emanating from the Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the "black smoke" emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of "black smoke". Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated	

No.	Complainant	Date	Location	Description	Results	Resolution
					the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
5	Dewalt	15/03/2018 14:00	Mondi Area	Black smoke emanating from the Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the “black smoke” emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of “black smoke”. Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
6	Ilana 082 877 8017	15/03/2018 17:05	John Ross Highway	Black smoke emanating from the Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the “black smoke” emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of “black smoke”. Once the Continuous Digester was up and	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
7	Ilana 082 877 8017	16/03/2018 08:15	John Ross Highway	Black smoke emanating from the Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the “black smoke” emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of "black smoke". Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
8	Anonymous	16/03/2018 08:50	eNseleni	An anonymous complaint has been logged on behalf of the eNseleni community: The attached photographs represent what is apparently occurring on a daily basis at the Collateral Trading Asphalt Plant		Resolved - Collateral Trading

No.	Complainant	Date	Location	Description	Results	Resolution
				in Nseleni under operating conditions. I have been informed that the situation is even worse on start-up. The message I have received reads as follows; "The fumes bring disease in line with breathing complications to the young, the old and weak. COLATERAL TRADING is kindly requested to investigate as a matter of urgency and provide feedback to the RBCAA.		
9	Anonymous	16/03/2018 08:50	Port of Richards Bay	Clouds of dust emanating from the Magnetite stockpile in the Port. (Photograph attached) TPT is kindly requested to investigate and report back to the RBCAA.		Resolved - TPT
10	L Savides 072 392 0511	17/03/2018	Arboretum Extension	All night Saturday 17th into the morning of Sunday 18th March,	Mondi 18/03/2018 Nozipho Ntombela responded: Nature of Complaint: Alton, Vicinity of Mondi, Sunday 18 March, 07h43, Pungent smell from the Mondi plant. Nature of Emissions: Mondi Pungent smell. Average Ambient	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
				Pungent Mondi Guava odour.	Concentrations of Emissions and Met Conditions RBCAA stations: Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action Mondi Richards Bay is starting up the Mill after a planned shutdown and has not reached full stability. During normal condition, hardwood (HW) gases are scrubbed primarily through the foul condensate tank for gas absorption before the secondary Kiln scrubber to atmosphere. During the time of the complaint, the foul condensate tank was sitting at 90%, which causes HW gases to be pushed back due to pressure. The carbon filters are used as mitigation should pressure problems be experienced, however, given the time required for carbon filters to scrub and the amount of pressure experienced, this resulted to gases being vented into atmosphere. Actions taken: The Foul condensate tank level is being dropped to allow for the scrubbing of HW gases.	
11	D Savides 072 392 0511	17/03/2018	Arboretum Extension	All night Saturday 17th into the morning of Sunday 18th March, Pungent Mondi Guava odour.	Mondi 18/03/2018 Nozipho Ntombela responded: Nature of Complaint: Alton, Vicinity of Mondi, Sunday 18 March, 07h43, Pungent smell from the Mondi plant. Nature of Emissions: Mondi Pungent smell. Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations: Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action Mondi Richards Bay is starting up the Mill after a planned shutdown and has not reached full stability. During normal condition, hardwood (HW) gases are scrubbed primarily through the foul condensate tank for gas absorption before the secondary Kiln scrubber to atmosphere. During the time of the complaint, the foul condensate tank was sitting at 90%, which causes HW gases to be pushed back due to pressure. The carbon filters are used as mitigation should pressure problems be experienced, however, given the time required for carbon filters to scrub and the amount of pressure	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					experienced, this resulted to gases being vented into atmosphere. Actions taken: The Foul condensate tank level is being dropped to allow for the scrubbing of HW gases.	
12	Hillside Employees	18/03/2018 06:55	Hillside Plant	"Noxious Smell all over Hillside. Smells like Mondi"	Mondi 18/03/2018 Nozipho Ntombela responded: Nature of Complaint: Alton, Vicinity of Mondi, Sunday 18 March, 07h43, Pungent smell from the Mondi plant. Nature of Emissions: Mondi Pungent smell. Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations: Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action Mondi Richards Bay is starting up the Mill after a planned shutdown and has not reached full stability. During normal condition, hardwood (HW) gases are scrubbed primarily through the foul condensate tank for gas absorption before the secondary Kiln scrubber to atmosphere. During the time of the complaint, the foul condensate tank was sitting at 90%, which causes HW gases to be pushed back due to pressure. The carbon filters are used as mitigation should pressure problems be experienced, however, given the time required for carbon filters to scrub and the amount of pressure experienced, this resulted to gases being vented into atmosphere. Actions taken: The Foul condensate tank level is being dropped to allow for the scrubbing of HW gases.	Resolved - Mondi Richards Bay
13	Anonymous	18/03/2018 08:16	Pelserplaat Meerensee	"Guava Smell causing nose irritation"	Mondi 18/03/2018 Nozipho Ntombela responded: Nature of Complaint: Alton, Vicinity of Mondi, Sunday 18 March, 07h43, Pungent smell from the Mondi plant. Nature of Emissions: Mondi Pungent smell. Average Ambient Concentrations of Emissions and Met Conditions RBCAA stations: Compliance with Permit's: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action Mondi Richards Bay is starting up the Mill after a planned shutdown and has not reached full stability. During normal condition, hardwood (HW) gases are	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					scrubbed primarily through the foul condensate tank for gas absorption before the secondary Kiln scrubber to atmosphere. During the time of the complaint, the foul condensate tank was sitting at 90%, which causes HW gases to be pushed back due to pressure. The carbon filters are used as mitigation should pressure problems be experienced, however, given the time required for carbon filters to scrub and the amount of pressure experienced, this resulted to gases being vented into atmosphere. Actions taken: The Foul condensate tank level is being dropped to allow for the scrubbing of HW gases.	
14	D Savides 072 392 0511	18/03/2018 09:00	John Ross Highway	Black smoke emanating from Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the "black smoke" emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					sightings of “black smoke”. Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
15	Anonymous,	18/03/2018 12:50	Mondi Area	Black smoke emanating from Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the “black smoke” emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of "black smoke". Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
16	Julie 082 498 4089	18/03/2018 16:00	John Ross Highway	Black smoke emanating from Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the "black smoke" emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of "black smoke". Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
17	D Savides 072 392 0511	19/03/2018 07:30	Mondi Area	"Black smoke emanating from Mondi stretching across the	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
				skyline all the way to ESikhaleni"	extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the "black smoke" emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of "black smoke". Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers. Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4.	

No.	Complainant	Date	Location	Description	Results	Resolution
					When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
18	R Camminga	19/03/2018 08:00	East Central arterial	Black smoke emanating from Mondi.	Mondi 29/03/2018 Brendan Crawford responded: Root Cause of Incident and Corrective Action Mondi Richards Bay was in the process of starting up the Mill after an extended unplanned shutdown. During a planned shutdown the liquor inventory in the system is conserved to enable availability of sufficient volumes of white liquor for cooking of chips in the digesters during start up. The black liquor that results from this cooking is transferred to the recovery boilers where it is used as a fuel source. Once burned the black liquor is turned into green liquor which is sent to the Chemical Plant for re-processing back to White Liquor. In this way the liquor circuit is maintained with minimal losses. The drawing below illustrates this liquor balance. During a normal start up process firing in the recovery boilers is initially done with HFO oil to bring the boilers up to the correct temperature range for firing of black liquor. It is during this time that the “black smoke” emission becomes visible due to the chemical nature of HFO. Once the recovery boilers start burning Black Liquor the visible dark plume dissipates quite quickly. During the start-up of the Continuous Digester there were numerous instances of leaks being picked up which necessitated the shutting down of the digester on numerous occasions. While this was happening the recovery boilers which were initially firing HFO in preparation for receipt of Black Liquor had to stop firing whenever the digester was shut down. This resulted in the repetitive sightings of “black smoke”. Once the Continuous Digester was up and running, we encountered more issues with regards to the quality of the Black Liquor which meant that the Recovery Boilers had to come off liquor firing and go back on to HFO firing to maintain the temperature in the boilers. During all this the loss of liquor from the circuit was so significant that it was no longer feasible to feed liquor to both the digesters and the boilers.	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					Actions taken: 1. HFO firing on Recovery Boiler 1 was stopped with only minimal liquor firing occurring on Recovery Boiler 2.2. Available liquor was prioritised for the digesters. 3. Salt cake, Soda Ash and Caustic were added to increase the White Liquor inventory. 3. Once the Black Liquor inventory had built up to acceptable level Recovery Boiler 1 was restarted with HFO until the temperature was within range. 4. When Recovery Boiler 1 was in range liquor firing started which dissipated the dark plume. 5. Sufficient liquor was available for both the digesters and the recovery boilers.	
19	Nick Webb 083 448 4912	20/03/2018 17:30	Mtunzini	Mondi odour	Mondi 22/03/2018 Brendan Crawford responded: Source and Nature of Emissions: From the google maps image attached, Mtunzini is 31 km away from Mondi. At an average wind speed of 3.5 m/s it would take 2.5 hours for any odorous emissions to reach the town. Based on the wind direction in the vicinity of Mondi prior to, and during, the time of the complaint it is unlikely that Mondi is the source of the odour. Average Ambient Concentrations of Emissions and Met Conditions: 2.5 Hours before the Complaint: The average wind direction on site was 143°. Compliance with Permit's: There were no TRS related exceedance of Mondi's Air Emission Licence limits during this time. Due to start-up conditions, CRU2 NOx and SO2 exceeded the 1-hour average AEL limits of 300 mg/Nm3 from 16:00 to 18:00 as well as the 24 hour PM limit of 100 mg/Nm3, however these are not odour contributing emissions. Root Cause of Incident and Corrective Action: • Investigations showed low TRS concentrations were measured at all available Mondi weather stations on the day of the complaint. • The RBCAA eSikhaleni and CBD stations also showed no TRS exceedances of the 10 min average limit of 4.5 ppb for the day prior to, and during, the time of the complaint. • On the day of the complaint, Mondi was still in start-up mode after the annual shut. Start-up operations were running smoothly until an unexpected power outage occurred at 23:20. • There were no H2S releases measured from effluent at the mixing	Unresolved

No.	Complainant	Date	Location	Description	Results	Resolution
					chamber or effluent stack and the effluent flow was low at the time. Considering all the findings above, Mondi could not identify any possible contributors to the odour.	
20	Demian 082 725 8730,	23/03/2018 18:30	44 Arum Lily - Veldenvlei	Pungent Mondi "guava" Odour.	Mondi 24/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Alton stations TRS information from the RBCAA CBD Station is not available. Compliance with Permit's: No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay
21	S Camminga 083 515 2384	23/03/2018 18:35	33 Heideheuvel – Veldenvlei	Pungent Mondi "guava" odour causing nausea and headache. The worst I have experienced in a very long time.	Mondi 24/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Alton stations TRS information from the RBCAA CBD Station is not available. Compliance with Permit's: No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay
22	S Camminga 083 515 2384	23/03/2018 18:45	33 Heideheuvel – Veldenvlei	Pungent Mondi "guava" odour causing nausea and headache.	Mondi 24/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Alton stations	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
				The worst I have experienced in a very long time.	TRS information from the RBCAA CBD Station is not available. Compliance with Permit's: No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	
23	Demian 082 725 8730,	23/03/2018 20:00	44 Arum Lily - Veldenvlei	Pungent Mondi "guava" Odour. Worse than earlier reported.	Mondi 24/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Alton stations TRS information from the RBCAA CBD Station is not available. Compliance with Permit's: No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay
24	S Camminga 083 515 2384	23/03/2018 20:00	33 Heideheuvel – Veldenvlei	Pungent Mondi "guava" odour causing nausea and headache. Worse than earlier reported.	Mondi 24/03/2018 Nozipho Ntombela responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Alton stations TRS information from the RBCAA CBD Station is not available. Compliance with Permit's: No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	
25	D Savides 072 392 0511	23/03/2018 20:15	Arboretum Extension	Strong Mondi "guava" odour	Mondi 26/03/2018 Brendan Crawford responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Compliance with Permit's No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay
26	Annalize	23/03/2018 20:15	Veldenvlei	Bad "guava" type Odour (complaint received via D Savides)	Mondi 26/03/2018 Brendan Crawford responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Compliance with Permit's No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
27	Bradley Kihn 083 653 8855	23/03/2018 20:15	Veldenvlei	"Unbearable smell in the air" causing burning of the eyes.	Mondi 26/03/2018 Brendan Crawford responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Compliance with Permit/s No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay
28	D Savides 072 392 0511	23/03/2018 20:15	Arboretum Extension	Pungent Mondi "guava" odour. Forced to close windows.	Mondi 26/03/2018 Brendan Crawford responded: Source and Nature of Emissions: NCG gases being vented through Carbon Filters. Average Ambient Concentrations of Emissions and Met Conditions Compliance with Permit/s No exceedances of AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated, and it was discovered that the limit switch on the NCG valve was faulty resulting in NCG gases being vented through the Carbon Filters. The standby Instrument Technician was called, and the valve was repaired. Actions taken: Softwood and Hardwood NCG gases have been routed to Flare and Incinerator to prevent venting through the Carbon Filters. Gases will be routed to the Lime Kiln once it has been boxed up which is scheduled for 24/03/2018.	Resolved - Mondi Richards Bay

Table D3: Complaints Log – April 2018.

No.	Complainant	Date	Location	Description	Results	Resolution
1	S Camminga 083 515 2384	08/04/2018 22:15	33 Heideheuvel – Veldenvlei	PUNGENT Mondi odour causing nausea and headache. Odour permeated home with doors and windows closed.	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
2	R Camminga 083 515 2384	08/04/2018 22:15	33 Heideheuvel – Veldenvlei	PUNGENT Mondi odour causing nausea and headache. Odour permeated home with doors and windows closed.	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
3	D Savides 072 392 0511	08/04/2018 22:30	Arboretum Extension	Very strong odour.	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
4	Dinesh Maharaj 083 440 6675	08/04/2018 22:30	Arboretum	"I was awakened by a very strong odour of industrial air pollution causing nausea and headache"	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
5	Carina Viviers	08/04/2018 22:37	Arboretum	"Terrible bad odour outside tonight. It has been in the air the whole day but obviously with the cooler air tonight it is overpowering. Like rotten meat. This cannot be healthy for any of us."	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
6	Natasha Daver	08/04/2018 22:50	Chat Crescent – Birdswood	“There is currently a very strong odour in chat crescent. It smells like cabbage or onion.”	Mondi 9/04/2018 Brendan Crawford responded: Source and Nature of Emissions Hardwood NCG gases were routed to the Incinerator which was not sized for this. There were no exceedances of Mondi's AEL limits. Root Cause of Incident and Corrective Action: Mondi investigated and found that the time of the complaints and monitoring station TRS increases corresponded with the switching of NCG gases from the Lime Kiln to the Flare. At the time the NCG gases were being routed out of the Lime Kiln to enable the acid washing of the Lime Mud Clari Disc (LMCD). If not washed out regularly the LMCD can become blocked and result in increased TRS emissions from the Lime Kiln. As per the procedure, the Hardwood gases were switched to the Flare while the Softwood gases were switched to the Incinerator. However, upon switching the gases the Operator experienced issues with loss of the primary combustion zone in the Flare. This was later found to be caused by a faulty positioner and junction box on the Flare control valve. To avoid venting through the Carbon Filters for too long the Operator switched the Hardwood gases into the Incinerator. Because the Incinerator was not designed	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					to combust both Hardwood and Softwood gases this resulted in incomplete combustion of the gases. This in turn resulted in increased TRS emissions from the Incinerator which, combined with favourable wind conditions, resulted in increased TRS detection at the monitoring stations and offensive odours at the surrounding community. Actions taken: As soon as the Flare control valve was repaired the Hardwood gases were switched back into the Flare and resulted in the reduction of TRS emissions. The communication protocol has been reinforced with Operations and includes trigger activities for escalation to the Environmental Manager and Operations Managers. A new procedure is being drafted for Operations for more efficient handling of NCG gases when switching out of the Lime Kiln. An audit of the Flare instrumentation will be conducted to determine any areas of concern.	
7	S Camminga 083 515 2384	10/04/2018 10:00	Civic Centre - CBD	PUNGENT Foskop smell causing eye and nasal irritation.	Foskop 12/04/2018 Mannana Ntoampe responded: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 1540 mg/Nm ³ were recorded for the main Stack, these were however within our AEL limits. Compliance with Permits : There was no contravention in existing permits. Root Cause of Incident: There was a minor fire reported at Sulphuric Acid "B" Plant surge hopper. It was discovered that there was a damaged roller which contributed to the ignition of the spark on conveyer system No 12. This could have contributed to the odour reported at 10h00. The fire was reported at 09h50. Corrective Action: Sprinklers were automatically activated on the conveyor system and the Foskop Proto team was immediately dispatched to ensure that the fire had been stopped. The damaged roller on the conveyor system was replaced. The fire was completely distinguished by 11h00. The odour reported at 17h00 could have been a result of temperature inversion due to cooler weather	Resolved - Foskop

No.	Complainant	Date	Location	Description	Results	Resolution
					conditions prevailing during that period. There were no other process upsets in the plant on the day except for the fire as indicated above.	
8	D Savides 072 392 0511	10/04/2018 17:00	Bullion Boulevard - CBD	Very strong Foskor odour.	Foskor 12/04/2018 Mannana Ntoampe responded: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 1540 mg/Nm ³ were recorded for the main Stack, these were however within our AEL limits. Compliance with Permits : There was no contravention in existing permits. Root Cause of Incident: There was a minor fire reported at Sulphuric Acid "B" Plant surge hopper. It was discovered that there was a damaged roller which contributed to the ignition of the spark on conveyor system No 12. This could have contributed to the odour reported at 10h00. The fire was reported at 09h50. Corrective Action: Sprinklers were automatically activated on the conveyor system and the Foskor Proto team was immediately dispatched to ensure that the fire had been stopped. The damaged roller on the conveyor system was replaced. The fire was completely distinguished by 11h00. The odour reported at 17h00 could have been a result of temperature inversion due to cooler weather conditions prevailing during that period. There were no other process upsets in the plant on the day except for the fire as indicated above.	Resolved - Foskor
9	D Savides 072 392 0511	19/04/2018 17:14	Arboretum Extension	"My son Paul says he has been smelling odour all day, but at about 3pm there was a sudden strong something that caused instant burning eyes and headache then went back to 'normal' again. Really bad!" Mr Savides reported that his son had to wash his eyes. The above complaint was received at 17h14.	Foskor 24/04/2018 Mannana Ntoampe responded: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 873 mg/Nm ³ were recorded for the AB Stack, these were however within our AEL limits. Root Cause/Correct Actions: Even though it is not clear what could have caused odour all day, there was a gas leak at B Plant burner ducting that was reported at 14h30. The leak was repaired online by 15h30. There were no process upsets reported at Phosphoric acid Plant. Granulation Plant was operating normally with no process upsets and there were offloading activities during this period.	Resolved - Foskor

No.	Complainant	Date	Location	Description	Results	Resolution
				Based on wind direction, the RBCAA informed Foskor standby who indicated that they were unaware of any incident or plant upsets.		

Table D4: Complaints Log – May 2018.

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Verna	17/05/2018 12:00	Arboretum Ext	Gas smell	Foskor 21/05/2018 Mannana Ntoampe responded: Nature of complaint: Gas smell, Time: started detecting the smell from 8h00 until 10h00, Complainant: Verna, Location: Arboretum Ext. SO2 data for Sulphuric Acid Stacks. Peak Concentrations of SO 2 Emissions: The highest SO2 emissions of 482.5 mg/Nm3 were recorded for the AB Stack, these were however within our AEL limits. Root Cause/Correct Actions: No root cause identified. All Plant operations were normal i.e. On the day of the complaint, there were NO ammonia leaks reported or ammonia offloading activities (Granulation Plant). Mondi effluent used to slurry the gypsum at the Phosphoric acid plant was at a pH range between 7 and 8 during that period. There were NO gas leaks reported at Sulphuric Acid Plant. There were No point source emission exceedances during this period. Important to also note is that during this period, the wind direction was predominantly towards the Harbour and it is therefore unlikely that the gas smell was because of Foskor operations. Other sources should therefore be investigated.	Unresolved
2	Mr Rudd 076 558 1276	30/05/2018 12:00	61 Grandiceps Brackenham	Pungent Mondi Odour causing respiratory symptoms. The complaint was received by the RBCAA at 13h18. Mondi was contacted at 13h20 and notified of the complaint, at which time Mondi	Mondi 31/05/2018 Brendan Crawford responded: Source and Nature of Emissions: Three trips on Flare resulting in venting of NCG gases through Carbon Filters. Compliance with Permits: There were no exceedances of Mondi's AEL limits at the time of the incident. Root Cause of Incident and Corrective Action: Mondi investigated and found that at the time of the complaint Chemical Plant was experiencing issues with trips on the Flare which resulted in NCG gases being routed to the Carbon Filters for approximately 30 minutes. The Carbon Filters are the backup mitigation against free venting of NCG gases during such an event and routing NCG gases through here during Flare upsets is part of Mondi procedures. It was during this routing through the Carbon Filters that the complaint was received. Even though Carbon Filters had been regenerated beforehand and	Resolved - Mondi Richards Bay

No.	Complainant	Date and time	Location	Description	Results	Resolution
				confirmed that there had been process upsets.	that there was little to no TRS activity at Mondi's Landfill monitoring station (which falls in the wind vector between Mondi and Brackenhams), the timing of the complaint along with the favourable wind direction would suggest that Mondi was the source of the odour. Actions taken: Flare trips were found to be caused by a jammed valve. This was resolved shortly after the time of the complaint. Despite the activated carbon in the Carbon Filters being well within their 12-month lifespan, the decision has been made to replace the activated carbon in June 2018. 3. Average Ambient Concentrations of Emissions and Met Conditions	

Table D5: Complaints Log – June 2018.

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Verna 079 712 3141	5-6-18 18:40	Boardwalk & Town Square areas - Richards Bay CBD	PUNGENT odour. Described by complainant as a “cat urine” odour. Complainant also reported the presence of another odour which they could not describe.	Mondi 07/06/2018 Brendan Crawford responded: Source and Nature of Emissions. Compliance with Permit/s: There were exceedances of Mondi's Flare TRS AEL limits at the time of the incident. Root Cause of Incident and Corrective Action: During the time of the incidents Mondi was starting up sections of the mill after the planned Recovery Boiler 1 Water Wash which had been communicated to external authorities and stakeholders. On the planned tasks was maintenance work on the Lime Kiln which would require it to be offline. The NCG gases were directed to the Flare during this time as per standard procedure and initially with little incident. Later, the Flare online analyser started to detect high levels of TRS, despite no change in the process. While the investigation into the increased emissions was taking place, Mondi received the odour complaints. Gases were directed back into the Lime Kiln as soon as process conditions allowed resulting the reduction of TRS emissions. Actions taken: Maintenance work was conducted on the Flare on 23rd April 2018. The Original Equipment Manufacturer (OEM) has been contacted to assist with further investigation and troubleshooting on the Flare. Activated Carbon in the Carbon Filters has been replaced should the need arise to use them. A mitigation plan is being prepared to minimise the risks of using the Flare during the investigation. NCG gases to Flare while mill was starting up after CRU1 Water Wash. Average Ambient Concentrations of Emissions and Met Conditions.	Resolved - Mondi Richards Bay
2	Demian 082 725 8730	5-6-18 20:30	Arum Lily – Veldenvlei	“Sudden, terrible smell, sulphur cross guava. Really PUNGENT”	Mondi 07/06/2018 Brendan Crawford responded: Source and Nature of Emissions. Compliance with Permit/s: There were exceedances of Mondi's Flare TRS AEL limits at the time of the incident. Root Cause of Incident and Corrective Action: During the time of the incidents Mondi was starting up sections of the mill after the planned Recovery Boiler 1	Resolved - Mondi Richards Bay

No.	Complainant	Date and time	Location	Description	Results	Resolution
					Water Wash which had been communicated to external authorities and stakeholders. On the planned tasks was maintenance work on the Lime Kiln which would require it to be offline. The NCG gases were directed to the Flare during this time as per standard procedure and initially with little incident. Later, the Flare online analyser started to detect high levels of TRS despite no change in the process. While the investigation into the increased emissions was taking place, Mondi received the odour complaints. Gases were directed back into the Lime Kiln as soon as process conditions allowed resulting the reduction of TRS emissions. Actions taken: Maintenance work was conducted on the Flare on 23rd April 2018. The Original Equipment Manufacturer (OEM) has been contacted to assist with further investigation and troubleshooting on the Flare. Activated Carbon in the Carbon Filters has been replaced should the need arise to use them. A mitigation plan is being prepared to minimise the risks of using the Flare during the investigation. NCG gases to Flare while mill was starting up after CRU1 Water Wash. Average Ambient Concentrations of Emissions and Met Conditions.	
3	S Camminga 083 515 2384	5-6-18 20:35	Heideheuvel – Veldenvlei	PUNGENT Mondi “Guava” odour.	Mondi 07/06/2018 Brendan Crawford responded: Source and Nature of Emissions. Compliance with Permit/s: There were exceedances of Mondi’s Flare TRS AEL limits at the time of the incident. Root Cause of Incident and Corrective Action: During the time of the incidents Mondi was starting up sections of the mill after the planned Recovery Boiler 1 Water Wash which had been communicated to external authorities and stakeholders. On the planned tasks was maintenance work on the Lime Kiln which would require it to be offline. The NCG gases were directed to the Flare during this time as per standard procedure and initially with little incident. Later, the Flare online analyser started to detect high levels of TRS despite no change in the process. While the investigation into the	Resolved - Mondi Richards Bay

No.	Complainant	Date and time	Location	Description	Results	Resolution
					increased emissions was taking place, Mondi received the odour complaints. Gases were directed back into the Lime Kiln as soon as process conditions allowed resulting the reduction of TRS emissions. Actions taken: Maintenance work was conducted on the Flare on 23rd April 2018. The Original Equipment Manufacturer (OEM) has been contacted to assist with further investigation and troubleshooting on the Flare. Activated Carbon in the Carbon Filters has been replaced should the need arise to use them. A mitigation plan is being prepared to minimise the risks of using the Flare during the investigation. NCG gases to Flare while mill was starting up after CRU1 Water Wash. Average Ambient Concentrations of Emissions and Met Conditions.	
4	S Camminga 083 515 2384	7-6-18 12:55	West Central Arterial - Vicinity of the RB Police Station	Air pollution emanating from burning on the premises of the Richards Bay Police Station (see attached photos). I stand corrected, but there appears to be what looks like some form of an incinerator. The complaint will be forwarded to the City of uMhlathuze Air Quality Management Unit for investigation.	uMhlathuze Municipality 08/06/2018: Siyabonga Ziqubu responded: Findings: Richards Bay Police station (Exhibit Management Department) interview response: Capt. M. Michael informed the authorities that on the date of the black smoke emission the Exhibit Management department was burning unclaimed exhibits. The material burnt included old computers and television that could no longer be auctioned (refer to figure 2). Capt. M. Michael also indicated that they need to destroy twenty (20) boats onsite that were used for illegal fishing. (refer to figure 2). The Municipality advised that open burning is prohibited by the Environmental Health Bylaws. Municipal inspection. The municipality conducted visual site inspection on Friday 08/06/2018 14: 20 at police station. The spot-on visit conducted showed burnt computers boxes, trolley, television and broken chairs as depicted on the photos below: Conclusion: The Exhibit management department admitted to burning old computers and TVs which caused black smoke during the incident that occurred on the 07 June 2018. The department also admitted that on ad hoc bases they	Resolved - SAPS

No.	Complainant	Date and time	Location	Description	Results	Resolution
					burn exhibits that cannot be auctioned. Way forward- The Richards Bay Police station must use environment friendly means to destroy exhibits to minimize the impact on the environment. · The City of uMhlathuze have prohibited the burning exhibits on site. · The Richards Bay Police management will liaise with the fire department for assistance. · The inspection report will be submitted to the police station management.	
5	S Camminga 083 515 2384	29-6-2018	John Ross Highway - Alton intersection as you turn towards Bayside	Dust - There is ongoing illegal dumping of various products taking place on the open stand at the Alton intersection as you turn towards Bayside. The “dump site” is adjacent to a wetland which has ecological significance. The contamination of this site is most certainly leaching into the groundwater and impacting on the wetland. On Friday 29 June I was alerted to sulphur having been dumped on the site. On arrival I observed 2 gentlemen bagging a significant amount of sulphur. On enquiring I was informed that the product belonged to ACCESS in Alton, and that a trucking company had dumped the sulphur. There is a significant amount of product covering the entire site. Sulphur, logs, and a mix of products which	KZN EDTEA 2/07/2018 Skhumbuzo Mpungose responded: The municipality cannot touch these materials since it is hazardous material. CME will issue a relevant notice to the generator to remove it. The municipality must assist by closing that site to be inaccessible so that there is no continuous misunderstanding that the site is another Truck Stop. The Truck stop signage next to it was misleading to that effect. uMhlathuze Municipality 2/07/2018: Zilindile Masango responded: Thank you for notifying us, we will make a follow up on it asap, together with Environmental Affairs.	Resolved - uMhlathuze Municipality

No.	Complainant	Date and time	Location	Description	Results	Resolution
				appear to be coal, magnetite, chrome etc. It appears that trucking companies have decided that it is an acceptable practice to enter this site and dispose of remnant products. This practice needs to be stopped with immediate effect. The site needs to be cleaned, and the entrance closed off to ensure that no trucks can enter the site.		

Table D6: Complaints Log – July 2018.

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Theo 083 449 3297	2018-07-19 00:00	(DUYS Engineering) – 54 Kabelkring Alton	Ongoing generation of dust from open stockpiles of products being stored on the premises of MacDonald's Transport. The complainant states that in addition to the white stockpiles there is now a black product being stockpiled. Complainant is of the opinion that the dust is a corrosive. I have contacted MacDonald's and they inform me that they are stockpiling Salt and Anthracite (first shipment received recently). They claim that all stockpiles are covered. The RBCAA will forward the complaint to the CoU Air Quality Management Unit for investigation.	uMhlathuze Municipality 07/08/2018 Siyabonga Ziqubu responded: The inspection was conducted on the 27 July 2018. A non-compliance notice will be issued this week for storage of anthracite and use of new facility without notifying municipality. On the red highlighted area, we escalated the matter to water department because it involves storm water systems and effluent.	Resolved - uMhlathuze Municipality

Table D7: Complaints Log – August 2018.

No.	Complainant	Date	Location	Description	Results	Resolution
1	D Savides (0723920511)	2018-08-18 13:40	Vicinity of Mondi	Excessive emissions emanating from Mondi. The RBCAA notified Mondi at the time of the complaint.	Mondi 23/08/2018 Brendan Crawford responded: During the time of the incidents, there were 1 x SO2 non-compliances and 5 x NOX non-compliances against Mondi's AEL limits on Recovery Boiler 1. Root Cause of Incident: A faulty emergency stop activated and tripped the feed water pumps in the water plant and secondary air fan of Recovery Boiler 1. The aforementioned trips resulted in the tripping of Recovery Boiler 1. During the start-up of a recovery boiler, Heavy Fuel Oil is fired to get the boiler to the correct parameters to safely introduce black liquor. Corrective Actions: As soon Recovery Boiler 1 was within range firing was switched to Black Liquor during which time the dark plume dissipated. The activation of the emergency stop is currently under investigation as part of the Root Cause Failure Analysis.	Resolved - Mondi Richards Bay
2	S Camminga 083 515 2384	2018-08-23 13:00	Richards Bay CBD	Excessive emissions emanating from Foskor's A\B stack. Foscok was notified.	Foskor 31/08/2018 Mannana Ntoampe responded: Introduction In the process of manufacturing sulphuric acid, absorption, which is the final stage of the process occurs in the Final Absorption Tower (FAT). FAT is a column packed with ceramic material. Sulphuric Acid is fed on top of the Tower and gas underneath the Tower to create what is termed a counter-current flow. Ideally, the acid should be distributed across the whole cross section of the Tower. In an event where there is no proper acid distribution, absorption becomes insufficient Background: Sulphuric Acid "AB" Plant stack was more visible than usual from 23 August into the week of 27th August. Feedback was provided on 28 August 2018 as follows: Complaint from 23 August The B Plant was stopped to inspect both Final Absorption (FAT) and Interpass Absorption Towers (IAT). The FAT and IAT were both inspected for flow distribution as well as	Resolved - Foskor

No.	Complainant	Date	Location	Description	Results	Resolution
					the mist eliminator seal pots for acid carryover, all of which are known contributory factors. Findings: • Acid flows were found to be satisfactory in both the towers, however the spouts were cleaned to further improve the flow distribution for improved absorption. • Uneven packing was observed on the 3rd trough of the FAT therefore the tower packing was spread out evenly to improve absorption • Two (02) Seal pots from the IAT were found to be low in acid and refilled (an indication of poor acid drainage from the mist eliminator candles) and a contributory factor to acid carryover. Complaint from 25 August Furthermore, over the past weekend other contributing factors were checked. Namely: • Acid strength • Acid temperatures The above parameters were monitored and controlled in conjunction with laboratory analysing special samples on frequent intervals and were found to be within specification, but no improvement was observed.	
3	Martin Paxton (0)74 580 4988	2018-08-23 00:00	Geleier Gang, Alton	In short, we have an operation next door to us where they crush various material into smaller sizes. This has become a nightmare especially when the Southern wind blows. The amount of dust that gets blown onto our sight is frightening. Please see attached photos. Workers and visitors to our site, such as Desmond Hibbert that phoned you and Ilma Filter, complain about eye, throat and chest irritation due to the excessive amount of dust in the air. They also crush material that looks like pig iron with a massive ball that they pick		Unresolved

No.	Complainant	Date	Location	Description	Results	Resolution
				up with a grab and drop on to the material. This operation sends huge shock waves through our whole building, so intense that the windows actually vibrate. This constant shaking of the earth cannot be good for the structure of our building. The RBCAA has forwarded the complaint to the Municipality's Air Quality Management Unit for investigation		
4	S Camminga 083 515 2384	2018-08-25 09:13	Vicinity of Foskor	Excessive emissions emanating from Foskor's AIB stack. (Foskor was telephonically informed at 09h16.)	Foskor 31/08/2018 Mannana Ntoampe responded: Introduction In the process of manufacturing sulphuric acid, absorption, which is the final stage of the process occurs in the Final Absorption Tower (FAT). FAT is a column packed with ceramic material. Sulphuric Acid is fed on top of the Tower and gas underneath the Tower to create what is termed a counter-current flow. Ideally, the acid should be distributed across the whole cross section of the Tower. In an event where there is no proper acid distribution, absorption becomes insufficient Background: Sulphuric Acid "AB" Plant stack was more visible than usual from 23 August into the week of 27th August. Feedback was provided on 28 August 2018 as follows: Complaint from 23 August The B Plant was stopped to inspect both Final Absorption (FAT) and Interpass Absorption Towers (IAT). The FAT and IAT were both inspected for flow distribution as well as the mist eliminator seal pots for acid carryover, all of which are known contributory factors. Findings: • Acid flows were found to be satisfactory in both the towers, however the spouts were cleaned to further improve the flow distribution for improved absorption. • Uneven packing was observed on the 3rd trough of	Resolved - Foskor

No.	Complainant	Date	Location	Description	Results	Resolution
					the FAT therefore the tower packing was spread out evenly to improve absorption • Two (02) Seal pots from the IAT were found to be low in acid and refilled (an indication of poor acid drainage from the mist eliminator candles) and a contributory factor to acid carryover. Complaint from 25 August Furthermore, over the past weekend other contributing factors were checked. Namely: • Acid strength • Acid temperatures The above parameters were monitored and controlled in conjunction with laboratory analysing special samples on frequent intervals and were found to be within specification, but no improvement was observed.	
5	S Camminga 083 515 2384	2018-08-25 11:40	Vicinity of Foskor	Excessive emissions emanating from Foskor's A\B stack.	Foskor 31/08/2018 Mannana Ntoampe responded: Introduction In the process of manufacturing sulphuric acid, absorption, which is the final stage of the process occurs in the Final Absorption Tower (FAT). FAT is a column packed with ceramic material. Sulphuric Acid is fed on top of the Tower and gas underneath the Tower to create what is termed a counter-current flow. Ideally, the acid should be distributed across the whole cross section of the Tower. In an event where there is no proper acid distribution, absorption becomes insufficient Background: Sulphuric Acid "AB" Plant stack was more visible than usual from 23 August into the week of 27th August. Feedback was provided on 28 August 2018 as follows: Complaint from 23 August The B Plant was stopped to inspect both Final Absorption (FAT) and Interpass Absorption Towers (IAT). The FAT and IAT were both inspected for flow distribution as well as the mist eliminator seal pots for acid carryover, all of which are known contributory factors. Findings: • Acid flows were found to be satisfactory in both the towers, however the spouts were cleaned to further improve the flow distribution for improved	Resolved - Foskor

No.	Complainant	Date	Location	Description	Results	Resolution
					absorption. • Uneven packing was observed on the 3rd trough of the FAT therefore the tower packing was spread out evenly to improve absorption • Two (02) Seal pots from the IAT were found to be low in acid and refilled (an indication of poor acid drainage from the mist eliminator candles) and a contributory factor to acid carryover. Complaint from 25 August Furthermore, over the past weekend other contributing factors were checked. Namely: • Acid strength • Acid temperatures The above parameters were monitored and controlled in conjunction with laboratory analysing special samples on frequent intervals and were found to be within specification, but no improvement was observed.	

Table D8: Complaints Log – September 2018.

No.	Complainant	Date	Location	Description	Results	Resolution
1	Lawrence (083 998 8855)	2018-09-06 12:12	eNseleni	“Today Nseleni tar plant is puffing straight to residential area. We are dying right now as we speak”. The “tar plant” being referred to by the complainant is the Collateral Trading Asphalt Plant. The RBCAA notified the CoU Air Quality Management Unit.		Resolved - Collateral Trading
2	Anonymous	2018-09-11 07:58	Small Craft Harbour	“Bulk carrier “African Starling” with smoke trail leaving Break Bulk Terminal No 708 photographed opposite Small Craft harbour”	TNPA 01/10/2018 Lumco Ncapai responded: from our Harbour Masters office: It is my understanding that most ships will emit darker colour exhaust gas when increasing RPM under load. This is usually for a brief period while engine speed is increasing, and turbo charger pressure is adjusting to the new	Resolved - Port of Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					and higher fuel input to the engine. The fuel to air ratio then soon improves to enable more complete fuel combustion and cleaner looking exhaust output. The exact colour and duration will vary from one ship to another, depending on a number of other variables. Some of these are:- Load condition and corresponding draught of the vessel. Difference between ship speed through the water and theoretical propeller speed. Fuel quality and temperature. Type and condition of ships propulsion plant. Setup of computer-controlled engine management system. Crew experience and operational procedures on board. In short, just as a diesel bakkie or bus emits a short burst of dark smoke when accelerating hard, so does a ship. Due the ships massively larger engine and fuel consumption, there will be more smoke. From the photograph, it looks as if the Harbour Pilot has recently or will shortly disembark the vessel, in which case the ship then increases speed for a safe port exit. As far as I am aware there was nothing unusual or abnormal taking place on this vessel.	
3	S Camminga	2018-09-11 08:52	CBD	Abnormal emissions emanating from the Foskor A\B Stack. I contacted Foskor and was informed that they were aware of the problem and that the plant was being stopped.	Foskor 12/09/2018 Mannana Ntoampe responded: Background: On 11 September, it was noticed that the AB stack appeared 'abnormal' again following a series of investigations and implementation of corrective measures in the past weeks. Procedures to shut down the Sulphuric Acid "B" plant safely were set in motion from 08h00 and the plant was successfully shut down at about 10h00. Root cause: Choked Final Tower spouts, Saturated candle drains, Corrective/Preventative measures: The spouts were cleaned, Candle drains were stripped and washed for effective trapping of acid carryover from the final absorption tower. Note: The course of the frequent blockages which affect the flow distribution (by causing turbulent	Resolved - Foskor

No.	Complainant	Date	Location	Description	Results	Resolution
					conditions) is yet to be established and the RBCAA will be updated in due course. The production team continues to work tirelessly to resolve this issue.	
4	S Camminga	2018-09-11 09:20	Vicinity of Hillside	Abnormal emissions emanating from the Foskor A\B Stack. Plant still operational.	Foskor 12/09/2018 Mannana Ntoampe responded: Background: On 11 September, it was noticed that the AB stack appeared 'abnormal' again following a series of investigations and implementation of corrective measures in the past weeks. Procedures to shut down the Sulphuric Acid "B" plant safely were set in motion from 08h00 and the plant was successfully shut down at about 10h00. Root cause: Choked Final Tower spouts, Saturated candle drains, Corrective/Preventative measures: The spouts were cleaned, Candle drains were stripped and washed for effective trapping of acid carryover from the final absorption tower. Note: The course of the frequent blockages which affect the flow distribution (by causing turbulent conditions) is yet to be established and the RBCAA will be updated in due course. The production team continues to work tirelessly to resolve this issue.	Resolved - Foskor
5	Trevor	2018-09-14 00:00	Meerensee	Pls take note that the air in Meerensee on the morning of 14 Sep 2018 smelled of chemicals. Very acidic. Pls investigate cause of this as well as how the relevant company that caused it is going to rectify it so that it does not happen again	Mondi Richards Bay 14/09/2018 Jay Oomadhram responded. The Mondi Richards Bay mill experienced a plant upset during the early hours of this morning, which resulted in abnormal emissions during this period. As a result of the emission a strong odour was prevalent in the areas surrounding the mill. During the investigation the following was found: The Effluent plant was on a planned maintenance shut on 13 September 2018. During start-up at 22:00, the effluent pH deviated due to a process station fault which resulted in H2S emissions. This deviation was corrected and stabilized by 23 30. There was a <5-minute TRS peak elevation on the flare at 00:30. Process	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
					was normalized soon thereafter. Due to wind inversion, it is concluded that both these impacts were localised, which in effect dispersed at a later stage and resulted in odour complaints being received. The Mill has been operationally stable since this morning and we will continue to take all reasonable actions to ensure that any environmental impacts from operational activities are kept to an absolute minimum, Should you require any additional information, please do not hesitate to contact the undersigned.	
6	Carl Friedrichs 0720294087	2018-09-14 00:00	Richards Bay	I would hereby like to report the extreme air pollution this morning in Richards Bay. Please can this matter be attended to urgently as the situation as is must be detrimental to everyone's health and I mean with emphasis everyone's immediate health.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
7	Clive Hardwick : 078 458 4760	2018-09-14 00:00	116 Kolstertkring, Meerensee	I woke up with a very strong odour in the house (similar to cat urine) and a severe sinus headache. Others living in the same residential complex experienced the same symptoms as well as burning eyes. I would appreciate some feedback regarding this event.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
8	Lourence Gerber	2018-09-14 00:00	Meerensee	I want to report a horrible smell that started in Meerensee during the night. This can't be good for us.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
9	Tania Delport 086 099 5105	2018-09-14 00:00	Arboretum	I would like to enquire/raise a complaint about the air quality this morning. It was so bad that the smell woke me up and has caused the sinuses of both my husband and son to flare up terribly. We live in Arboretum	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
10	Rene Du Preez 060 973 0575	2018-09-14 00:00	Moon Fish – Meerensee	“ bad odour causing vomiting and a tight chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
11	Kate Brading 084 208 9725	2018-09-14 00:00	Pony Fish – Meerensee	“ bad smell causing burning nose. Could not sleep)	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
12	Gus Schmidt 079 896 1284	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Bad smell causing sore and scratchy eyes and burning of the nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
13	Marie Schmidt 079 896 1284	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Bad smell causing sore and scratchy eyes and burning of the nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
14	Le-Riche Smith 083 773 9912	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Very heavy bad gas smell. whole family had huge headaches and not feeling well”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
15	Vanessa Smith 083 773 9912	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Very heavy bad gas smell. whole family had huge headaches and not feeling well”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
16	Mandy Smith 083 773 9912	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Very heavy bad gas smell. whole family had huge headaches and not feeling well”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
17	Marco Smith 083 773 9912	2018-09-14 00:00	Pinkie Pool – Meerensee	“ Very heavy bad gas smell. whole family had huge headaches and not feeling well”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
18	Margariet Kriel 084 407 9232	2018-09-14 01:00	Pelican Parade – Birdswood	“Bad odour. Woke up this morning with a headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
19	Abi 064 173 3059	2018-09-14 01:20	Hornbill - Birdswood	“woken up by a terrible smell. I now feel terrible and have a bad headache.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
20	Juli Fourie 084 516 6151	2018-09-14 01:30	Chinkerinchee – Veldenvlei	Foul smell. Woke up sick with headache and nausea. Took the dogs out a nearly collapsed from the smell. Eyes are itchy and swollen”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
21	Reshal 083 301 3540	2018-09-14 02:00	Pennis - Meerensee	“Severe odour causing headache and stuffy nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
22	Olga 072 049 0450	2018-09-14 02:00	Geranium Place – Veldenvlei	“Very bad odour causing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
23	Owen 073 306 8546	2018-09-14 02:00	Arboretum	“ Bad odour causing burning sensation of the throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
24	Nico Lamprecht 083 307 4835	2018-09-14 02:00	Pelican Parade – Birdswood	“heavy smell causing nausea – could not sleep)	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
25	Nirvana Ganpath 083 741 9387	2018-09-14 02:00	Arboretum	"the smell actually woke me and was almost suffocating me. It was very overpowering. I have a 2-month baby and if I was in distress migraine what my baby must have been feeling. I am now suffering with very bad sinus, headaches"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
26	Tanja Arts 082 927 8291	2018-09-14 02:00	Birdswood	"terrible smell. My 2-year-old son has not stopped coughing. This is not acceptable. Whoever this company is they need to be brought to task. They can't get away with it. What if I now need to take my child to the doctor if his chest does not clear. Who is going to pay the bill?"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
27	Melisa Baliram 084 536 6205	2018-09-14 02:00	Apies Doring – Arboretum	"Woken up by a bad smell which caused sneezing irritation of the nose and headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
28	Kevin Baliram 084 536 6205	2018-09-14 02:00	Apies Doring – Arboretum	"Woken up by a bad smell which caused sneezing irritation of the nose and headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
29	Marilyn Muller 083 272 4166	2018-09-14 02:00	Octopus Arm – Meerensee	"Awful smell permeated throughout my home"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
30	Mrs Pillay 082 833 9987	2018-09-14 02:00	Brackenham	"Foul smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
31	Lindy Brett 078 095 9150	2018-09-14 02:00	Birdswood	"Bad smell causing headache and eye irritation"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
32	Shirley Swanepoel 063 093 0426	2018-09-14 02:00	Arboretum	"really bad smell right through my house. After an hour or so I started getting a headache and feeling nauseous."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
33	Tanja Garces 071 351 8311	2018-09-14 02:00	Arboretum	"Terrible smell causing splitting headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
34	Sandy Mohan 083 785 5641	2018-09-14 02:00	Penvis - Meerensee	"intoxicating smell causing nausea. I was worried for my children especially my baby."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
35	Nadine 073 204 8080	2018-09-14 02:00	Arboretum	"horrible smell causing sinus irritation and gagging"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
36	Tim Harding 084 234 2260	2018-09-14 02:00	Birdswood	"sharp unpleasant odour"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
37	073 473 8275	2018-09-14 02:00		"Incredible smell hanging over Richards Bay. Its unbearable. I had to bring my animals inside. We are nauseous"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
38	Melinda Ashington 082 558 4275	2018-09-14 02:00	Meerensee	"bad smell. Headache, eyes burning"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
39	Tina 082 327 9153	2018-09-14 02:00	Meerensee	"Bad smell causing headache sore throat and nausea"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
40	Shaun Governder 083 320 7303	2018-09-14 02:00	Peserplaat – Meerensee	"woken up by this horrible smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
41	Sam Swanepoel 071 351 5586	2018-09-14 02:00	Meerensee	"Horrible Mondl smell. I have had 2 nose bleeds already"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
42	Zanini 083 353 0742	2018-09-14 02:00		"Feel very sick from the smell. Terrible headache, very dry and sore throat and nose burning"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
43	Wendy van Loggerenberg	2018-09-14 02:08	Veldenvlei	"Rotten onion smell woke me. It was awful having to breathe.	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
44	Patty Greyling 082 805 3823	2018-09-14 02:30	Veldenvlei Extension	"Bad odour causing Sinus and sore throat"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
45	Lianne 064 751 6496	2018-09-14 02:30	Duikerdraai - Wildenweide	"woke up to a horrible smell. Have a headache. Husband experienced heavy chest"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
46	Lianne & husband 064 751 6496	2018-09-14 02:30	Duikerdraai - Wildenweide	"woke up to a horrible smell. Have a headache. Husband experienced heavy chest"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
47	Mrs Reddy 082 491 6644	2018-09-14 02:30	Breamhill – Meerensee	"Terrible odour causing nausea and headache. We felt like we were suffocating, we couldn't breathe. Baby sick"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay
48	Mrs Reddy's husband 082 491 6644	2018-09-14 02:30	Breamhill – Meerensee	"Terrible odour causing nausea and headache. We felt like we were suffocating, we couldn't breathe. Baby sick"	SEE COMPLAINT NO 5	Resolved - Mondl Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
49	Tracy 073 473 8275	2018-09-14 02:30	Golf Estate – Meerensee	“ Horrific odour. Have lived here for 35 years and this is only the 2nd time I have ever experienced this. Had to close windows and bring dogs in who were also affected.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
50	Mr Nel 082 784 0678	2018-09-14 02:45	Arboretum	“bad smell causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
51	Mrs Nel 082 784 0678	2018-09-14 02:45	Arboretum	“bad smell causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
52	L. Britz 072 733 1519	2018-09-14 03:00	Birdswood	“Pungent cat urine smell in the early hours of the morning. The smell is very strong and causing unease and nausea.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
53	S Camminga 083 515 2384	2018-09-14 03:00	Heideheuvel – Veldenvlei	” Woken up by a pungent Mondi odour permeating through the house causing nausea headache and throat irritation	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
54	Ronald 079 429 9877	2018-09-14 03:00	Grunter Gulley – Meerensee	“Unbearable odour causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
55	Ronald's wife	2018-09-14 03:00	Grunter Gulley – Meerensee	“Unbearable odour causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
56	Ennia Munyi 084 602 0849	2018-09-14 03:00	Arboretum	“very bad odour causing nausea and stomach upset”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
57	Patricia Blignaut 082 940 2720	2018-09-14 03:00	Shrimptail – Meerensee	“horrible smell causing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
58	Claudia 076 484 8706	2018-09-14 03:00	Birdswood	“Cat urine smell causing sinus irritation”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
59	Elaine De Klerk 082 448 2518	2018-09-14 03:00	Geranium Place - Veldenvlei	“ very strong smell causing headache, burning eyes and nose. Even my dogs were crying at my bedroom window to be let in”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
60	Steven 082 303 9021	2018-09-14 03:00	Olienhout Koppie – Arboretum	“there is a very bad gas smell in the air. Me and my wife woke up because we couldn’t breathe”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
61	Rudi Corver 083 259 6261	2018-09-14 03:00	Geranium Place – Veldenvlei	“ Foul smell causing nausea burning eyes headache and runny nose with sinus type symptoms”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
62	Mrs Corver	2018-09-14 03:00	Geranium Place – Veldenvlei	“ Foul smell causing nausea burning eyes headache and runny nose with sinus type symptoms”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
63	Rob Franklin 083 265 1700	2018-09-14 03:00	Pinkie Pool – Meerensee	“terrible smell in the air. Found it quite difficult to breathe and have since had a terrible headache.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
64	Tess Gower 083 653 6406	2018-09-14 03:00	Veldenvlei	“ Strong cat urine odour. Woke up with a severe headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
65	Ragini Ramlall 083 785 8482	2018-09-14 03:00	Arboretum extension	"suffocating smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
66	Ntokozo Mtshali 073 995 8168	2018-09-14 03:00	Kwasakhulu	"bad smell when I woke up this morning. Most people complaining about it when we were travelling to Richards Bay"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
67	Hannes du Preez 062 181 0181	2018-09-14 03:00	Meerensee	" Really bad smell causing nausea and headache. Burning of the eyes and throat"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
68	Michelle 079 031 7684	2018-09-14 03:00	Arboretum	"woken up by a terrible smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
69	083 680 2826	2018-09-14 03:00		"Smell really bad"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
70	Lee-Anne Elliot 082 559 9777	2018-09-14 03:00	Pony Fish Meerensee	" Foul odour. Unable to sleep and developed a horrible migraine and messed up my sinuses.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
71	Lee-Anne Elliot's Daughter	2018-09-14 03:00	Pony Fish Meerensee	" Foul odour. Unable to sleep and developed a horrible migraine and messed up my sinuses.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
72	Adele 083 312 7130	2018-09-14 03:00	Veldenvlei	"bad smell. Have a bad headache and my eyes are killing me"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
73	Alex Burger 072 458 2474	2018-09-14 03:00	Weaver wing – Birdswood	"Me and my son started to have terrible headaches nausea and burning eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
74	D Savides 060 971 9249	2018-09-14 03:00	Cassia Close – Arboretum Extension	“ Intense Mondi smell causing burning eyes and nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
75	Neils 079 330 7085	2018-09-14 03:15	Kabeljoukade – Meerensee	“bad odour causing headache and tight chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
76	Petra van Wyk 079 628 8964	2018-09-14 03:15	Grevillia – Arboretum	“ The smell was so bad that it woke my whole family. We were feeling sick”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
77	Franz Schmidt 083 675 8356	2018-09-14 03:30	Kolsterkring - Meerensee	Particularly strong “hydrocarbon like” odour over entire Meerensee (especially Kolsterkring and roads leading off it) from 03h30 on 14 September 2018. This is the strongest smell I have experienced since 2007 in Meerensee. The odour permeates buildings / vehicles and seem to linger in fabrics exposed to it (inside the home /office / car). Externally the odour seems to have abated from 07h40 onwards. Arboretum and Brackenham less odorous than Meerensee (from people who have been in both suburbs during that time). Little to no odour over the harbour Casuarinas area (06h30), a number of complaints from Waterfront area has been noted via Zululand Kayak Club WhatsApp though. Very light land breeze (00h00 to approx. 07h00), I suspect a plume from Mondi descending over lake Mzingazi and	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
				thus affecting Meerensee (directly to the west) – with inversion layer forming, exacerbating problem?		
78	Iselle 066 273 3897	2018-09-14 03:30	Pompano Place – Meerensee	“really bad odour causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
79	Iselle's Husband 066 273 3897	2018-09-14 03:30	Pompano Place – Meerensee	“really bad odour causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
80	Lindy Viljoen 083 454 8019	2018-09-14 03:30	Birdswood	“ Terrible cat urine odour causing eye and nose irritation”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
81	Carinda Du Plessis 083 645 0500	2018-09-14 03:30	Meerensee	“ Terrible odour causing puffy watery eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
82	083 654 5630	2018-09-14 03:35	Mzingazi Golf Estate – Meerensee	“ Horrible air. Burning eyes, running nose and not able to breathe. Have asthma.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
83	Sharin Govender 082 450 4187	2018-09-14 03:40	Birdswood	“ bad odour. Woke up with a headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
84	Teane White 082 355 4535	2018-09-14 03:45	Grunter Gulley – Meerensee	“ Horrific smell. Myself and my kids had terrible reactions to this. Sinus trouble, itchy eyes, dizziness, headaches and sore throats”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
85	Teane White's children 082 355 4535	2018-09-14 03:45	Grunter Gulley – Meerensee	“Horrific smell. Myself and my kids had terrible reactions to this. Sinus trouble, itchy eyes, dizziness, headaches and sore throats”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
86	Marlise Snyman 076 574 9075	2018-09-14 03:50	Arboretum	“Bad smell. Woke me up. Causing suffocation and sore burning throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
87	Nontombi 073 000 7640	2018-09-14 04:00	Wildenweide	“very bad odour”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
88	Marietjie Dekker 083 399 5514	2018-09-14 04:00	Galjoengolf – Meerensee	“really bad odour causing difficulty breathing headache nausea and eye irritation”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
89	Tessa 060 933 2948	2018-09-14 04:00	Veldenvlei	“Terrible smell causing heavy chest nose and eye irritation”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
90	Mr Govender 082 924 6501	2018-09-14 04:00	Arum Lily-Veldenvlei	“terrible odour causing nausea and breathing difficulties”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
91	Mr Govender's wife 082 924 6501	2018-09-14 04:00	Arum Lily-Veldenvlei	“terrible odour causing nausea and breathing difficulties”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
92	Nombuso 081 242 0907	2018-09-14 04:00	Veldenvlei	“terrible smell causing a really bad headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
93	Enza Coetzee	2018-09-14 04:00	Meerensee	"Really bad odour in the house. Husband had to use asthma pump"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
94	Enza Coetzee's Husband	2018-09-14 04:00	Meerensee	"Really bad odour in the house. Husband had to use asthma pump"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
95	Kathleen Parnham 076 040 1939	2018-09-14 04:00	Kolstertkring – Meerensee	"Bad odour causing headache and nausea. I thought I was being gassed"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
96	Ricky 084 525 7526	2018-09-14 04:00	Birdswood	"Nauseating stench. It smelt like rotting onions"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
97	Mari Lowe 072 687 3911	2018-09-14 04:00	Kitefish – Meerensee	"bad smell causing coughing)	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
98	Mari Lowe's Husband and baby	2018-09-14 04:00	Kitefish – Meerensee	"bad smell causing coughing)	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
99	Yolande 084 604 6073	2018-09-14 04:00	Olienhoutkoppi – Arboretum	"Bad smell . Woke up with a migraine"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
100	Mr Govender 082 857 7443	2018-09-14 04:00	Thrush Trail – Birdswood	"bad smell causing nausea and headache itchy eyes and throat"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
101	Herman Meyer 065 937 5985	2018-09-14 04:00	Via Cassiandra – Arboretum	"Odour causing nausea and headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
102	Daleen Meyer 065 937 5985	2018-09-14 04:00	Via Cassiandra – Arboretum	“ Odour causing nausea and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
103	Mari van Rooyen 084 652 8908	2018-09-14 04:00	Via Cassiandra – Arboretum	“ we were awakened by a sickening smell and severe nausea	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
104	Alan 084 470 7095	2018-09-14 04:00	Essenwood - Arboretum	“ odour causing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
105	Martie Mulder 079 509 5572	2018-09-14 04:00	Porpoise Passage – Meerensee	“Terrible smell. I am not asthmatic, but I could not breathe. Every door and window were closed but the smell inside my house was Unbearable. I started sneezing and my throat and eyes were burning. Smell only subsided around 7am.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
106	Maretha 082 908 9989	2018-09-14 04:00	Pelserplaat – Meerensee	“dreadful ammonia type smell causing burning throat, and itching eyes. Instant headache. We could taste the awful ammonia metal type taste in our mouths”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
107	Angie Els 076 339 1804	2018-09-14 04:00	Birdswood	“Mondi smell causing sore throat headache and burning eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
108	Joanne Harding 084 620 2350	2018-09-14 04:00	Pelican Hide – Birdswood	“ This morning my son and I woke up to the noxious smell. Both experiencing headaches, horrid taste on our tongues.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
109	Alfronzo 071 480 6823	2018-09-14 04:30	Geelhoutkruin – Arboretum	“Terrible smell causing coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
110	Alfonzo's 2 children 071 480 6823	2018-09-14 04:30	Geelhoutkruin – Arboretum	“Terrible smell causing coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
111	Nicolene Montgomery 082 876 4830	2018-09-14 04:30	Krewelkring – Meerensee	“Bad cat urine smell causing burning of the eyes, and headaches. Mother experienced tight chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
112	Nicolene Montgomery's Mother	2018-09-14 04:30	Krewelkring – Meerensee	“Bad cat urine smell causing burning of the eyes, and headaches. Mother experienced tight chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
113	Theo 082 938 2366	2018-09-14 04:30	Egyptian Goose – Birdswood	“The smell of Mondi was very bad causing throat constriction”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
114	Mr Fick 083 310 1697	2018-09-14 04:30	Roller Ring - Birdswood	“bad smell causing headache and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
115	Mrs Fick 083 310 1697	2018-09-14 04:30	Roller Ring - Birdswood	“bad smell causing headache and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
116	Alan Stirk 083 287 6766	2018-09-14 04:30	Frangipani – Arboretum Ext	“smelling bad like acid. Head was hurting when I woke up”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
117	Allan Naidoo 082 593 5881	2018-09-14 04:30	Pelserplaat – Meerensee	“ Awful stench in the air. My husband has a sore throat and I have discomfort with breathing and a hoarse voice”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
118	Hannah Naidoo 082 593 5881	2018-09-14 04:30	Pelserplaat – Meerensee	“Awful stench in the air. My husband has a sore throat and I have discomfort with breathing and a hoarse voice”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
119	Reginald Haskins 083 417 1487	2018-09-14 04:30	Pinkie Pool - Meerensee	“Bad odour. woke up with a headache and shortness of breath”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
120	Nick 072 133 5466	2018-09-14 04:30	Meerensee	“woke up to a very strong pungent guava like smell nose irritated and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
121	Jeanine Maakai 082 572 6945	2018-09-14 04:30	Pompano Place – Meerensee	“Stench causing Headache, burning nose and eyes.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
122	Eunice Synodinos 072 992 8763	2018-09-14 04:45	Mzingazi Estate	“bad smell causing sneezing and runny nose and felt very dizzy all day”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
123	Anita Naidoo 083 3007111	2018-09-14 04:45	Veldenvlei	“bad odour causing persistent cough”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
124	Eunice Synodinos 072 992 8763	2018-09-14 04:45	Mzingazi Estate – Meerensee	“odour causing sneezing and runny nose. Been dizzy all day.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
125	Kim Roberts 074 186 2002	2018-09-14 04:50	Msimbithi – Arboretum	“bad Smell. My chest closed up. Had awful sinus and sneezing into the day as well as a heavy chest.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
126	Karen 078 457 4848	2018-09-14 05:00	Meerensee	“terrible smell causing irritation of the eyes and skin”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
127	Andries Linda 035-789 7592	2018-09-14 05:00	Weigelia – Veldenvlei	“ bad odour causing sore throat and burning nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
128	Gerda Viljoen 035 789 8501	2018-09-14 05:00	Ponyfish – Meerensee	“Woken up by a very bad odour causing shortness of breath”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
129	Michelle 083 251 4132	2018-09-14 05:00	Kabeljoukade – Meerensee	“ Terrible odour causing headache nausea and burning watery eyes	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
130	Nondumiso Msezane 081 737 1456	2018-09-14 05:00	Mzingazi	“very strong rotten egg smell causing son to be unwell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
131	Jenna 083 284 4055	2018-09-14 05:00	Arboretum	“ very bad odour causing a major headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
132	Magda Veldsman 035 -799 0500	2018-09-14 05:00	Ouhoutoord – Arboretum	“bad odour causing burning of the nose and throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
133	Ivan Naidoo 082 451 1179	2018-09-14 05:00	Veldenvlei	“ terrible odour causing bad health effects. Battled to breathe. Have to take wife to doctor”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
134	Ivan Naidoo's Wife 082 451 1179	2018-09-14 05:00	Veldenvlei	“ terrible odour causing bad health effects. Battled to breathe. Have to take wife to doctor”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
135	Marlize 083 656 6294	2018-09-14 05:00	Disa Dives – Veldenvlei	“Bad Smell causing headaches”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
136	Elindi Fouche 082 575 3409	2018-09-14 05:00	Krewelkring – Meerensee	“awful smell. My family suffered from headaches and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
137	R Rhamdhani 082 891 6731	2018-09-14 05:00	Nyalaberry – Arboretum	“bad odour causing severe headache and difficulty breathing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
138	Mr Dhaniram 084 627 1169	2018-09-14 05:00	Saddle back Village – Meerensee	“toxic Headache causing headache and burning eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
139	Mrs Dhaniram 084 627 1169	2018-09-14 05:00	Saddle back Village – Meerensee	“toxic Headache causing headache and burning eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
140	Rialine Steyn 083 724 1098	2018-09-14 05:00	Oesterbank – Meerensee	“Woken up by a terrible smell. Had a terrible headache all day”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
141	Samuel Keeve 083 265 4383	2018-09-14 05:00	Pompano Place – Meerensee	“ Bad odour. Woke with a headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
142	Sandra Keeve 083 265 4383	2018-09-14 05:00	Pompano Place – Meerensee	“ Bad odour. Woke with a headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
143	Marinus Labuschagne 083 646 8236	2018-09-14 05:00	Birdswood	“This morning I couldn’t breathe. I suffer from asthma. This better not have damaged my lungs further.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
144	Hlengiwe 082 830 4432	2018-09-14 05:00	Birdswood	“Woke up to an awful smell inside my house and outside. I couldn’t breathe properly.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
145	R Camminga 083 251 4969	2018-09-14 05:00	Heideheuvel – Veldenvlei	“Awful guava odour causing nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
146	Simphiwe Morajane 082 882 1800	2018-09-14 05:00	Lantern reef – Meerensee	“terrible smell. Was actually worried and scared. My 4-year-old son was struggling to breathe”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
147	Celeste Morkel 079 492 5834	2018-09-14 05:00	Kolstertkring – Meerensee	“terrible smell causing massive headache and sinus”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
148	Anneli Swanepoel 062 117 4241	2018-09-14 05:00	Arboretum	“ Bad Mondi smell causing itchy eyes and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
149	Gerda van As 082 777 6832	2018-09-14 05:00	Meerensee	“ Foul smell. Children woke up at 5am complaining. One daughter has a migraine and has to write exams. Also, nauseas and dry throats.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
150	Nadia Hattingh 079 511 3267	2018-09-14 05:00	Krewelkring – Meerensee	“Strong cat urine smell. Nose and eyes burning. Kids coughing. Had to give my 4- year-old her pump”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
151	Umuzi Guest House	2018-09-14 05:00	Mussel Cracker – Meerensee	“bad smell in the air. Guests and staff complaining”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
152	Bertus Kleynhans 083 994 2695	2018-09-14 05:00	Damba Draai – Meerensee	“ whole family coughing and headache. Lisa- Mari didn’t go to school because of constant coughing.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
153	Roelee Kleynhans 083 994 2695	2018-09-14 05:00	Damba Draai – Meerensee	“ whole family coughing and headache. Lisa- Mari didn’t go to school because of constant coughing.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
154	Lisa-Mari Kleynhans 083 994 2695	2018-09-14 05:00	Damba Draai – Meerensee	“ whole family coughing and headache. Lisa- Mari didn’t go to school because of constant coughing.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
155	Candace 078 626 2722	2018-09-14 05:00	Snapper Bend – Meerensee	“really bad smell. Woke me up.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
156	Anike Dos Santos 082 327 4623	2018-09-14 05:00	Grunter Gully – Meerensee	“terrible toxic smell causing headache, burning eyes and coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
157	Ryno Martyn 076 499 1111	2018-09-14 05:15	Mackeral – Meerensee	“ Bad odour causing Headache and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
158	Ryno Martyn's Wife 076 499 1111	2018-09-14 05:15	Mackeral – Meerensee	“ Bad odour causing Headache and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
159	Wayne 082 923 6657	2018-09-14 05:30	Acacia Canopy - Arboretum	“ Noxious odour causing irritation”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
160	Dr Kavista Udarajh 084 707 2558	2018-09-14 05:30	Golf Estate – Meerensee	“really bad air pollution causing tight chest and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
161	Cyril Mtuntuto 081 336 1036	2018-09-14 05:30	Mzingazi	“really bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
162	Francois Smit	2018-09-14 05:30	Kolsterkring – Meerensee	“ Terrible odour causing a very bad headache. Children not feeling well.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
163	Francois Smit's Wife & Kids	2018-09-14 05:30	Kolsterkring – Meerensee	“ Terrible odour causing a very bad headache. Children not feeling well.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
164	Jemaine Naicker 035 - 799 0500	2018-09-14 05:30	Frangipani- Arboretum Ext	“bad odour causing burning of the eyes nose and throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
165	Tamlyn 087 630 0096	2018-09-14 05:30	Crayfish Creek - Meerensee	“Really bad odour. Couldn't drink the water on my bedside table because it had absorbed the odour”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
166	Reinah Padyachee 083 466 5766	2018-09-14 05:30	Soapberry – R. bay CBD	“Bad smell causing heavy chest, headache and vomiting”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
167	Leonie 083 642 4442	2018-09-14 05:30	Veldenvlei	“terrible smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
168	Hillside Employees	2018-09-14 05:30	Hillside	“Employees complaining of headaches and not being able to work”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
169	Verna 079 712 3141	2018-09-14 05:30	Arboretum	“Mix of cat pee and who knows what. Extreme sore throat, headache and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
170	Faan 083 259 4799	2018-09-14 05:30	Soulsands – Meerensee	“really bad odour causing me to have to use my asthma pump”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
171	D Kirkwood 083 305 4802	2018-09-14 05:45	Mzingazi Golf estate	"Terrible stench causing itching and burning eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
172	D Kirkwood's Son 083 305 4802	2018-09-14 05:45	Mzingazi Golf estate	"Terrible stench causing itching and burning eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
173	Karen 078 457 4848	2018-09-14 06:00	Hillside	"terrible smell causing irritation of the eyes and skin"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
174	Gugu Myeni 035-799 0500	2018-09-14 06:00	Mandlazini	"bad odour"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
175	Bongi 081 789 1960	2018-09-14 06:00	Meerensee	" Very bad smell causing my daughter to vomit while sleeping. She has been vomiting since this morning."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
176	Nadia Marais 082 322 9811	2018-09-14 06:00	Pelserplaat – Meerensee	" I want to log a complaint about the air pollution. We have had enough of this nonsense"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
177	Henk Joubert 072 476 5485	2018-09-14 06:00	Loodvislyn – Meerensee	" Very bad smell causing burning sensation in the nose and throat"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
178	Nora & 2 children 083 299 8298	2018-09-14 06:15	Arboretum	"bad headache and had to fetch children from school because they were nauseas"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
179	Nora's two children	2018-09-14 06:15	Arboretum	"bad headache and had to fetch children from school because they were nauseas"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
180	Bennie Badenhorst 082 062 1213	2018-09-14 06:30	Kitefish – Meerensee	, “ Bad smell. Whole family was coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
181	Alison 073 791 7949	2018-09-14 06:30	Octopus Arm – Meerensee	“odour”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
182	Cynthia 083 469 1994	2018-09-14 07:00	Shad Shoal – Meerensee	“bad odour”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
183	Hayden Hegter	2018-09-14 07:00	Krewelkring – Meerensee	“ Shocking smell causing headache and nausea. Have already been ill twice.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
184	Lauren van den Heuwel	2018-09-14 07:00	Krewelkring – Meerensee	“ Shocking smell causing headache and nausea. Have already been ill twice.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
185	Gerda Pieterse 082 720 9064	2018-09-14 07:30	Pompano Place – Meerensee	“woke with a sore throat and an odd chemical smell in the house. My voice didn’t sound right, eyes itching and general discomfort.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
186	Lorika 078 282 3820	2018-09-14 07:45	Richards Bay Christian School- V&V	“ Bad smell affecting myself and my grade 5 learners. Experiencing headaches, nausea and a bad taste in the mouth”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
187	Lelani van Blerk 073 191 0284	2018-09-14 06:00 - 07:30	St Lucia	“foul cat pee like smell hanging over St Lucia and nearly all the way to Mtuba”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
188	Chris Van Vuuren 082 354 7907	2018-09-14 around 01h00	Eagle Ray – Meerensee	“ Woke up aware of and tasting an unpleasant smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
189	Brynne Gericke 083 254 5538	2018-09-14 around 24h00	Arboretum	“woken up by a terrible smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
190	Bertus Ferreira 082 356 0120	2018-09-14 before 05h00	Suurvy – Veldenvlei	“ I am a healthcare professional pharmacist. I was woken up with respiratory difficulties which included a tight and wheezy chest and burning chest, nose and eyes. I was aware of an extremely bad smell in my bedroom. It was very concentrated. I had to use an inhaler during the day to relieve my tight chest and antihistamines to ease nasal irritation.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
191	Mr Raubenheimer 035- 789 1382	2018-09-14 earl morning	Duifdal – Birdswood	“terrible smell can’t breathe”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
192	Brendon 062 879 0312	2018-09-14 early hours	Meerensee	“toxic gasses causing serious health problems”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
193	Roxanne 073 142 7860	2018-09-14 early hours	Brackenham	“ very bad odour causing a terrible headache and eye irritation – feeling really terrible”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
194	Dee 083 309 9162	2018-09-14 early hours	Geelhoutkruin – Arboretum	“ bad odour causing blocked nose sore throat and itching”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
195	Dee's Husband 083 309 9162	2018-09-14 early hours	Geelhoutkruin – Arboretum	“ bad odour causing blocked nose sore throat and itching”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
196	Joe 083 586 3237	2018-09-14 early hours	Leatherback- Meerensee	Really bad odour causing headache nausea vomiting and burning throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
197	Veronica 082 329 3360	2018-09-14 early hours	Marlynhoek – Meerensee	“really bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
198	Leon 035 -753 1187	2018-09-14 early hours	Meerensee	“really bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
199	Kerry Franklin 083 419 5808	2018-09-14 early hours	Meerensee	“Bad cat urine smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
200	Pam Scofield 072 264 6988	2018-09-14 early hours	Disa Dives – Veldenvlei	“Bad smell. Woke up with sinus.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
201	Robert 074 156 0657	2018-09-14 early hours	Avokado Kroon – Arboretum Ext	“terrible cat urine smell. The smell interrupted our sleep and there was a lot of sneezing, irritated nasal passages and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
202	Noen 074 156 0657	2018-09-14 early hours	Avokado Kroon – Arboretum Ext	“terrible cat urine smell. The smell interrupted our sleep and there was a lot of sneezing, irritated nasal passages and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
203	Tamm 074 156 0657	2018-09-14 early hours	Avokado Kroon – Arboretum Ext	“terrible cat urine smell. The smell interrupted our sleep and there was a lot of sneezing, irritated nasal passages and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
204	Ethan 074 156 0657	2018-09-14 early hours	Avokado Kroon – Arboretum Ext	“terrible cat urine smell. The smell interrupted our sleep and there was a lot of sneezing, irritated nasal passages and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
205	Wellington 074 156 0657	2018-09-14 early hours	Avokado Kroon – Arboretum Ext	“terrible cat urine smell. The smell interrupted our sleep and there was a lot of sneezing, irritated nasal passages and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
206	Clifford Hammond 082 308 7699	2018-09-14 early hours	Birdswood	“Harmful smell causing sore throat watery eyes and closed chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
207	Clifford Hammond's Wife	2018-09-14 early hours	Birdswood	“Harmful smell causing sore throat watery eyes and closed chest”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
208	Hugh Wason 083 357 3193	2018-09-14 early hours	Springer Leap – Meerensee	“terrible smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
209	Nobuhle 073 499 3151	2018-09-14 early hours	Mandlazini	“bad smell causing headache and sore throat”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
210	Natalie 083 654 6078	2018-09-14 early hours	Karateen – Meerensee	“ strong smell causing blocked nose watery eyes and hoarse voice”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
211	Heidi 066 211 5297	2018-09-14 early hours	Meerensee	"terrible smell causing headache and vomiting"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
212	Ilene 084 426 7540	2018-09-14 early hours	Arboretum	"terrible cat urine smell" On the 15th complainant reported that son had fever and vomiting since the Friday	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
213	Martha de Waal 073 210 6566	2018-09-14 early hours	Snapper Bend – Meerensee	"Unbearable cat urine odour causing nausea and headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
214	Charmaine Walford 071 889 6962	2018-09-14 early hours	Honeysuckle – Veldenvlei	"awful smell made out family feel sick with headache burning eyes and sore throat"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
215	Adri Jones 083 409 5898	2018-09-14 early hours	Lantern Reef – Meerensee	"terrible cat urine smell causing nausea headache and sinus"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
216	Christelle Janse van Rensburg 083 293 9655	2018-09-14 early hours	Disa Dives – Veldenvlei	"toxic smell causing nausea headache and burning eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
217	Nathan Gower 063 692 4797	2018-09-14 early hours	Veldenvlei	"Bad odour causing coughing and vomiting"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
218	Jay Naicker 072 5 79 8682	2018-09-14 early hours	Duikerdraai – Wildenweide	"noxious smell causing nausea and throat irritation"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
219	Mason Van der Watt 082 222 6174	2018-09-14 early hours	Meerensee	"terrible smell causing headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
220	Beatrix Erasmus 076 313 0041	2018-09-14 early hours	Meerensee	"terrible smell causing nausea"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
221	Wena Wepener 083 298 5814	2018-09-14 early hours	Arboretum	"terrible smell. Woke up with a burning nose"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
222	Jeanette 079 691 0905	2018-09-14 early hours		"terrible Mondi smell. Been a long time since we experienced this horrible smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
223	Julandi 083 603 0525	2018-09-14 early hours	Arboretum	"Terrible smell causing burning and swollen eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
224	Meri van Wyk 084 206 4340	2018-09-14 early hours	Mullet Leap – Meerensee	"Stench causing coughing irritated eyes and a sleepless night"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
225	Zenda Ebersohn 061 997 8557	2018-09-14 early hours	Meerensee	"the air is really bad"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
226	M Pretorius 076 548 6898	2018-09-14 early hours	Richards Bay	"terrible smell. Couldn't sleep. Almost suffocated"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
227	Norman Harper 082 659 9636	2018-09-14 early hours	Pelserplaat – Meerensee	"bad smell woke me up. Now suffering with a headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
228	061 019 5316	2018-09-14 early hours		"horrible smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
229	Estelvene Smit 078 389 2530	2018-09-14 early hours	Arboretum	"Bad smell causing headaches"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
230	Adriaan 060 375 7918	2018-09-14 early hours	Richards Bay	"bad smell causing nausea and headache"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
231	Belinda Mahaffy 083 212 5384	2018-09-14 early hours	Roller ring – Birdswood	"Bad odour causing nausea and closed chest"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
232	Sunelle 083 409 9093	2018-09-14 early hours	Meerensee	"terrible smell causing nausea vomiting puffy eyes and difficulty breathing"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
233	Pauline Baker 083 226 7397	2018-09-14 early hours	Birdswood	"bad smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
234	Angela Hodgson 082 455 4966	2018-09-14 early hours	Meerensee	"very bad smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
235	Jan Heyneke 082 890 7688	2018-09-14 early hours	Tussel-Berry – Arboretum	"terrible smell. My husband has asthma and was forced to use his nebuliser twice before going to work and is still battling to breathe."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
236	Riekie Heyneke 082 890 7688	2018-09-14 early hours	Tussel-Berry – Arboretum	“terrible smell. My husband has asthma and was forced to use his nebuliser twice before going to work and is still battling to breathe.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
237	Wesley Robertson 082 380 1842	2018-09-14 early hours	Arboretum	“Bad odour causing sinus congestion”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
238	Suzette Grobler 083 459 8625	2018-09-14 early hours	Seilvis - Meerensee	“awful smell – smells like Mondi”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
239	W Le Roux 083 273 0980	2018-09-14 early hours	Meerensee	“Horrible pungent smell. Battling to breathe”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
240	072 029 4087	2018-09-14 early hours		“ I want to report the extreme pollution as it must be detrimental to everyone’s health”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
241	Yolande 079 381 3107	2018-09-14 early hours	Meerensee	“terrible smell in the air. I am sure this will have a bad effect on my swimming pool water and my child also has asthma.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
242	Steph Espag 083 255 7979	2018-09-14 early hours	Richards Bay	“ Terrible smell causing nausea, itching and feeling sick.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
243	Ernst 061 227 4574	2018-09-14 early hours	Knorhaanbaai – Meerensee	“air very bad. Woke my family”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
244	Gwennie Coetzee 074 537 2083	2018-09-14 early hours	Drongo Domein – Birdswood	“ The poison in the air is making me sick”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
245	Xanthe Maree 072 478 5144	2018-09-14 early hours	Dune Sands - Meerensee	“Vulgar smell causing nausea and my 2-year-old to cough I have had allergy like symptoms since then”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
246	Trynie 083 255 3577	2018-09-14 early hours	Arboretum	“ air pollution affecting our health. It will be appreciated if I can be informed which entity is responsible for the pollution so that I can hold them responsible for any medical costs.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
247	Charlene Kriedeman 083 384 4861	2018-09-14 early hours	Arboretum	“strong Mondi smell. Woke up with a huge headache. Oldest son complained he wasn't feeling well, headache and nausea.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
248	Naomi Steyn 084 788 0004	2018-09-14 early hours	Meerensee	“bad odour causing headaches and nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
249	Sibusiso Mthombeni 078 573 8823	2018-09-14 early hours	Veldenvlei	“I battled to breathe last night. Eye irritation and a terrible headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
250	Bronwyn 083 384 8803	2018-09-14 early hours	Musselcracker – Meerensee	“ Terrible cat pee smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
251	Tina 083 424 0454	2018-09-14 early hours	Hoopoe Hideaway – Birdswood	“ Horrible smell	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
252	Vic Scorgie 082 886 5426	2018-09-14 early hours	Pelican Parade – Birdswood	“ The smell was so strong that I couldn’t sleep. Blocked nose and burning eyes and headache.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
253	Yvonne Maree 083 517 2360	2018-09-14 early hours	Kabeljoukade – Meerensee	“awful bleachy smell in the air”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
254	Dionne Beneke 083 601 3285	2018-09-14 early hours	Pinkie Pool – Meerensee	“very bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
255	H S Meyer 083 232 5251	2018-09-14 early hours	Coucal Cover – Birdswood	“ Mondi smell causing headache and runny blocked nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
256	Christo 083 463 9333	2018-09-14 early hours	Bottlebrush Bend – Veldenvlei	“My entire family woke up with headaches and congestion. This is not acceptable.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
257	Busiswa Barn 082 896 6615	2018-09-14 early hours	Moonfish – Meerensee	“ Foul smell left me dizzy and with a throbbing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
258	Andre Smuts 081 347 6678	2018-09-14 early hours	Breamhill – Meerensee	“terrible chemical smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
259	Sharon 082 876 2656	2018-09-14 early hours	Wildenweide	“smell in the air. My son has itchy swollen eyes and cough and scratchy throat.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
260	Ben Linde 071 645 2486	2018-09-14 early hours	Duifdal – Birdswood	“really bad odour causing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
261	Louw Cilliers 083 639 9856	2018-09-14 early hours	Pelican Hide – Birdswood	“ Horrible smell. It was nauseating. “	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
262	Arlene Gilmore 072 528 0599	2018-09-14 early hours	Avokadokroon – arboretum ext.	Very severe odour causing sinus and headaches”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
263	082 322 8058	2018-09-14 early hours	Breamhill – Meerensee	“ Smell was so awful I have a migraine”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
264	C van Wyk 083 375 3598	2018-09-14 early hours	Arboretum	“strong acid smell causing sinusitis”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
265	Shaun Jordaan 083 635 0864	2018-09-14 early hours	Whydah Wing – Birdswood	“Awful smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
266	Tori 064 821 9141	2018-09-14 early hours	Lira Link – CBD	“bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
267	Nicky 079 194 7187	2018-09-14 early hours	Buffalo Bend – Wildenweide	“bad odour causing headache coughing and choking feeling”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
268	Jean Short 072 357 7263	2018-09-14 early hours	Chat Crescent – Birdswood	“ Smell woke us causing headaches”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
269	Donald Fischer	2018-09-14 early hours	Honeysuckle – Veldenvlei	“I am asthmatic, and I had to take more than double dose of prescribed medicine	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
				to “survive, and my wife suffered with sinus”.		
270	Elsa Fischer	2018-09-14 early hours	Honeysuckle – Veldenvlei	“I am asthmatic, and I had to take more than double dose of prescribed medicine to “survive, and my wife suffered with sinus”.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
271	Tessa 060 933 2948	2018-09-14 early hours	Arum Lily – Veldenvlei	“ Terrible odour causing heavy chest burning nose and headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
272	Johan 084 295 1409	2018-09-14 early hours of the morning	Pompano – Meerensee	“bad odour causing irritation of the nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
273	George 082 337 5634	2018-09-14 early hours of the morning	Haakdoringrug – Arboretum	“bad odour causing nausea”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
274	Bernie 035 786 0966	2018-09-14 early morning	Birdswood	“pungent odour causing headache and irritation of the nose”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
275	D Myburgh 083 275 2834	2018-09-14 early morning	Snapper Bend – Meerensee	“serious bad smell causing sinusitis and stuffy headache” (domestic worker in Mzingazi village also affected)	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
276	Elichia van Schalkwyk 082 679 0830	2018-09-14 early morning	Seilvis – Meerensee	“really awful smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
277	Cindy Potgieter 083 200 0067	2018-09-14 early morning	Arboretum	“ Bad cat urine odour causing sneezing coughing sore throat headache and battling to concentrate”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
278	Mpume 083 379 4770	2018-09-14 early morning	Pelican Hide – Birdswood	“foul smell causing headache”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
279	Angel van Rensburg 076 790 1387	2018-09-14 early morning	Birdswood	“ smell in the air causing headache and fatigue”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
280	Debbie 083 417 0866	2018-09-14 early morning	Meerensee	“woke up to a terribly toxic cat urine type smell	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
281	Carmen Harris 082 804 1910	2018-09-14 early morning	Veldenvlei	“ Cat urine smell from early this morning causing burning eyes	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
282	Surika Campher 073 146 2525	2018-09-14 early morning	Honeysuckle – Veldenvlei	“bad smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
283	Tim Ellis 072 223 1655	2018-09-14 early morning		“unbearable smell. It’s almost suffocating, and it burns the eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
284	Michelle Gedye 082 856 2024	2018-09-14 early morning	Arboretum Extension	Early morning, “smells like a mixture of cat wee and gas. Causing headache , nausea, burning throat, coughing and sinus. My son has flu and was getting better but this morning his eyes were red and watery and his chest tight and congested.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
285	Jeffrey Maivha 076 341 5101	2018-09-14 early morning	Meerensee	“bad smell. Daughter is asthmatic, and she had an asthma attack. My wife and I feel are unwell.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
286	Jeffrey Maivha's Wife 076 341 5101	2018-09-14 early morning	Meerensee	"bad smell. Daughter is asthmatic, and she had an asthma attack. My wife and I feel are unwell."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
287	Jo Nel 083 586 3237	2018-09-14 early morning	Meerensee	"bad odour"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
288	Lind Matthews 083 273 3072	2018-09-14 early morning	Meerensee	"terrible smell. This is unacceptable."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
289	Mausley Mhlongo 079 747 7118	2018-09-14 early morning	Mzingazi	"Foul smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
290	Mr Jughdis 083 288 5490	2018-09-14 early morning	Pinkie Pool – Meerensee	"Unacceptable odour. My daughter suffers with asthma"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
291	Valerie 072 260 0147	2018-09-14 early morning		"bad odour causing headache and sore throat"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
292	Francois Mienie 073 041 6955	2018-09-14 early morning		"Odour"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
293	Brenda Viljoen 072 851 3170	2018-09-14 early morning	Meerensee	"really bad smell"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
294	Dorothy 072 124 6740	2018-09-14 early morning	Richards bay	"terrible smell in the air"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
295	Beatri Dekker 084 614 8071	2018-09-14 early morning	Ladyfish Nook – Meerensee	“Terrible stench”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
296	Sonja Jacobs 076 308 9830	2018-09-14 early morning	Meerensee	“ really bad acid smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
297	Erica Holtzkamp 072 473 0112	2018-09-14 early morning	Ocean Sands – Meerensee	“we woke up with terrible sinus. Baby just been given all clear by doctor and is now blocked up again”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
298	J Potgieter 073 414 2096	2018-09-14 early morning	Arboretum	“Stinking smell. No easy to breathe”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
299	Estelle rapper 083 631 4023	2018-09-14 early morning	Richards Bay	“ Unacceptable and unhealthy smell”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
300	Maryke Badenhorst 072 242 8453	2018-09-14 early morning	Meerensee and Veldenvlei	“smell filling the town is extremely unhealthy. We moved from Pretoria and the air here is always dirty and we have never been ill so often. Please ca something be done about this.”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
301	Simone Scarce 084 598 0012	2018-09-14 early morning	Birdswood	“ Strong bad smell (onion)”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
302	Hilton Renald 082 804 8122	2018-09-14 early morning	Pelserplaat – Meerensee	“Some form of acid in the air causing Nose and eye irritation. Worst we have experienced since we moved to Richards Bay 18 years ago.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
303	Marie van Niekerk 082 614 4411	2018-09-14 early morning	Meerensee	"I cannot breathe. If I have to go to Hospital !!! it's a disgrace!!"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
304	Lou-Anne Volschenk 079 184 0059	2018-09-14 early morning	Davidson Lane – Meerensee	"the smell in Davidson Lane was very overwhelming. I arrived at my office in Dollar Drive it was just as bad"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
305	Halvar Rautenbach 072 603 4014	2018-09-14 early morning	Octopus Arm – Meerensee	" The smell this morning was terrible. Smelt like cat pee"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
306	Scott Robinson 082 859 3916	2018-09-14 early morning	Meerensee	" Unbearable gas smell. I feel sick with a headache and sinus. My whole family are battling"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
307	Jan Combrink 083 460 7661	2018-09-14 early morning	Arboretum	" sickening smell causing headache nausea and sore eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
308	Thys Walters 083 272 4179	2018-09-14 early morning	Mzingazi Golf estate – Meerensee	" Bad smell in our house. So bad out cat started throwing up"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
309	Matthew Moon 083 275 6035	2018-09-14 early morning	Pelserplaat – Meerensee	" Terrible acidic odour"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
310	Spring Erasmus 079 064 4617	2018-09-14 early morning	Snapper Bend – Meerensee	" Disgusting smell throughout my house and at my office in the CBD. Causing really stuffy nose and headache. Also, chest discomfort, with heaviness.	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
311	Marda 061 172 7317	2018-09-14 early morning		"I want to lay a complaint about the Mond smell today"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
312	Pam Pereira 084 262 9485	2018-09-14 early morning	Meerensee	"Bad smell causing terrible headache nausea and itchy eyes"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
313	Elaine Whittacker 079 504 7297	2018-09-14 early morning	CBD	"terrible smell. Lady in my office says she had a terrible cat urine smell at her home."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
314	Mel 082 558 4275	2018-09-14 from 02h00	Meerensee	"very bad odour causing burning eyes and nose irritation. Child sick and vomiting."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
315	Mel's child	2018-09-14 from 02h00	Meerensee	"very bad odour causing burning eyes and nose irritation. Child sick and vomiting."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
316	Neil Chamber 083 658 3219	2018-09-14 from 02h00	Heideheuvel – Veldenvlei	"Nearly died last night. We had to close windows in the house. Could hardly breathe."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
317	Keri Binks 083 275 9906	2018-09-14 from 02h00	Meerensee	Terrible smell. I think the smell gave me my first asthma attack. For the first time in my life I was coughing uncontrollably and battling to breathe. It was a terrible experience as I could feel my chest closing in on me."	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
318	Kerry 083 275 9906	2018-09-14 from 02h00	Meerensee	"Horrific cat urine smell. Struggling to breathe"	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay

No.	Complainant	Date	Location	Description	Results	Resolution
319	Lize van Niekerk 072 977 5280	2018-09-14 from 03h00	Moony Pool – Meerensee	“ bad odour. I have a rash on my lower legs and arms and my whole body is itching”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
320	Gideon Breytenbach 061 412 5438	2018-09-14 from 04h00		“ Really bad. Itchy eyes”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
321	Andia Pienaar 083 501 7317	2018-09-14 from 06h00	Arboretum	“terrible mouldy smell causing sneezing and coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
322	Lehman van Niekerk 079 523 5445	2018-09-14 from 06h00		“ Terrible mouldy smell causing sneezing and coughing”	SEE COMPLAINT NO 5	Resolved - Mondi Richards Bay
323	Yolande 084 604 6073	2018-09-16 07:34	Alton	“ we on our way to Alton and the same smell as Friday is in Alton”		Unresolved
324	S Camminga	2018-09-16 08:05	Heideheuvel – Veldenvlei	Pungent nauseating Mondi odour .		Unresolved
325	Nontombi 066 228 6228	2018-09-16 00:00	Wildenweide	“the same smell as Friday morning is back”		Unresolved
326	Marius Becker 083 272 4209	2018-09-16 20:55	John Ross Highway adjacent to gypsum dam	Nauseating Cat Urine Odour “I have lived in Richards Bay for 20 years and never experienced anything like this. The odour was Mondi x 10. It hit me as it came in through the car vents and caught my chest. I had to close vents and hold my breath until I could open my windows. Mondi has been telephonically notified.		Unresolved

No.	Complainant	Date	Location	Description	Results	Resolution
Indirect Complaints						
327	Gugu Gazu 083 470 2812	2018-09-02 11:23	N2 Highway	Dark smoke emissions were emanating from Mpact Felixton	Mpact 2/09/2018 responded: Boiler House combined stack for Boiler No 4&5 was emitting dark smoke, Boiler 4&5 stack was emitting dark smoke above the normal operating ringer man chart (20% Darkness) on the 02nd of September 2018 over the period 11h15 -11h45 (about 30 minutes, Provisions for start-up, soot blowing and incidences of abnormal conditions (18 minutes) was exceeded, There were no exceedances on the ambient air quality standards recorded by the RBCAA Felixton monitoring station. Root Cause: Abnormal operating conditions - Boiler 4 stoker jam up due to broken stoker grate link. Stoker jam and reversing the stoker to identify the broken link upset boiler fuel/air ratio resulting to dark stacks Corrective Action: The broken stoker grate link was replaced and boiler No.4 put back online, the boiler operating ranges were adjusted (balanced) to meet the steam demand whilst minimizing observable emissions. The new operating standards were set and communicated to the boiler operators .	Resolved - Mpact
328	Gugu Gazu	2018-09-28 12:38	Foskor AB Plant Stack	Sulphuric Acid AB bad stack	Foskor 02/10/2018 Mannana Ntoampe responded: Root cause: During the inspection it was discovered that the acid strength was higher resulting in poor absorption. This was because of a faulty dilution valve. Corrective measure: Plant rates were reduced immediately, the control valve for dilution was fixed online. The sulphuric Acid A Plant is currently on shut and the production team will continue to monitor B Plant closely.	Resolved - Foskor

Table D9: Complaints Log – October 2018.

No.	Complainant	Time	Location	Description	Results	Resolution
1	Gus Schmidt 079 896 1284	2018-10-02 09:00	Pinkie Pool Meerensee	Poor air quality causing burning eyes and noses.	Mondi 03/10/2018 Nosipho Ntombela responded: Mondi monitoring stations: Average Wind direction = 112° Min = 90°. Max = 115°. RBCAA CBD Monitoring Station :Average wind direction = 136°. Min = 30°. Max = 249°.Mondi Monitoring Stations: There is no TRS exceedances recorded at monitoring stations before and during the time of the complaint. RBCAA CBD Monitoring Station: In the early hours of the morning, there were TRS exceedance against RBCAA limit. There was no exceedance 2hours before the time of the complaint. Compliance against Permits: There were no exceedance on the AEL limit. Root Cause of Incident: N/A Corrective Actions N/A Conclusions of the investigation: Based on the above information, it cannot be concluded that Mondi is responsible for the complaint. South 32 08/11/2018 Alison Gerber responded. The wind direction at the CBD station indicates a Northerly wind in the 4 hours prior to the complaint. There were no exceedances of the legislated limits of our AEL. Due to the wind direction, Hillside could not have caused nor contributed to the source of the complaint.	Resolved - Foskor
2	Jo Nel 0835863237	2018-10-07 07:00	Leatherback Road Meerensee	Complaint reported bad odour.	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 210° Min = 60°. Max = 311°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations: Elevated TRS detected prior to the incident at UVS station. RBCAA CBD Monitoring Station No TRS exceedances noted at any stations before, during and after the complaints. Compliance against Permits There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. During a Softwood blow the foul condensate seal broke which resulted in a loss of level and stopping of the foul condensate pump. As a result, the Flare tripped resulting in un-combusted NCGs being vented to atmosphere. Corrective Actions: The pump was reset, and the Flare was put back online within 15 minutes.	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
3	R. Franklin 0832651700	2018-10-07 07:43	Meerensee	Complaint reported "cat urine odour, same odour as experienced on the 14th of September but less intense";	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 210° Min = 60°. Max = 311°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations: Elevated TRS detected prior to the incident at UVS station. RBCAA CBD Monitoring Station No TRS exceedances noted at any stations before, during and after the complaints. Compliance against Permits There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. During a Softwood blow the foul condensate seal broke which resulted in a loss of level and stopping of the foul condensate pump. As a result, the Flare tripped resulting in un-combusted NCGs being vented to atmosphere. Corrective Actions: The pump was reset, and the Flare was put back online within 15 minutes.	Resolved - Mondi Richards Bay
4	Debbie 0834170866	2018-10-07 07:26	Meerensee	Cat urine odour	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 210° Min = 60°. Max = 311°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations: Elevated TRS detected prior to the incident at UVS station. RBCAA CBD Monitoring Station No TRS exceedances noted at any stations before, during and after the complaints. Compliance against Permits There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. During a Softwood blow the foul condensate seal broke which resulted in a loss of level and stopping of the foul condensate pump. As a result, the Flare tripped resulting in un-combusted NCGs being vented to atmosphere. Corrective Actions: The pump was reset, and the Flare was put back online within 15 minutes.	Resolved - Mondi Richards Bay
5	Alan 0832876766	2018-10-07 08:15	Frangipani Road in Arboretum	Bad odour	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations	Resolved - Mondi

No.	Complainant	Time	Location	Description	Results	Resolution
					Average wind direction = 210° Min = 60°. Max = 311°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations: Elevated TRS detected prior to the incident at UVS station. RBCAA CBD Monitoring Station No TRS exceedances noted at any stations before, during and after the complaints. Compliance against Permits There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. During a Softwood blow the foul condensate seal broke which resulted in a loss of level and stopping of the foul condensate pump. As a result, the Flare tripped resulting in un-combusted NCGs being vented to atmosphere. Corrective Actions: The pump was reset, and the Flare was put back online within 15 minutes.	Richards Bay
6	Yolandi 079 381 3107	2018-10-07 08:50	Klipviskinkel Road Meerensee	Complainant reported "terrible gassy stink in the air again"	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 210° Min = 60°. Max = 311°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations: Elevated TRS detected prior to the incident at UVS station. RBCAA CBD Monitoring Station No TRS exceedances noted at any stations before, during and after the complaints. Compliance against Permits There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. During a Softwood blow the foul condensate seal broke which resulted in a loss of level and stopping of the foul condensate pump. As a result, the Flare tripped resulting in un-combusted NCGs being vented to atmosphere. Corrective Actions: The pump was reset, and the Flare was put back online within 15 minutes.	Resolved - Mondi Richards Bay
7	Molly Govender 082 322 8059	2018-10-08 16:45	Vicinity of Melomed Hospital, John Ross Road	Complaint reported "same odour experienced in"	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 139° Min = 25°. Max = 300°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
				Meerensee on 14th September	Monitoring Stations. No TRS exceedances noted at any stations before, during and after the complaints. RBCAA CBD Monitoring Station. Slight increase in TRS concentration noted at eSikhaleni station at approximately 20:30pm. Compliance against Permits: There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. Following the Flare trip on the morning of the 7 October 2018 the air damper on Flare failed in the shut position. When the Flare had been restarted the damper remained in the shut position, however the DCS indicated it to be in the open position. The actual position of the damper was confirmed when the Flare TRS emissions started to trend high and a physical check was done. The damper issue was resolved however it is suspected that the Flare burner assembly may have been damaged during the period when there was no combustion/cooling air that was fed into the Flare while the damper feedback was problematic. This is based on the fact that despite making numerous changes to the damper and MRG gas inlet the best run settings cannot be regained. Corrective Actions: The Flare will be shut during the upcoming Water Wash on the 10 October 2018 for inspection and repair of damaged equipment. In the interim the set point temperature and damper position have been increased to improve combustion.	
8	Family members	2018-10-08 01:43	122 Krewelkring Road, Meerensee	Complainant reported "Our windows were open the whole night, a horrible smell similar to cate urine from a couple of weeks ago came through our windows, family members complaining about	Mondi 08/10/2018 Brendan Crawford responded: Source of Odour: Combustion of Hardwood gases in the Flare as a result of extended Lime Kiln outage. Mondi monitoring stations Average wind direction = 139° Min = 25°. Max = 300°. RBCAA CBD Monitoring Station: The RBCAA website could not be accessed at the time due to issues with Mondi's internet service. Mondi Monitoring Stations. No TRS exceedances noted at any stations before, during and after the complaints. RBCAA CBD Monitoring Station. Slight increase in TRS concentration noted at eSikhaleni station at approximately 20:30pm. Compliance against Permits: There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the combustion of NCGs in the Flare and Incinerator. Following the Flare trip on the morning of the 7 October 2018 the air damper on Flare failed in the shut position. When the Flare had been restarted the damper remained in the shut position, however the DCS indicated it to be in the open position. The actual position of the damper	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
				symptoms of headaches and nausea".	was confirmed when the Flare TRS emissions started to trend high and a physical check was done. The damper issue was resolved however it is suspected that the Flare burner assembly may have been damaged during the period when there was no combustion/cooling air that was fed into the Flare while the damper feedback was problematic. This is based on the fact that despite making numerous changes to the damper and MRG gas inlet the best run settings cannot be regained. Corrective Actions: The Flare will be shut during the upcoming Water Wash on the 10 October 2018 for inspection and repair of damaged equipment. In the interim the set point temperature and damper position have been increased to improve combustion.	
9	David Davidson 082 887 0221	2018-10-12 16:05	100m east of Nseleni Railway Station	complaint reported "Strong cat urine odour".	Mondi 16/10/2018 Brendan Crawford responded: Source of Odour: Combustion of gases in Flare. Meteorological Conditions: Mondi monitoring stations, Average wind direction = 216o Min = 207o. Max = 223o. RBCAA eNseleni Monitoring Station: Average wind direction = 228o Min = 205o. Max = 249o. Mondi Monitoring Stations: TRS exceedances noted at Landfill monitoring station at 11:20am. RBCAA CBD Monitoring Station: No exceedances noted at eNseleni station. Compliance against Permits: There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the continuous combustion of NCGs in the Flare and Incinerator to keep the plant safe. The Flare has recently been experiencing reliability issues which is the subject of a high-level investigation by a Mondi multi-disciplinary task team. At 10:20am the Flare experienced an unforeseen trip which momentarily resulted in uncommuted gases venting to atmosphere. Corrective Actions: The Flare was reset and back online within 10 minutes. A number of actions have been planned to address the reliability of the Flare including a)Upgrading of the burner to improve air supply for combustion as per OEM recommendations. b)Eventual replacement of the Flare with a more efficient combustion device (e.g. Fire Tube Burner, Waste Heat Boiler).	Resolved - Mondi Richards Bay
10	Anonymous	2018-10-16 11:40	John Ross in vicinity of Foskor	White cloud across road coming from Foskor. "something	Foskor 19/10/2018 Sandile Mdamba responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 1248.06 ppm were recorded for the AB Stack, these were within AEL limits. Background : In the Sulphuric Acid production, there is cooling involved. Acid is cooled by circulating water between the acid coolers/heat exchangers and the cooling towers. The Purpose of	Resolved - Foskor

No.	Complainant	Time	Location	Description	Results	Resolution
				depositing on my car"	the cooling tower is to maintain lower water temperature by removing heat from the water. This is achieved by evaporating water molecules into the atmosphere. In the process of cooling, evaporation occurs and under cooler ambient air conditions, vapour condenses. This forms a fog which appears as a cloud from a distance. This is particularly more visible in the mornings and afternoons when the temperature is lower, and atmosphere is denser. Outcome of the investigation: Sulphuric Cooling Towers: On both days (16th and 18th October) the temperature was about 200C and this was conducive for the formation of fog which appeared as a cloud. What was observed in the picture was fog emanating from the sulphuric Plant cooling towers. Over and above this, the Sulphuric "A" Plant was in the process of heating up after being on shut as communicated on the Zululand Observer on Monday 15/10/2018. As stated on the article "A visible plume of water vapour will be evident during the heat up process due to the condensation of the Sasol Gas which is used for heating the plants" Whilst heating up the plant, the moisture in the system caused water vapour to be released through the vents on the burner side of the plant. This could have contributed to what appeared to be a cloud emanating from Foskop. The cooling water is pure with no contaminants therefore, the vapour from the cooling towers and the burner would not pose any danger to human health nor the environment. As indicated above, the 'cloud' referred to in the complaint is not harmful and could not have caused a sore throat. The sore throat reported could have been from other sources that could not be confirmed during the investigation.	
11	Dave Conradie	2018-10-18 11:40	TWK South of Foskop	White cloud/fog coming from Foskop causing burning throat.	Foskop 19/10/2018 Sandile Mdamba responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 1248.06 ppm were recorded for the AB Stack, these were within AEL limits. Background : In the Sulphuric Acid production, there is cooling involved. Acid is cooled by circulating water between the acid coolers/heat exchangers and the cooling towers. The Purpose of the cooling tower is to maintain lower water temperature by removing heat from the water. This is achieved by evaporating water molecules into the atmosphere. In the process of cooling, evaporation occurs and under cooler ambient air conditions, vapour condenses. This forms a fog which appears as a cloud from a distance. This is particularly more	Resolved - Foskop

No.	Complainant	Time	Location	Description	Results	Resolution
					visible in the mornings and afternoons when the temperature is lower, and atmosphere is denser. Outcome of the investigation: Sulphuric Cooling Towers: On both days (16th and 18th October) the temperature was about 200C and this was conducive for the formation of fog which appeared as a cloud. What was observed in the picture was fog emanating from the sulphuric Plant cooling towers. Over and above this, the Sulphuric "A" Plant was in the process of heating up after being on shut as communicated on the Zululand Observer on Monday 15/10/2018. As stated on the article "A visible plume of water vapour will be evident during the heat up process due to the condensation of the Sasol Gas which is used for heating the plants" Whilst heating up the plant, the moisture in the system caused water vapour to be released through the vents on the burner side of the plant. This could have contributed to what appeared to be a cloud emanating from Foskor. The cooling water is pure with no contaminants therefore, the vapour from the cooling towers and the burner would not pose any danger to human health nor the environment. As indicated above, the 'cloud' referred to in the complaint is not harmful and could not have caused a sore throat. The sore throat reported could have been from other sources that could not be confirmed during the investigation.	
12	Anonymous	2018-10-19 22:48	Geranium Place, Veldenvlei	"Odour started about 2 hours ago and has intensified, causing burning eyes and scratchy throat".	Mondi 23/10/2018 Brendan Crawford responded: Source of Odour: Trip on Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 238o Min = 182o. Max = 276o. RBCAA CBD Monitoring Station: Average wind direction = 219o Min = 141o. Max = 285o. Mondi Monitoring Stations: No TRS exceedances recorded at any of the stations. RBCAA CBD Monitoring Station: TRS exceedances from 22:36pm to 22:39pm. Compliance against Permits: There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln is currently undergoing an unplanned extended shut. This necessitates the continuous combustion of NCGs in the Flare and Incinerator to keep the plant safe. The Flare has recently been experiencing reliability issues which is the subject of a high-level investigation by a Mondi multi-disciplinary task team. At 16:42pm the Flare experienced an unforeseen trip which momentarily resulted in un-combusted gases venting to atmosphere. Corrective Actions: The Flare was reset and back online within 5 minutes. The Lime Kiln is expected	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					to be back online by the 25th October 2018. A number of actions have been planned to address the reliability of the Flare including: a) Upgrading of the burner to improve air supply for combustion as per OEM recommendations')Eventual replacement of the Flare with a more efficient combustion device (e.g. Fire Tube Burner, Waste Heat Boiler).	
13	Verna 079 712 3141	2018-10-24 22:17	Via Cassiandra Arboretum Ext	"Bad Odour" Causing sore throat and sinus.	Mondi 24/10/2018 Brendan Crawford responded: Source of Odour: Not Mondi Related (see Root Cause investigation below) Meteorological Conditions: Mondi monitoring stations Average wind direction = 86o Min = 73o. Max = 100o. RBCAA monitoring stations: Average wind direction = 26o Min = 3o. Max = 57o. Average wind direction = 18o Min = 5o. Max = 35o. Mondi Monitoring Stations No TRS exceedances or increases recorded at any of the stations: RBCAA monitoring stations: No exceedances at CBD or eSikhaleni station. Compliance against Permits: There were no exceedances of any of Mondi's AEL limits. Root Cause of Incident: The Lime Kiln has been undergoing an extended shut since the 5th October 2018 due to a breakdown. This necessitates the continuous combustion of NCGs in the Flare and Incinerator to keep the plant safe. On occasion Methanol is also required to be combusted in the Flare as accumulation in the condensate system could lead to a potentially explosive mixture. The Flare has recently been experiencing reliability issues which is the subject of a high-level investigation by a Mondi multi-disciplinary task team. Despite the above, based on wind direction measured at Mondi stations as well RBCAA Arboretum, CBD and eSikhaleni stations, Mondi would have been placed downwind of the vicinity of the complainant starting from at least 4 hours before the complaint was received. Based on this, and also the lack of TRS activity at any of the stations, it is unlikely that Mondi would have been the source of the odour complaint received. The attached map shows the areas that might have been impacted by a Mondi based odour (shaded in yellow) based on the wind directions measured. Corrective Actions: None. Not Mondi Related. Foskor 29/10/2018 Sandile Mdamba responded: Peak Concentrations of SO₂ Emissions: The highest SO₂ emissions of 838,64 mg/Nm³ were recorded for the 'C' Stack however, these were within our AEL limits, Root Cause/Correct Actions: There were no Sulphuric Acid Plant start-ups during this period. There were no fugitive gas leaks reported on the day. There were no point source exceedances (SO₂ data	Resolved - Foskor

No.	Complainant	Time	Location	Description	Results	Resolution
					provided in Table 1) There were no sulphur fire incidents. No ammonia leaks or offloading reported at Granulation Plant. Mondi effluent used to slurry the gypsum at the Phosphoric acid plant was at a pH range. between 7 and 8 during that period. Based on wind direction, Foskor could not have contributed to the exceedances reported at Arboretum Extension. It is advised that other sources be investigated further. South 32 08/11/2018 Alison Gerber responded. The wind direction at the CBD station indicates a Northerly wind in the 4 hours prior to the complaint. There were no exceedances of the legislated limits of our AEL. The aluminium production process is not associated with the generation of foul odours. Due to the wind direction, Hillside could not have caused nor contributed to the source of the complaint. RBM 09/11/2018 Lourens Britz responded. During the time when the complaint was logged the wind direction was 350 deg with moderate wind speeds, however there were some fluctuations between 279 and 32 deg in the hour leading up to the complaint. All the operational plant was operating under normal conditions during this time, which would not have contributed to any odour related emissions. The Zircon Treatment plant did start taking feed at 21:30 but no abnormal trends were observed. None of our Atmospheric Emission Licence conditions were breached during this time. Even though the wind direction indicate that the complaint was logged downwind from RBM , based on the evidence above , RBM could not have been responsible for this odour complaint.	
14	S Camminga 083 515 2384	2018-10-30 18:15	Heideheuvel – Veldenvlei	Mondi “guava” smell causing nausea and sinus irritation. Mondi was notified.	Mondi 02/11/2018 Brendan Crawford responded: Source of Odour: Lime Kiln TRS emissions. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 245o Min = 234o. Max = 261o. RBCAA monitoring stations: Average wind direction = 219o Min = 199o. Max = 262o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: No TRS exceedances recorded at any of the stations. RBCAA monitoring stations: No exceedances recorded at CBD station although it must be noted that there was a loss of data from 18:18pm to 18:53pm. Compliance against Permits There were two recorded exceedances of the Lime Kiln AEL TRS limit before the complaint. Root Cause of Incident: On the 30th October 2018 from 16:41pm to 17:13pm the Lime Kiln exceeded the AEL TRS limit of 10 mg/Nm3 and peaked at 31mg/Nm3. This was caused by a drop in the temperature in the burning zone which recovered soon thereafter. The cause of the temperature drop	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					is still under investigation. Corrective Actions: LMCD washing was increased to further reduce TRS emissions from the Lime Kiln.	
15	R Camminga 083 515 2384	2018-10-30 18:15	Heideheuvel – Veldenvlei	Mondi “guava” smell causing nausea and sinus irritation. Mondi was notified.	Mondi 02/11/2018 Brendan Crawford responded: Source of Odour: Lime Kiln TRS emissions. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 245o Min = 234o. Max = 261o. RBCAA monitoring stations: Average wind direction = 219o Min = 199o. Max = 262o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: No TRS exceedances recorded at any of the stations. RBCAA monitoring stations: No exceedances recorded at CBD station although it must be noted that there was a loss of data from 18:18pm to 18:53pm. Compliance against Permits There were two recorded exceedances of the Lime Kiln AEL TRS limit before the complaint. Root Cause of Incident: On the 30th October 2018 from 16:41pm to 17:13pm the Lime Kiln exceeded the AEL TRS limit of 10 mg/Nm3 and peaked at 31mg/Nm3. This was caused by a drop in the temperature in the burning zone which recovered soon thereafter. The cause of the temperature drop is still under investigation. Corrective Actions: LMCD washing was increased to further reduce TRS emissions from the Lime Kiln.	Resolved - Mondi Richards Bay

Table D10: Complaints Log – November 2018.

No.	Complainant	Time	Location	Description	Results	Resolution
1	Tjaart Sauerman	2018-11-03 00:00	Seilvis – Meerensee	"Woke up with sore \tight chest. Had to nebulize to open chest. Nose blocked and headache"	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	Resolved - Mondi Richards Bay
2	Martha 073 210 6566	2018-11-03 00:00	Richards Bay area	"Same pungent smell as last time causing nausea"	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
3	. Alan Stirk 083 287 6766	2018-11-03 04:00	Frangipani – Arboretum Ext	“Bad Smell could smell it all the way to RBM”	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	Resolved - Mondi Richards Bay
4	Candace 078 626 2722	2018-11-03 06:00	Snapper Bend – Meerensee	Mondi odour causing headache, sinus and itchy eyes.	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	Resolved - Mondi Richards Bay
5	S Camminga 083 515 2384	2018-11-03 06:00	Heideheuvel – Veldenvlei	Pungent Mondi guava odour causing headache and nausea.	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	
6	Yolande 084 604 6073	2018-11-03 06:59	Olienhoutkoppie – Arboretum	Mondi smell. “ My whole family woke up with stuffy noses and headache again”	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	Resolved - Mondi Richards Bay
7	Elize 073 925 0619	2018-11-03 07:27	Birdswood	“Cat Urine smell causing headache”	Mondi 06/11/2018 Brendan Crawford responded: Source of Odour: TRS emissions from Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 249o Min = 180o. Max = 273o. RBCAA monitoring stations: Average wind direction = 275o Min = 84o. Max = 343o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: TRS exceedances recorded at Hytec station at 2:20am and 3:00am. TRS exceedances recorded at Alton station from 4:50am to 6:20am.RBCAA monitoring stations: Exceedances recorded at CBD station from 3:20am to 4:00am. Root Cause of Incident On the 3rd November 2018 at 00:20am the Lime Kiln main drive failed resulting in the shutdown of the	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					Lime Kiln. The failure of the main drive was the result of flooding in the servitude room caused by heavy rainfall and build-up of Lime Mud from the extended Kiln outage in October 2018. As a result of the Lime Kiln outage NCG gases had to be switched to the Flare and Incinerator. At the time of switching gases to the Flare there was an initial drop in Flare combustion temperature which resulted in un-combusted NCG exiting the Flare stack.	
8	S Camminga 083 5152384	2018-11-04 10:00	Richards Bay CBD	Excessive emissions emanating from Foskor's AIB stack. Foskor was notified at the time.	Foskor 19/11/2018 Sandile Mdamba responded: Peak Concentrations of SO ₂ Emissions : The highest SO ₂ emissions of 765,01 mg/Nm ³ were recorded for the 'C' Stack, these were however within our AEL limits. Root cause: Degradation of ceramics in the Final Absorption Tower blocking the Final Tower spouts . Corrective/Preventative measures: The plant was stopped to clean the spouts . To further prevent blockage of the sprouts, the strainer on the Final Absorption Tower needs to be modified. This has been planned for the next opportunity shut.	Resolved - Foskor
9	David Davidson 082 887 0221	2018-11-05 00:00	eNseleni	Ongoing dust generation from the Chrome Carriers facility located adjacent to the N2 towards Mtubatuba. The RBCAA will inform the CoU Air Quality Management Unit, and request guidance as I think the area falls outside of uMhlathuze. The product is however being transported to the Port of Richards Bay.		Resolved – Port of Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
10	D Savides 072 392 0511	2018-11-16 07:05	Cassia Close – Arboretum Extension	Very Concentrated “Cat Urine” odour of short duration. Mondi was notified.	Mondi 20/11/2018 Brendan Crawford responded: Source of Odour: Lime Kiln Carbon Filters. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 99o Min = 72o. Max = 146o. RBCAA monitoring stations: Average wind direction = 168o Min = 0o. Max = 362o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: No TRS exceedances or increases recorded at any of the monitoring stations. RBCAA monitoring stations: No exceedances but increase noted at 6:53am at CBD station. Compliance against Permits All Mondi stacks were compliant against AEL limits. Root Cause of Incident: At 5:20am the Lime Kiln experienced a sudden trip which resulted in the venting of CNCG gases through the Carbon Filters as per standard protocol for this type of situation. Although the gases only vented for a duration of 10 minutes this was sufficient enough to cause an odour issue. The delayed effect could be explained by the erratic and sudden change in wind direction at the time of the complaint. Corrective Actions: Investigation is currently underway to determine why Carbon Filters were ineffective in mitigating odours. Activated carbon in these filters was changed in May 2018 which means that they are still within their active life.	Resolved - Mondi Richards Bay
11	Lungi Mathaba 079 960 5888	2018-11-15 11:20	John Ross	“ I just passed Mondi with the smell that is from there I’m experiencing a headache”.	Mondi 20/11/2018 Brendan Crawford responded: Source of Odour: Effluent Emergency Ponds. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 89o Min = 70o. Max = 111o. RBCAA monitoring stations: Average wind direction = 61o Min = 10o. Max = 112o. Ambient Air Monitoring Stations: Mondi Monitoring Stations: No TRS exceedances or increases recorded at any of the monitoring stations. Compliance against Permits: All Mondi stacks were compliant against AEL limits. Root Cause of Incident: The effluent emergency ponds have accumulated abnormal levels of sludge due to recent plant incidents and, as a result, have themselves become a potential source of fugitive emissions and effluent non-compliance. As a result, Mondi Richards Bay has, since 19th September 2018, undertaken desludging of these emergency ponds. While all precautions have been taken by the appointed contractor to minimise environmental impacts, the desludging activity itself is one that results in odour emissions due to the disturbance of the sludge. Normally this odour is localised to the vicinity of the Effluent Plant but can, depending on prevailing weather conditions, migrate further outwards. At the time of the complaint the average wind direction and speed was conducive to migration of odours towards the John Ross highway which resulted in the odour complaint. Corrective Actions: The desludging contractor was notified to keep odour related activities	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					to a minimum. The desludging of the emergency ponds is a once-off activity that is planned to end on the 30th November 2018.	
12	S Camminga 083 251 4969	2018-11-16 08:30	Bullion Boulevard	Excessive emissions emanating from Foskor's AIB stack.	Foskor 20/11/2018 Sandile Mdamba responded: Nature of complaint/s: S Camminga 083 5152384, Bullion Boulevard, Friday 16 Nov, 08h30, Excessive emissions emanating from Foskor's AIB stack. Root cause : 1.On the 16 November, it was observed that there were acid flow interruptions in the Interpass Absorption Tower as a result of pump inefficiency. 2.Further investigation, it was also observed that the moisture from dilution water which reacts in the air, contributes to the stack being visible. This manifested itself in the decrease in acid strength which was corrected on 17/11/18. Correct action: 1.The pump was repaired for smooth acid flow.2. The dilution water control into the final tank has been improved by fixing the control valve.	Resolved - Foskor
13	David Davidson 082 887 0221	2018-11-21 17:21	Zenith Estates Nseleni	"Strong cat wee smell 50 m east of Nseleni Railway Station"	Mondi 23/11/2018 Brendan Crawford responded: Source of Odour: Burning of CNCG in Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 247o Min = 216o. Max = 289o RBCAA monitoring stations: Average wind direction = 228o Min = 213o. Max = 241o. Ambient Air Monitoring Stations: Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. RBCAA monitoring stations No exceedances noted at eNseleni. Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. No exceedances noted at CBD but increases from 23:40pm to 3:35am and from 6:45am to 7:00am. Compliance against Permits: Average Flare TRS = 31 mg/m3. Root Cause of Incident: The Lime Kiln was shut on the 21st November 2018 to conduct repairs on the girth gear. This was a planned shut and was communicated to all authorities and stakeholders. Due to the Lime Kiln being shut, Hardwood CNCG gases were routed to the Flare. To further mitigate against odour emissions, no Methanol was combusted in the Flare and mill rates were reduced to minimum to decrease volume of Hardwood CNCG produced. Flare operation was kept steady throughout with good temperature control. By 00:30 on 22nd November 2018 the Lime Kiln was back online and CNCG was switched from the Flare back into the Lime Kiln. Despite this odour complaints were received from the community. It is suspected that the Flare burner might have suffered internal damage, but this can only be confirmed during a Flare shut and inspection. Corrective Actions: A Flare shut has been planned and will commence once the Lime Kiln	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					has achieved stable operation. A new burner, incorporating the OEM's recommendations, is being fabricated for the Flare and is expected to be ready by 15th December 2018.	
14	David Davidson 082 887 0221	2018-11-21 20:45	Zenith Estates Nseleni	"Strong cat wee smell 50 m east of Nseleni Railway Station"	Mondi 23/11/2018 Brendan Crawford responded: Source of Odour: Burning of CNCG in Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 247o Min = 216o. Max = 289o RBCAA monitoring stations: Average wind direction = 228o Min = 213o. Max = 241o. Ambient Air Monitoring Stations: Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. RBCAA monitoring stations No exceedances noted at eNseleni. Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. No exceedances noted at CBD but increases from 23:40pm to 3:35am and from 6:45am to 7:00am. Compliance against Permits: Average Flare TRS = 31 mg/m3. Root Cause of Incident: The Lime Kiln was shut on the 21st November 2018 to conduct repairs on the girth gear. This was a planned shut and was communicated to all authorities and stakeholders. Due to the Lime Kiln being shut, Hardwood CNCG gases were routed to the Flare. To further mitigate against odour emissions, no Methanol was combusted in the Flare and mill rates were reduced to minimum to decrease volume of Hardwood CNCG produced. Flare operation was kept steady throughout with good temperature control. By 00:30 on 22nd November 2018 the Lime Kiln was back online and CNCG was switched from the Flare back into the Lime Kiln Despite this odour complaints were received from the community. It is suspected that the Flare burner might have suffered internal damage, but this can only be confirmed during a Flare shut and inspection. Corrective Actions: A Flare shut has been planned and will commence once the Lime Kiln has achieved stable operation. A new burner, incorporating the OEM's recommendations, is being fabricated for the Flare and is expected to be ready by 15th December 2018.	Resolved - Mondi Richards Bay
15	Elize 083 227 5616	2018-11-22 00:00	Kruisbessie – Veldenvlei	"Terrible Mondi odour. Can't breathe and nauseas "	Mondi 23/11/2018 Brendan Crawford responded: Source of Odour: Burning of CNCG in Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 247o Min = 216o. Max = 289o RBCAA monitoring stations: Average wind direction = 228o Min = 213o. Max = 241o. Ambient Air Monitoring Stations: Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. RBCAA monitoring stations No exceedances noted at eNseleni. Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. No	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					exceedances noted at CBD but increases from 23:40pm to 3:35am and from 6:45am to 7:00am. Compliance against Permits: Average Flare TRS = 31 mg/m³. Root Cause of Incident: The Lime Kiln was shut on the 21st November 2018 to conduct repairs on the girth gear. This was a planned shut and was communicated to all authorities and stakeholders. Due to the Lime Kiln being shut, Hardwood CNCG gases were routed to the Flare. To further mitigate against odour emissions, no Methanol was combusted in the Flare and mill rates were reduced to minimum to decrease volume of Hardwood CNCG produced. Flare operation was kept steady throughout with good temperature control. By 00:30 on 22nd November 2018 the Lime Kiln was back online and CNCG was switched from the Flare back into the Lime Kiln Despite this odour complaints were received from the community. It is suspected that the Flare burner might have suffered internal damage, but this can only be confirmed during a Flare shut and inspection. Corrective Actions: A Flare shut has been planned and will commence once the Lime Kiln has achieved stable operation. A new burner, incorporating the OEM's recommendations, is being fabricated for the Flare and is expected to be ready by 15th December 2018.	
16	R Camminga 083 515 2384	2018-11-22 00:00	Heideheuvel – Veldenvlei	early morning, Woke to a lingering Mondi odour in our home, and with a headache and nausea.	Mondi 23/11/2018 Brendan Crawford responded: Source of Odour: Burning of CNCG in Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 247o Min = 216o. Max = 289o RBCAA monitoring stations: Average wind direction = 228o Min = 213o. Max = 241o. Ambient Air Monitoring Stations: Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. RBCAA monitoring stations No exceedances noted at eNseleni. Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. No exceedances noted at CBD but increases from 23:40pm to 3:35am and from 6:45am to 7:00am. Compliance against Permits: Average Flare TRS = 31 mg/m³. Root Cause of Incident: The Lime Kiln was shut on the 21st November 2018 to conduct repairs on the girth gear. This was a planned shut and was communicated to all authorities and stakeholders. Due to the Lime Kiln being shut, Hardwood CNCG gases were routed to the Flare. To further mitigate against odour emissions, no Methanol was combusted in the Flare and mill rates were reduced to minimum to decrease volume of Hardwood CNCG produced. Flare operation was kept steady throughout with good temperature control. By 00:30 on 22nd November 2018 the Lime Kiln was back online and CNCG was switched from the Flare back into the Lime Kiln	Resolved - Mondi Richards Bay

No.	Complainant	Time	Location	Description	Results	Resolution
					Despite this odour complaints were received from the community. It is suspected that the Flare burner might have suffered internal damage, but this can only be confirmed during a Flare shut and inspection. Corrective Actions: A Flare shut has been planned and will commence once the Lime Kiln has achieved stable operation. A new burner, incorporating the OEM's recommendations, is being fabricated for the Flare and is expected to be ready by 15th December 2018.	
17	S Camminga 083 515 2384	2018-11-22 00:00	Heideheuvel – Veldenvlei	early morning, Woke to a lingering Mondi odour in our home, and with a headache and nausea.	Mondi 23/11/2018 Brendan Crawford responded: Source of Odour: Burning of CNCG in Flare. Meteorological Conditions: Mondi monitoring stations: Average wind direction = 247o Min = 216o. Max = 289o RBCAA monitoring stations: Average wind direction = 228o Min = 213o. Max = 241o. Ambient Air Monitoring Stations: Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. RBCAA monitoring stations No exceedances noted at eNseleni. Mondi Monitoring Stations TRS exceedances recorded at portable station at 1:30am and at Alton station at 5:00am. No exceedances noted at CBD but increases from 23:40pm to 3:35am and from 6:45am to 7:00am. Compliance against Permits: Average Flare TRS = 31 mg/m3. Root Cause of Incident: The Lime Kiln was shut on the 21st November 2018 to conduct repairs on the girth gear. This was a planned shut and was communicated to all authorities and stakeholders. Due to the Lime Kiln being shut, Hardwood CNCG gases were routed to the Flare. To further mitigate against odour emissions, no Methanol was combusted in the Flare and mill rates were reduced to minimum to decrease volume of Hardwood CNCG produced. Flare operation was kept steady throughout with good temperature control. By 00:30 on 22nd November 2018 the Lime Kiln was back online and CNCG was switched from the Flare back into the Lime Kiln Despite this odour complaints were received from the community. It is suspected that the Flare burner might have suffered internal damage, but this can only be confirmed during a Flare shut and inspection. Corrective Actions: A Flare shut has been planned and will commence once the Lime Kiln has achieved stable operation. A new burner, incorporating the OEM's recommendations, is being fabricated for the Flare and is expected to be ready by 15th December 2018.	Resolved - Mondi Richards Bay
18	S Camminga 083 515 2384	2018-11-22 09:35	Bullion Boulevard	Excessive emissions emanating from		Resolved - Foskor

No.	Complainant	Time	Location	Description	Results	Resolution
				Foskor's AIB stack. Foskor was notified.		
19	S Camminga 083 515 2384	2018-11-22 15:20	Bullion Boulevard	Excessive emissions emanating from Foskor's AIB stack. Foskor was notified.		Resolved - Foskor
20	Anita 082 893 9673	2018-11-26 12:50	Bridge adjacent to Foskor	"Pungent Foskor odour causing chest to close up" Foskor has been notified.		Resolved - Foskor
21	Employees SABS Offices 035 901 1615	2018-11-28 08:20	Bullion Boulevard	"Very strong acid smell and rotten egg smell coming from Foskor" The RBCAA notified Foskor on the 28th at 08h23.		Resolved - Foskor

Table D11: Complaints Log – December 2018.

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Camminga 083 515 2384	2018-12-14 10:30	Richards Bay CBD	Excessive emissions emanating from Foskor's AIB Stack. (see photo below) Foskor was notified at the time.	Foskor 19/12/2018 Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 988,63 mg/Nm3 were recorded for the 'AB' Stack these were however within our AEL limits. Root cause: The bad stack reported was attributed to an acid controller valve failure on the day. The dilution water valve failed in a closed position compromising acid dilution. This resulted in increased acid strength. Corrective action: The acid controller valve was repaired on the day. Note: The same complaint was logged by the municipality on behalf of the RBCAA.	Resolved - Foskor

No.	Complainant	Date and time	Location	Description	Results	Resolution
2	S Camminga 083 515 2384	2018-12-22 08:20	Richards Bay CBD	Excessive emissions emanating from Foskor's A\B Stack (see photos below). Foskor was notified at the time.	Foskor 3112/2018 Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions : The highest SO2 emissions of 1027,15 mg/Nm3 were recorded for the 'AB' Stack these were however within our AEL limits. Root cause: The problem emanated from the Final Absorption Tower (FAT) at the Sulphuric Acid 'B' Plant. Upon inspection of the FAT, it was discovered that the third trough spouts were choked and blocked with sulphates debris. Corrective/Preventative actions: Sulphates debris in the FAT were cleaned including 8 seal pots.	Resolved - Foskor
3	Anonymous	2018-12-29 11:00	Richards Bay Yacht Club	Pungent sewage odour emanating from vicinity of a boat called "Michaello". Complainant states that the sewage appeared to be coming from the boat as something was bubbling up from under the boat. Smell was so bad people fishing from the bank packed up and left.		Resolved – Zululand Yacht Club

PM₁₀ Exceedance Log.

Table E1: PM₁₀ daily exceedances.

Standard/ Guideline/ Target	Station	Date	Value (µg/m ³)	Allocation	Wind Direction (°)	Wind Speed (m/s)
NEMAQA Daily Standard (75 µg/m ³)	Brackenhams	2018-01-15	96	High wind speeds and dusty / dry conditions	294	6.0
	Brackenhams	2018-07-26	84	Smoky conditions	303	1.6
	Brackenhams	2018-08-01	83	Construction work on road	247	5.0
	Brackenhams	2018-08-17	128	Construction work on road	216	6.9
	Brackenhams	2018-10-02	114	Construction work on road next to monitoring station and high WS	3	4.4
	Brackenhams	2018-10-30	100	Construction work on road next to monitoring station and high WS	355	6.9
	Felixton	2018-07-26	110	Smoky conditions	269	1.4
WHO Daily Guideline (50 µg/m ³)	Brackenhams	2018-01-15	96	High wind speeds and dusty / dry conditions	294	6.0
	Brackenhams	2018-07-02	72	High Wind Speeds	6	5.0
	Brackenhams	2018-07-26	84	Smoky conditions	303	1.6
	Brackenhams	2018-08-01	83	Construction work on road	247	5.0
	Brackenhams	2018-08-02	68	Construction work on road and high wind speeds	213	3.0
	Brackenhams	2018-08-17	128	Construction work on road and high wind speeds	216	6.9
	Brackenhams	2018-08-21	53	Construction work on road	208	3.8
	Brackenhams	2018-08-26	60	Construction work on road and high wind speeds	303	5.2
	Brackenhams	2018-09-01	52	Construction work on road	277	2.8
	Brackenhams	2018-09-06	66	Construction work on road next to monitoring station	197	2.9
	Brackenhams	2018-09-09	61	Construction work on road next to monitoring station and high WS	212	6.1
	Brackenhams	2018-09-19	67	Construction work on road next to monitoring station and high WS	208	4.4
	Brackenhams	2018-09-29	52	Construction work on road next to monitoring station and high WS	191	4.6
	Brackenhams	2018-10-02	114	Construction work on road next to monitoring station and high WS	3	4.4
	Brackenhams	2018-10-12	60	Construction work on road next to monitoring station and high WS	215	5.0
	Brackenhams	2018-10-30	100	Construction work on road next to monitoring station and high WS	7	4.1
	CBD	2018-07-26	61	Smoky conditions	197	2.3
	eNseleni	2018-01-15	56	High wind speeds and dusty / dry conditions	294	6.0
	eNseleni	2018-07-26	65	Smoky conditions	327	2.0
	eNseleni	2018-10-02	55	High wind speeds.	355	6.9
	eNseleni	2018-10-30	51	High wind speeds.	41	7.4
	eSikhaleni	2018-07-02	51	High Wind Speeds	129	4.1
	eSikhaleni	2018-07-26	72	Smoky conditions	269	1.4
	eSikhaleni	2018-10-02	53	High wind speeds.	242	3.6
	Felixton	2018-07-02	53	High Wind Speeds	129	4.1

Standard/ Guideline/ Target	Station	Date	Value (µg/m3)	Allocation	Wind Direction (°)	Wind Speed (m/s)
	Felixton	2018-07-26	110	Smoky conditions	269	1.4
	Felixton	2018-08-17	66	High wind speeds	224	6.2
	Felixton	2018-09-01	58	Cane Burning	299	2.8
	Felixton	2018-10-30	63	High wind speeds.	49	8.1

APPENDIX E

SO₂ Exceedance Log.

Table F1: SO₂ daily exceedances.

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
NEMAQA & WHO Daily Standard / Interim Target 1 (48 ppb)	Harbour West	2018-04-13	105	South32 & Foskor
	Harbour West	2018-04-18	76	South32 & Foskor
	Harbour West	2018-04-24	60	South32 & Foskor
	Harbour West	2018-04-26	106	South32 & Foskor
	Scorpio	2018-10-15	55	Unknown
WHO Daily Interim Target 2 (19 ppb)	CBD	2018-05-25	20	*
	CBD	2018-07-14	21	*
	Harbour West	2018-04-12	28	South32 & Foskor
	Harbour West	2018-04-13	105	South32 & Foskor
	Harbour West	2018-04-14	21	South32 & Foskor
	Harbour West	2018-04-17	28	South32 & Foskor
	Harbour West	2018-04-18	76	South32 & Foskor
	Harbour West	2018-04-19	21	South32 & Foskor
	Harbour West	2018-04-23	28	South32 & Foskor
	Harbour West	2018-04-24	60	South32 & Foskor
	Harbour West	2018-04-25	29	South32 & Foskor
	Harbour West	2018-04-26	106	South32 & Foskor
	Harbour West	2018-04-28	27	South32 & Foskor
	Harbour West	2018-05-02	48	*
	Harbour West	2018-05-07	26	*
	Harbour West	2018-05-08	39	*
	Harbour West	2018-05-09	39	*
	Harbour West	2018-05-21	21	*
	Harbour West	2018-06-09	30	*
	Harbour West	2018-06-13	36	*
	Harbour West	2018-06-14	33	*
	Harbour West	2018-06-21	29	*
	Harbour West	2018-06-27	24	*
	Harbour West	2018-07-02	35	*
	Harbour West	2018-07-12	37	*
	Harbour West	2018-07-13	44	*
	Harbour West	2018-07-21	28	*
	Harbour West	2018-07-22	30	*
	Harbour West	2018-07-23	36	*
	Harbour West	2018-07-24	30	*
	Harbour West	2018-07-27	36	*
	Harbour West	2018-07-29	35	*
	Harbour West	2018-08-04	21	Unknown
	Harbour West	2018-08-12	23	Unknown
	Harbour West	2018-08-19	20	Unknown
	Harbour West	2018-08-25	23	Unknown
	Harbour West	2018-08-26	26	Unknown
	Harbour West	2018-08-30	20	Unknown
	Harbour West	2018-08-31	25	South32, Foskor

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Harbour West	2018-09-05	22	*
	Harbour West	2018-09-23	21	*
	Harbour West	2018-10-01	20	*
	Scorpio	2018-04-08	21	*
	Scorpio	2018-04-10	21	*
	Scorpio	2018-04-14	25	*
	Scorpio	2018-04-26	26	*
	Scorpio	2018-05-08	27	*
	Scorpio	2018-05-11	25	*
	Scorpio	2018-05-18	24	*
	Scorpio	2018-05-21	44	*
	Scorpio	2018-05-29	23	*
	Scorpio	2018-05-31	25	*
	Scorpio	2018-06-01	27	*
	Scorpio	2018-06-09	29	*
	Scorpio	2018-06-12	29	*
	Scorpio	2018-06-13	44	*
	Scorpio	2018-06-14	33	*
	Scorpio	2018-06-15	24	*
	Scorpio	2018-06-18	31	*
	Scorpio	2018-06-21	32	*
	Scorpio	2018-06-25	22	*
	Scorpio	2018-06-27	46	*
	Scorpio	2018-07-01	20	*
	Scorpio	2018-07-02	42	*
	Scorpio	2018-07-10	27	*
	Scorpio	2018-07-13	41	*
	Scorpio	2018-07-19	20	*
	Scorpio	2018-07-21	23	*
	Scorpio	2018-07-22	32	*
	Scorpio	2018-07-24	23	*
	Scorpio	2018-07-25	26	*
	Scorpio	2018-08-01	24	Unknown
	Scorpio	2018-08-02	36	Foskor
	Scorpio	2018-08-03	20	Foskor
	Scorpio	2018-08-19	21	Unknown
	Scorpio	2018-08-20	21	Unknown
	Scorpio	2018-08-23	46	Foskor
	Scorpio	2018-08-26	34	Unknown
	Scorpio	2018-10-15	55	Unknown
	Scorpio	2018-10-17	27	Unknown
WHO Daily Guideline (8 ppb)	Arboretum	2018-07-15	10	*
	Arboretum	2018-08-02	13	*
	Arboretum	2018-08-03	9	*
	CBD	2018-02-25	14	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-02-26	10	*
	CBD	2018-03-08	10	*
	CBD	2018-03-09	9	*
	CBD	2018-03-16	11	*
	CBD	2018-03-22	11	*
	CBD	2018-03-26	11	*
	CBD	2018-03-31	12	*
	CBD	2018-04-07	9	*
	CBD	2018-04-08	10	*
	CBD	2018-04-11	10	*
	CBD	2018-04-27	12	*
	CBD	2018-04-30	9	*
	CBD	2018-05-04	11	*
	CBD	2018-05-14	11	*
	CBD	2018-05-15	16	*
	CBD	2018-05-25	20	*
	CBD	2018-06-03	9	*
	CBD	2018-06-04	15	*
	CBD	2018-06-05	10	*
	CBD	2018-06-10	10	*
	CBD	2018-06-11	15	*
	CBD	2018-06-22	18	*
	CBD	2018-06-28	13	*
	CBD	2018-07-14	21	*
	CBD	2018-07-15	18	*
	CBD	2018-07-28	9	*
	CBD	2018-07-30	13	*
	CBD	2018-08-01	10	*
	CBD	2018-08-02	10	*
	CBD	2018-08-05	11	*
	CBD	2018-08-13	12	*
	CBD	2018-08-23	15	*
	CBD	2018-09-06	14	*
	CBD	2018-09-07	9	*
	CBD	2018-09-08	13	*
	CBD	2018-09-09	18	*
	CBD	2018-09-10	13	*
	CBD	2018-09-13	15	*
	CBD	2018-09-18	12	*
	CBD	2018-09-19	9	*
	CBD	2018-09-20	14	*
	CBD	2018-10-03	16	*
	CBD	2018-10-04	10	*
	CBD	2018-10-12	12	*
	CBD	2018-10-13	13	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-10-21	8	*
	CBD	2018-11-18	9	*
	CBD	2018-11-21	10	*
	CBD	2018-11-22	8	*
	CBD	2018-12-04	10	*
	CBD	2018-12-05	11	*
	CBD	2018-12-09	9	*
	CBD	2018-12-20	11	*
	CBD	2018-12-28	13	*
	Harbour West	2018-01-01	17	*
	Harbour West	2018-01-05	15	*
	Harbour West	2018-01-08	17	*
	Harbour West	2018-01-12	12	*
	Harbour West	2018-01-13	10	*
	Harbour West	2018-01-14	8	*
	Harbour West	2018-01-15	13	*
	Harbour West	2018-01-17	9	*
	Harbour West	2018-01-18	11	*
	Harbour West	2018-01-19	13	*
	Harbour West	2018-01-23	16	*
	Harbour West	2018-01-24	10	*
	Harbour West	2018-01-27	12	*
	Harbour West	2018-01-30	17	*
	Harbour West	2018-02-02	15	*
	Harbour West	2018-02-06	8	*
	Harbour West	2018-02-15	18	*
	Harbour West	2018-02-23	27	*
	Harbour West	2018-02-24	12	*
	Harbour West	2018-02-27	10	*
	Harbour West	2018-02-28	10	*
	Harbour West	2018-03-01	9	*
	Harbour West	2018-03-05	14	*
	Harbour West	2018-03-07	11	*
	Harbour West	2018-03-10	11	*
	Harbour West	2018-03-11	19	*
	Harbour West	2018-03-14	15	*
	Harbour West	2018-03-15	8	*
	Harbour West	2018-03-19	16	*
	Harbour West	2018-03-21	12	*
	Harbour West	2018-03-25	8	*
	Harbour West	2018-03-28	15	*
	Harbour West	2018-04-02	11	*
	Harbour West	2018-04-03	10	*
	Harbour West	2018-04-05	11	*
	Harbour West	2018-04-12	28	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Harbour West	2018-04-13	105	*
	Harbour West	2018-04-14	21	*
	Harbour West	2018-04-17	28	*
	Harbour West	2018-04-18	76	*
	Harbour West	2018-04-19	21	*
	Harbour West	2018-04-21	16	*
	Harbour West	2018-04-22	12	*
	Harbour West	2018-04-23	28	*
	Harbour West	2018-04-24	60	*
	Harbour West	2018-04-25	29	*
	Harbour West	2018-04-26	106	*
	Harbour West	2018-04-28	27	*
	Harbour West	2018-05-01	12	*
	Harbour West	2018-05-02	48	*
	Harbour West	2018-05-03	12	*
	Harbour West	2018-05-06	9	*
	Harbour West	2018-05-07	26	*
	Harbour West	2018-05-08	39	*
	Harbour West	2018-05-09	39	*
	Harbour West	2018-05-10	15	*
	Harbour West	2018-05-11	12	*
	Harbour West	2018-05-20	14	*
	Harbour West	2018-05-21	21	*
	Harbour West	2018-05-28	17	*
	Harbour West	2018-05-29	14	*
	Harbour West	2018-05-31	17	*
	Harbour West	2018-06-03	9	*
	Harbour West	2018-06-09	30	*
	Harbour West	2018-06-12	14	*
	Harbour West	2018-06-13	36	*
	Harbour West	2018-06-14	33	*
	Harbour West	2018-06-15	8	*
	Harbour West	2018-06-17	17	*
	Harbour West	2018-06-18	14	*
	Harbour West	2018-06-21	29	*
	Harbour West	2018-06-23	11	*
	Harbour West	2018-06-27	24	*
	Harbour West	2018-06-29	9	*
	Harbour West	2018-07-01	15	*
	Harbour West	2018-07-02	35	*
	Harbour West	2018-07-10	11	*
	Harbour West	2018-07-11	10	*
	Harbour West	2018-07-12	37	*
	Harbour West	2018-07-13	44	*
	Harbour West	2018-07-20	13	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Harbour West	2018-07-21	28	*
	Harbour West	2018-07-22	30	*
	Harbour West	2018-07-23	36	*
	Harbour West	2018-07-24	30	*
	Harbour West	2018-07-25	11	*
	Harbour West	2018-07-26	8	*
	Harbour West	2018-07-27	36	*
	Harbour West	2018-07-29	35	*
	Harbour West	2018-07-31	15	*
	Harbour West	2018-08-01	19	*
	Harbour West	2018-08-04	21	*
	Harbour West	2018-08-12	23	*
	Harbour West	2018-08-19	20	*
	Harbour West	2018-08-20	10	*
	Harbour West	2018-08-25	23	*
	Harbour West	2018-08-26	26	*
	Harbour West	2018-08-30	20	*
	Harbour West	2018-08-31	25	*
	Harbour West	2018-09-01	8	*
	Harbour West	2018-09-02	16	*
	Harbour West	2018-09-03	8	*
	Harbour West	2018-09-04	8	*
	Harbour West	2018-09-05	22	*
	Harbour West	2018-09-11	13	*
	Harbour West	2018-09-12	19	*
	Harbour West	2018-09-17	10	*
	Harbour West	2018-09-23	21	*
	Harbour West	2018-09-25	17	*
	Harbour West	2018-09-26	9	*
	Harbour West	2018-10-01	20	*
	Harbour West	2018-10-02	9	*
	Harbour West	2018-10-09	14	*
	Harbour West	2018-10-10	16	*
	Harbour West	2018-10-11	16	*
	Harbour West	2018-10-15	8	*
	Harbour West	2018-10-19	10	*
	Harbour West	2018-10-24	15	*
	Harbour West	2018-10-25	13	*
	Harbour West	2018-10-26	14	*
	Harbour West	2018-10-29	13	*
	Harbour West	2018-10-30	11	*
	Harbour West	2018-11-04	18	*
	Harbour West	2018-11-13	10	*
	Harbour West	2018-11-14	12	*
	Harbour West	2018-11-15	10	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Harbour West	2018-11-24	14	*
	Harbour West	2018-11-25	17	*
	Harbour West	2018-11-27	10	*
	Harbour West	2018-12-01	13	*
	Harbour West	2018-12-07	11	*
	Harbour West	2018-12-17	11	*
	Harbour West	2018-12-18	17	*
	Harbour West	2018-12-24	8	*
	Harbour West	2018-12-30	12	*
	Harbour West	2018-12-31	9	*
	Scorpio	2018-01-01	18	*
	Scorpio	2018-01-03	12	*
	Scorpio	2018-01-06	18	*
	Scorpio	2018-01-10	11	*
	Scorpio	2018-01-15	10	*
	Scorpio	2018-01-17	9	*
	Scorpio	2018-01-24	19	*
	Scorpio	2018-01-28	18	*
	Scorpio	2018-02-02	9	*
	Scorpio	2018-02-15	13	*
	Scorpio	2018-02-17	9	*
	Scorpio	2018-02-18	10	*
	Scorpio	2018-02-27	13	*
	Scorpio	2018-03-03	14	*
	Scorpio	2018-03-07	11	*
	Scorpio	2018-03-09	9	*
	Scorpio	2018-03-10	10	*
	Scorpio	2018-03-16	11	*
	Scorpio	2018-03-17	40	*
	Scorpio	2018-03-18	8	*
	Scorpio	2018-03-19	15	*
	Scorpio	2018-03-21	13	*
	Scorpio	2018-03-22	9	*
	Scorpio	2018-03-24	30	*
	Scorpio	2018-03-25	14	*
	Scorpio	2018-04-02	10	*
	Scorpio	2018-04-03	17	*
	Scorpio	2018-04-04	12	*
	Scorpio	2018-04-05	15	*
	Scorpio	2018-04-06	15	*
	Scorpio	2018-04-07	9	*
	Scorpio	2018-04-08	21	*
	Scorpio	2018-04-09	13	*
	Scorpio	2018-04-10	21	*
	Scorpio	2018-04-11	10	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Scorpio	2018-04-13	18	*
	Scorpio	2018-04-14	25	*
	Scorpio	2018-04-17	17	*
	Scorpio	2018-04-19	14	*
	Scorpio	2018-04-20	13	*
	Scorpio	2018-04-21	13	*
	Scorpio	2018-04-23	14	*
	Scorpio	2018-04-24	9	*
	Scorpio	2018-04-26	26	*
	Scorpio	2018-04-28	13	*
	Scorpio	2018-05-02	14	*
	Scorpio	2018-05-03	14	*
	Scorpio	2018-05-06	12	*
	Scorpio	2018-05-07	17	*
	Scorpio	2018-05-08	27	*
	Scorpio	2018-05-09	13	*
	Scorpio	2018-05-11	25	*
	Scorpio	2018-05-12	15	*
	Scorpio	2018-05-16	11	*
	Scorpio	2018-05-18	24	*
	Scorpio	2018-05-20	15	*
	Scorpio	2018-05-21	44	*
	Scorpio	2018-05-24	9	*
	Scorpio	2018-05-28	15	*
	Scorpio	2018-05-29	23	*
	Scorpio	2018-05-31	25	*
	Scorpio	2018-06-01	27	*
	Scorpio	2018-06-02	12	*
	Scorpio	2018-06-07	17	*
	Scorpio	2018-06-08	17	*
	Scorpio	2018-06-09	29	*
	Scorpio	2018-06-12	29	*
	Scorpio	2018-06-13	44	*
	Scorpio	2018-06-14	33	*
	Scorpio	2018-06-15	24	*
	Scorpio	2018-06-16	10	*
	Scorpio	2018-06-17	10	*
	Scorpio	2018-06-18	31	*
	Scorpio	2018-06-20	14	*
	Scorpio	2018-06-21	32	*
	Scorpio	2018-06-22	10	*
	Scorpio	2018-06-23	16	*
	Scorpio	2018-06-25	22	*
	Scorpio	2018-06-27	46	*
	Scorpio	2018-06-29	13	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Scorpio	2018-06-30	13	*
	Scorpio	2018-07-01	20	*
	Scorpio	2018-07-02	42	*
	Scorpio	2018-07-08	10	*
	Scorpio	2018-07-10	27	*
	Scorpio	2018-07-13	41	*
	Scorpio	2018-07-19	20	*
	Scorpio	2018-07-20	17	*
	Scorpio	2018-07-21	23	*
	Scorpio	2018-07-22	32	*
	Scorpio	2018-07-23	12	*
	Scorpio	2018-07-24	23	*
	Scorpio	2018-07-25	26	*
	Scorpio	2018-07-26	18	*
	Scorpio	2018-07-27	14	*
	Scorpio	2018-07-28	13	*
	Scorpio	2018-07-29	11	*
	Scorpio	2018-08-01	24	*
	Scorpio	2018-08-02	36	*
	Scorpio	2018-08-03	20	*
	Scorpio	2018-08-04	11	*
	Scorpio	2018-08-07	13	*
	Scorpio	2018-08-15	9	*
	Scorpio	2018-08-17	14	*
	Scorpio	2018-08-19	21	*
	Scorpio	2018-08-20	21	*
	Scorpio	2018-08-23	46	*
	Scorpio	2018-08-24	17	*
	Scorpio	2018-08-25	13	*
	Scorpio	2018-08-26	34	*
	Scorpio	2018-08-28	16	*
	Scorpio	2018-09-01	16	*
	Scorpio	2018-09-02	8	*
	Scorpio	2018-09-03	15	*
	Scorpio	2018-09-04	12	*
	Scorpio	2018-09-11	10	*
	Scorpio	2018-09-15	8	*
	Scorpio	2018-09-18	14	*
	Scorpio	2018-09-21	17	*
	Scorpio	2018-09-26	11	*
	Scorpio	2018-09-28	10	*
	Scorpio	2018-09-29	10	*
	Scorpio	2018-10-01	10	*
	Scorpio	2018-10-15	55	*
	Scorpio	2018-10-16	8	*

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Scorpio	2018-10-17	27	*
	Scorpio	2018-10-22	9	*
	Scorpio	2018-10-23	14	*
	Scorpio	2018-11-02	9	*
	Scorpio	2018-11-05	12	*
	Scorpio	2018-11-08	11	*
	Scorpio	2018-11-09	10	*
	Scorpio	2018-11-26	11	*
	Scorpio	2018-11-27	9	*
	Scorpio	2018-11-30	15	*
	Scorpio	2018-12-01	10	*
	Scorpio	2018-12-11	10	*
	Scorpio	2018-12-12	10	*
	Scorpio	2018-12-18	12	*
Note: * Exceedance of the WHO guideline - doesn't require investigation.				

Table F2: SO₂ hourly exceedances.

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
NEMAQA Hourly Standard (134 ppb)	Harbour West	2018-04-12 23:00:00	162	South32 & Foskor
	Harbour West	2018-04-13 00:00:00	147	South32 & Foskor
	Harbour West	2018-04-13 01:00:00	203	South32 & Foskor
	Harbour West	2018-04-13 02:00:00	161	South32 & Foskor
	Harbour West	2018-04-13 04:00:00	147	South32 & Foskor
	Harbour West	2018-04-13 05:00:00	158	South32 & Foskor
	Harbour West	2018-04-13 07:00:00	167	South32 & Foskor
	Harbour West	2018-04-13 08:00:00	142	South32 & Foskor
	Harbour West	2018-04-13 14:00:00	141	South32 & Foskor
	Harbour West	2018-04-18 19:00:00	152	South32 & Foskor
	Harbour West	2018-04-18 22:00:00	151	South32 & Foskor
	Harbour West	2018-04-18 23:00:00	145	South32 & Foskor
	Harbour West	2018-04-24 01:00:00	170	South32 & Foskor
	Harbour West	2018-04-24 02:00:00	143	South32 & Foskor
	Harbour West	2018-04-26 05:00:00	142	South32 & Foskor
	Harbour West	2018-04-26 13:00:00	137	South32 & Foskor
	Harbour West	2018-04-26 19:00:00	213	South32 & Foskor
	Harbour West	2018-04-26 20:00:00	374	South32 & Foskor
	Harbour West	2018-04-26 21:00:00	216	South32 & Foskor
	Harbour West	2018-05-03 00:00:00	144	South32 & Foskor
	Harbour West	2018-07-29 14:30:00	206	South32 & Foskor
	Harbour West	2018-09-23 15:00:00	191	Foskor & South32
	Scorpio	2018-07-28 16:00:00	145	Foskor
	Scorpio	2018-08-02 19:00:00	497	Foskor
	Scorpio	2018-08-03 10:10:00	208	Foskor

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Scorpio	2018-08-23 18:00:00	161	Foskor
	Scorpio	2018-08-23 19:00:00	178	Foskor
	Scorpio	2018-08-23 21:00:00	159	Foskor
	Scorpio	2018-08-23 23:00:00	207	Foskor
	Scorpio	2018-08-26 01:00:00	137	South32
	Scorpio	2018-10-15 11:00:00	176	Unknown
	Scorpio	2018-10-15 12:00:00	174	Unknown
	Scorpio	2018-10-15 13:00:00	160	Unknown
	Scorpio	2018-10-15 14:00:00	384	Unknown

Table F3: SO₂ 10-minute exceedances.

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
NEMAQA & WHO 10-minute Standard / Guideline (191 ppb)	Harbour West	2018-04-12 23:30:00	208	South32 & Foskor
	Harbour West	2018-04-13 00:50:00	226	South32 & Foskor
	Harbour West	2018-04-13 01:00:00	215	South32 & Foskor
	Harbour West	2018-04-13 01:10:00	258	South32 & Foskor
	Harbour West	2018-04-13 01:20:00	230	South32 & Foskor
	Harbour West	2018-04-13 01:30:00	200	South32 & Foskor
	Harbour West	2018-04-13 02:30:00	205	South32 & Foskor
	Harbour West	2018-04-13 02:40:00	203	South32 & Foskor
	Harbour West	2018-04-13 03:20:00	199	South32 & Foskor
	Harbour West	2018-04-13 04:10:00	195	South32 & Foskor
	Harbour West	2018-04-13 05:10:00	213	South32 & Foskor
	Harbour West	2018-04-13 07:00:00	220	South32 & Foskor
	Harbour West	2018-04-13 07:40:00	192	South32 & Foskor
	Harbour West	2018-04-13 08:10:00	212	South32 & Foskor
	Harbour West	2018-04-13 13:00:00	216	South32 & Foskor
	Harbour West	2018-04-13 14:40:00	191	South32 & Foskor
	Harbour West	2018-04-17 20:20:00	194	South32 & Foskor
	Harbour West	2018-04-18 20:30:00	209	South32 & Foskor
	Harbour West	2018-04-18 20:50:00	207	South32 & Foskor
	Harbour West	2018-04-18 23:00:00	212	South32 & Foskor
	Harbour West	2018-04-24 01:20:00	223	South32 & Foskor
	Harbour West	2018-04-24 01:30:00	235	South32 & Foskor
	Harbour West	2018-04-26 06:00:00	192	South32 & Foskor
	Harbour West	2018-04-26 13:50:00	210	South32 & Foskor
	Harbour West	2018-04-26 14:50:00	305	South32 & Foskor
	Harbour West	2018-04-26 15:00:00	205	South32 & Foskor
	Harbour West	2018-04-26 19:30:00	250	South32 & Foskor
	Harbour West	2018-04-26 19:40:00	365	South32 & Foskor
	Harbour West	2018-04-26 19:50:00	375	South32 & Foskor
	Harbour West	2018-04-26 20:00:00	402	South32 & Foskor
	Harbour West	2018-04-26 20:10:00	388	South32 & Foskor

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Harbour West	2018-04-26 20:20:00	382	South32 & Foskor
	Harbour West	2018-04-26 20:30:00	396	South32 & Foskor
	Harbour West	2018-04-26 20:40:00	368	South32 & Foskor
	Harbour West	2018-04-26 20:50:00	310	South32 & Foskor
	Harbour West	2018-04-26 21:00:00	283	South32 & Foskor
	Harbour West	2018-04-26 21:10:00	330	South32 & Foskor
	Harbour West	2018-04-26 21:20:00	326	South32 & Foskor
	Harbour West	2018-04-26 21:30:00	261	South32 & Foskor
	Harbour West	2018-05-07 10:00:00	245	South32 & Foskor
	Harbour West	2018-07-29 14:30:00	477	Foskor
	Harbour West	2018-07-29 14:50:00	512	Foskor
	Harbour West	2018-08-31 19:50:00	198	South32 & Foskor
	Harbour West	2018-09-23 15:20:00	380	Foskor & South32
	Harbour West	2018-09-23 15:30:00	421	Foskor & South32
	Harbour West	2018-09-23 15:40:00	236	Foskor & South32
	Scorpio	2018-04-20 15:30:00	226	Foskor
	Scorpio	2018-07-08 15:00:00	201	Foskor
	Scorpio	2018-07-26 13:10:00	222	Unknown
	Scorpio	2018-07-26 13:20:00	247	Unknown
	Scorpio	2018-07-26 14:20:00	222	Unknown
	Scorpio	2018-07-26 15:10:00	195	Unknown
	Scorpio	2018-07-28 15:50:00	201	Foskor
	Scorpio	2018-07-28 16:00:00	687	Foskor
	Scorpio	2018-08-02 14:40:00	314	Foskor
	Scorpio	2018-08-02 15:10:00	267	Foskor
	Scorpio	2018-08-02 18:50:00	406	Foskor
	Scorpio	2018-08-02 19:00:00	369	Foskor
	Scorpio	2018-08-02 19:10:00	485	Foskor
	Scorpio	2018-08-02 19:20:00	239	Foskor
	Scorpio	2018-08-02 19:30:00	918	Foskor
	Scorpio	2018-08-02 19:40:00	897	Foskor
	Scorpio	2018-08-03 10:10:00	418	Foskor
	Scorpio	2018-08-03 10:20:00	386	Foskor
	Scorpio	2018-08-03 10:30:00	264	Foskor
	Scorpio	2018-08-23 18:10:00	203	Foskor
	Scorpio	2018-08-23 19:00:00	196	Foskor
	Scorpio	2018-08-23 19:10:00	208	Foskor
	Scorpio	2018-08-23 21:10:00	245	Foskor
	Scorpio	2018-08-23 21:20:00	229	Foskor
	Scorpio	2018-08-23 22:10:00	225	Foskor
	Scorpio	2018-08-23 22:20:00	203	Foskor
	Scorpio	2018-08-23 23:10:00	258	Foskor
	Scorpio	2018-08-23 23:20:00	248	Foskor
	Scorpio	2018-08-23 23:30:00	222	Foskor
	Scorpio	2018-08-23 23:40:00	193	Foskor

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	Scorpio	2018-08-23 23:50:00	207	Foskor
	Scorpio	2018-09-21 14:10:00	194	Foskor
	Scorpio	2018-10-15 10:20:00	261	Unknown
	Scorpio	2018-10-15 11:00:00	246	Unknown
	Scorpio	2018-10-15 11:10:00	192	Unknown
	Scorpio	2018-10-15 11:20:00	284	Unknown
	Scorpio	2018-10-15 11:30:00	191	Unknown
	Scorpio	2018-10-15 12:20:00	215	Unknown
	Scorpio	2018-10-15 12:50:00	488	Unknown
	Scorpio	2018-10-15 13:00:00	354	Unknown
	Scorpio	2018-10-15 13:50:00	265	Unknown
	Scorpio	2018-10-15 14:10:00	443	Unknown
	Scorpio	2018-10-15 14:20:00	1083	Unknown
	Scorpio	2018-10-15 14:30:00	227	Unknown
	Scorpio	2018-10-15 14:40:00	369	Unknown

APPENDIX F

TRS Exceedance Log

Table G1: SO₂ 30-minute exceedances.

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
WHO 30-minute H ₂ S Guideline (5.0 ppb)	CBD	2018-01-24 22:00:00	8.2	Mondi
	CBD	2018-02-01 21:30:00	11.5	Mondi
	CBD	2018-02-16 23:00:00	6.9	Mondi
	CBD	2018-04-08 22:00:00	22.8	Mondi
	CBD	2018-04-08 22:30:00	5.1	Mondi
	CBD	2018-04-27 06:00:00	6.0	Mondi
	CBD	2018-04-30 20:30:00	7.7	Mondi
	CBD	2018-04-30 21:00:00	6.4	Mondi
	CBD	2018-04-30 22:00:00	7.0	Mondi
	CBD	2018-05-01 00:00:00	5.5	Mondi
	CBD	2018-05-01 01:00:00	7.7	Mondi
	CBD	2018-05-01 01:30:00	5.5	Mondi
	CBD	2018-05-01 03:00:00	5.1	Mondi
	CBD	2018-05-03 05:00:00	5.1	Mondi
	CBD	2018-05-09 22:30:00	5.5	Unknown
	CBD	2018-05-10 06:00:00	5.8	Mondi
	CBD	2018-06-01 21:30:00	8.9	Mondi
	CBD	2018-06-01 22:00:00	7.0	Mondi
	CBD	2018-06-02 01:30:00	5.4	Mondi
	CBD	2018-06-18 22:00:00	6.5	Mondi
	CBD	2018-06-18 22:30:00	18.2	Mondi
	CBD	2018-06-18 23:00:00	18.3	Mondi
	CBD	2018-06-19 21:30:00	11.0	Mondi
	CBD	2018-06-19 22:30:00	5.1	Mondi
	CBD	2018-06-22 20:30:00	8.3	Mondi
	CBD	2018-06-22 21:00:00	5.9	Mondi
	CBD	2018-06-22 21:30:00	11.4	Mondi
	CBD	2018-06-22 22:00:00	9.9	Mondi
	CBD	2018-06-22 22:30:00	9.2	Mondi
	CBD	2018-06-25 20:30:00	10.8	Mondi
	CBD	2018-06-25 22:30:00	12.0	Mondi
	CBD	2018-06-30 20:00:00	7.0	Mondi
	CBD	2018-06-30 20:30:00	5.3	Mondi
	CBD	2018-06-30 21:30:00	5.7	Mondi
	CBD	2018-06-30 22:30:00	5.7	Mondi
	CBD	2018-06-30 23:00:00	5.9	Mondi
	CBD	2018-07-05 05:00:00	5.3	Mondi
	CBD	2018-07-06 18:30:00	5.7	Mondi
	CBD	2018-07-15 09:00:00	6.3	Mondi
	CBD	2018-07-15 09:30:00	6.2	Mondi
	CBD	2018-07-15 10:30:00	5.4	Mondi
	CBD	2018-07-15 11:00:00	5.6	Mondi
	CBD	2018-07-15 17:30:00	5.4	Mondi
	CBD	2018-07-15 18:00:00	5.9	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-08-02 02:00:00	5.8	Mondi
	CBD	2018-08-03 03:00:00	5.8	Mondi
	CBD	2018-08-03 03:30:00	7.1	Mondi
	CBD	2018-08-08 18:30:00	9.1	Mondi
	CBD	2018-08-08 20:30:00	8.6	Mondi
	CBD	2018-08-09 03:00:00	11.6	Mondi
	CBD	2018-08-09 04:00:00	5.8	Mondi
	CBD	2018-08-13 22:30:00	5.7	Mondi
	CBD	2018-08-14 22:00:00	7.6	Mondi
	CBD	2018-08-14 22:30:00	6.8	Mondi
	CBD	2018-08-24 05:00:00	8.1	Mondi
	CBD	2018-08-24 06:00:00	16.1	Mondi
	CBD	2018-08-24 06:30:00	20.0	Mondi
	CBD	2018-08-24 07:00:00	18.6	Mondi
	CBD	2018-08-24 07:30:00	14.6	Mondi
	CBD	2018-08-24 08:00:00	14.4	Mondi
	CBD	2018-09-10 04:30:00	5.1	Mondi
	CBD	2018-09-12 20:00:00	6.3	Mondi
	CBD	2018-09-12 20:30:00	5.6	Mondi
	CBD	2018-09-13 00:30:00	5.3	Mondi
	CBD	2018-09-13 01:00:00	5.9	Mondi
	CBD	2018-09-13 06:00:00	5.1	Mondi
	CBD	2018-09-16 08:00:00	9.1	Mondi
	CBD	2018-09-18 21:00:00	7.5	Mondi
	CBD	2018-09-18 22:00:00	18.3	Mondi
	CBD	2018-09-18 22:30:00	11.9	Mondi
	CBD	2018-09-19 01:30:00	6.6	Mondi
	CBD	2018-09-20 08:00:00	5.4	Mondi
	CBD	2018-09-20 09:30:00	5.2	Mondi
	CBD	2018-09-21 22:00:00	5.2	Mondi
	CBD	2018-09-22 08:30:00	6.9	Mondi
	CBD	2018-09-22 09:00:00	6.7	Mondi
	CBD	2018-09-29 05:00:00	8.0	Mondi
	CBD	2018-09-29 05:30:00	6.8	Mondi
	CBD	2018-09-29 06:00:00	11.2	Mondi
	CBD	2018-10-13 09:30:00	5.4	Mondi
	CBD	2018-10-13 10:00:00	5.4	Mondi
	CBD	2018-10-15 22:30:00	5.8	Mondi
	CBD	2018-10-15 23:30:00	5.7	Mondi
	CBD	2018-10-16 01:00:00	6.3	Mondi
	CBD	2018-10-31 19:30:00	5.6	Mondi
	CBD	2018-11-01 03:00:00	5.6	Mondi
	CBD	2018-11-01 05:30:00	5.9	Mondi
	CBD	2018-11-01 06:30:00	5.5	Mondi
	CBD	2018-11-01 07:00:00	11.4	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-11-01 08:00:00	6.2	Mondi
	CBD	2018-11-01 09:00:00	7.2	Mondi
	CBD	2018-11-01 20:00:00	9.1	Mondi
	CBD	2018-11-01 20:30:00	6.6	Mondi
	CBD	2018-11-01 21:30:00	7.1	Mondi
	CBD	2018-11-02 06:30:00	5.8	Mondi
	CBD	2018-11-03 01:00:00	5.1	Mondi
	CBD	2018-11-03 01:30:00	5.3	Mondi
	CBD	2018-11-03 03:30:00	7.1	Mondi
	CBD	2018-11-28 04:00:00	7.6	Unknown
	CBD	2018-11-28 08:00:00	6.6	Unknown
	CBD	2018-11-28 08:30:00	14.0	Unknown
	CBD	2018-11-28 10:00:00	8.9	Unknown
	CBD	2018-11-28 10:30:00	9.0	Unknown
	eSikhaleni	2018-02-28 06:00:00	5.1	Mondi
	eSikhaleni	2018-03-01 06:00:00	5.7	Mondi
	eSikhaleni	2018-05-09 05:30:00	5.1	Mondi
	eSikhaleni	2018-05-09 06:30:00	6.6	Mondi
	eSikhaleni	2018-05-11 18:00:00	7.0	Unknown
	eSikhaleni	2018-05-11 18:30:00	5.3	Unknown
	eSikhaleni	2018-05-11 19:30:00	7.8	Unknown
	eSikhaleni	2018-05-28 00:30:00	5.2	Mondi
	eSikhaleni	2018-06-01 04:30:00	5.2	Unknown
	eSikhaleni	2018-06-09 20:30:00	5.2	Mondi
	eSikhaleni	2018-06-11 20:00:00	6.5	Mondi
	eSikhaleni	2018-06-11 20:30:00	6.2	Mondi
	eSikhaleni	2018-06-13 21:30:00	15.8	Mondi
	eSikhaleni	2018-06-13 22:00:00	15.4	Mondi
	eSikhaleni	2018-06-13 22:30:00	11.8	Mondi
	eSikhaleni	2018-06-14 02:00:00	13.4	Mondi
	eSikhaleni	2018-06-14 02:30:00	9.8	Mondi
	eSikhaleni	2018-06-14 04:30:00	9.7	Mondi
	eSikhaleni	2018-06-14 05:30:00	6.9	Mondi
	eSikhaleni	2018-06-14 08:00:00	5.6	Mondi
	eSikhaleni	2018-06-14 08:30:00	5.7	Mondi
	eSikhaleni	2018-06-18 06:30:00	7.2	Mondi
	eSikhaleni	2018-06-21 02:00:00	6.4	Mondi
	eSikhaleni	2018-06-22 02:30:00	9.2	Mondi
	eSikhaleni	2018-06-27 22:30:00	5.6	Mondi
	eSikhaleni	2018-06-27 23:00:00	5.6	Mondi
	eSikhaleni	2018-06-27 23:30:00	7.1	Mondi
	eSikhaleni	2018-07-18 05:00:00	6.1	Mondi
	eSikhaleni	2018-07-25 02:30:00	6.9	Mondi
	eSikhaleni	2018-07-25 05:00:00	6.9	Mondi
	eSikhaleni	2018-07-25 08:30:00	5.6	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-08-07 05:00:00	10.9	Mondi
	eSikhaleni	2018-08-10 18:00:00	5.2	Mondi
	eSikhaleni	2018-08-13 03:30:00	9.2	Mondi
	eSikhaleni	2018-08-13 04:00:00	7.8	Mondi
	eSikhaleni	2018-08-17 02:30:00	11.6	Mondi
	eSikhaleni	2018-08-17 03:00:00	23.6	Mondi
	eSikhaleni	2018-08-17 03:30:00	5.2	Mondi
	eSikhaleni	2018-08-26 09:00:00	5.8	Mondi
	eSikhaleni	2018-09-12 06:00:00	7.3	Mondi
	eSikhaleni	2018-09-12 06:30:00	8.9	Mondi
	eSikhaleni	2018-09-21 03:00:00	7.1	Mondi
	eSikhaleni	2018-09-21 03:30:00	11.5	Mondi
	eSikhaleni	2018-09-28 06:30:00	6.6	Unknown
	eSikhaleni	2018-10-28 02:30:00	5.4	Mondi
	ESikhaleni	2018-11-27 05:00:00	5.6	Unknown
	eSikhaleni	2018-11-30 03:30:00	5.1	Unknown
	eSikhaleni	2018-11-30 04:30:00	5.6	Unknown
	eSikhaleni	2018-12-08 05:30:00	8.6	Unknown
	eSikhaleni	2018-12-21 23:30:00	5.1	Unknown

Table G2: TRS 10-minute exceedances.

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
OME 10-minute TRS health standard (9.3 ppb)	CBD	2018-01-24 22:00:00	11.2	Mondi
	CBD	2018-02-01 21:30:00	10.5	Mondi
	CBD	2018-02-01 21:40:00	13.2	Mondi
	CBD	2018-02-01 21:50:00	10.8	Mondi
	CBD	2018-02-16 23:10:00	9.6	Mondi
	CBD	2018-03-16 06:00:00	5.2	Mondi
	CBD	2018-03-21 19:40:00	5.3	Mondi
	CBD	2018-03-21 19:50:00	4.6	Mondi
	CBD	2018-03-21 20:00:00	4.6	Mondi
	CBD	2018-03-23 20:10:00	4.6	Mondi
	CBD	2018-03-23 20:20:00	5.1	Mondi
	CBD	2018-04-08 22:00:00	12.5	Mondi
	CBD	2018-04-08 22:10:00	33.1	Mondi
	CBD	2018-04-08 22:20:00	22.9	Mondi
	CBD	2018-04-08 22:30:00	9.9	Mondi
	CBD	2018-05-01 03:20:00	10.0	Mondi
	CBD	2018-06-01 21:30:00	11.3	Mondi
	CBD	2018-06-18 22:30:00	10.4	Mondi
	CBD	2018-06-18 22:40:00	19.5	Mondi
	CBD	2018-06-18 22:50:00	24.8	Mondi
	CBD	2018-06-18 23:00:00	23.4	Mondi
	CBD	2018-06-18 23:10:00	19.6	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-06-18 23:20:00	11.8	Mondi
	CBD	2018-06-19 21:30:00	11.5	Mondi
	CBD	2018-06-19 21:40:00	12.1	Mondi
	CBD	2018-06-19 21:50:00	9.5	Mondi
	CBD	2018-06-22 20:30:00	9.7	Mondi
	CBD	2018-06-22 21:40:00	11.6	Mondi
	CBD	2018-06-22 21:50:00	14.5	Mondi
	CBD	2018-06-22 22:00:00	11.1	Mondi
	CBD	2018-06-22 22:20:00	10.2	Mondi
	CBD	2018-06-22 22:30:00	13.9	Mondi
	CBD	2018-06-25 20:40:00	13.5	Mondi
	CBD	2018-06-25 20:50:00	11.9	Mondi
	CBD	2018-06-25 22:40:00	19.1	Mondi
	CBD	2018-06-25 22:50:00	10.8	Mondi
	CBD	2018-06-30 20:20:00	9.4	Mondi
	CBD	2018-08-03 03:00:00	11.4	Mondi
	CBD	2018-08-08 18:40:00	9.8	Mondi
	CBD	2018-08-08 20:20:00	12.2	Mondi
	CBD	2018-08-08 20:30:00	17.2	Mondi
	CBD	2018-08-09 03:00:00	15.0	Mondi
	CBD	2018-08-09 03:10:00	12.8	Mondi
	CBD	2018-08-24 05:00:00	11.4	Mondi
	CBD	2018-08-24 05:10:00	9.4	Mondi
	CBD	2018-08-24 06:10:00	18.7	Mondi
	CBD	2018-08-24 06:20:00	20.8	Mondi
	CBD	2018-08-24 06:30:00	16.3	Mondi
	CBD	2018-08-24 06:40:00	21.3	Mondi
	CBD	2018-08-24 06:50:00	22.3	Mondi
	CBD	2018-08-24 07:00:00	19.4	Mondi
	CBD	2018-08-24 07:10:00	16.6	Mondi
	CBD	2018-08-24 07:20:00	19.9	Mondi
	CBD	2018-08-24 07:30:00	15.7	Mondi
	CBD	2018-08-24 07:40:00	12.6	Mondi
	CBD	2018-08-24 07:50:00	15.6	Mondi
	CBD	2018-08-24 08:00:00	17.9	Mondi
	CBD	2018-08-24 08:10:00	12.8	Mondi
	CBD	2018-08-24 08:20:00	12.5	Mondi
	CBD	2018-09-16 08:00:00	14.9	Mondi
	CBD	2018-09-18 06:20:00	9.4	Mondi
	CBD	2018-09-18 21:00:00	13.4	Mondi
	CBD	2018-09-18 22:00:00	16.4	Mondi
	CBD	2018-09-18 22:10:00	21.7	Mondi
	CBD	2018-09-18 22:20:00	16.8	Mondi
	CBD	2018-09-18 22:30:00	13.0	Mondi
	CBD	2018-09-18 22:40:00	11.7	Mondi
	CBD	2018-09-18 22:50:00	11.1	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-09-22 09:00:00	9.5	Mondi
	CBD	2018-09-29 05:00:00	11.2	Mondi
	CBD	2018-09-29 05:50:00	11.1	Mondi
	CBD	2018-09-29 06:00:00	16.0	Mondi
	CBD	2018-09-29 06:10:00	11.9	Mondi
	CBD	2018-11-01 06:40:00	10.9	Mondi
	CBD	2018-11-01 07:10:00	17.5	Mondi
	CBD	2018-11-01 07:20:00	9.4	Mondi
	CBD	2018-11-01 09:10:00	9.6	Mondi
	CBD	2018-11-01 20:10:00	9.7	Mondi
	CBD	2018-11-01 20:20:00	10.2	Mondi
	CBD	2018-11-01 21:40:00	9.7	Mondi
	CBD	2018-11-28 04:00:00	15.8	Unknown
	CBD	2018-11-28 08:20:00	11.6	Unknown
	CBD	2018-11-28 08:30:00	18.2	Unknown
	CBD	2018-11-28 08:40:00	10.2	Unknown
	CBD	2018-11-28 08:50:00	13.5	Unknown
	CBD	2018-11-28 10:20:00	14.7	Unknown
	CBD	2018-11-28 10:50:00	11.6	Unknown
	eSikhaleni	2018-03-01 01:40:00	4.8	Mondi
	eSikhaleni	2018-03-01 06:10:00	7.2	Mondi
	eSikhaleni	2018-03-01 06:20:00	5.7	Mondi
	eSikhaleni	2018-03-18 19:10:00	5.7	Unknown Source
	eSikhaleni	2018-03-18 19:20:00	5.4	Unknown Source
	eSikhaleni	2018-05-09 06:40:00	9.5	Mondi
	eSikhaleni	2018-05-11 18:20:00	9.9	Unknown
	eSikhaleni	2018-05-11 19:50:00	9.4	Unknown
	eSikhaleni	2018-06-11 20:20:00	9.8	Mondi
	eSikhaleni	2018-06-11 20:30:00	9.4	Mondi
	eSikhaleni	2018-06-13 21:30:00	15.9	Mondi
	eSikhaleni	2018-06-13 21:40:00	16.3	Mondi
	eSikhaleni	2018-06-13 21:50:00	15.2	Mondi
	eSikhaleni	2018-06-13 22:00:00	14.6	Mondi
	eSikhaleni	2018-06-13 22:10:00	16.5	Mondi
	eSikhaleni	2018-06-13 22:20:00	15.0	Mondi
	eSikhaleni	2018-06-13 22:30:00	14.7	Mondi
	eSikhaleni	2018-06-13 22:40:00	9.7	Mondi
	eSikhaleni	2018-06-13 22:50:00	11.0	Mondi
	eSikhaleni	2018-06-14 02:10:00	17.6	Mondi
	eSikhaleni	2018-06-14 02:20:00	15.8	Mondi
	eSikhaleni	2018-06-14 02:30:00	13.5	Mondi
	eSikhaleni	2018-06-14 04:30:00	10.6	Mondi
	eSikhaleni	2018-06-14 04:40:00	12.6	Mondi
	eSikhaleni	2018-06-14 05:30:00	10.3	Mondi
	eSikhaleni	2018-06-18 06:30:00	9.7	Mondi
	eSikhaleni	2018-06-22 02:30:00	17.8	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-06-27 22:20:00	9.5	Mondi
	eSikhaleni	2018-06-27 23:30:00	9.8	Mondi
	eSikhaleni	2018-08-07 05:10:00	17.3	Mondi
	eSikhaleni	2018-08-07 05:20:00	12.0	Mondi
	eSikhaleni	2018-08-13 03:40:00	9.9	Mondi
	eSikhaleni	2018-08-13 03:50:00	14.4	Mondi
	eSikhaleni	2018-08-13 04:00:00	11.8	Mondi
	eSikhaleni	2018-08-17 02:40:00	11.2	Mondi
	eSikhaleni	2018-08-17 02:50:00	18.4	Mondi
	eSikhaleni	2018-08-17 03:00:00	25.4	Mondi
	eSikhaleni	2018-08-17 03:10:00	24.8	Mondi
	eSikhaleni	2018-08-17 03:20:00	20.6	Mondi
	eSikhaleni	2018-08-17 03:30:00	10.8	Mondi
	eSikhaleni	2018-09-12 06:20:00	16.1	Mondi
	eSikhaleni	2018-09-12 06:30:00	14.4	Mondi
	eSikhaleni	2018-09-21 03:20:00	14.0	Mondi
	eSikhaleni	2018-09-21 03:30:00	18.9	Mondi
	eSikhaleni	2018-09-21 03:40:00	9.9	Mondi
	eSikhaleni	2018-09-28 06:30:00	10.5	Unknown
RBCAA 10-minute Target (4.5 ppb)	CBD	2018-01-09 08:20:00	4.6	Mondi
	CBD	2018-01-09 09:10:00	5.8	Mondi
	CBD	2018-01-09 10:10:00	5.4	Mondi
	CBD	2018-01-09 10:20:00	5.1	Mondi
	CBD	2018-01-09 10:30:00	5.0	Mondi
	CBD	2018-01-09 10:40:00	5.5	Mondi
	CBD	2018-01-24 21:40:00	5.7	Mondi
	CBD	2018-01-24 21:50:00	5.6	Mondi
	CBD	2018-01-24 22:00:00	11.2	Mondi
	CBD	2018-01-24 22:10:00	7.2	Mondi
	CBD	2018-01-24 22:20:00	6.3	Mondi
	CBD	2018-01-25 06:20:00	4.9	Mondi
	CBD	2018-01-25 21:10:00	6.1	Mondi
	CBD	2018-01-31 22:00:00	6.0	Mondi
	CBD	2018-02-01 03:30:00	5.2	Mondi
	CBD	2018-02-01 21:20:00	6.5	Mondi
	CBD	2018-02-01 21:30:00	10.5	Mondi
	CBD	2018-02-01 21:40:00	13.2	Mondi
	CBD	2018-02-01 21:50:00	10.8	Mondi
	CBD	2018-02-07 22:40:00	5.2	Mondi
	CBD	2018-02-12 06:00:00	4.9	Mondi
	CBD	2018-02-12 06:10:00	5.1	Mondi
	CBD	2018-02-15 21:20:00	4.8	Mondi
	CBD	2018-02-15 21:30:00	4.9	Mondi
	CBD	2018-02-15 23:10:00	4.8	Mondi
	CBD	2018-02-16 23:10:00	9.6	Mondi
	CBD	2018-02-16 23:20:00	8.6	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-02-25 20:30:00	5.0	Mondi
	CBD	2018-02-25 20:40:00	5.3	Mondi
	CBD	2018-02-25 21:20:00	4.8	Mondi
	CBD	2018-02-26 20:30:00	5.2	Mondi
	CBD	2018-04-08 22:00:00	12.5	Mondi
	CBD	2018-04-08 22:10:00	33.1	Mondi
	CBD	2018-04-08 22:20:00	22.9	Mondi
	CBD	2018-04-08 22:30:00	9.9	Mondi
	CBD	2018-04-19 06:30:00	4.8	Mondi
	CBD	2018-04-19 23:20:00	6.6	Mondi
	CBD	2018-04-19 23:30:00	6.7	Mondi
	CBD	2018-04-24 22:50:00	4.9	Mondi
	CBD	2018-04-24 23:00:00	5.7	Mondi
	CBD	2018-04-24 23:10:00	4.9	Mondi
	CBD	2018-04-27 06:00:00	5.6	Mondi
	CBD	2018-04-27 06:10:00	5.6	Mondi
	CBD	2018-04-27 06:20:00	6.6	Mondi
	CBD	2018-04-27 06:30:00	5.5	Mondi
	CBD	2018-04-30 20:10:00	6.1	Mondi
	CBD	2018-04-30 20:20:00	4.9	Mondi
	CBD	2018-04-30 20:30:00	6.4	Mondi
	CBD	2018-04-30 20:40:00	8.1	Mondi
	CBD	2018-04-30 20:50:00	8.6	Mondi
	CBD	2018-04-30 21:00:00	8.1	Mondi
	CBD	2018-04-30 21:10:00	7.4	Mondi
	CBD	2018-04-30 22:00:00	8.0	Mondi
	CBD	2018-04-30 22:10:00	8.4	Mondi
	CBD	2018-04-30 23:40:00	4.9	Mondi
	CBD	2018-04-30 23:50:00	5.8	Mondi
	CBD	2018-05-01 00:00:00	5.6	Mondi
	CBD	2018-05-01 00:10:00	6.0	Mondi
	CBD	2018-05-01 00:20:00	4.9	Mondi
	CBD	2018-05-01 01:00:00	6.6	Mondi
	CBD	2018-05-01 01:10:00	8.5	Mondi
	CBD	2018-05-01 01:20:00	8.0	Mondi
	CBD	2018-05-01 01:30:00	8.0	Mondi
	CBD	2018-05-01 01:40:00	6.3	Mondi
	CBD	2018-05-01 03:20:00	10.0	Mondi
	CBD	2018-05-01 03:30:00	9.3	Mondi
	CBD	2018-05-03 04:50:00	5.9	Mondi
	CBD	2018-05-03 05:00:00	5.8	Mondi
	CBD	2018-05-03 05:10:00	4.8	Mondi
	CBD	2018-05-03 05:20:00	4.8	Mondi
	CBD	2018-05-03 05:30:00	5.6	Mondi
	CBD	2018-05-03 05:40:00	4.7	Mondi
	CBD	2018-05-05 00:50:00	5.0	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-05-05 02:50:00	4.6	Mondi
	CBD	2018-05-09 22:40:00	6.2	Mondi
	CBD	2018-05-09 22:50:00	5.9	Mondi
	CBD	2018-05-10 06:00:00	6.2	Mondi
	CBD	2018-05-10 06:00:10	5.7	Mondi
	CBD	2018-05-10 06:20:00	5.5	Mondi
	CBD	2018-05-12 08:20:00	4.6	Mondi
	CBD	2018-05-12 08:30:00	5.9	Mondi
	CBD	2018-05-12 08:40:00	5.2	Mondi
	CBD	2018-05-12 23:10:00	5.0	Mondi
	CBD	2018-05-12 23:30:00	5.9	Mondi
	CBD	2018-05-13 21:20:00	5.2	Mondi
	CBD	2018-05-13 21:30:00	6.5	Mondi
	CBD	2018-05-14 21:40:00	5.2	Mondi
	CBD	2018-05-14 22:20:00	5.5	Mondi
	CBD	2018-05-14 22:50:00	7.4	Mondi
	CBD	2018-05-15 10:50:00	6.7	Mondi
	CBD	2018-05-15 11:00:00	5.2	Mondi
	CBD	2018-05-15 14:10:00	5.0	Mondi
	CBD	2018-05-25 21:10:00	4.8	Mondi
	CBD	2018-06-01 21:30:00	11.3	Mondi
	CBD	2018-06-01 21:40:00	8.6	Mondi
	CBD	2018-06-01 21:50:00	6.8	Mondi
	CBD	2018-06-01 22:00:00	8.1	Mondi
	CBD	2018-06-01 22:10:00	6.5	Mondi
	CBD	2018-06-01 22:20:00	6.3	Mondi
	CBD	2018-06-01 22:30:00	5.2	Mondi
	CBD	2018-06-01 23:40:00	4.6	Mondi
	CBD	2018-06-02 00:40:00	5.6	Mondi
	CBD	2018-06-02 00:50:00	4.8	Mondi
	CBD	2018-06-02 01:30:00	6.2	Mondi
	CBD	2018-06-02 01:40:00	6.2	Mondi
	CBD	2018-06-02 02:00:00	4.9	Mondi
	CBD	2018-06-08 07:20:00	5.0	Mondi
	CBD	2018-06-08 07:30:00	5.7	Mondi
	CBD	2018-06-10 06:30:00	5.6	Mondi
	CBD	2018-06-10 06:40:00	4.6	Mondi
	CBD	2018-06-11 01:50:00	4.8	Mondi
	CBD	2018-06-11 02:00:00	6.7	Mondi
	CBD	2018-06-16 02:00:00	5.3	Mondi
	CBD	2018-06-16 02:10:00	5.8	Mondi
	CBD	2018-06-16 03:40:00	5.0	Mondi
	CBD	2018-06-16 03:50:00	5.7	Mondi
	CBD	2018-06-18 22:00:00	4.6	Mondi
	CBD	2018-06-18 22:10:00	8.5	Mondi
	CBD	2018-06-18 22:20:00	6.4	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-06-18 22:30:00	10.4	Mondi
	CBD	2018-06-18 22:40:00	19.5	Mondi
	CBD	2018-06-18 22:50:00	24.8	Mondi
	CBD	2018-06-18 23:00:00	23.4	Mondi
	CBD	2018-06-18 23:10:00	19.6	Mondi
	CBD	2018-06-18 23:20:00	11.8	Mondi
	CBD	2018-06-18 23:30:00	5.5	Mondi
	CBD	2018-06-19 20:50:00	5.5	Mondi
	CBD	2018-06-19 21:20:00	5.0	Mondi
	CBD	2018-06-19 21:30:00	11.5	Mondi
	CBD	2018-06-19 21:40:00	12.1	Mondi
	CBD	2018-06-19 21:50:00	9.5	Mondi
	CBD	2018-06-19 22:30:00	7.4	Mondi
	CBD	2018-06-19 22:40:00	5.9	Mondi
	CBD	2018-06-19 23:20:00	8.4	Mondi
	CBD	2018-06-19 23:30:00	6.0	Mondi
	CBD	2018-06-22 08:20:00	4.8	Mondi
	CBD	2018-06-22 08:30:00	5.2	Mondi
	CBD	2018-06-22 08:40:00	5.2	Mondi
	CBD	2018-06-22 10:00:00	4.6	Mondi
	CBD	2018-06-22 20:20:00	7.0	Mondi
	CBD	2018-06-22 20:30:00	9.7	Mondi
	CBD	2018-06-22 20:40:00	8.4	Mondi
	CBD	2018-06-22 20:50:00	6.6	Mondi
	CBD	2018-06-22 21:00:00	6.2	Mondi
	CBD	2018-06-22 21:10:00	5.9	Mondi
	CBD	2018-06-22 21:20:00	5.7	Mondi
	CBD	2018-06-22 21:30:00	8.0	Mondi
	CBD	2018-06-22 21:40:00	11.6	Mondi
	CBD	2018-06-22 21:50:00	14.5	Mondi
	CBD	2018-06-22 22:00:00	11.1	Mondi
	CBD	2018-06-22 22:10:00	8.4	Mondi
	CBD	2018-06-22 22:20:00	10.2	Mondi
	CBD	2018-06-22 22:30:00	13.9	Mondi
	CBD	2018-06-22 22:40:00	9.0	Mondi
	CBD	2018-06-22 22:50:00	4.7	Mondi
	CBD	2018-06-24 07:50:00	8.5	Mondi
	CBD	2018-06-25 20:30:00	6.9	Mondi
	CBD	2018-06-25 20:40:00	13.5	Mondi
	CBD	2018-06-25 20:50:00	11.9	Mondi
	CBD	2018-06-25 21:00:00	7.2	Mondi
	CBD	2018-06-25 22:30:00	6.1	Mondi
	CBD	2018-06-25 22:40:00	19.1	Mondi
	CBD	2018-06-25 22:50:00	10.8	Mondi
	CBD	2018-06-28 02:30:00	4.7	Mondi
	CBD	2018-06-30 20:00:00	4.9	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-06-30 20:10:00	6.8	Mondi
	CBD	2018-06-30 20:20:00	9.4	Mondi
	CBD	2018-06-30 20:30:00	9.2	Mondi
	CBD	2018-06-30 20:40:00	4.7	Mondi
	CBD	2018-06-30 21:40:00	7.5	Mondi
	CBD	2018-06-30 21:50:00	7.0	Mondi
	CBD	2018-06-30 22:30:00	4.6	Mondi
	CBD	2018-06-30 22:40:00	5.6	Mondi
	CBD	2018-06-30 22:50:00	7.0	Mondi
	CBD	2018-06-30 23:00:00	8.1	Mondi
	CBD	2018-06-30 23:10:00	7.0	Mondi
	CBD	2018-07-05 05:00:00	5.2	Mondi
	CBD	2018-07-05 05:10:00	6.9	Mondi
	CBD	2018-07-06 18:10:00	5.1	Mondi
	CBD	2018-07-06 18:20:00	8.0	Mondi
	CBD	2018-07-06 18:30:00	8.2	Mondi
	CBD	2018-07-06 18:40:00	4.9	Mondi
	CBD	2018-07-07 21:50:00	5.2	Mondi
	CBD	2018-07-07 22:00:00	6.8	Mondi
	CBD	2018-07-14 04:10:00	5.0	Mondi
	CBD	2018-07-14 04:20:00	5.2	Mondi
	CBD	2018-07-14 04:30:00	4.8	Mondi
	CBD	2018-07-14 07:10:00	5.4	Mondi
	CBD	2018-07-14 14:10:00	4.6	Mondi
	CBD	2018-07-14 23:00:00	5.1	Mondi
	CBD	2018-07-15 06:00:00	5.5	Mondi
	CBD	2018-07-15 06:10:00	4.6	Mondi
	CBD	2018-07-15 07:00:00	5.8	Mondi
	CBD	2018-07-15 09:00:00	4.8	Mondi
	CBD	2018-07-15 09:10:00	6.8	Mondi
	CBD	2018-07-15 09:20:00	7.2	Mondi
	CBD	2018-07-15 09:40:00	8.2	Mondi
	CBD	2018-07-15 09:50:00	7.1	Mondi
	CBD	2018-07-15 10:00:00	5.9	Mondi
	CBD	2018-07-15 10:20:00	4.8	Mondi
	CBD	2018-07-15 10:30:00	7.3	Mondi
	CBD	2018-07-15 10:50:00	6.2	Mondi
	CBD	2018-07-15 11:00:00	8.1	Mondi
	CBD	2018-07-15 11:20:00	5.2	Mondi
	CBD	2018-07-15 17:50:00	9.3	Mondi
	CBD	2018-07-15 18:00:00	9.2	Mondi
	CBD	2018-07-15 18:10:00	7.3	Mondi
	CBD	2018-08-02 00:50:00	7.4	Mondi
	CBD	2018-08-02 01:00:00	4.6	Mondi
	CBD	2018-08-02 02:10:00	5.8	Mondi
	CBD	2018-08-02 02:20:00	6.3	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-08-02 02:30:00	6.0	Mondi
	CBD	2018-08-02 04:30:00	5.3	Mondi
	CBD	2018-08-02 04:40:00	5.6	Mondi
	CBD	2018-08-02 21:50:00	5.4	Mondi
	CBD	2018-08-03 02:50:00	8.4	Mondi
	CBD	2018-08-03 03:00:00	11.4	Mondi
	CBD	2018-08-03 03:30:00	6.0	Mondi
	CBD	2018-08-03 03:40:00	8.1	Mondi
	CBD	2018-08-03 03:50:00	7.2	Mondi
	CBD	2018-08-03 04:00:00	6.4	Mondi
	CBD	2018-08-03 04:10:00	5.1	Mondi
	CBD	2018-08-03 07:50:00	5.4	Mondi
	CBD	2018-08-03 08:00:00	6.8	Mondi
	CBD	2018-08-03 09:00:00	4.7	Mondi
	CBD	2018-08-03 09:10:00	5.1	Mondi
	CBD	2018-08-08 18:20:00	5.2	Mondi
	CBD	2018-08-08 18:30:00	8.3	Mondi
	CBD	2018-08-08 18:40:00	9.8	Mondi
	CBD	2018-08-08 18:50:00	9.2	Mondi
	CBD	2018-08-08 20:20:00	12.2	Mondi
	CBD	2018-08-08 20:30:00	17.2	Mondi
	CBD	2018-08-08 20:40:00	5.8	Mondi
	CBD	2018-08-09 01:30:00	7.1	Mondi
	CBD	2018-08-09 03:00:00	15.0	Mondi
	CBD	2018-08-09 03:10:00	12.8	Mondi
	CBD	2018-08-09 03:20:00	7.2	Mondi
	CBD	2018-08-09 04:10:00	7.3	Mondi
	CBD	2018-08-09 04:20:00	6.2	Mondi
	CBD	2018-08-09 05:40:00	6.1	Mondi
	CBD	2018-08-09 06:40:00	5.1	Mondi
	CBD	2018-08-12 21:00:00	4.9	Mondi
	CBD	2018-08-13 22:30:00	4.6	Mondi
	CBD	2018-08-13 22:40:00	6.4	Mondi
	CBD	2018-08-13 22:50:00	6.1	Mondi
	CBD	2018-08-13 23:00:00	6.5	Mondi
	CBD	2018-08-13 23:10:00	5.3	Mondi
	CBD	2018-08-14 21:50:00	5.5	Mondi
	CBD	2018-08-14 22:00:00	7.6	Mondi
	CBD	2018-08-14 22:10:00	6.7	Mondi
	CBD	2018-08-14 22:20:00	8.5	Mondi
	CBD	2018-08-14 22:30:00	8.0	Mondi
	CBD	2018-08-14 22:40:00	6.6	Mondi
	CBD	2018-08-14 22:50:00	5.8	Mondi
	CBD	2018-08-14 23:00:00	5.5	Mondi
	CBD	2018-08-14 23:10:00	4.9	Mondi
	CBD	2018-08-24 04:50:00	8.0	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-08-24 05:00:00	11.4	Mondi
	CBD	2018-08-24 05:10:00	9.4	Mondi
	CBD	2018-08-24 06:00:00	8.8	Mondi
	CBD	2018-08-24 06:10:00	18.7	Mondi
	CBD	2018-08-24 06:20:00	20.8	Mondi
	CBD	2018-08-24 06:30:00	16.3	Mondi
	CBD	2018-08-24 06:40:00	21.3	Mondi
	CBD	2018-08-24 06:50:00	22.3	Mondi
	CBD	2018-08-24 07:00:00	19.4	Mondi
	CBD	2018-08-24 07:10:00	16.6	Mondi
	CBD	2018-08-24 07:20:00	19.9	Mondi
	CBD	2018-08-24 07:30:00	15.7	Mondi
	CBD	2018-08-24 07:40:00	12.6	Mondi
	CBD	2018-08-24 07:50:00	15.6	Mondi
	CBD	2018-08-24 08:00:00	17.9	Mondi
	CBD	2018-08-24 08:10:00	12.8	Mondi
	CBD	2018-08-24 08:20:00	12.5	Mondi
	CBD	2018-08-24 08:30:00	6.3	Mondi
	CBD	2018-09-01 19:30:00	4.8	Mondi
	CBD	2018-09-01 19:40:00	5.0	Mondi
	CBD	2018-09-01 19:50:00	4.6	Mondi
	CBD	2018-09-01 20:20:00	5.9	Mondi
	CBD	2018-09-01 20:30:00	5.0	Mondi
	CBD	2018-09-01 20:50:00	5.0	Mondi
	CBD	2018-09-09 00:40:00	4.7	Mondi
	CBD	2018-09-09 01:50:00	5.5	Mondi
	CBD	2018-09-09 06:00:00	5.4	Mondi
	CBD	2018-09-10 01:00:00	4.9	Mondi
	CBD	2018-09-10 01:20:00	5.1	Mondi
	CBD	2018-09-10 04:30:00	5.8	Mondi
	CBD	2018-09-10 04:40:00	6.4	Mondi
	CBD	2018-09-12 19:50:00	4.8	Mondi
	CBD	2018-09-12 20:00:00	5.8	Mondi
	CBD	2018-09-12 20:10:00	6.0	Mondi
	CBD	2018-09-12 20:20:00	7.1	Mondi
	CBD	2018-09-12 20:30:00	5.1	Mondi
	CBD	2018-09-12 20:40:00	5.6	Mondi
	CBD	2018-09-12 20:50:00	6.0	Mondi
	CBD	2018-09-13 00:30:00	4.6	Mondi
	CBD	2018-09-13 00:40:00	5.5	Mondi
	CBD	2018-09-13 00:50:00	5.8	Mondi
	CBD	2018-09-13 01:00:00	5.7	Mondi
	CBD	2018-09-13 01:10:00	6.2	Mondi
	CBD	2018-09-13 01:20:00	5.8	Mondi
	CBD	2018-09-13 01:30:00	5.8	Mondi
	CBD	2018-09-13 03:00:00	4.6	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-09-13 03:10:00	4.7	Mondi
	CBD	2018-09-13 03:50:00	5.0	Mondi
	CBD	2018-09-13 04:00:00	6.3	Mondi
	CBD	2018-09-13 04:10:00	4.8	Mondi
	CBD	2018-09-13 06:00:00	5.0	Mondi
	CBD	2018-09-13 06:10:00	4.9	Mondi
	CBD	2018-09-13 06:20:00	5.3	Mondi
	CBD	2018-09-14 01:10:00	4.7	Mondi
	CBD	2018-09-15 03:00:00	6.6	Unknown
	CBD	2018-09-16 08:00:00	14.9	Mondi
	CBD	2018-09-16 08:10:00	8.7	Mondi
	CBD	2018-09-16 08:40:00	5.1	Mondi
	CBD	2018-09-18 06:20:00	9.4	Mondi
	CBD	2018-09-18 06:30:00	9.2	Mondi
	CBD	2018-09-18 20:50:00	6.0	Mondi
	CBD	2018-09-18 21:00:00	13.4	Mondi
	CBD	2018-09-18 21:10:00	6.9	Mondi
	CBD	2018-09-18 21:50:00	8.2	Mondi
	CBD	2018-09-18 22:00:00	16.4	Mondi
	CBD	2018-09-18 22:10:00	21.7	Mondi
	CBD	2018-09-18 22:20:00	16.8	Mondi
	CBD	2018-09-18 22:30:00	13.0	Mondi
	CBD	2018-09-18 22:40:00	11.7	Mondi
	CBD	2018-09-18 22:50:00	11.1	Mondi
	CBD	2018-09-19 00:50:00	4.9	Mondi
	CBD	2018-09-19 01:00:00	5.1	Mondi
	CBD	2018-09-19 01:30:00	6.2	Mondi
	CBD	2018-09-19 01:40:00	6.6	Mondi
	CBD	2018-09-19 01:50:00	7.0	Mondi
	CBD	2018-09-19 02:00:00	4.6	Mondi
	CBD	2018-09-20 07:50:00	4.8	Mondi
	CBD	2018-09-20 08:00:00	5.2	Mondi
	CBD	2018-09-20 08:10:00	5.9	Mondi
	CBD	2018-09-20 08:20:00	5.0	Mondi
	CBD	2018-09-20 08:50:00	4.7	Mondi
	CBD	2018-09-20 09:40:00	6.8	Mondi
	CBD	2018-09-20 09:50:00	4.9	Mondi
	CBD	2018-09-20 10:00:00	5.0	Mondi
	CBD	2018-09-20 10:10:00	4.7	Mondi
	CBD	2018-09-20 17:50:00	6.2	Mondi
	CBD	2018-09-20 18:00:00	5.0	Mondi
	CBD	2018-09-21 22:10:00	5.7	Mondi
	CBD	2018-09-21 22:20:00	7.2	Mondi
	CBD	2018-09-21 22:30:00	7.5	Mondi
	CBD	2018-09-22 08:30:00	5.6	Mondi
	CBD	2018-09-22 08:40:00	7.5	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-09-22 08:50:00	7.7	Mondi
	CBD	2018-09-22 09:00:00	9.5	Mondi
	CBD	2018-09-22 09:10:00	7.1	Mondi
	CBD	2018-09-22 23:30:00	6.3	Mondi
	CBD	2018-09-29 04:50:00	6.7	Mondi
	CBD	2018-09-29 05:00:00	11.2	Mondi
	CBD	2018-09-29 05:10:00	8.2	Mondi
	CBD	2018-09-29 05:40:00	5.8	Mondi
	CBD	2018-09-29 05:50:00	11.1	Mondi
	CBD	2018-09-29 06:00:00	16.0	Mondi
	CBD	2018-09-29 06:10:00	11.9	Mondi
	CBD	2018-09-29 06:20:00	5.7	Mondi
	CBD	2018-10-05 04:00:00	6.8	Mondi
	CBD	2018-10-05 04:10:00	4.9	Mondi
	CBD	2018-10-12 19:00:00	5.2	Mondi
	CBD	2018-10-12 20:10:00	5.1	Mondi
	CBD	2018-10-12 20:20:00	5.5	Mondi
	CBD	2018-10-13 09:20:00	8.0	Mondi
	CBD	2018-10-13 09:50:00	8.0	Mondi
	CBD	2018-10-13 10:00:00	5.4	Mondi
	CBD	2018-10-13 10:10:00	6.6	Mondi
	CBD	2018-10-13 10:30:00	5.6	Mondi
	CBD	2018-10-13 11:40:00	4.8	Mondi
	CBD	2018-10-15 22:30:00	5.2	Mondi
	CBD	2018-10-15 22:40:00	7.6	Mondi
	CBD	2018-10-15 22:50:00	4.7	Mondi
	CBD	2018-10-15 23:00:00	4.6	Mondi
	CBD	2018-10-15 23:10:00	5.1	Mondi
	CBD	2018-10-15 23:40:00	5.5	Mondi
	CBD	2018-10-15 23:50:00	8.7	Mondi
	CBD	2018-10-16 00:00:00	5.2	Mondi
	CBD	2018-10-16 00:50:00	5.8	Mondi
	CBD	2018-10-16 01:10:00	6.7	Mondi
	CBD	2018-10-16 01:20:00	8.4	Mondi
	CBD	2018-10-16 01:30:00	5.1	Mondi
	CBD	2018-10-16 03:50:00	4.9	Mondi
	CBD	2018-10-16 04:00:00	5.2	Mondi
	CBD	2018-10-16 04:10:00	6.8	Mondi
	CBD	2018-10-18 00:00:00	4.8	Mondi
	CBD	2018-10-20 00:10:00	5.2	Mondi
	CBD	2018-10-21 07:10:00	5.2	Mondi
	CBD	2018-10-22 06:50:00	5.0	Mondi
	CBD	2018-10-31 19:30:00	6.0	Mondi
	CBD	2018-10-31 19:40:00	5.6	Mondi
	CBD	2018-10-31 19:50:00	5.1	Mondi
	CBD	2018-10-31 22:10:00	4.8	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-11-01 03:10:00	7.1	Mondi
	CBD	2018-11-01 03:20:00	8.3	Mondi
	CBD	2018-11-01 05:30:00	5.5	Mondi
	CBD	2018-11-01 05:50:00	9.0	Mondi
	CBD	2018-11-01 06:40:00	10.9	Mondi
	CBD	2018-11-01 07:00:00	7.2	Mondi
	CBD	2018-11-01 07:10:00	17.5	Mondi
	CBD	2018-11-01 07:20:00	9.4	Mondi
	CBD	2018-11-01 08:00:00	7.8	Mondi
	CBD	2018-11-01 08:10:00	6.6	Mondi
	CBD	2018-11-01 09:00:00	5.5	Mondi
	CBD	2018-11-01 09:10:00	9.6	Mondi
	CBD	2018-11-01 09:20:00	6.7	Mondi
	CBD	2018-11-01 17:50:00	4.8	Mondi
	CBD	2018-11-01 19:40:00	6.6	Mondi
	CBD	2018-11-01 19:50:00	6.2	Mondi
	CBD	2018-11-01 20:00:00	7.4	Mondi
	CBD	2018-11-01 20:10:00	9.7	Mondi
	CBD	2018-11-01 20:20:00	10.2	Mondi
	CBD	2018-11-01 20:30:00	6.6	Mondi
	CBD	2018-11-01 20:40:00	5.4	Mondi
	CBD	2018-11-01 20:50:00	8.0	Mondi
	CBD	2018-11-01 21:20:00	4.6	Mondi
	CBD	2018-11-01 21:30:00	5.4	Mondi
	CBD	2018-11-01 21:40:00	9.7	Mondi
	CBD	2018-11-01 21:50:00	6.1	Mondi
	CBD	2018-11-02 06:30:00	5.7	Mondi
	CBD	2018-11-02 06:40:00	7.7	Mondi
	CBD	2018-11-02 23:00:00	5.2	Mondi
	CBD	2018-11-02 23:10:00	4.8	Mondi
	CBD	2018-11-03 00:50:00	6.0	Mondi
	CBD	2018-11-03 01:00:00	7.8	Mondi
	CBD	2018-11-03 01:30:00	5.3	Mondi
	CBD	2018-11-03 01:40:00	5.8	Mondi
	CBD	2018-11-03 01:50:00	4.8	Mondi
	CBD	2018-11-03 03:20:00	7.6	Mondi
	CBD	2018-11-03 03:30:00	8.1	Mondi
	CBD	2018-11-03 03:40:00	7.0	Mondi
	CBD	2018-11-03 03:50:00	6.0	Mondi
	CBD	2018-11-28 04:00:00	15.8	Unknown
	CBD	2018-11-28 04:10:00	5.7	Unknown
	CBD	2018-11-28 08:10:00	7.2	Unknown
	CBD	2018-11-28 08:20:00	11.6	Unknown
	CBD	2018-11-28 08:30:00	18.2	Unknown
	CBD	2018-11-28 08:40:00	10.2	Unknown
	CBD	2018-11-28 08:50:00	13.5	Unknown

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	CBD	2018-11-28 09:00:00	7.0	Unknown
	CBD	2018-11-28 10:10:00	9.2	Unknown
	CBD	2018-11-28 10:20:00	14.7	Unknown
	CBD	2018-11-28 10:30:00	7.7	Unknown
	CBD	2018-11-28 10:40:00	7.8	Unknown
	CBD	2018-11-28 10:50:00	11.6	Unknown
	CBD	2018-11-28 11:00:00	7.5	Unknown
	CBD	2018-11-28 11:10:00	5.4	Unknown
	CBD	2018-12-13 00:50:00	5.7	Mondi
	eSikhaleni	2018-02-02 05:50:00	5.2	Mondi
	eSikhaleni	2018-02-02 06:00:00	6.0	Mondi
	eSikhaleni	2018-02-27 06:40:00	5.0	Mondi
	eSikhaleni	2018-02-27 06:50:00	5.5	Mondi
	eSikhaleni	2018-02-27 07:00:00	5.3	Mondi
	eSikhaleni	2018-02-28 05:50:00	4.7	Mondi
	eSikhaleni	2018-02-28 06:00:00	5.9	Mondi
	eSikhaleni	2018-02-28 06:10:00	6.1	Mondi
	eSikhaleni	2018-05-06 20:50:00	8.1	Mondi
	eSikhaleni	2018-05-09 04:20:00	6.8	Mondi
	eSikhaleni	2018-05-09 04:30:00	8.8	Mondi
	eSikhaleni	2018-05-09 05:10:00	5.3	Mondi
	eSikhaleni	2018-05-09 05:20:00	5.4	Mondi
	eSikhaleni	2018-05-09 05:50:00	8.1	Mondi
	eSikhaleni	2018-05-09 06:00:00	5.8	Mondi
	eSikhaleni	2018-05-09 06:30:00	5.0	Mondi
	eSikhaleni	2018-05-09 06:40:00	9.5	Mondi
	eSikhaleni	2018-05-09 06:50:00	5.4	Mondi
	eSikhaleni	2018-05-09 07:50:00	5.1	Mondi
	eSikhaleni	2018-05-11 00:20:00	4.9	Unknown
	eSikhaleni	2018-05-11 00:40:00	4.8	Unknown
	eSikhaleni	2018-05-11 00:50:00	5.3	Unknown
	eSikhaleni	2018-05-11 01:00:00	4.6	Unknown
	eSikhaleni	2018-05-11 01:30:00	4.7	Unknown
	eSikhaleni	2018-05-11 05:50:00	5.0	Unknown
	eSikhaleni	2018-05-11 06:00:00	6.3	Unknown
	eSikhaleni	2018-05-11 06:50:00	4.9	Unknown
	eSikhaleni	2018-05-11 17:30:00	6.4	Unknown
	eSikhaleni	2018-05-11 18:00:00	7.0	Unknown
	eSikhaleni	2018-05-11 18:20:00	9.9	Unknown
	eSikhaleni	2018-05-11 18:30:00	7.5	Unknown
	eSikhaleni	2018-05-11 18:50:00	4.7	Unknown
	eSikhaleni	2018-05-11 19:20:00	6.9	Unknown
	eSikhaleni	2018-05-11 19:30:00	5.1	Unknown
	eSikhaleni	2018-05-11 19:40:00	8.9	Unknown
	eSikhaleni	2018-05-11 19:50:00	9.4	Unknown
	eSikhaleni	2018-05-11 20:00:00	5.0	Unknown

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-05-11 20:30:00	4.6	Unknown
	eSikhaleni	2018-05-28 00:40:00	4.9	Mondi
	eSikhaleni	2018-05-28 00:50:00	7.3	Mondi
	eSikhaleni	2018-05-28 01:00:00	6.9	Mondi
	eSikhaleni	2018-05-28 07:30:00	4.6	Mondi
	eSikhaleni	2018-06-01 04:20:00	7.9	Unknown
	eSikhaleni	2018-06-01 04:30:00	6.9	Unknown
	eSikhaleni	2018-06-01 04:40:00	5.2	Unknown
	eSikhaleni	2018-06-01 05:20:00	5.6	Unknown
	eSikhaleni	2018-06-01 05:30:00	6.7	Unknown
	eSikhaleni	2018-06-01 06:00:00	4.8	Unknown
	eSikhaleni	2018-06-03 03:00:00	4.9	Mondi
	eSikhaleni	2018-06-03 04:40:00	5.1	Mondi
	eSikhaleni	2018-06-03 07:50:00	4.6	Mondi
	eSikhaleni	2018-06-03 08:00:00	9.1	Mondi
	eSikhaleni	2018-06-09 19:30:00	4.7	Mondi
	eSikhaleni	2018-06-09 20:10:00	4.7	Mondi
	eSikhaleni	2018-06-09 20:20:00	6.2	Mondi
	eSikhaleni	2018-06-09 20:40:00	5.8	Mondi
	eSikhaleni	2018-06-09 20:50:00	6.0	Mondi
	eSikhaleni	2018-06-11 20:10:00	6.4	Mondi
	eSikhaleni	2018-06-11 20:20:00	9.8	Mondi
	eSikhaleni	2018-06-11 20:30:00	9.4	Mondi
	eSikhaleni	2018-06-11 20:40:00	5.6	Mondi
	eSikhaleni	2018-06-13 21:20:00	6.5	Mondi
	eSikhaleni	2018-06-13 21:30:00	15.9	Mondi
	eSikhaleni	2018-06-13 21:40:00	16.3	Mondi
	eSikhaleni	2018-06-13 21:50:00	15.2	Mondi
	eSikhaleni	2018-06-13 22:00:00	14.6	Mondi
	eSikhaleni	2018-06-13 22:10:00	16.5	Mondi
	eSikhaleni	2018-06-13 22:20:00	15.0	Mondi
	eSikhaleni	2018-06-13 22:30:00	14.7	Mondi
	eSikhaleni	2018-06-13 22:40:00	9.7	Mondi
	eSikhaleni	2018-06-13 22:50:00	11.0	Mondi
	eSikhaleni	2018-06-13 23:00:00	8.8	Mondi
	eSikhaleni	2018-06-14 01:20:00	5.2	Mondi
	eSikhaleni	2018-06-14 01:40:00	4.8	Mondi
	eSikhaleni	2018-06-14 02:00:00	6.7	Mondi
	eSikhaleni	2018-06-14 02:10:00	17.6	Mondi
	eSikhaleni	2018-06-14 02:20:00	15.8	Mondi
	eSikhaleni	2018-06-14 02:30:00	13.5	Mondi
	eSikhaleni	2018-06-14 02:40:00	8.7	Mondi
	eSikhaleni	2018-06-14 02:50:00	7.3	Mondi
	eSikhaleni	2018-06-14 04:20:00	5.0	Mondi
	eSikhaleni	2018-06-14 04:30:00	10.6	Mondi
	eSikhaleni	2018-06-14 04:40:00	12.6	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-06-14 04:50:00	5.8	Mondi
	eSikhaleni	2018-06-14 05:30:00	10.3	Mondi
	eSikhaleni	2018-06-14 05:40:00	7.7	Mondi
	eSikhaleni	2018-06-14 08:00:00	5.2	Mondi
	eSikhaleni	2018-06-14 08:10:00	4.6	Mondi
	eSikhaleni	2018-06-14 08:20:00	6.9	Mondi
	eSikhaleni	2018-06-14 08:30:00	8.8	Mondi
	eSikhaleni	2018-06-14 08:40:00	6.1	Mondi
	eSikhaleni	2018-06-18 06:20:00	5.5	Mondi
	eSikhaleni	2018-06-18 06:30:00	9.7	Mondi
	eSikhaleni	2018-06-18 06:40:00	6.9	Mondi
	eSikhaleni	2018-06-18 06:50:00	5.1	Mondi
	eSikhaleni	2018-06-21 01:40:00	5.0	Mondi
	eSikhaleni	2018-06-21 01:50:00	6.2	Mondi
	eSikhaleni	2018-06-21 02:00:00	7.8	Mondi
	eSikhaleni	2018-06-21 02:10:00	5.3	Mondi
	eSikhaleni	2018-06-21 02:20:00	6.1	Mondi
	eSikhaleni	2018-06-21 02:30:00	5.7	Mondi
	eSikhaleni	2018-06-22 02:20:00	5.7	Mondi
	eSikhaleni	2018-06-22 02:30:00	17.8	Mondi
	eSikhaleni	2018-06-22 02:40:00	7.7	Mondi
	eSikhaleni	2018-06-27 22:20:00	9.5	Mondi
	eSikhaleni	2018-06-27 22:30:00	6.5	Mondi
	eSikhaleni	2018-06-27 22:40:00	6.1	Mondi
	eSikhaleni	2018-06-27 23:00:00	6.3	Mondi
	eSikhaleni	2018-06-27 23:10:00	6.0	Mondi
	eSikhaleni	2018-06-27 23:30:00	9.8	Mondi
	eSikhaleni	2018-06-27 23:40:00	8.1	Mondi
	eSikhaleni	2018-06-30 10:00:00	5.2	Unknown
	eSikhaleni	2018-07-18 04:50:00	7.0	Mondi
	eSikhaleni	2018-07-18 05:00:00	7.4	Mondi
	eSikhaleni	2018-07-18 05:10:00	7.0	Mondi
	eSikhaleni	2018-07-25 02:30:00	5.7	Mondi
	eSikhaleni	2018-07-25 02:30:00	5.7	Mondi
	eSikhaleni	2018-07-25 02:40:00	6.0	Mondi
	eSikhaleni	2018-07-25 02:50:00	9.1	Mondi
	eSikhaleni	2018-07-25 03:00:00	5.5	Mondi
	eSikhaleni	2018-07-25 04:40:00	5.3	Mondi
	eSikhaleni	2018-07-25 04:50:00	4.7	Mondi
	eSikhaleni	2018-07-25 05:00:00	5.3	Mondi
	eSikhaleni	2018-07-25 05:10:00	8.2	Mondi
	eSikhaleni	2018-07-25 05:20:00	7.1	Mondi
	eSikhaleni	2018-07-25 05:30:00	4.7	Mondi
	eSikhaleni	2018-07-25 06:40:00	5.0	Mondi
	eSikhaleni	2018-07-25 06:50:00	7.1	Mondi
	eSikhaleni	2018-07-25 07:00:00	5.8	Mondi

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-07-25 08:40:00	7.0	Mondi
	eSikhaleni	2018-07-25 08:50:00	6.0	Mondi
	eSikhaleni	2018-07-29 17:40:00	5.0	Mondi
	eSikhaleni	2018-07-29 17:50:00	6.0	Mondi
	eSikhaleni	2018-08-07 05:10:00	17.3	Mondi
	eSikhaleni	2018-08-07 05:20:00	12.0	Mondi
	eSikhaleni	2018-08-10 17:50:00	8.2	Mondi
	eSikhaleni	2018-08-10 18:00:00	8.3	Mondi
	eSikhaleni	2018-08-10 18:10:00	6.4	Mondi
	eSikhaleni	2018-08-13 03:40:00	9.9	Mondi
	eSikhaleni	2018-08-13 03:50:00	14.4	Mondi
	eSikhaleni	2018-08-13 04:00:00	11.8	Mondi
	eSikhaleni	2018-08-13 04:10:00	7.6	Mondi
	eSikhaleni	2018-08-17 02:30:00	5.2	Mondi
	eSikhaleni	2018-08-17 02:40:00	11.2	Mondi
	eSikhaleni	2018-08-17 02:50:00	18.4	Mondi
	eSikhaleni	2018-08-17 03:00:00	25.4	Mondi
	eSikhaleni	2018-08-17 03:10:00	24.8	Mondi
	eSikhaleni	2018-08-17 03:20:00	20.6	Mondi
	eSikhaleni	2018-08-17 03:30:00	10.8	Mondi
	eSikhaleni	2018-08-18 23:40:00	4.8	Mondi
	eSikhaleni	2018-08-20 01:50:00	5.6	Mondi
	eSikhaleni	2018-08-20 02:00:00	4.9	Mondi
	eSikhaleni	2018-08-26 08:40:00	4.8	Mondi
	eSikhaleni	2018-08-26 09:00:00	7.2	Mondi
	eSikhaleni	2018-08-26 09:10:00	6.2	Mondi
	eSikhaleni	2018-09-12 06:20:00	16.1	Mondi
	eSikhaleni	2018-09-12 06:30:00	14.4	Mondi
	eSikhaleni	2018-09-12 06:40:00	9.2	Mondi
	eSikhaleni	2018-09-12 21:40:00	4.6	Mondi
	eSikhaleni	2018-09-12 22:10:00	4.6	Mondi
	eSikhaleni	2018-09-12 22:20:00	5.1	Mondi
	eSikhaleni	2018-09-12 22:30:00	4.8	Mondi
	eSikhaleni	2018-09-12 23:50:00	4.7	Mondi
	eSikhaleni	2018-09-15 18:20:00	6.9	Unknown
	eSikhaleni	2018-09-20 19:50:00	6.0	Mondi
	eSikhaleni	2018-09-21 03:10:00	5.2	Mondi
	eSikhaleni	2018-09-21 03:20:00	14.0	Mondi
	eSikhaleni	2018-09-21 03:30:00	18.9	Mondi
	eSikhaleni	2018-09-21 03:40:00	9.9	Mondi
	eSikhaleni	2018-09-21 03:50:00	5.5	Mondi
	eSikhaleni	2018-09-27 03:50:00	8.2	Mondi
	eSikhaleni	2018-09-27 04:00:00	7.0	Mondi
	eSikhaleni	2018-09-27 04:10:00	4.8	Mondi
	eSikhaleni	2018-09-28 06:30:00	10.5	Unknown
	eSikhaleni	2018-09-28 06:40:00	5.9	Unknown

Target / Guideline / Standard	Station	Date	Value (ppb)	Allocation
	eSikhaleni	2018-09-30 05:30:00	5.4	Mondi
	eSikhaleni	2018-10-22 21:00:00	5.0	Mondi
	eSikhaleni	2018-10-26 23:30:00	7.0	Mondi
	eSikhaleni	2018-10-27 00:40:00	4.6	Mondi
	eSikhaleni	2018-10-28 02:20:00	5.4	Mondi
	eSikhaleni	2018-10-28 02:30:00	5.7	Mondi
	eSikhaleni	2018-10-28 02:40:00	5.6	Mondi
	eSikhaleni	2018-10-28 02:50:00	5.0	Mondi
	eSikhaleni	2018-10-28 03:00:00	5.0	Mondi
	eSikhaleni	2018-10-28 05:10:00	4.6	Mondi
	eSikhaleni	2018-10-28 20:40:00	4.9	Mondi
	eSikhaleni	2018-10-28 20:50:00	7.4	Mondi
	eSikhaleni	2018-10-28 21:00:00	6.4	Mondi
	ESikhaleni	2018-11-27 05:10:00	6.6	Unknown
	ESikhaleni	2018-11-27 05:20:00	6.5	Unknown
	eSikhaleni	2018-11-30 03:40:00	6.3	Unknown
	eSikhaleni	2018-11-30 03:50:00	4.8	Unknown
	eSikhaleni	2018-11-30 04:40:00	5.0	Unknown
	eSikhaleni	2018-11-30 04:50:00	8.1	Unknown
	eSikhaleni	2018-11-30 05:00:00	7.7	Unknown
	eSikhaleni	2018-11-30 05:10:00	4.8	Unknown
	eSikhaleni	2018-12-08 05:10:00	4.6	Mondi
	eSikhaleni	2018-12-08 05:30:00	4.6	Mondi
	eSikhaleni	2018-12-08 05:40:00	8.2	Mondi
	eSikhaleni	2018-12-08 05:50:00	7.6	Mondi
	eSikhaleni	2018-12-08 13:30:00	4.6	Unknown
	eSikhaleni	2018-12-08 17:40:00	4.8	Unknown
	eSikhaleni	2018-12-08 21:00:00	4.7	Unknown
	eSikhaleni	2018-12-12 00:10:00	5.5	Mondi
	eSikhaleni	2018-12-12 00:20:00	4.6	Mondi
	eSikhaleni	2018-12-21 23:20:00	5.2	Unknown
	eSikhaleni	2018-12-21 23:30:00	5.9	Unknown
	eSikhaleni	2018-12-21 23:40:00	6.0	Unknown

APPENDIX G

Meteorological Monitoring.

Meteorological Data Capture

The percentage of valid data received from the meteorological network for 2018 is shown in Table H1.

Table H1: Meteorological data capture.

Station	Height (m)	Station Availability (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
Airport	2	96		96	96	96	96	
Airport	10	96	96					
Arboretum	3	95		95				
Arboretum	18	95	95					
CBD	2	99		99	41			42
CBD	10	99	79					
eSikhaleni	2	97		97				
eSikhaleni	9	97	97					
Mtunzini	2	96		96	96			
Mtunzini	9	96	96					
Brackenham	3	99		99				
Brackenham	10	99	96					
Harbour West	2	99		99				
Harbour West	10	99	98					

Notes:
Red - Not acceptable for statistical purposes (<80%);
Yellow – Acceptable for statistical purposes but does not meet SANAS data capture requirements (<90%);
White – Meets SANAS data capture requirements (>=90%); and,
Blue - RBCAA Target (>=98%).

Annual Wind Roses

MM5² modelled and measured annual wind roses for 2018 at Arboretum are presented in Figure H1. They indicate that wind blew predominantly along the NE and SW axis. NE wind is generally associated with fair weather, while SW wind is usually associated with the passage of coastal lows, cold fronts and inclement weather.

Arboretum

² The Penn State University (PSU) / National Centre for Atmospheric Research (NCAR) meso-scale model is a limited-area, non-hydrostatic or hydrostatic (Version 2 only), terrain-following sigma-coordinate model designed to simulate or predict meso-scale and regional-scale atmospheric circulation. It has been developed at PSU and NCAR as a community meso-scale model and is continuously being improved by contributions from users at several universities and government laboratories. The Fifth-Generation PSU / NCAR Meso-scale Model is known as MM5.

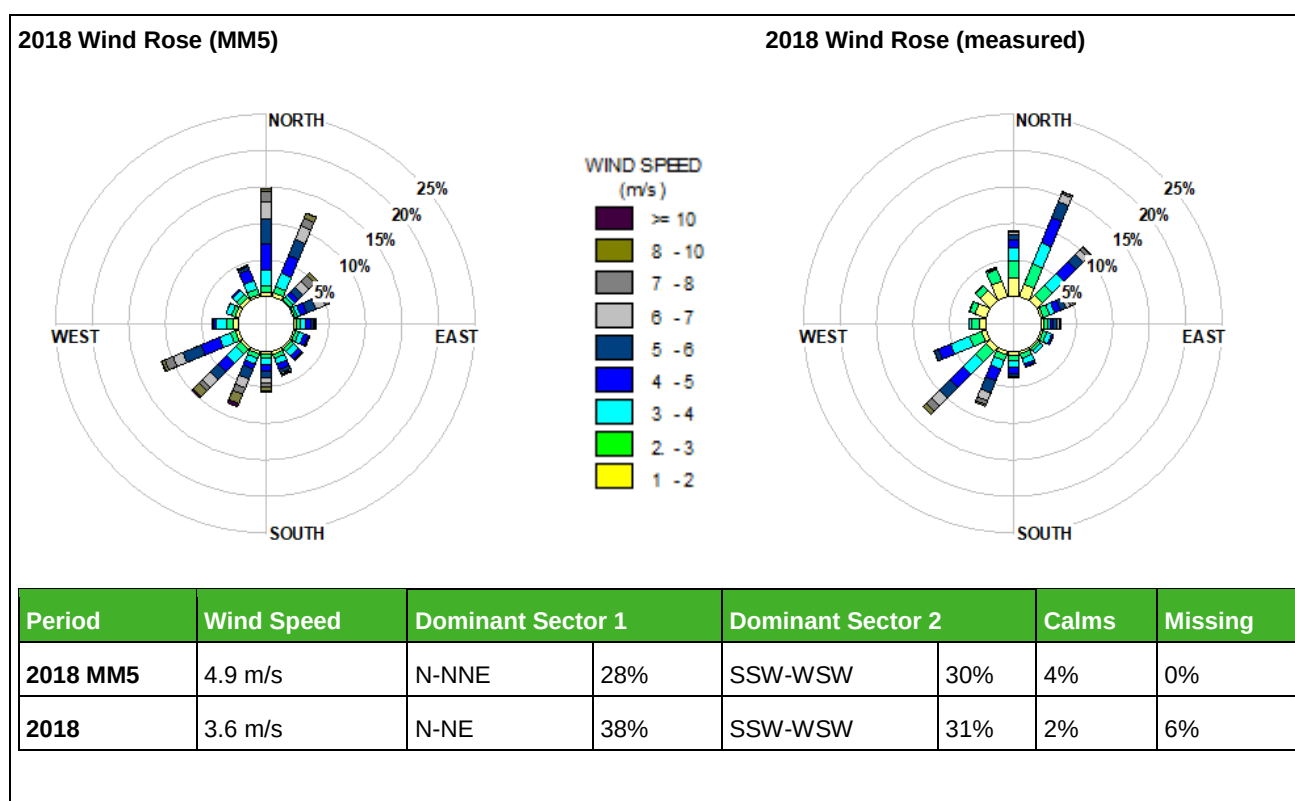
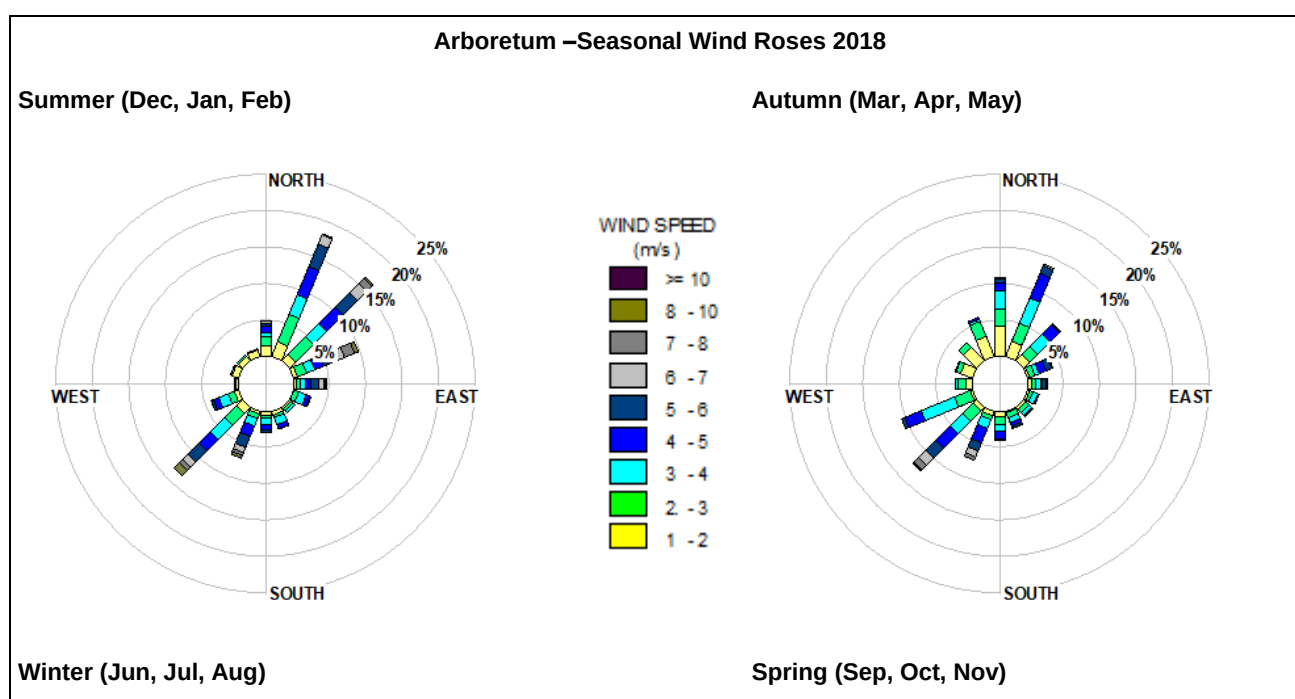


Figure H1: Annual wind roses.

Seasonal and Diurnal Wind Roses

Seasonal and diurnal wind roses for 2018 can be seen in Figure H2 and Figure H3. Note the increase in light (1 to 3 m/s) to moderate (3 to 6 m/s) wind from the NNW during winter (and the seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during periods that include spring and early summer.



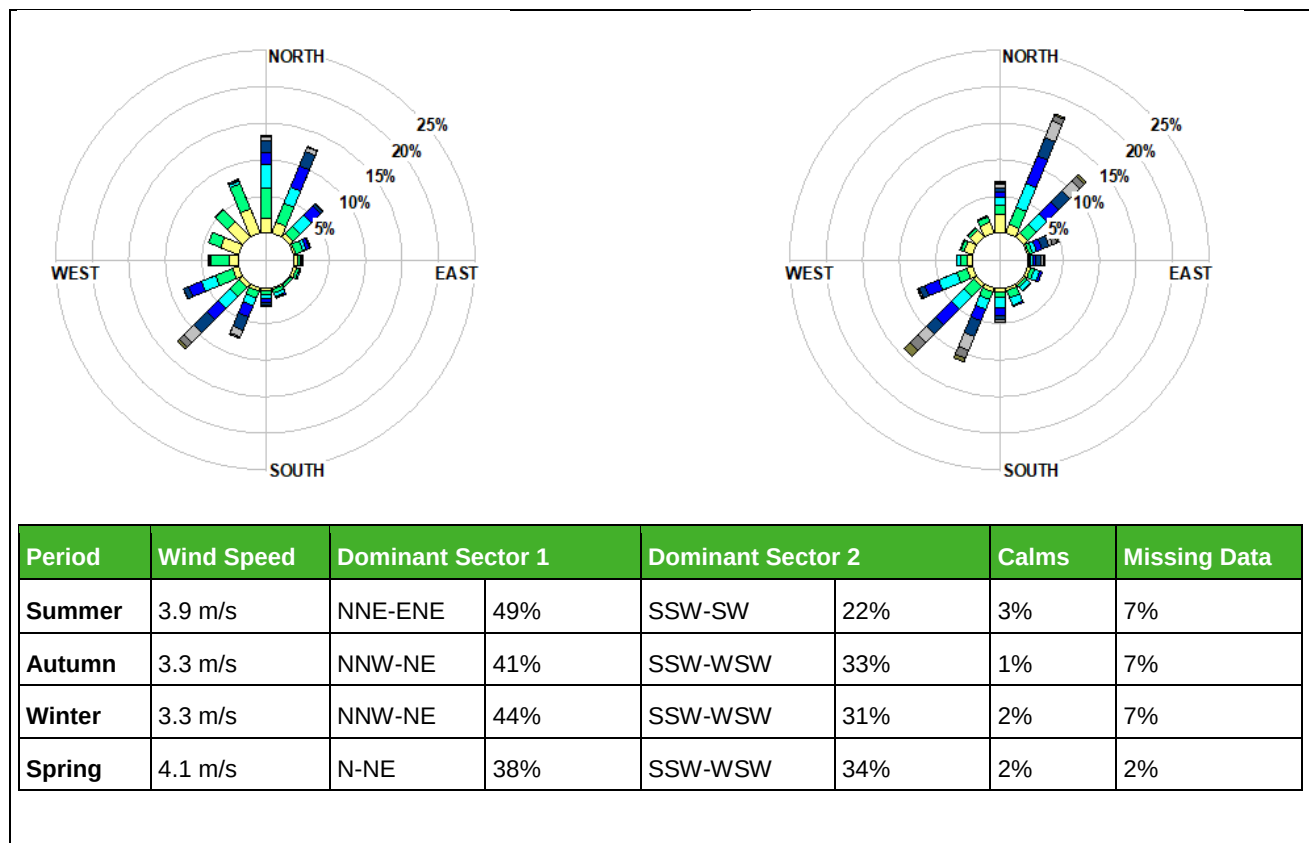


Figure H2: Seasonal wind roses.

Strong southerly to SSW wind occurs throughout the year, typically associated with the arrival of coastal lows and cold fronts. Coastal lows tend to be more frequent during the summer months; hence the slightly higher proportion of these winds.

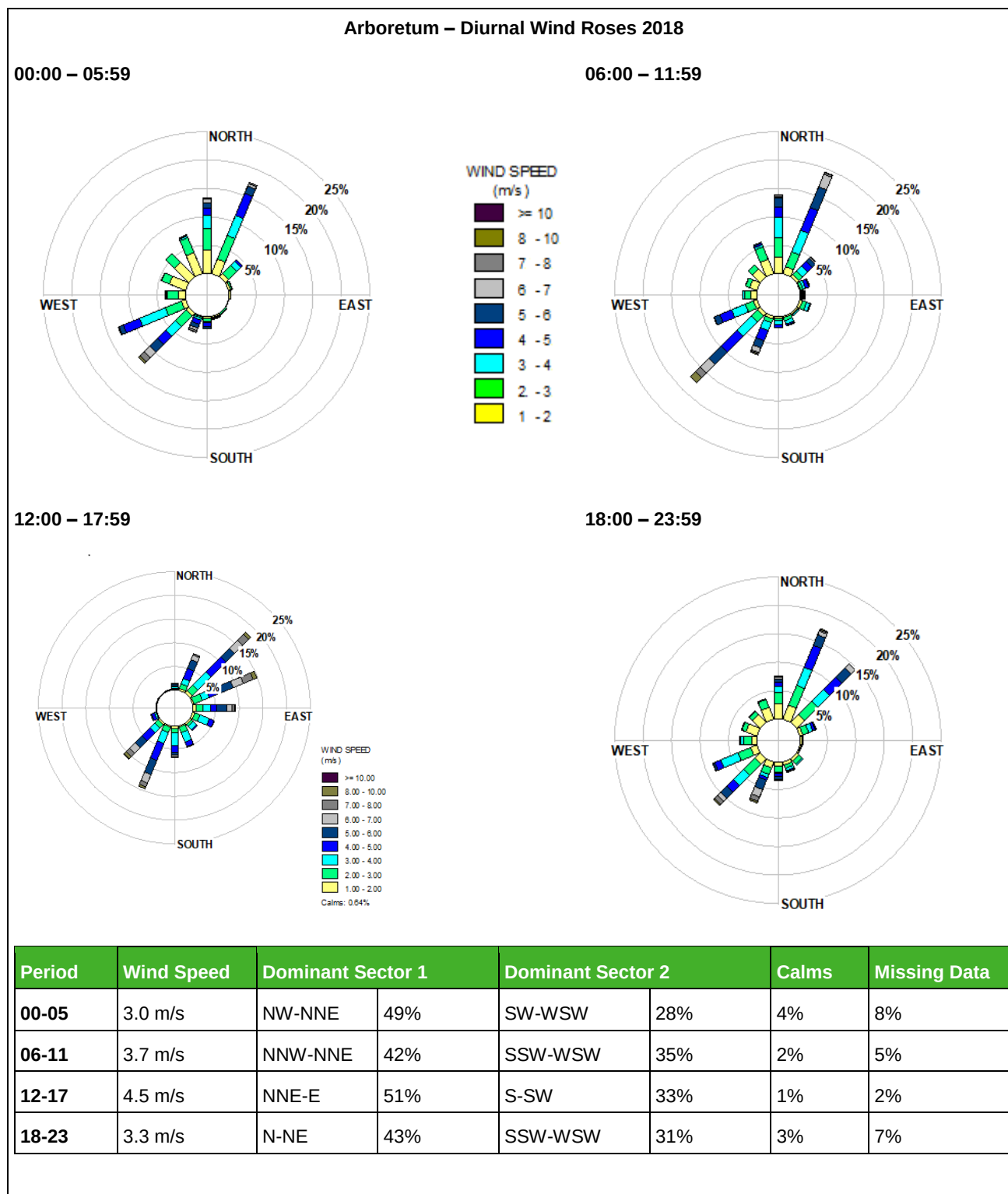


Figure H3: Seasonal wind roses.

Rainfall

Table H2: Rainfall – Richards Bay.

Month	Richards Bay		
	2016	2017	2018
Jan	84	277	94
Feb	100	345	232
Mar	137	142	139
Apr	179	22	261
May	291	476	311
Jun	152	62	70
Jul	293	25	20
Aug	41	75	100
Sep	172	51	85
Oct	205	94	213
Nov	128	144	119
Dec	53	260	156
Minimum	41	22	20
Average	153	164	150
Maximum	293	476	311
Total	1834	1973	1798

Table H3: Rainfall – Felixton.

Month	Felixton		
	2016	2017	2018
Jan	64	193	43
Feb	61	277	129
Mar	83	101	89
Apr	116	116	138
May	243	286	342
Jun	32	24	60
Jul	183	27	22
Aug	20	54	83
Sep	92	95	53

Month	Felixton		
	2016	2017	2018
Oct	124	119	201
Nov	77	82	84
Dec	32	138	111
Minimum	20	24	22
Average	94	126	113
Maximum	243	286	342
Total	1126	1512	1354

Table H4: Rainfall – RBCT.

Month	RBCT		
	2016	2017	2018
Jan	-	160	42.2
Feb	-	323	137
Mar	96	98	78
Apr	75	32	161
May	162	382	175
Jun	80	41	59
Jul	240	23	21
Aug	8	51	35
Sep	144	70	41
Oct	55	103	80
Nov	58	89	70
Dec	19	183	104
Minimum	8	23	21
Average	94	130	84
Maximum	240	382	175
Total	936	1555	1005

APPENDIX H

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