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RICHARDS BAY CLEAN AIR ASSOCIATION

Annual Air Quality Report - 2016

Submitted to:

Richards Bay Clean Air Association (RBCAA)

Attention: Sandy Camminga



REPORT



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1.0 INTRODUCTION

This 19th annual air quality report summarises the meteorology, sulphur dioxide (SO₂), total reduced sulphur (TRS) and fine particulate (PM₁₀) monitoring conducted by the Richards Bay Clean Air Association (RBCAA) during 2016. The monitoring network consists of 9 stations, as seen in Figure 1.



Figure 1: Locality map

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.

2.0 METEOROLOGY

2.1 Meteorological Data Capture

The percentage of valid data received from the meteorological network for 2016 is shown in Table 1.

Table 1: Meteorological data capture

Station	Height (m)	Station Available (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
Airport	2	97		97	97	97	97	
Airport	10	97	51					
Arboretum	3	92		92				
Arboretum	18	92	78					



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Station	Height (m)	Station Available (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
CBD	2	98		98	98			98
CBD	10	98	98					
eSikhaleni	2	98		98				
eSikhaleni	9	98	98					
Mtunzini	2	99		99	99			
Mtunzini	9	99	73					
Brackenham	3	96		96				
Brackenham	10	96	96					
Harbour West	2	100		100				
Harbour West	10	100	66					

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%)

Blue - RBCAA Target (>=98%)

Missing Data:

Airport - faulty anemometer (Jan - Apr, Oct - Dec)

Arboretum - faulty anemometer (Mar - May)

Mtunzini - faulty anemometer (Sep - Dec)

Harbour West - faulty anemometer (Feb - Apr, Nov - Dec)

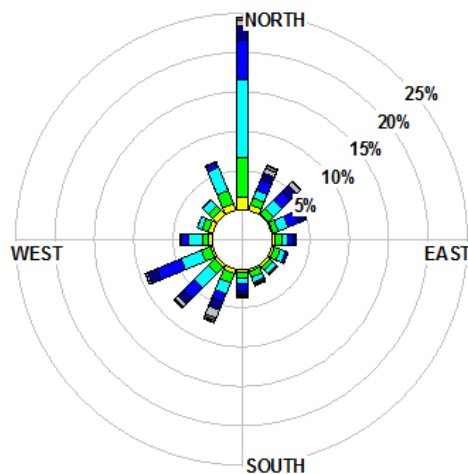
2.2 Wind Roses

MM5¹ modelled and measured annual wind roses for 2016 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.

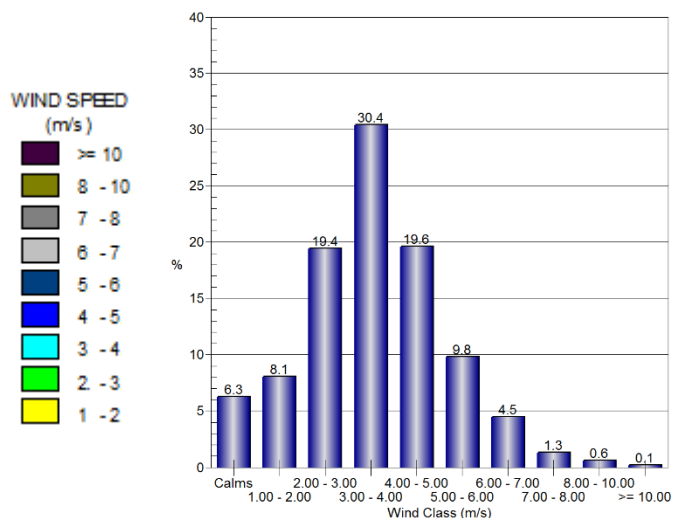
¹ The Penn State University (PSU) / National Centre for Atmospheric Research (NCAR) meso-scale model is a limited-area, non-hydrostatic or hydrostatic (Version 2 only), terrain-following sigma-coordinate model designed to simulate or predict meso-scale and regional-scale atmospheric circulation. It has 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.



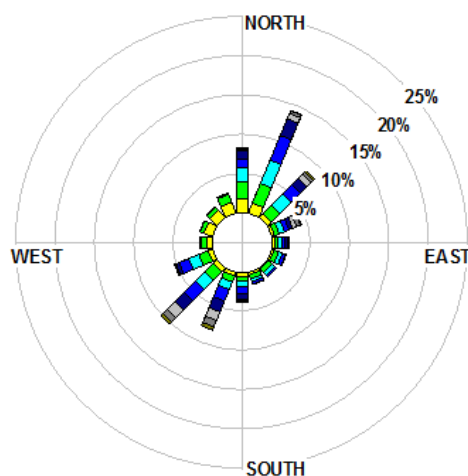
Arboretum 2016 Wind Rose (MM5)



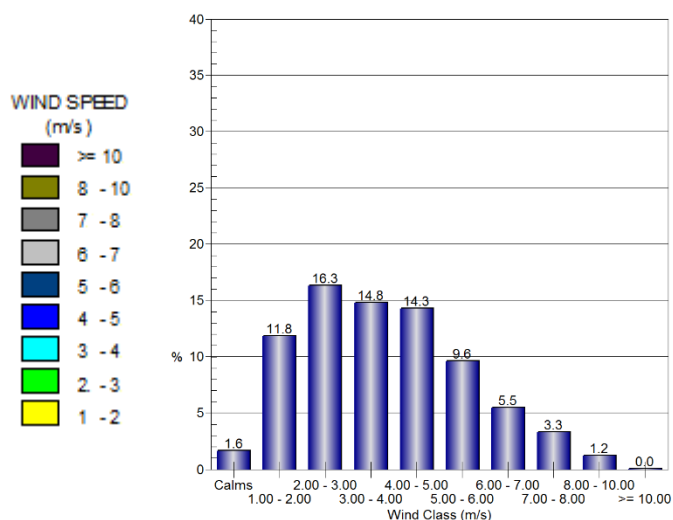
Arboretum 2016 Wind Classes (MM5)



Arboretum 2016 Wind Rose



Arboretum 2016 Wind Classes



Year	Wind Speed	Missing Data	Calms	Dominant Sector		Dominant Sector	
2016 (MM5)	3.5 m/s	0.0%	6.3%	NNW-NE	46%	SSW-WSW	26%
2016 (Arb)	3.8 m/s	21.7%	1.6%	N-NE	40%	SSW-WSW	30%

Figure 2: General meteorology

2.3 Seasonal and Diurnal Wind Roses

Seasonal wind roses for 2016 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.



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Coastal lows tend to be more frequent during the summer months; hence the slightly higher proportion of these winds.

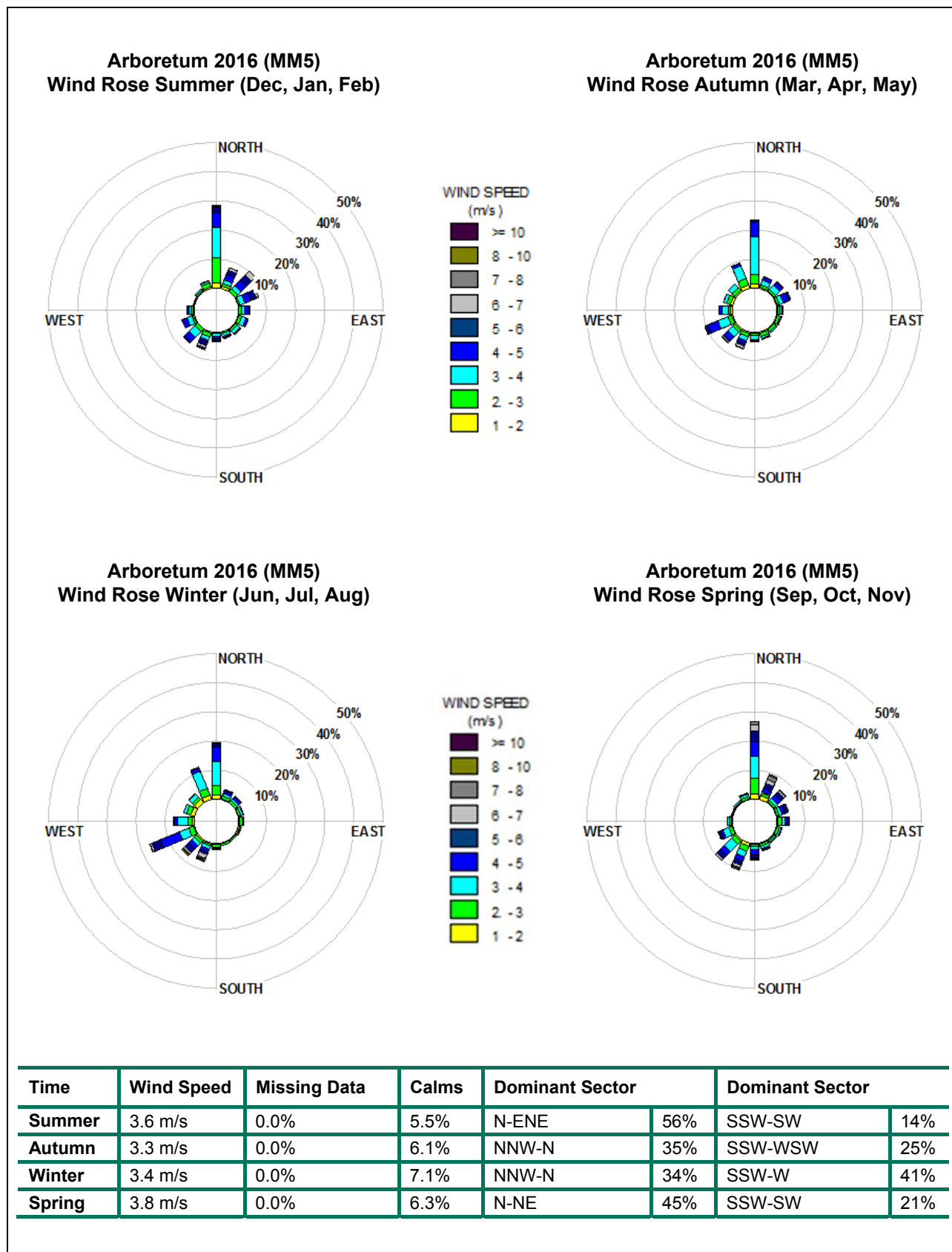


Figure 3: Seasonal meteorology



NNW to WNW wind is largely in the form of land breezes at night and early morning, particularly during the cooler and more stable autumn and winter months.

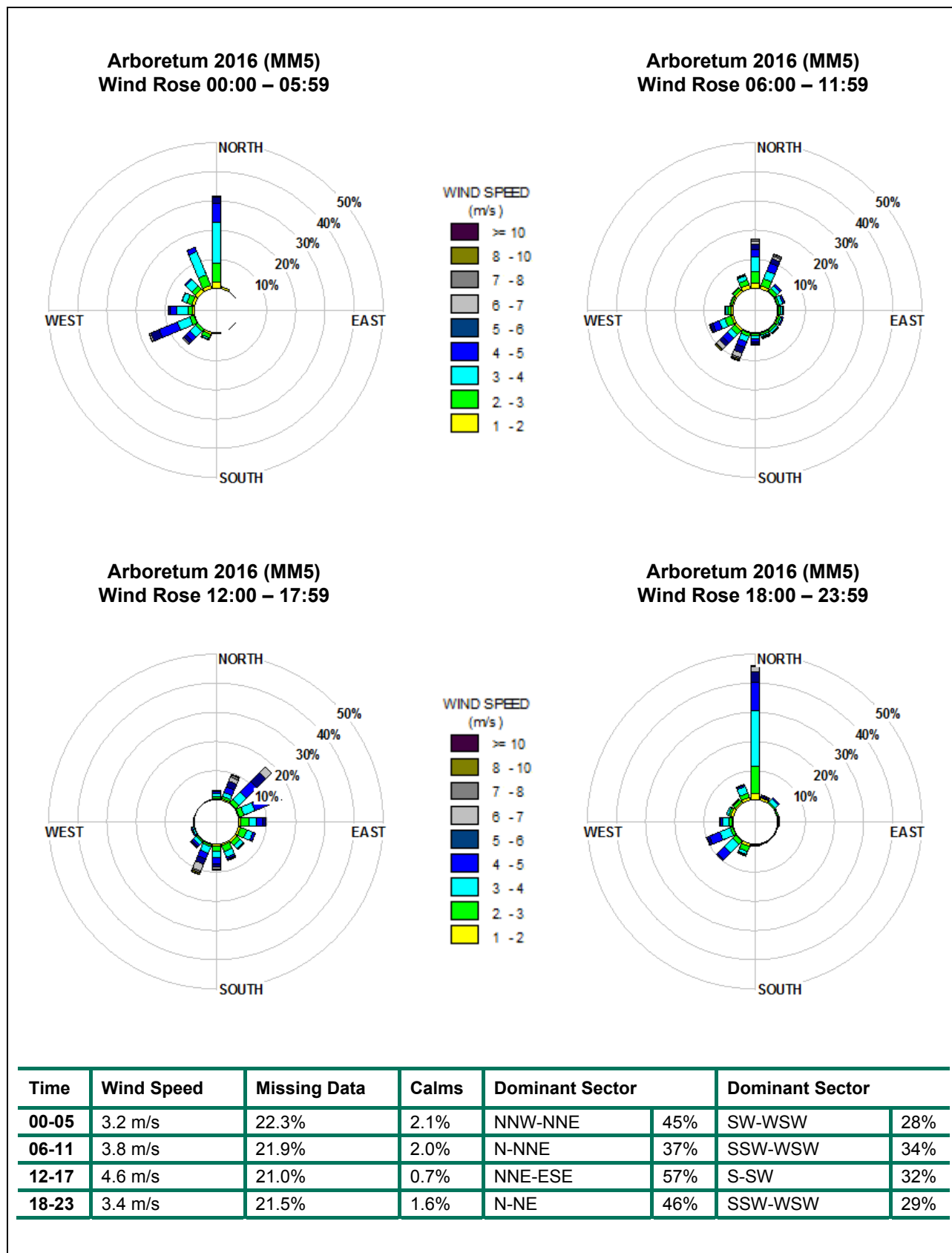


Figure 4: Diurnal meteorology



2.4 Rainfall

Rainfall measured at various locations is summarized in Table 2.

Table 2: Rainfall

Month	CBD (mm)	Felixton (mm)
January	84	64
February	100	61
March	137	83
April	179	116
May	291	243
June	152	32
July	293	183
August	41	20
September	172	92
October	205	124
November	128	77
December	53	32
Minimum	41	20
Average	153	94
Maximum	293	243
Total	1834	1126

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 2016. Please see APPENDIX F for the Complaints Log.

3.1 Field Observations

The maximum number of complaints received in a single year was 397 in 2004, this decreased to 162 in 2009, and seems to have stabilised at approximately 180 complaints per year since then (Figure 5). A comparatively lower amount of complaints (124) were received in 2016.

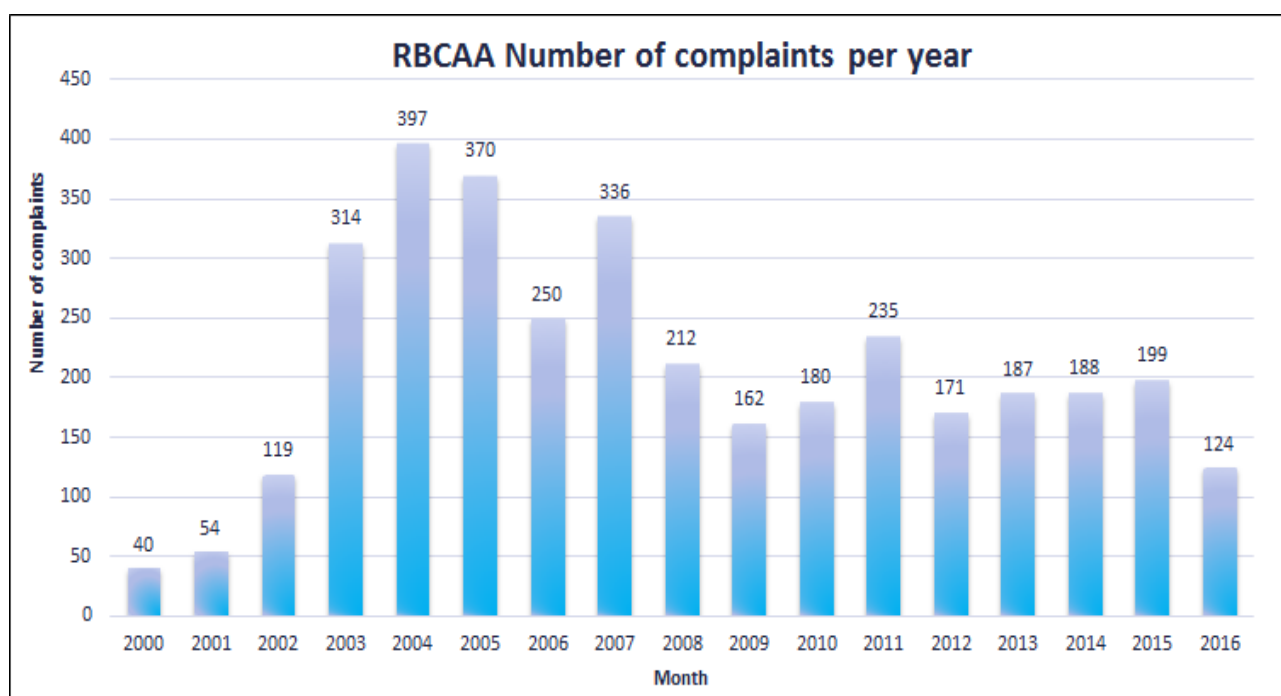


Figure 5: Complaints – historical annual comparison

The historical count of complaints per month for the last five years is reflected in Figure 6. The large number of complaints received in April and May were mostly attributed to Mondi Richards Bay and Mondi Forests (peat fires).

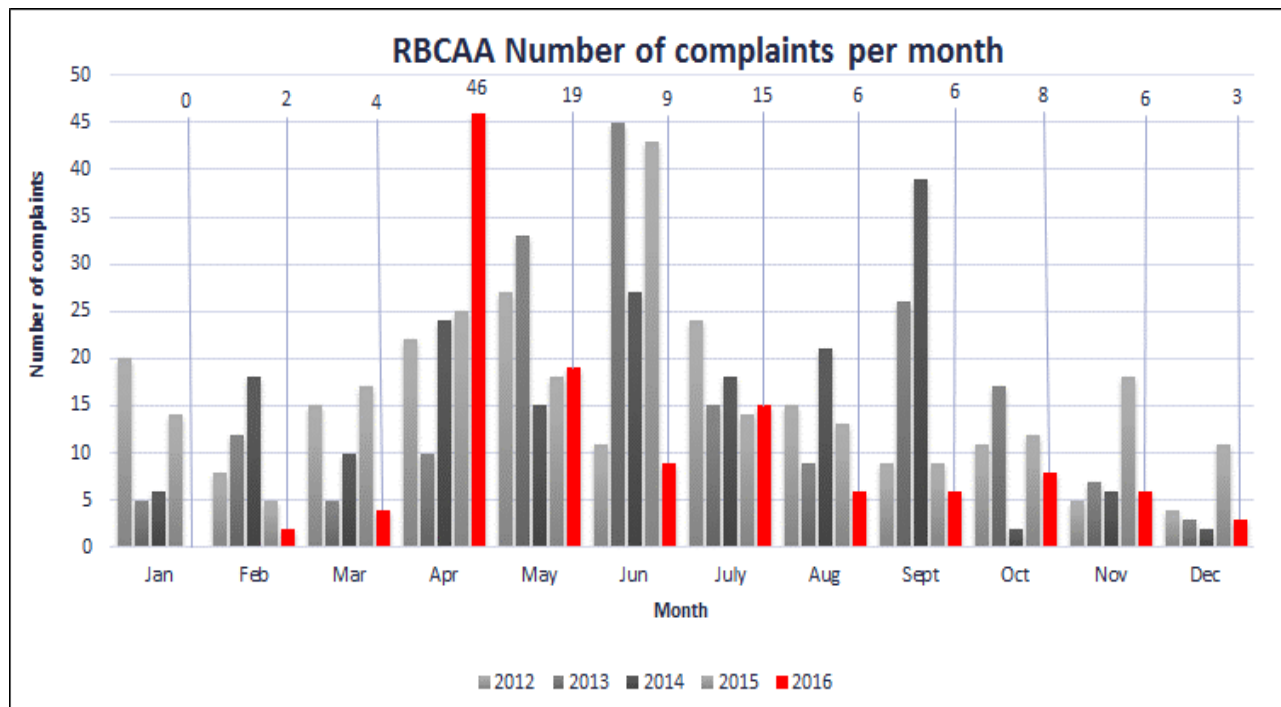


Figure 6: Complaints - historical monthly comparison

3.2 Complaints distribution

The distribution of complaints in 2016 by region, source and type are presented in Figure 7, complaints received were allocated as follows Mondi Richards Bay (40%), and Mondi Forests – Peat Fires (27%), Foskor (16%), and other (17%). Distributions for 2015 are included for comparison.

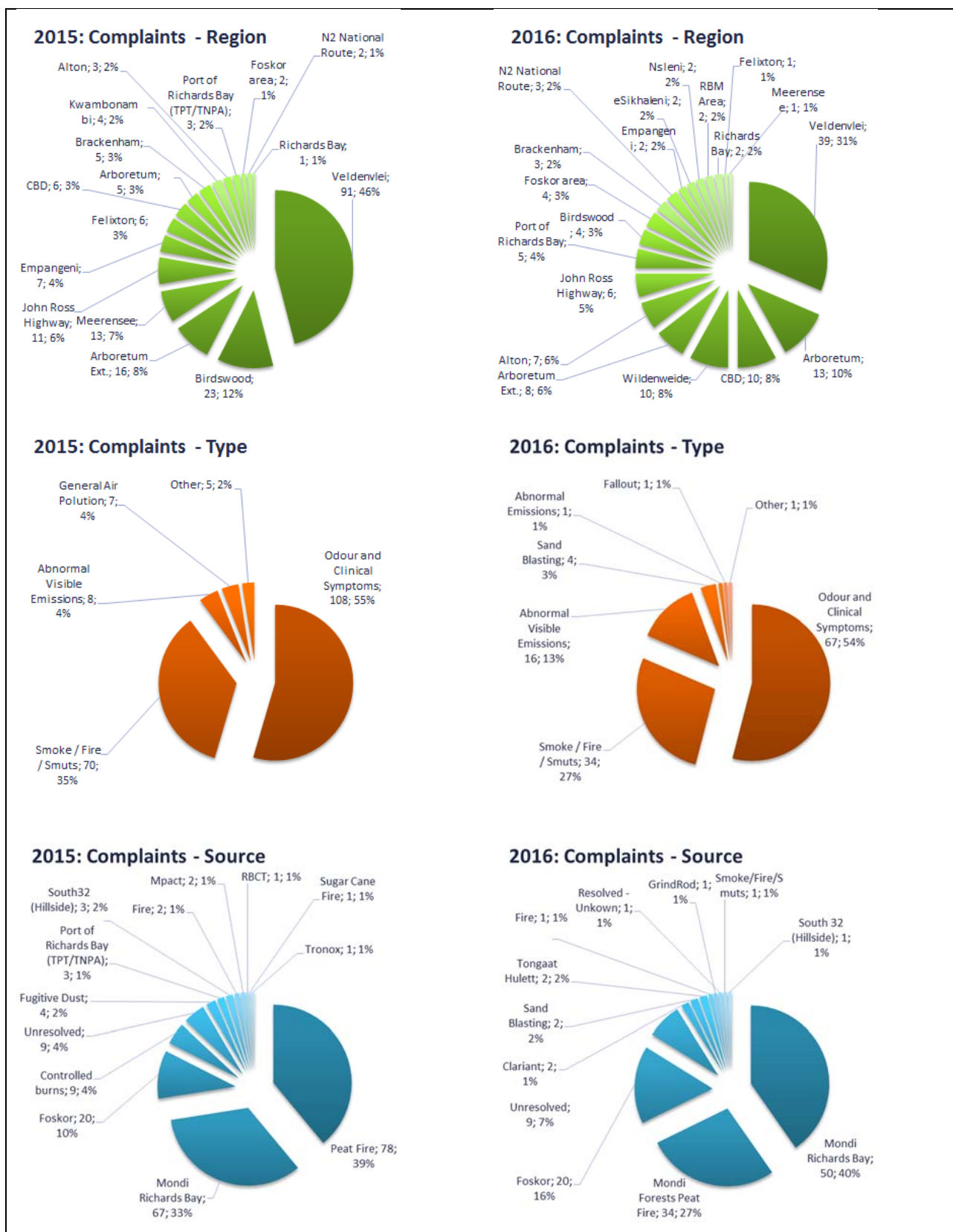


Figure 7: Complaints - region, type and source



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 Data Capture

The percentage of valid data received from the PM₁₀ analysers for 2016 is shown in Table 3.

Table 3: PM₁₀ data capture

Station	Station Availability (%)	PM ₁₀ (%)
Brackenham	96	96
CBD	98	95
Felixton	99	95
eSikhaleni	98	99
Mtunzini	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%)

Blue - RBCAA Target (>=98%)

4.2 PM₁₀ Ambient Air Quality Standards

Ambient air quality standards for PM₁₀ are listed below (Table 4).

Table 4: 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) SA Government Gazette 32816 (24th December 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015.

b) Not to be exceeded more than 4 times in one year.

c) Not to be exceeded.

d) World health Organisation/International Finance Corporation.



4.3 PM₁₀ Exceedances and Compliance

A summary of the SO₂ exceedances and breakdown per station is presented in Table 5.

Table 5: PM₁₀ station exceedance summary

Standard/Guideline/Target	Station	Count
NEM: AQA Daily Standard (75 µg/m ³)	Brackenhams	1
	CBD	0
	eSikhaleni	1
	Felixton	0
	Mtunzini	0
NEM: AQA Annual Standard (40 µg/m ³)	Brackenhams	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Mtunzini	0
WHO Daily Guideline (50 µg/m ³)	Brackenhams	13
	CBD	7
	eSikhaleni	14
	Felixton	0
	Mtunzini	8
WHO Annual Guideline (20 µg/m ³)	Brackenhams	1
	CBD	1
	eSikhaleni	1
	Felixton	0
	Mtunzini	1

4.4 PM₁₀ Annual Average Information

Annual average concentrations dating back to 2004 are illustrated in Figure 8. A decreasing trend is noticeable from 2007 to 2010; this has reversed and stabilised since then, it is particularly noticeable at Brackenhams and CBD. During 2016 NEM: AQA PM₁₀ Annual Limit (40 µg/m³) was not exceeded, the WHO/ IFC PM₁₀ Annual Guideline (20 µg/m³) was exceeded at Brackenhams, CBD, eSikhaleni and Mtunzini.

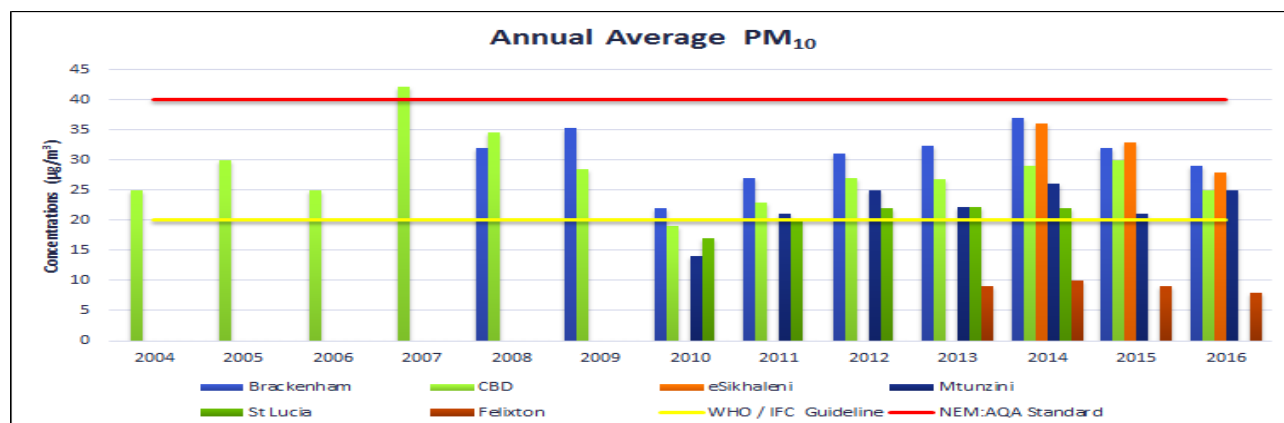


Figure 8: PM₁₀ annual average concentrations

Notes:

- Mtunzini and St Lucia stations were baseline stations; and
- The St Lucia monitoring station was decommissioned and eSikhaleni monitoring station commissioned in 2014.



Maximum and annual average concentrations for PM₁₀ are provided in Table 6.

Table 6: PM₁₀ maximum and monthly average concentrations

Station		South Africa NEM: AQA Daily Standard (75 µg/m³)	International WHO Daily Guideline (50 µg/m³)	South Africa NEM: AQA Annual Standard (40 µg/m³)	International WHO Annual Guideline (20 µg/m³)
Brackenham	% of guideline	107%	160%	73%	145%
	µg/m³ TEOM	80	80	29	29
	Date & Time	2016/08/01	2016/08/01	2016	2016
CBD	% of guideline	79%	118%	63%	125%
	µg/m³ TEOM	59	59	25	25
	Date & Time	2016/04/23	2016/04/23	2016	2016
eSikhaleni	% of guideline	104%	156%	70%	140%
	µg/m³ TEOM	78	78	28	28
	Date & Time	2016/06/10	2016/06/10	2016	2016/06
Mtunzini	% of guideline	88%	132%	63%	125%
	µg/m³ TEOM	66	66	25	25
	Date & Time	2016/07/01	2016/07/01	2016	2016
Felixton	% of guideline	29%	44%	20%	40%
	µg/m³ E-sampler	22	22	8	8
	Date & Time	2016/09/02	2016/09/02	2016	2016

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).

4.5 PM₁₀ Seasonal Concentrations

Seasonal PM₁₀ concentrations for 2016 are provided in Figure 9. The NEM: AQA annual standard is used for comparative purposes.

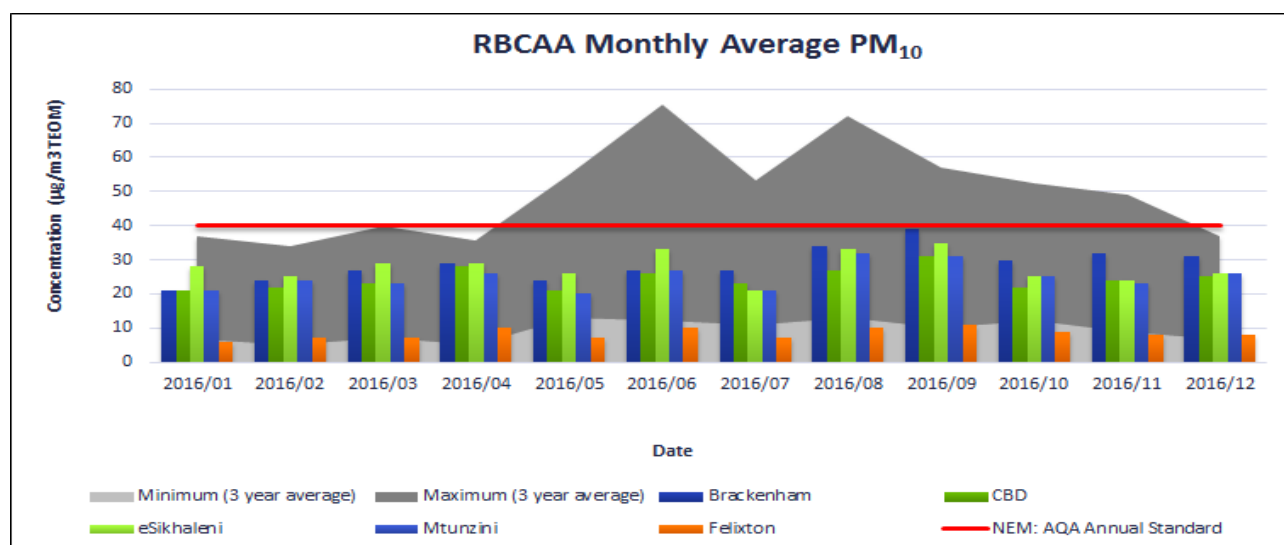


Figure 9: PM₁₀ seasonal concentrations



4.6 PM₁₀ Diurnal Average

Diurnal PM₁₀ concentrations are shown below (Figure 10).

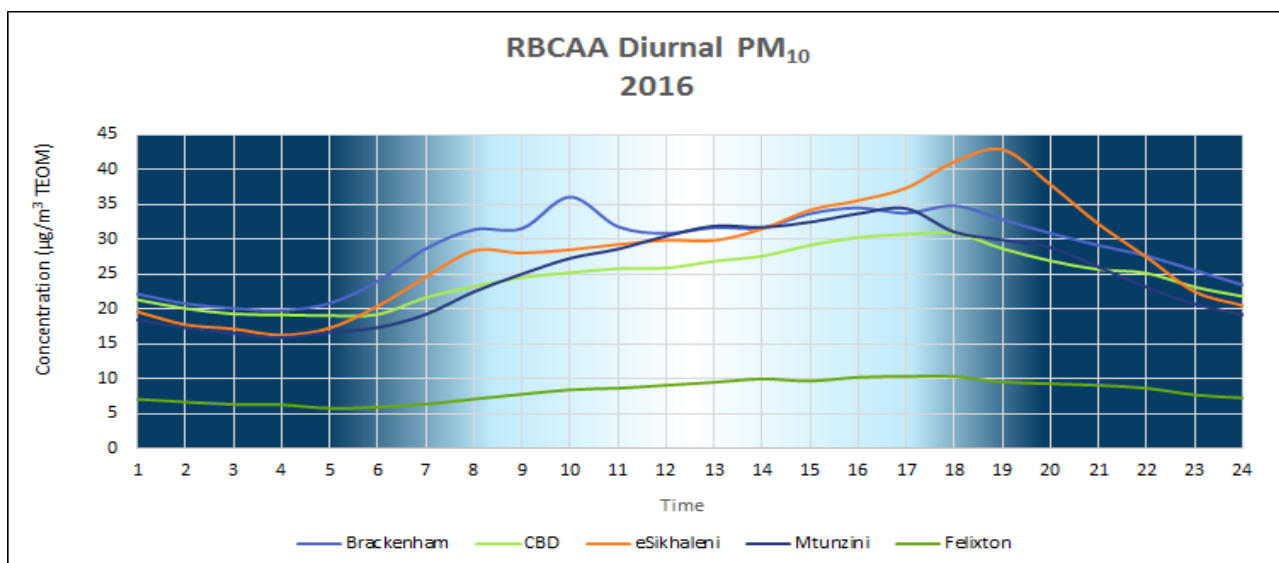


Figure 10: PM₁₀ diurnal concentrations

4.7 PM₁₀ Daily Average Concentrations

Daily average PM₁₀ concentrations are shown below (Figure 11). There were 2 exceedances of the NEM: AQA PM₁₀ Daily Limit (75 µg/m³) (Table 7) and 42 exceedances of WHO / IFC Daily Guideline (50 µg/m³). A list of daily PM₁₀ exceedances can be found in APPENDIX E.

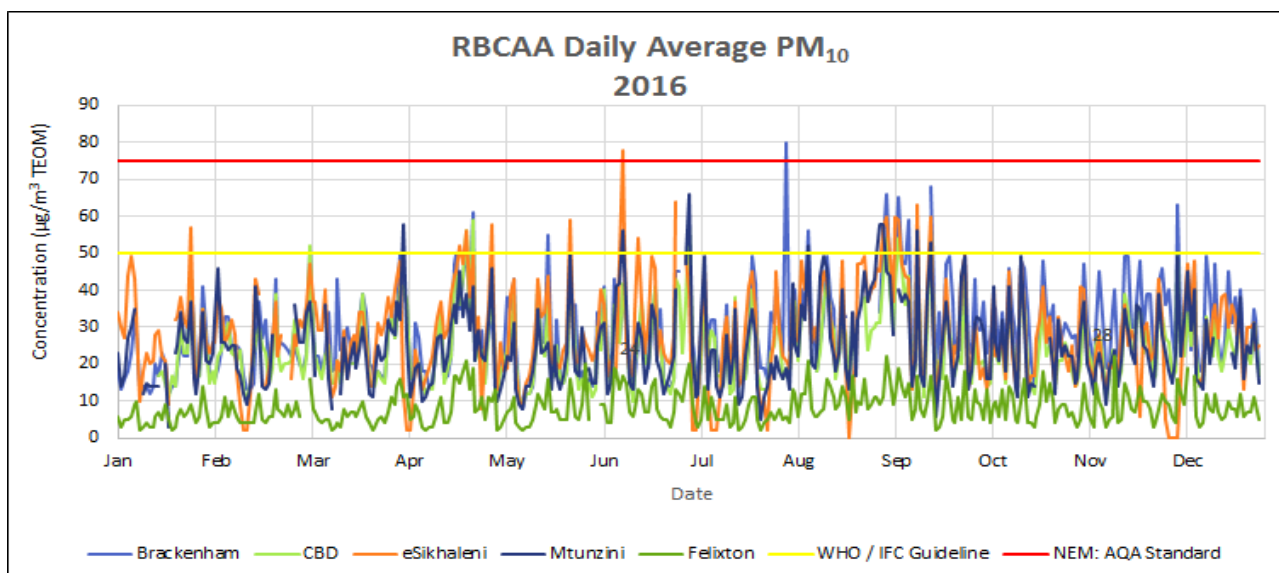


Figure 11: PM₁₀ daily average concentrations

Table 7: NEM: AQA PM₁₀ daily exceedances

Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
NEMAQA Daily Standard (75 µg/m³)	Brackenham	2016/08/01	83	Spray painting adjacent to the monitoring shelter
	eSikhaleni	2016/06/10	78	Fires and high wind speed.



5.0 SULPHUR DIOXIDE MONITORING AND MODELLED RESULTS

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 a number of 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; and
- In severe cases, reduction in life expectancy.

In this section of the report, SO₂ concentrations measured at the fixed monitoring stations are compared to those predicted by the CALPUFF dispersion model. The CALPUFF dispersion model uses meteorological and topographical data, and a regional emission inventory to simulate the prevailing conditions in order to estimate the concentration of SO₂ at any given point within the area of interest.

This requires the use of certain assumptions, resulting in a variation between the modelled and measured SO₂ concentrations presented.

The concentration maps generated using the CALPUFF model represent the cumulative concentrations predicted at receptor grid points by means of concentration isopleths, averaged over the required time period. The predicted concentrations in these dose maps may vary from actual concentrations.

Limitations of dispersion models are their inability to account for highly complex, rapidly varying spatial and temporal meteorological systems such as calms, coastal fumigation, sea/land breeze recirculation, and mountain and valley winds, particularly in complex terrain or near coastal boundaries. The US EPA considers the range of uncertainty to be -50% to 200% for models applied to gently rolling terrain. The accuracy improves with fairly strong wind speeds and during neutral atmospheric conditions. Dispersion modelling results can be compared with monitored values in order to improve the accuracy or “calibrate” models using percentiles.

5.1 SO₂ Data Capture

The percentage of valid data received from the SO₂ analysers for 2016 is shown in Table 8.

Table 8: SO₂ data capture

Station	Station Availability (%)	SO ₂ (%)
Arboretum	92	67
Brackenham	96	95
CBD	98	96
Harbour West	100	91
Scorpio	98	97
Felixton	99	95
eSikhaleni	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%)

Blue - RBCAA Target (>=98%)

Missing Data:

Arboretum – faulty analyser, faulty data logger (Jan – Apr, Dec)



5.2 SO₂ Ambient Air Quality Standards

South African ambient air quality standards for SO₂ are listed below (Table 9).

Table 9: SO₂ ambient air quality standards

Variable	Organisation	10-min average	Hourly average	Daily average	Annual average
SO ₂	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]
	WHO / IFC	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.
- 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.

5.3 SO₂ Exceedances and Compliance

A summary of the SO₂ exceedances and breakdown per station is presented in Table 10.

Table 10: SO₂ station exceedance summary

Standard/Guideline/Target	Station	Count
NEM: AQA 10-minute Standard (191 ppb)	Arboretum	0
	Brackenham	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Harbour West	6
	Scorpio	7
NEM: AQA Hourly Standard (134 ppb)	Arboretum	0
	Brackenham	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Harbour West	1
	Scorpio	2
NEM: AQA Daily Standard (48 ppb)	Arboretum	0
	Brackenham	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Harbour West	0
	Scorpio	0
NEM: AQA Annual Standard (19 ppb)	Arboretum	0
	Brackenham	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Harbour West	0
	Scorpio	0



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Standard/Guideline/Target	Station	Count
WHO 10-minute Guideline (191 ppb)	Arboretum	0
	Brackenheim	0
	CBD	0
	eSikhaleni	0
	Felixton	0
	Harbour West	6
	Scorpio	7
WHO Daily Standard (8 ppb)	Arboretum	0
	Brackenheim	0
	CBD	24
	eSikhaleni	0
	Felixton	0
	Harbour West	107
	Scorpio	101

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, pipe lines, seals, valves (fugitive emissions) or a particular events (e.g. fires or emergency shutdowns). Maximum and annual average concentrations for SO₂ are provided in Table 11.

Table 11: SO₂ maximum and monthly average concentrations.

Station		National & International NEM: AQA & 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	34%	26%	12%	70%	5%
	(ppb)	64	34	6	6	1
	Date & time	2016/03/14 09:40	2016/03/14 09:00	2016/03/14	2016/03/14	2016
Brackenheim	% of guideline	18%	12%	15%	90%	6%
	(ppb)	34	16	7	7	1
	Date & time	2016/03/14 09:40	2016/03/14 09:00	2016/03/14	2016/03/14	2016
CBD	% of guideline	44%	42%	45%	269%	13%
	(ppb)	83	56	22	22	2
	Date & time	2016/07/03 04:30	2016/02/09 03:00	2016/05/25	2016/05/25	2016
Harbour West	% of guideline	217%	146%	65%	389%	37%
	(ppb)	415	196	31	31	7
	Date & time	2016/07/14 21:00	2016/07/14 21:00	2016/07/01	2016/07/01	2016
Scorpio	% of guideline	151%	112%	61%	366%	37%
	(ppb)	289	150	29	29	7
	Date & time	2016/09/13 20:30	2016/09/13 20:00	2016/06/07	2016/06/07	2016



Station		National & International NEM: AQA & WHO 10-minute Standard 500 µg/m³ 191 ppb	National NEM: AQA 1-hour Standard 350 µg/m³ 134 ppb	National NEM: AQA 24-hour Standard 125 µg/m³ 48 ppb	International WHO 24-hour Guideline 20 µg/m³ 8 ppb	National NEM: AQA Annual Standard 50 µg/m³ 19 ppb
Felixton	% of guideline	55%	37%	16%	95%	9%
	(ppb)	104	50	8	8	2
	Date & time	2016/09/17 03:50	2016/08/08 20:00	2016/10/02	2016/10/02	2016
eSikhaleni	% of guideline	17%	16%	13%	78%	7%
	(ppb)	32	22	6	6	1
	Date & time	2016/08/25 18:00	2016/08/25 17:00	2016/07/01	2016/07/01	2016

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).

5.4 SO₂ Annual Average Concentrations

Annual average SO₂ concentrations are illustrated in Figure 12. There was a decrease in average annual SO₂ concentrations from 2005 to 2008, this trend has since then reversed from 2008 to 2013, but seems to be decreasing again (from 2013 to 2016). During 2015 NEM: AQA SO₂ Annual limit (19 ppb) was not exceeded.

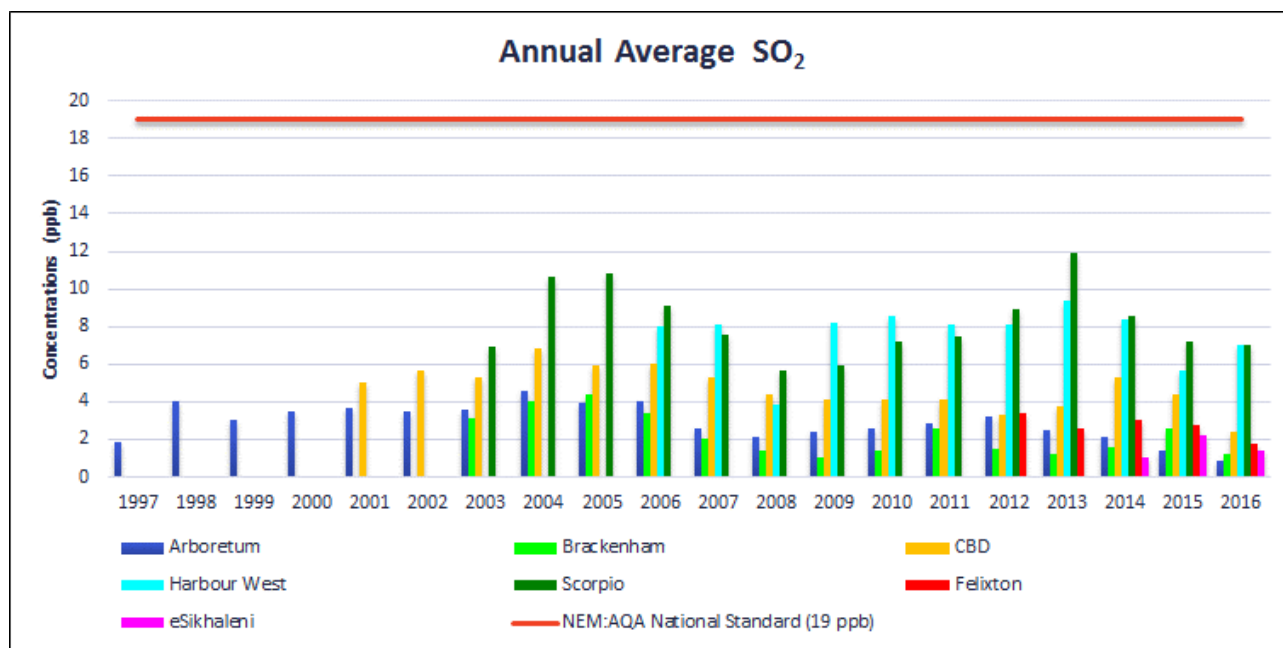


Figure 12: SO₂ annual average concentrations

The decrease in SO₂ concentrations from 2014 to 2016, could be linked to numerous shut downs at Foskor, in particular the Foskor A-plant had a long shut in 2015, that overlapped with the 2016 annual shut.

5.5 SO₂ Seasonal Concentrations

The seasonal SO₂ concentrations for 2016 are provided in Figure 13.

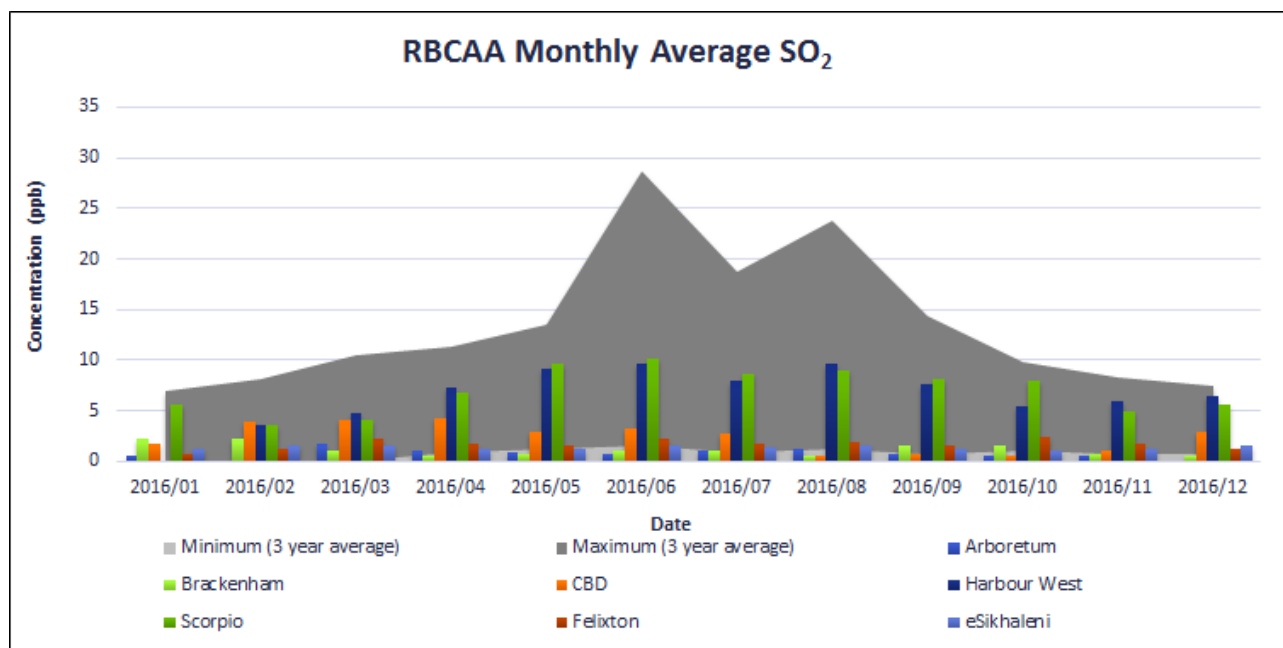


Figure 13: SO₂ seasonal concentrations

5.6 SO₂ Diurnal Average

Diurnal SO₂ concentrations are shown below (Figure 14).

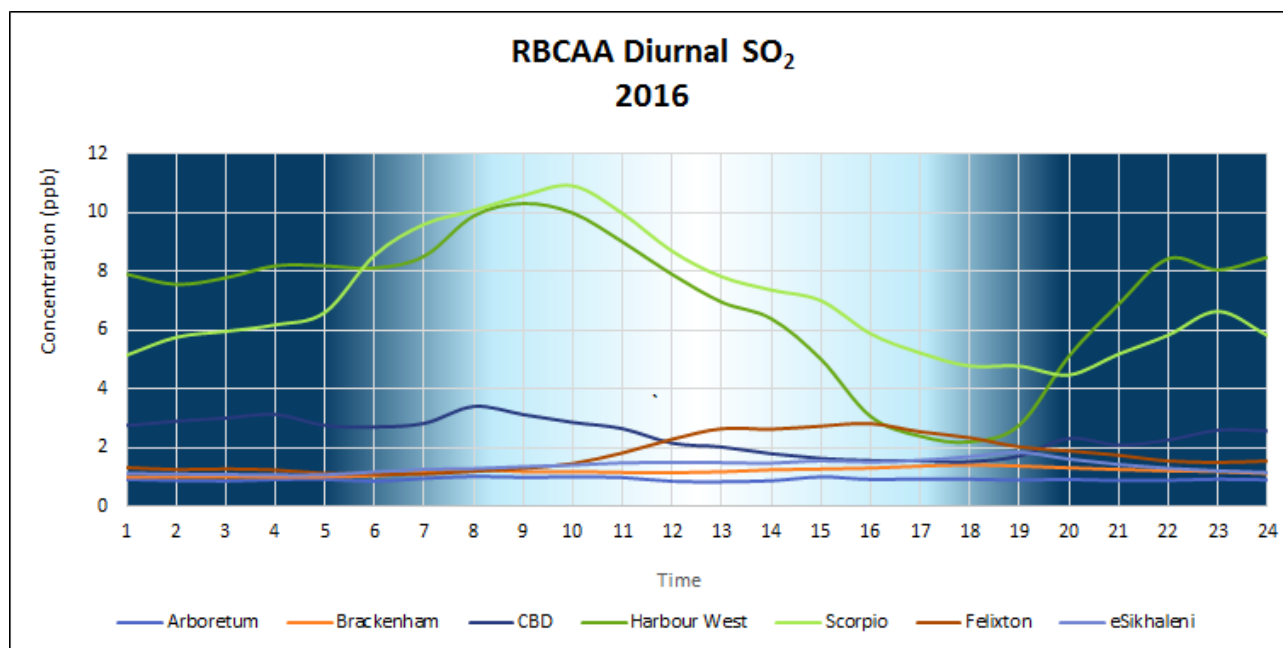


Figure 14: SO₂ diurnal concentrations



5.7 SO₂ Annual Average Concentration and Prediction

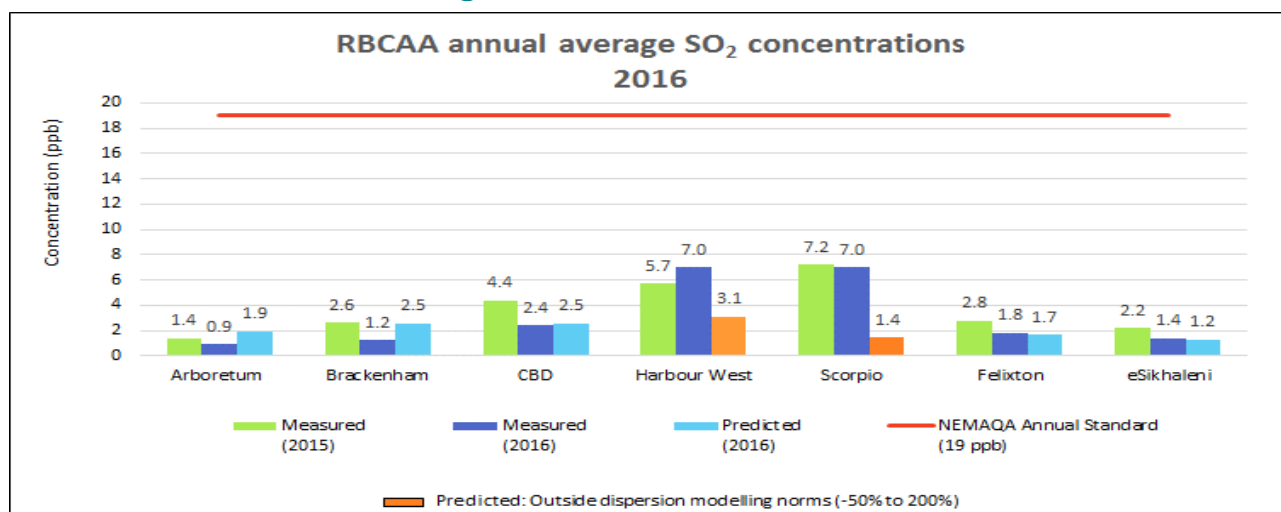


Figure 15: SO₂ annual average concentration and prediction

Annual average SO₂ concentration measured at each of the RBCAA stations, and the CALPUFF predicted average for the month are shown in Figure 15. The Annual average for the same period the previous year is also provided. Compared to the previous year Annual average SO₂ concentrations values at all stations with the exception of CBD were similar (within 10% of each other).

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 models 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, Felixton and eSikhaleni similar (within 10% of each other).

5.8 SO₂ Predicted Annual Average Concentration

The following plots of the Annual average SO₂ concentrations are provided:

- Regional (Figure 16);
- Richards Bay (Figure 17);
- Felixton (Figure 18); and
- RBM (Figure 19).

The plots are colour coded according to the RBCAA's Air Quality Index (AQI) (Table 12). The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).

Table 12: SO₂ annual air quality index

Air Quality Rating	Air Quality Index	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.

Notes: * Percentage of NEM: AQA Annual SO₂ Standard.



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

The model did not predict any annual average SO₂ concentrations greater than the NEM: AQA SO₂ Annual Average Standard (19 ppb). The half-guideline was also not predicted to be exceeded.

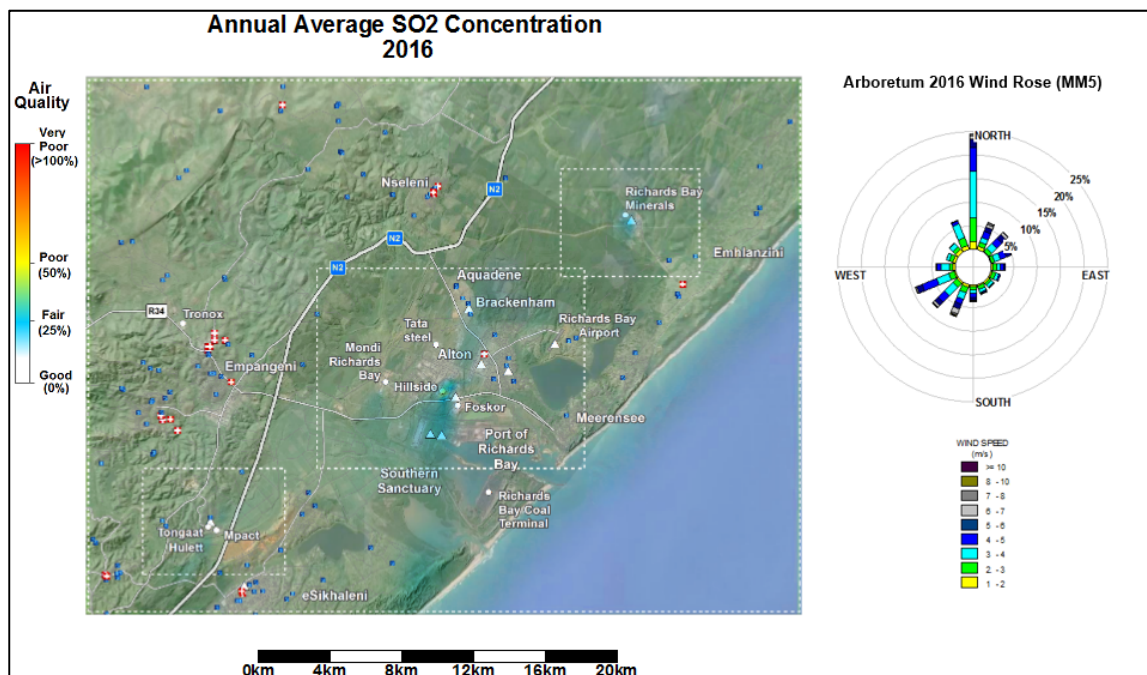


Figure 16: SO₂ annual average prediction (regional map)

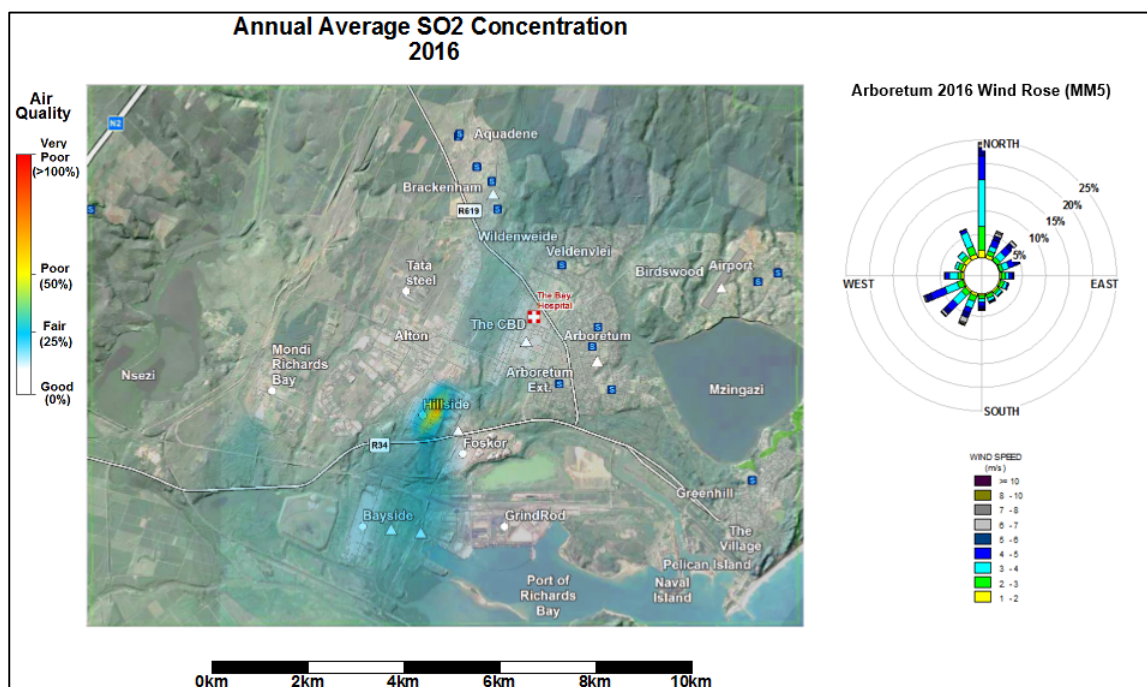


Figure 17: SO₂ annual average prediction (Richards Bay map)

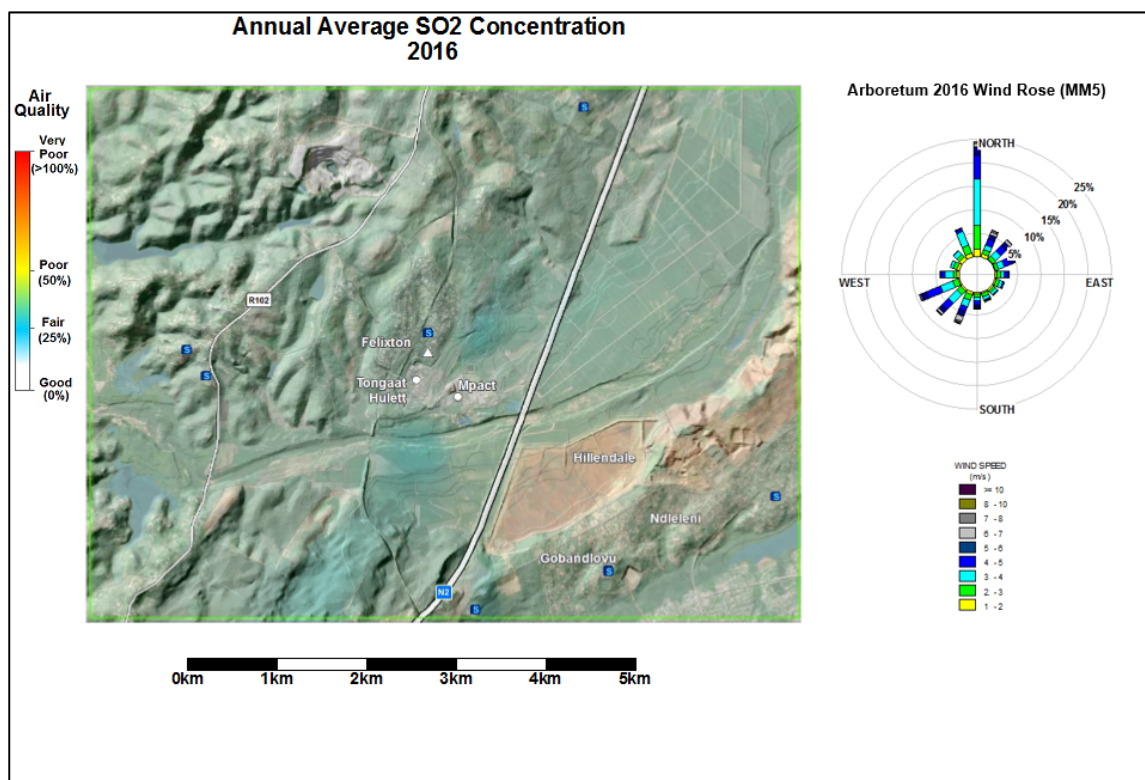


Figure 18: SO₂ annual average prediction (Felixton map)

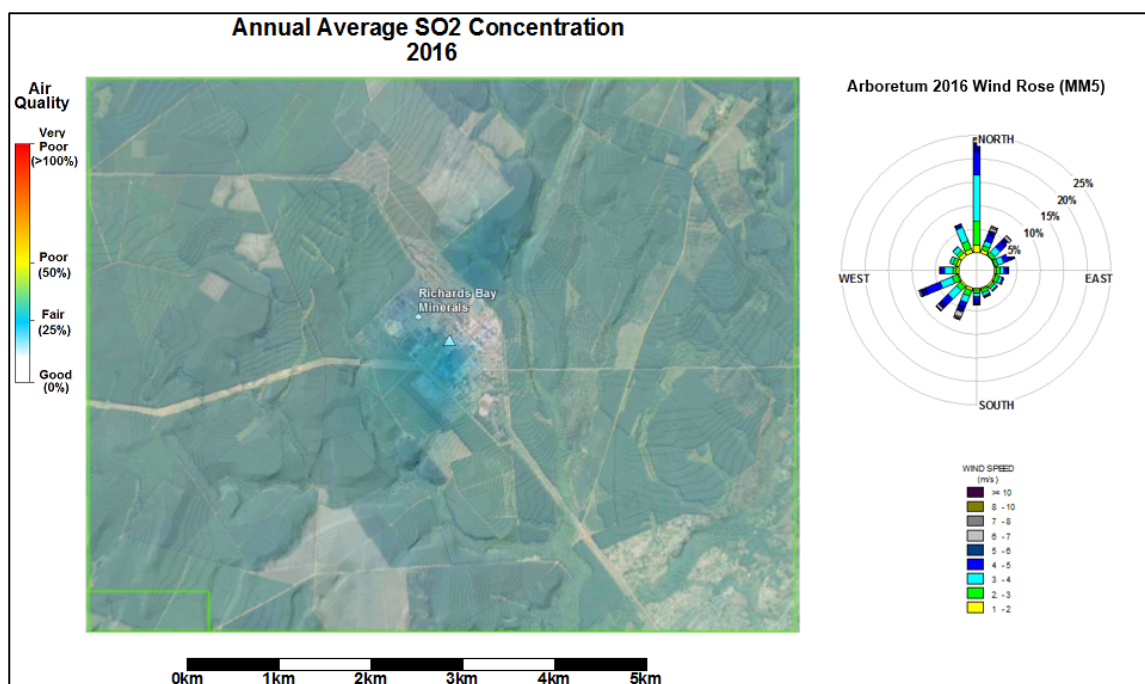


Figure 19: SO₂ annual average prediction (RBM map)

5.9 SO₂ Daily Average Concentrations

The daily average SO₂ concentrations are shown below (Figure 20). There were no exceedances of the NEM: AQA SO₂ Daily Limit (48 ppb), the WHO/IFC Daily Guideline (8 ppb) was exceeded 232 times. A list of daily SO₂ exceedances can be found in APPENDIX E.

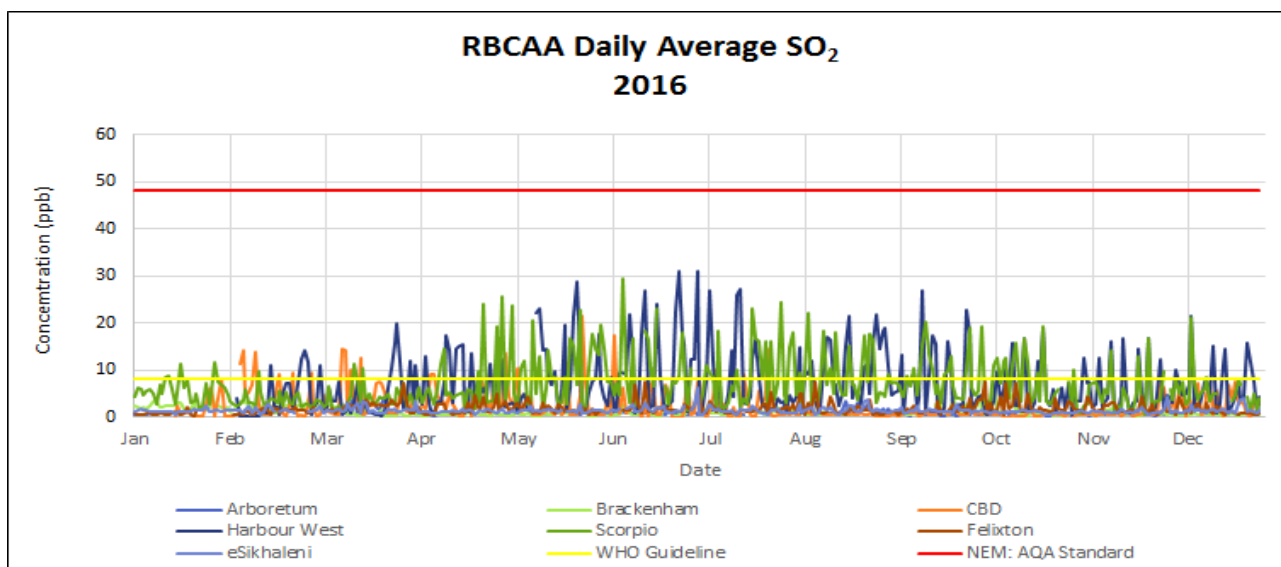


Figure 20: SO₂ daily average concentrations

5.10 SO₂ Daily Average Concentration and Prediction

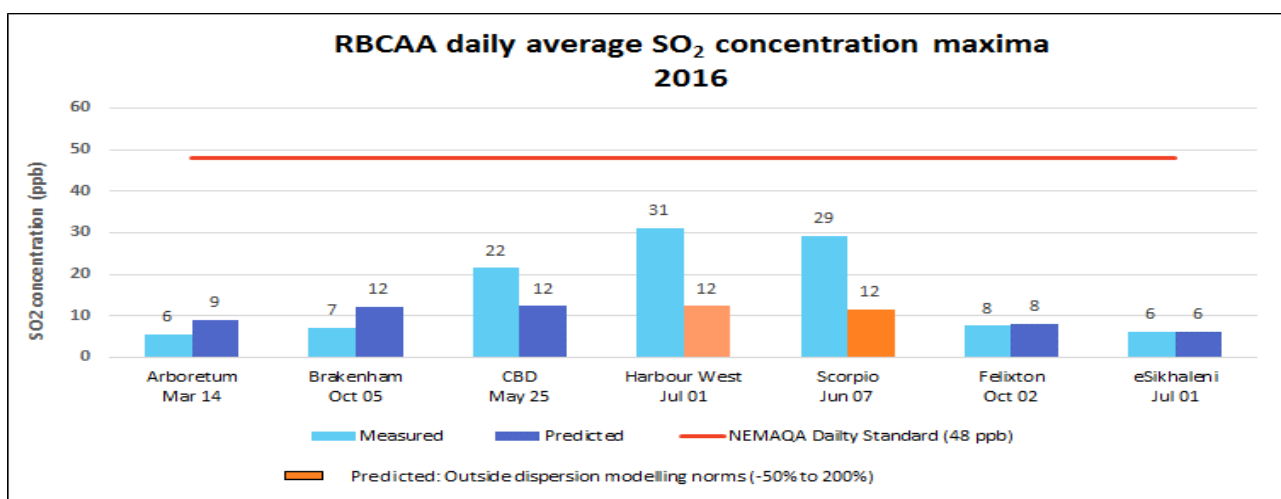


Figure 21: SO₂ maximum daily average concentration and prediction

Daily 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 models tendency to under predict in the near field. Compared to the measurements predicted values at CBD, Harbour West, and Scorpio were lower, at Arboretum, Felixton and eSikhaleni similar (within 10% each other), and at Brackenham higher (Figure 21).

5.11 SO₂ Maximum Predicted Daily Average Concentration

The following plots of the maximum daily average SO₂ concentrations are provided:

- Regional (Figure 22);
- Richards Bay (Figure 23);
- Felixton (Figure 24); and
- RBM (Figure 25).



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

The plots are colour coded according to the RBCAA's Air Quality Index (AQI) (Table 13). The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).

Table 13: SO₂ daily air quality index

Air Quality Rating	Air Quality Index *	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.

Notes: * Percentage of NEM: AQA Daily SO₂ Standard.

The model did not predict maximum daily average SO₂ concentrations greater than the NEM: AQA SO₂ Daily Average Standard (48 ppb). The half-guideline includes parts of Mandlazini Agri-Village, Nzalabantu, Emhlanzini and Velabandhla.

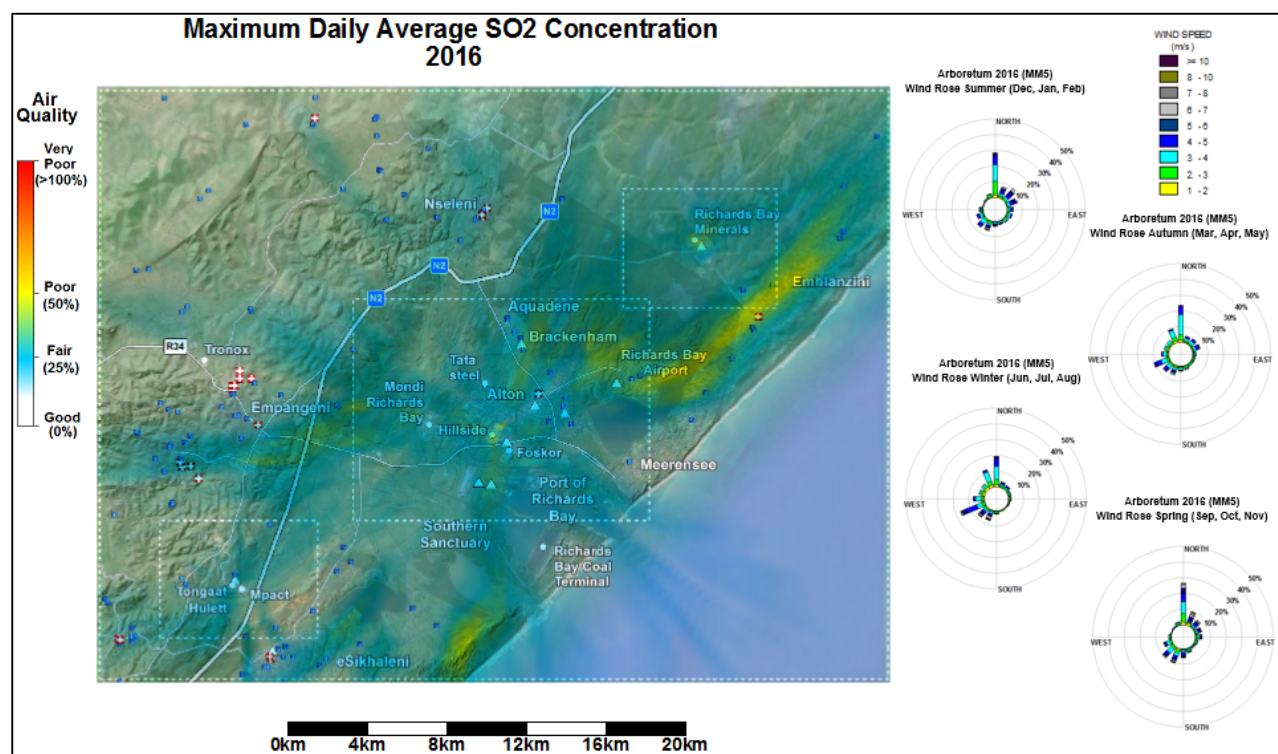


Figure 22: SO₂ maximum daily annual average prediction (regional map)



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

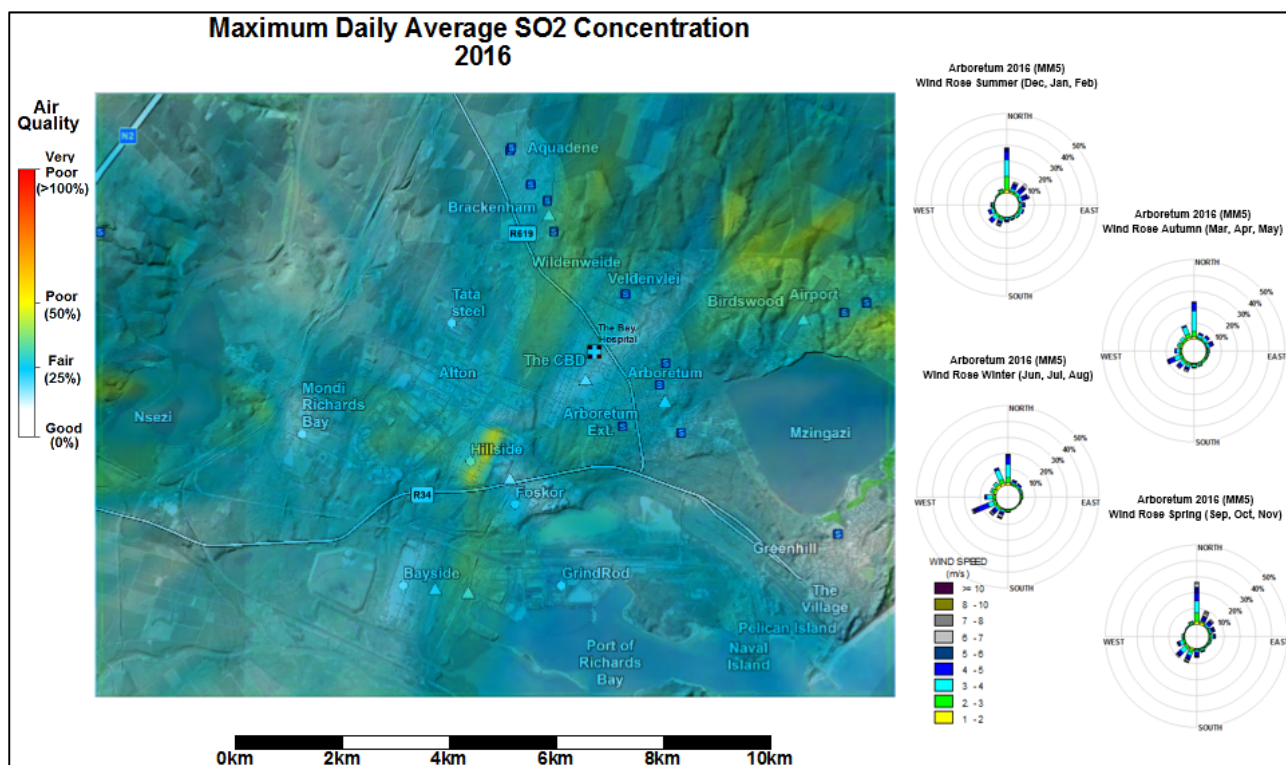


Figure 23: SO₂ maximum daily annual average prediction (Richards Bay map)

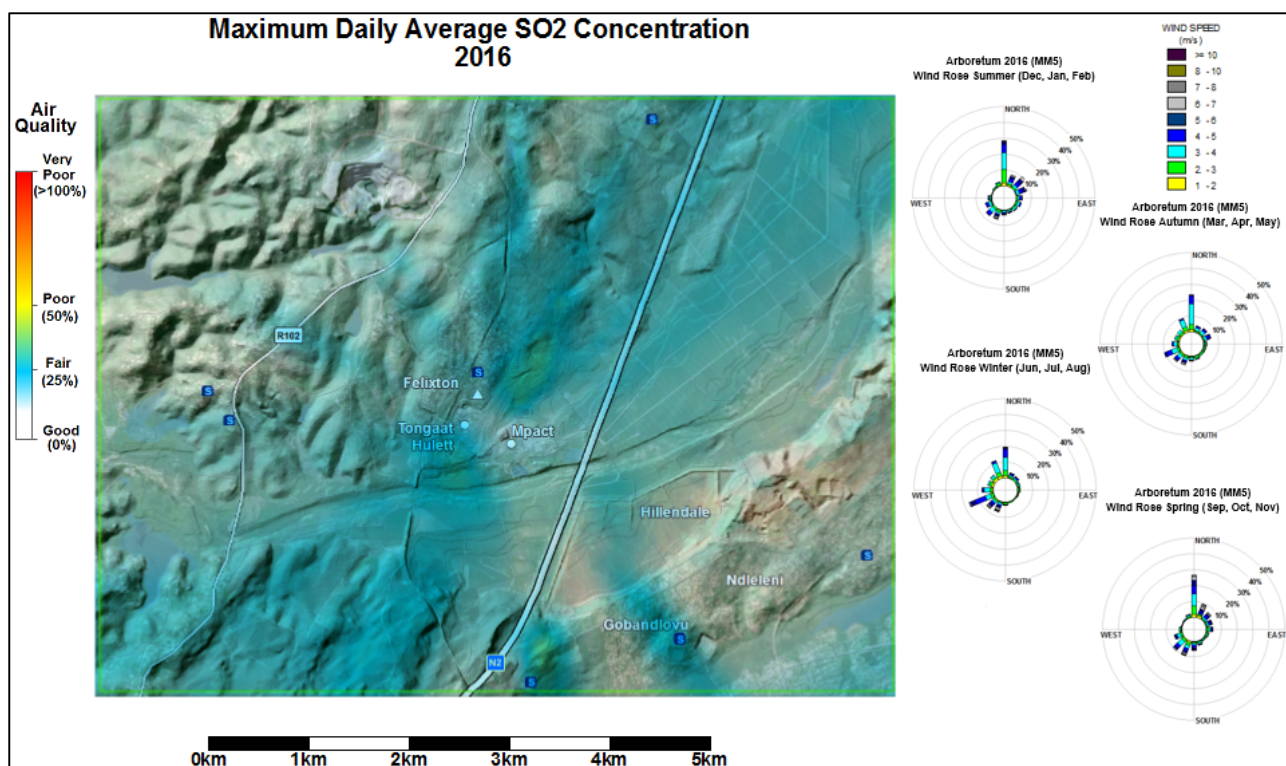


Figure 24: SO₂ maximum daily annual average prediction (Felixton map)

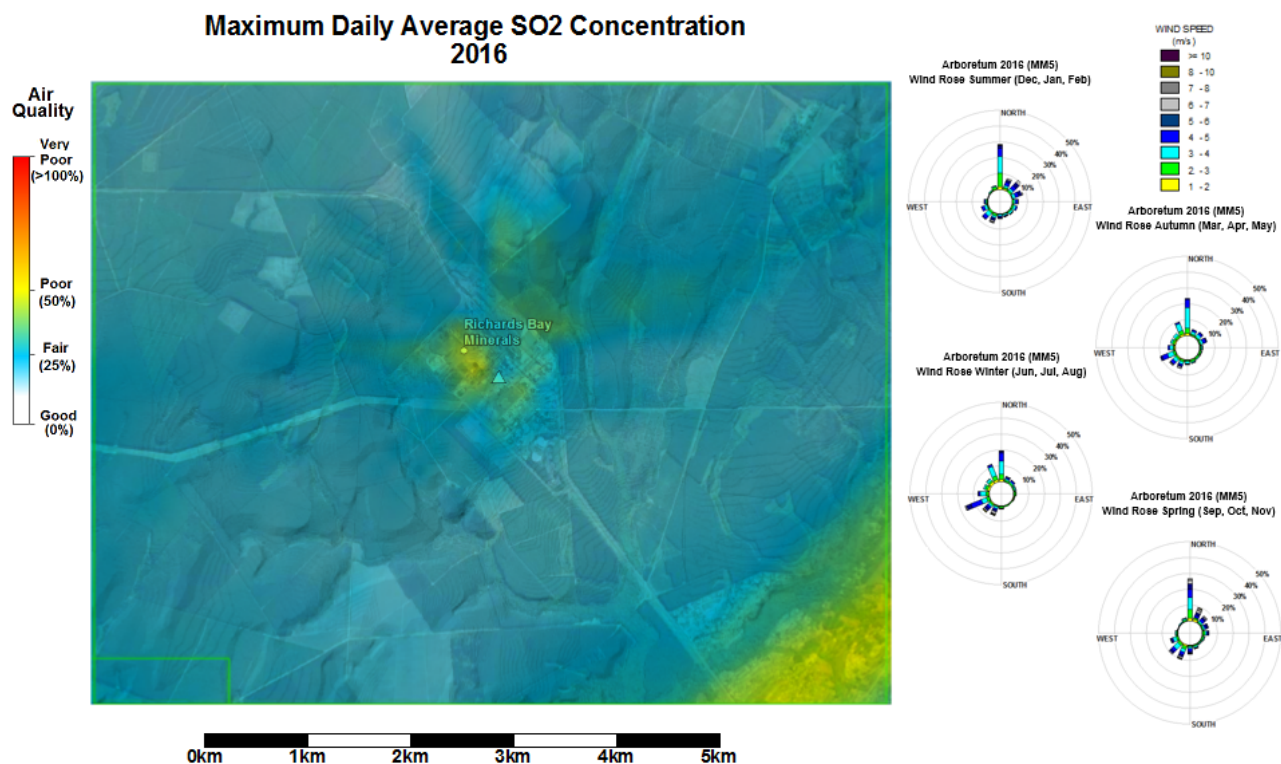


Figure 25: SO₂ maximum daily annual average prediction (RBM map)

5.12 SO₂ Hourly Average Concentrations

Hourly average SO₂ concentrations are shown below (Figure 26). There were 3 exceedances of the NEM: AQA Hourly Standard (134 ppb) (Table 14).

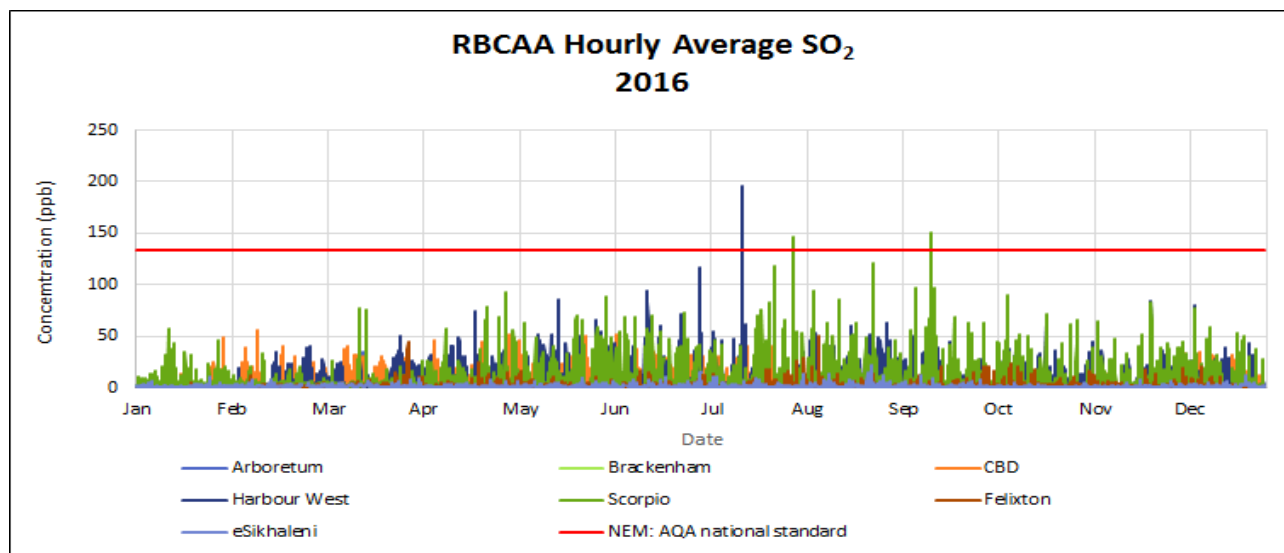


Figure 26: SO₂ maximum hourly average concentrations

Table 14: NEM: AQA SO₂ hourly exceedances.

Standard/Guideline/Target	Station	Date	Value (µg/m ³)	Allocation
NEMAQA SO ₂ Hourly Standard (134 ppb)	Harbour West	2016/07/14 21:00	196	Foskor
	Scorpio	2016/07/31 14:00	146	Unresolved
		2016/09/13 20:10	150	Foskor



5.13 SO₂ Hourly Average Concentration and Prediction

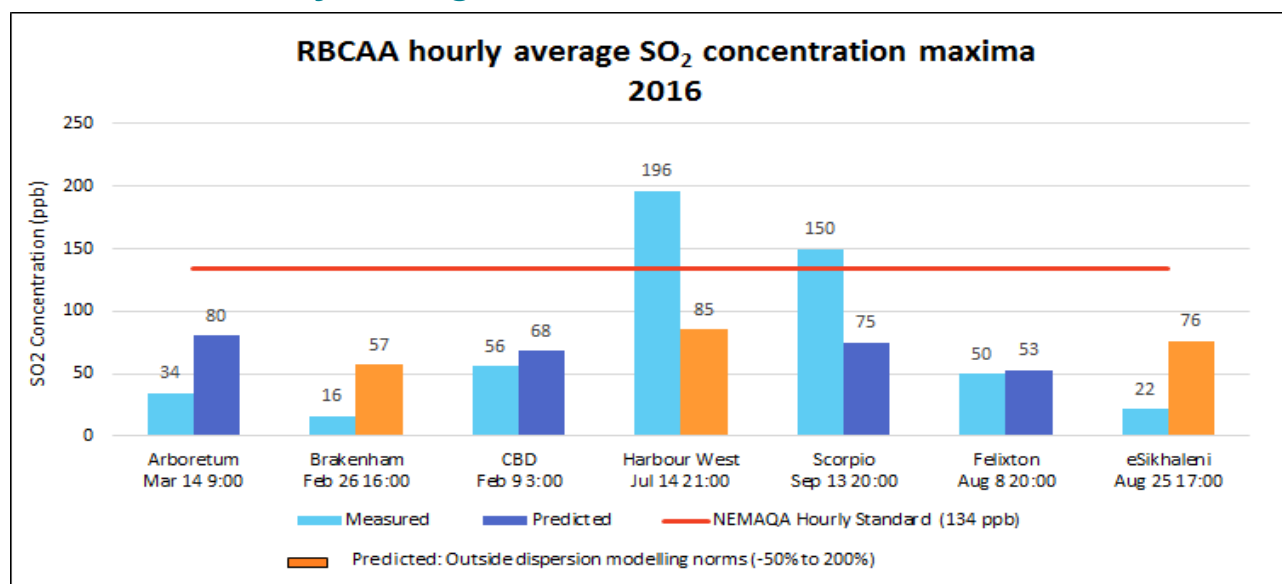


Figure 27: SO₂ hourly average concentration and prediction

Hourly average predicted values most stations were within accepted dispersion modelling norms (-50% to 200%). Harbour West was under predicted, and Brackenham and eSikhaleni over predicted. The cause of the under prediction is most likely as a result of a combination of local fugitive emissions unaccounted for in the model, and the models tendency to under predict in the near field. The over predictions are most likely as a result of the models inability to account for highly complex, rapidly varying spatial and temporal meteorological systems. Compared to the measurements predicted values at Harbour West, Scorpio were lower, at CBD and Felixton similar (within 10% each other), and at Arboretum, Brackenham and eSikhaleni higher (Figure 27).

5.14 SO₂ Maximum Predicted Hourly Average Concentration

The following plots of the maximum hourly average SO₂ concentrations are provided:

- Regional (Figure 28);
- Richards Bay (Figure 29);
- Felixton (Figure 30); and
- RBM (Figure 31).

The plots are colour coded according to the RBCAA's Air Quality Index (AQI) (Table 15). The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).

Table 15: SO₂ hourly air quality index

Air Quality Rating	Air Quality Index *	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.

Notes: * Percentage of NEM: AQA Hourly SO₂ Standard.



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

The model predicted maximum hourly average SO₂ concentrations greater than the NEM; AQA SO₂ Hourly Average Standard (134 ppb) over Birdwood, Esikhawini, Foskop, Mandlazini Agri-Village, Mzingazi Agri-Village, the Port of Richards Bay and Richards Bay Minerals. The half-guideline includes parts of Arboretum, Arboretum Extension, Bayside Aluminium, the CBD, Empangeni, Felixton, Greenhill, Hillside Aluminium, Meerensee, Mondi Richards Bay, Nseleni, Richards Bay Coal Terminal, the Southern Sanctuary, Tata Steel, Veldenvlei and Vulindlela.

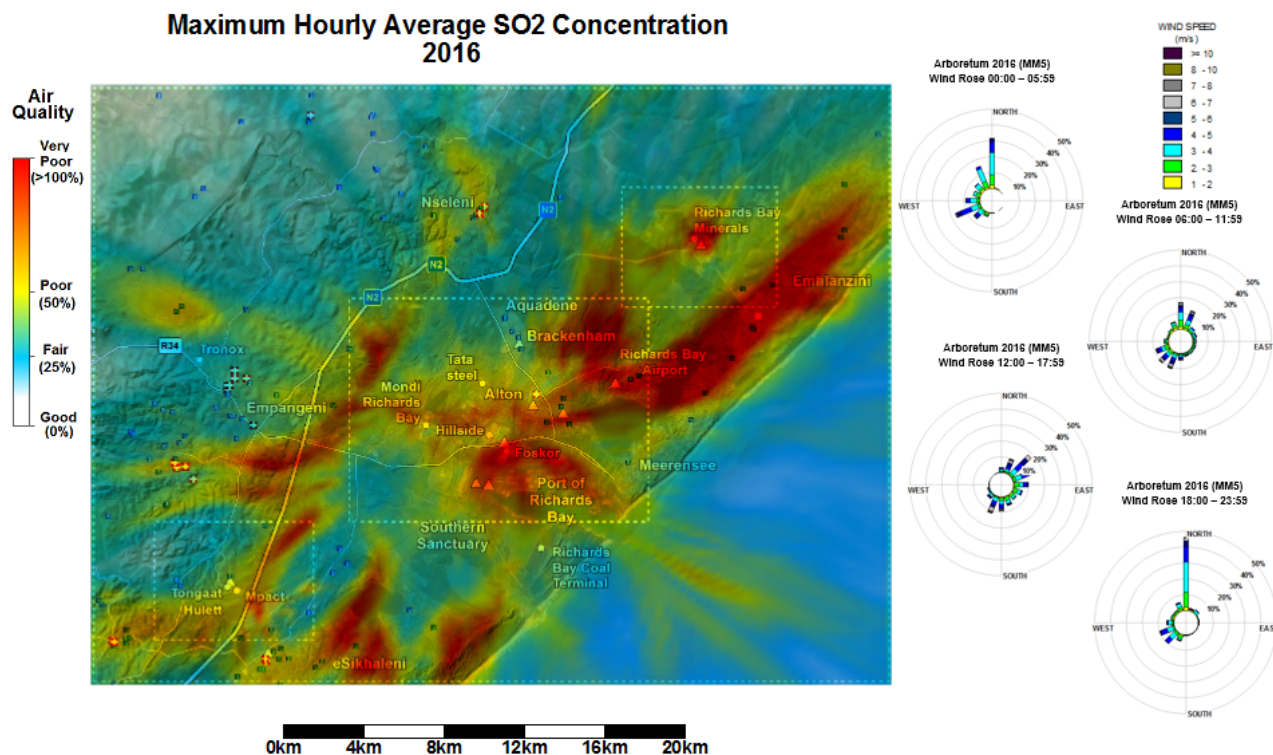


Figure 28: SO₂ maximum hourly annual average prediction (regional map)

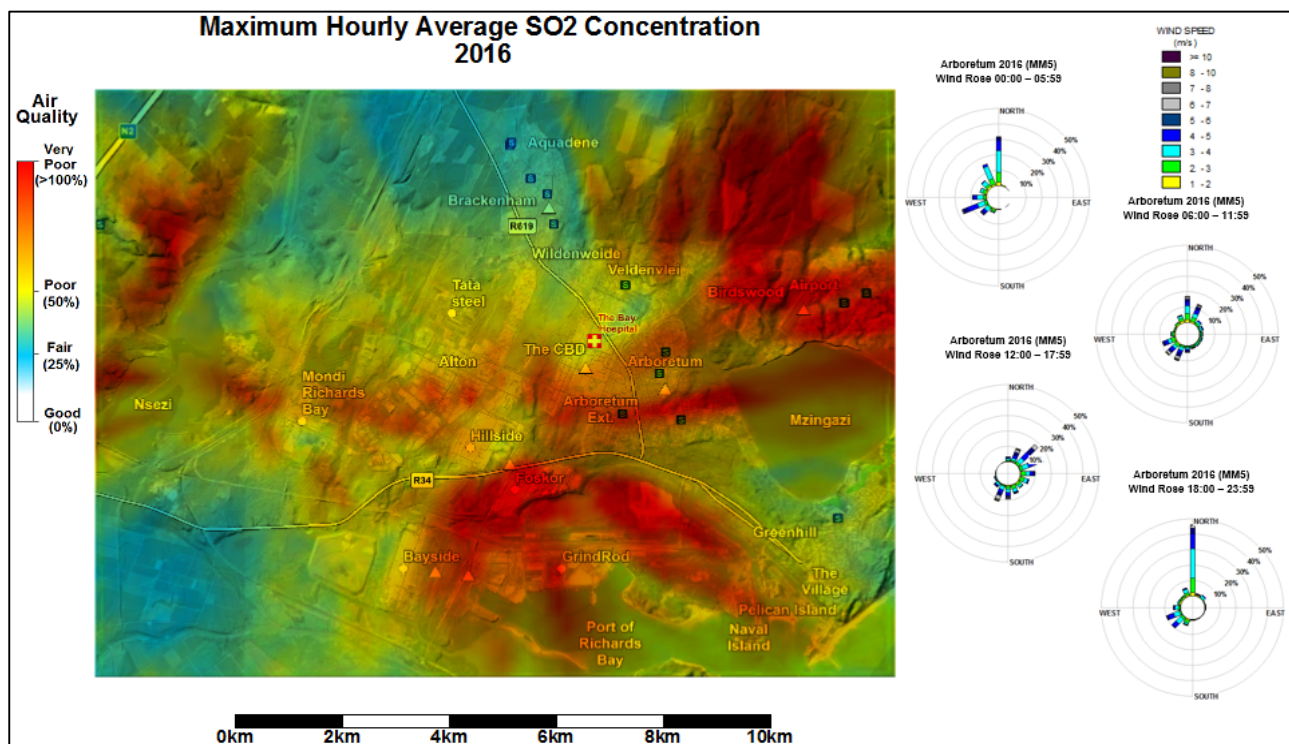


Figure 29: SO₂ maximum daily annual average prediction (Richards Bay map)

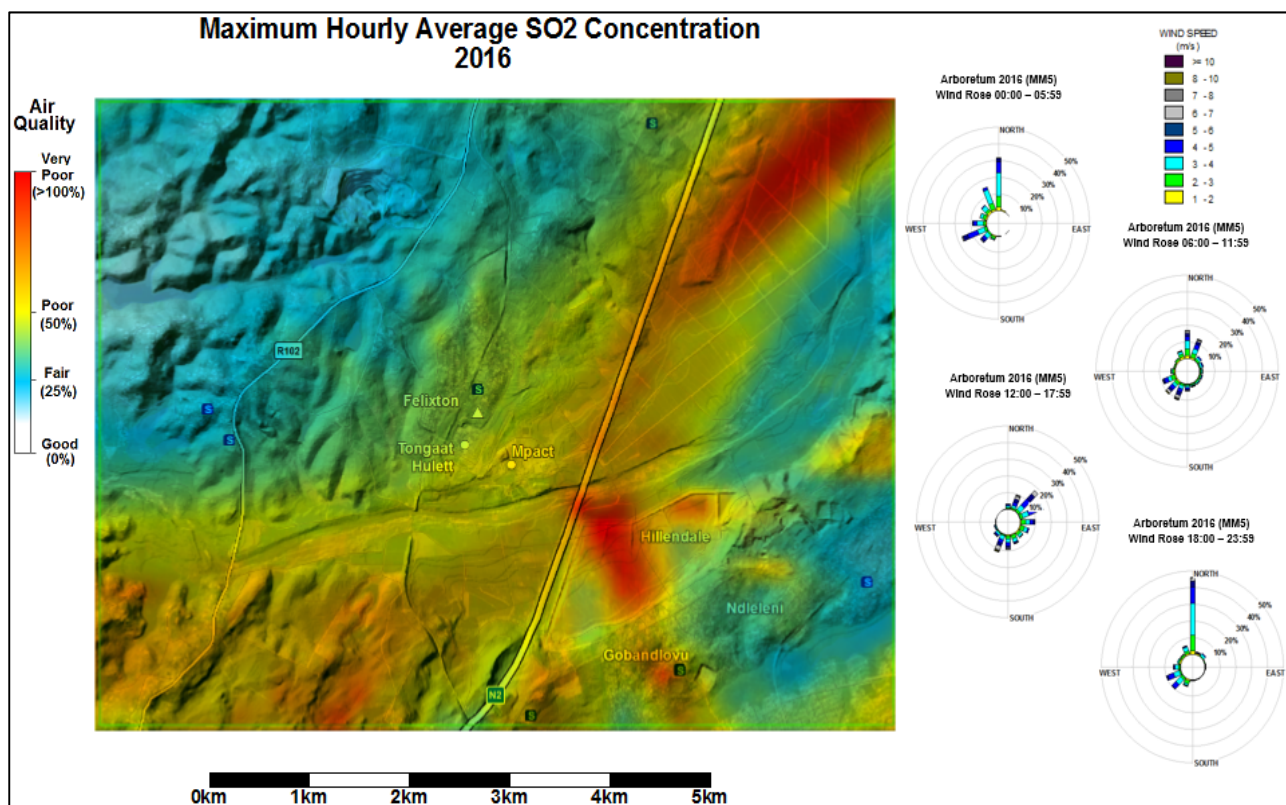


Figure 30: SO₂ maximum daily annual average prediction (Felixton map)

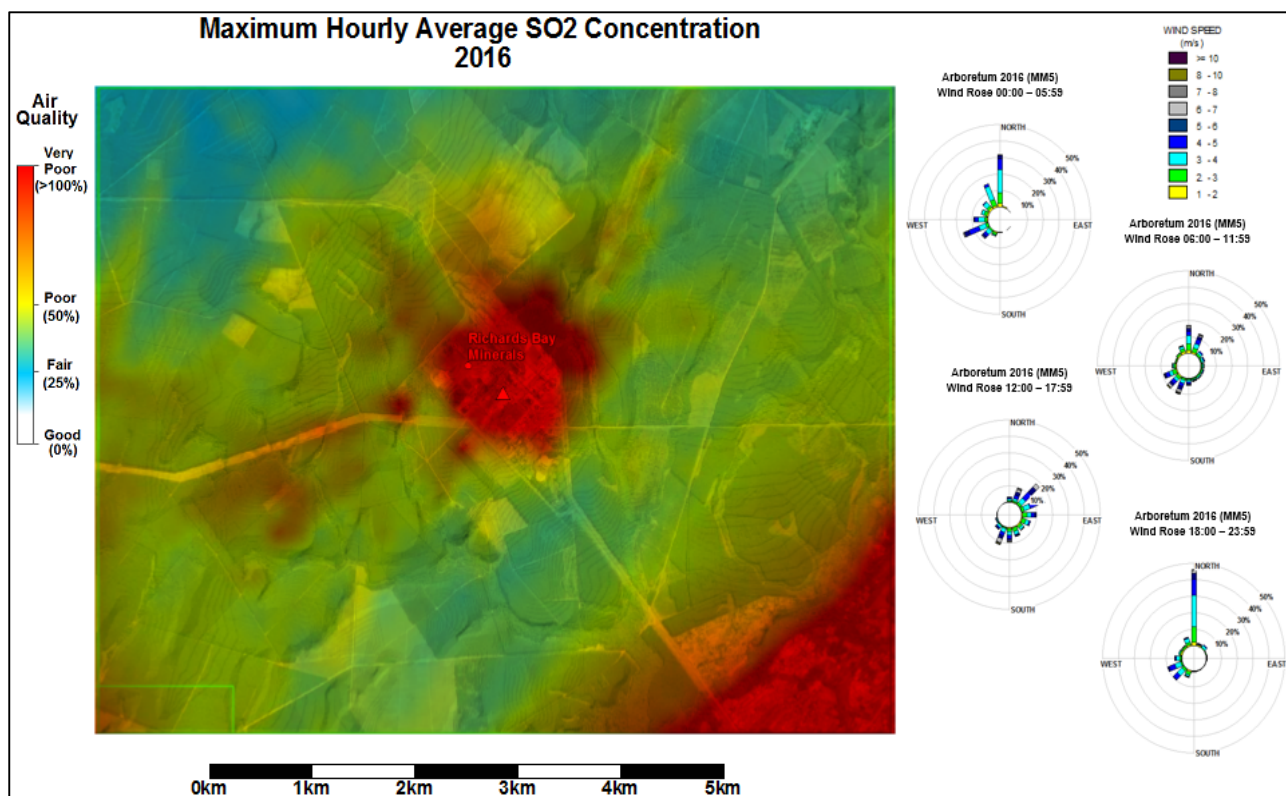


Figure 31: SO₂ maximum daily annual average prediction (RBM map)



5.15 SO₂ 10-minute Average Concentrations

10-minute average SO₂ concentrations are shown below (Figure 32). There were 13 exceedances of the NEM: AQA and WHO/IFC 10-minute Standard (191 ppb) (Table 16).

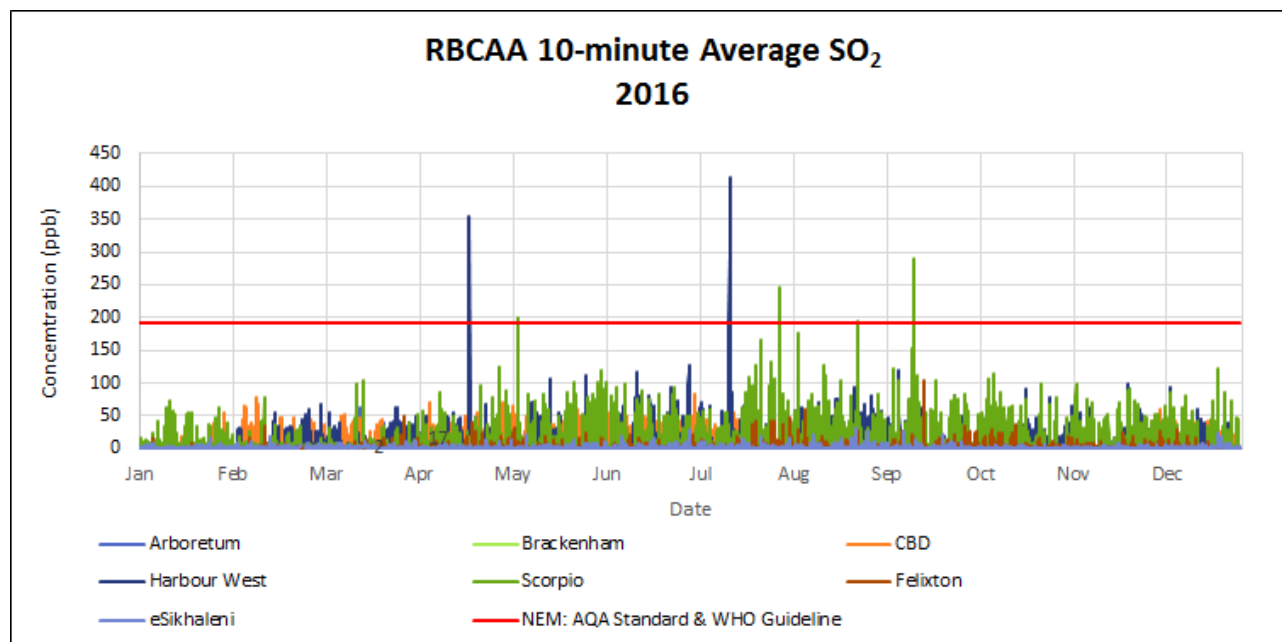


Figure 32: SO₂ 10 minute average concentrations

Table 16: NEM: AQA and WHO SO₂ 10-minute exceedances

Standard/Guideline/Target	Station	Date	Value (µg/m ³)	Allocation
NEMAQA SO ₂ 10-minute Standard (191 ppb) WHO SO ₂ 10-minute Guideline (191 ppb)	Harbour West	2016/04/19 00:00	354	South32
		2016/07/14 20:30	197	Foskor
		2016/07/14 20:40	301	Foskor
		2016/07/14 21:00	415	Foskor
		2016/07/14 21:10	198	Foskor
		2016/07/14 21:20	313	Foskor
	Scorpio	2016/05/05 11:50	199	Unresolved
		2016/07/31 14:10	245	Unresolved
		2016/08/26 13:30	194	South32
		2016/09/13 18:10	204	Foskor
		2016/09/13 20:10	260	Foskor
		2016/09/13 20:20	200	Foskor
		2016/09/13 20:30	289	Foskor

6.0 TOTAL REDUCED SULPHUR MONITORING (TRS)

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 (H₂S), methyl mercaptan (CH₃S-H), dimethyl sulphide (CH₃-S-CH₃) and dimethyl disulphide (CH₃-S-S-CH₃). 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 Data Capture

The percentage of valid data received from the TRS analysers for 2016 is shown in Table 8.

Table 17: TRS ambient air quality standards

Station	Station Availability (%)	TRS (%)
CBD	98	90
eSikhaleni	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%)

Blue - RBCAA Target (>=98%)

6.2 TRS Ambient Air Quality Standards

There are no South African standards for TRS.

The World Health Organization (WHO) recommends that in order to avoid substantial complaints about odour annoyance among the exposed population, hydrogen sulphide concentrations should not be allowed to exceed 7 µg/m³ (5 ppb), with a 30-minute averaging period.

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

- A 24-hour average Ambient Air Quality Criterion (AAQC) of 14 µg/m³ (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 µg/m³ (9.3 ppb) for TRS, based on odour effects; and
- A 30-minute standard of 10 µg/m³ (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 µg/m³ (5.0 ppb) for TRS based on the adverse effects on the respiratory system of this mixture;
- A 10-minute average AAQC of 13 µg/m³ (9.3 ppb) for TRS based on odour effects; and
- A 30-minute standard of 10 µg/m³ (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 H₂S nuisance guideline 7 µg/m³ (5 ppb), the OME 10-minute TRS health standard 13 µg/m³ (9.3 ppb). In addition, the RBCAA established a correlation between TRS concentrations exceeding 4.5 ppb and the number of complaints received. Thus the RBCAA has set its own 10-minute target of 5.9 µg/m³ (4.5 ppb).

6.3 TRS Exceedances and Compliance

A summary of the TRS exceedances and breakdown per station is presented below (Table 18)

Table 18: TRS station exceedances summary

Standard/Guideline/Target	Station	Count
RBCAA 10-minute Target (4.5 ppb)	CBD	246
	eSikhaleni	367
OME	CBD	38



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Standard/Guideline/Target	Station	Count
10-minute TRS health Standard (9.3 ppb)	eSikhaleni	60
WHO 30-minute H ₂ S Guideline (5.0 ppb)	CBD	56
	eSikhaleni	85

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, pipe lines, seals, valves (fugitive emissions) or a particular events (e.g. fires or emergency shutdowns). Most of the TRS exceedances recorded during 2016 were allocated to Mondi. Maximum and Annual average concentrations for TRS are provided in Table 19.

Table 19: TRS maximum and monthly 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	656%	317%	322%	41%	-
	(ppb)	29.5	29.5	16.1	4.1	0.7
	Date & time	2016/02/07 05:20	2016/02/07 05:20	2016/02/07 05:00	2016/02/07	2016
eSikhaleni	% of guideline	380%	184%	248%	28%	-
	(ppb)	17.1	17.1	12.4	2.8	1.4
	Date & time	2016/01/03 21:50	2016/01/03 21:50	2016/01/03 21:00	2016/10/01	2016

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).

6.4 TRS Seasonal Concentrations

The seasonal TRS concentrations in 2016 are provided in Figure 33.

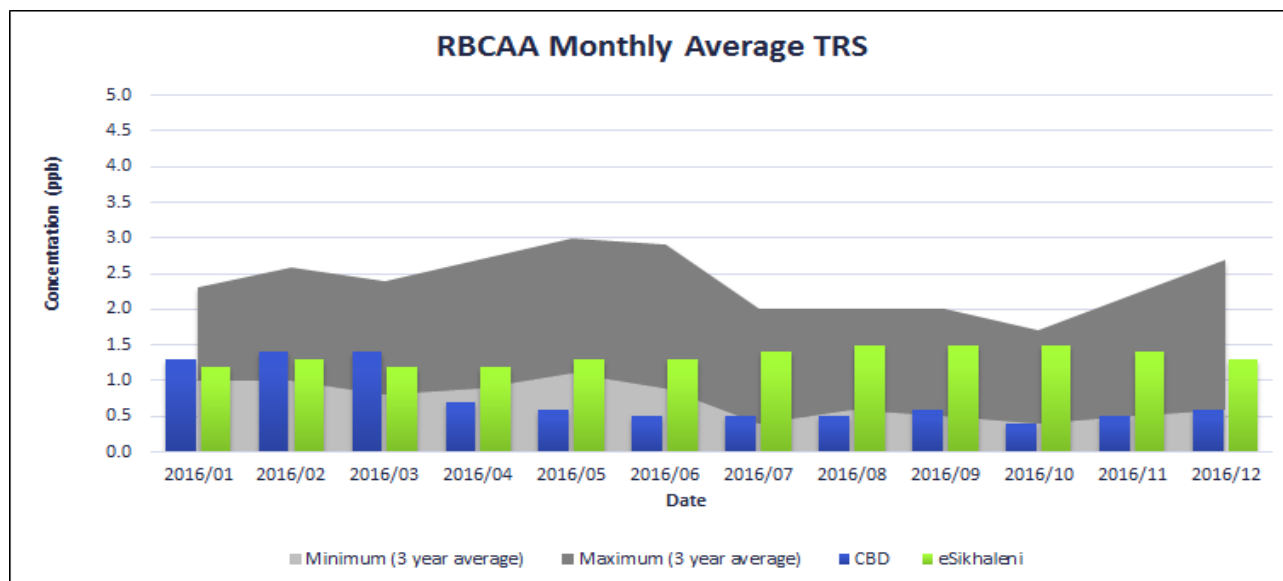


Figure 33: TRS seasonal concentrations



6.5 TRS Diurnal Concentrations

The diurnal TRS concentrations are shown below (Figure 34).

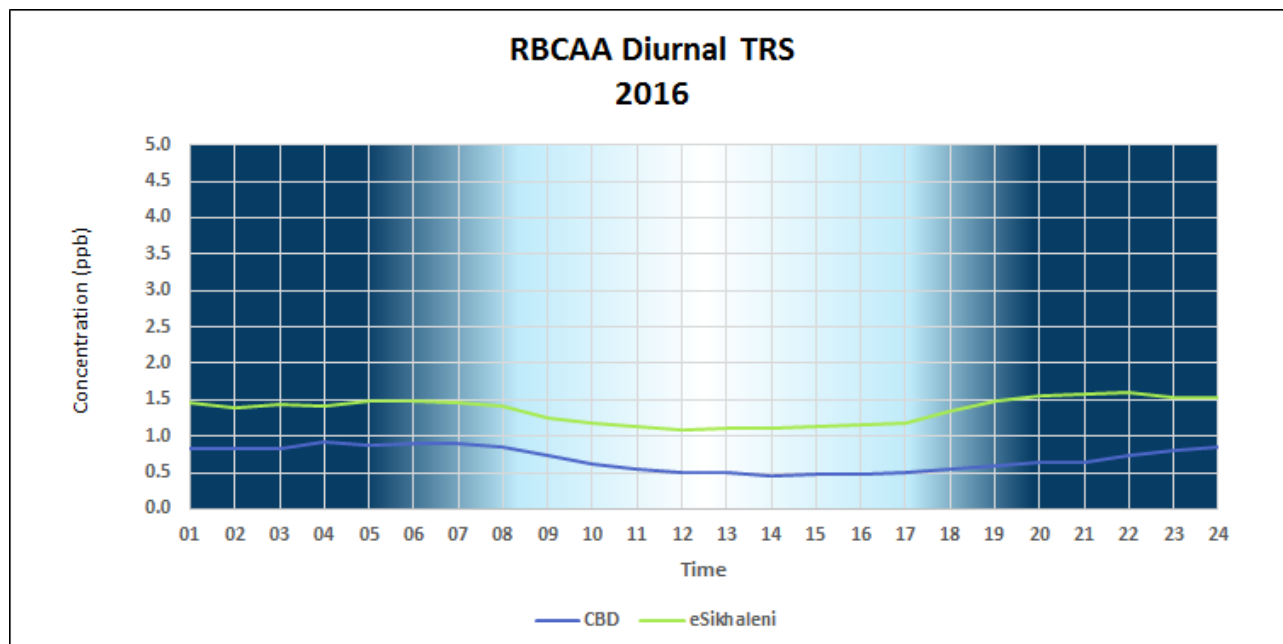


Figure 34: TRS diurnal concentrations

6.6 TRS Annual Average Concentration

Annual average TRS concentrations are illustrated in Figure 35. There was a decrease in annual average TRS concentrations from 2006 to 2010, concentrations seem to have stabilised since then though.

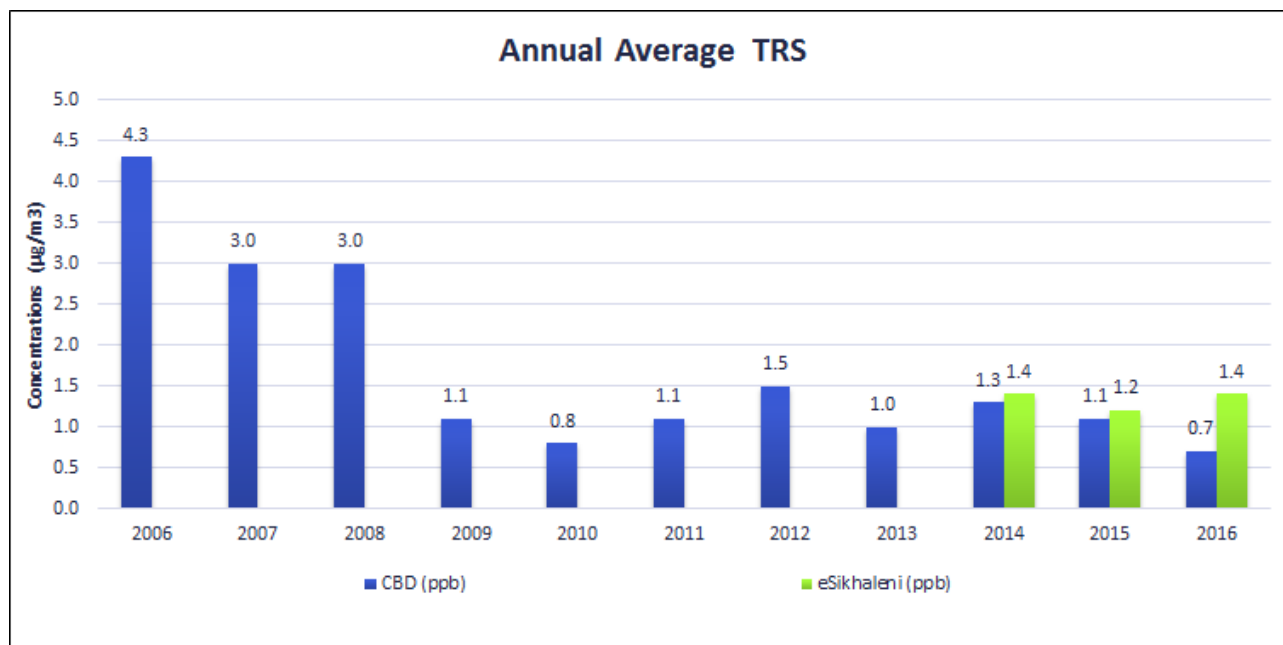


Figure 35: TRS annual average concentrations

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 and 2016 also proved to be a difficult years with an increase in fugitive emissions from the effluent plant as a result of decreased water consumption.

6.7 TRS 30-minute Average Concentrations

The 30-minute average TRS concentrations at CBD are shown below (Figure 36). There were 141 exceedances of the WHO 30-minute H₂S Guideline (5.0 ppb). A list of daily TRS 30-minute exceedances can be found in APPENDIX E.

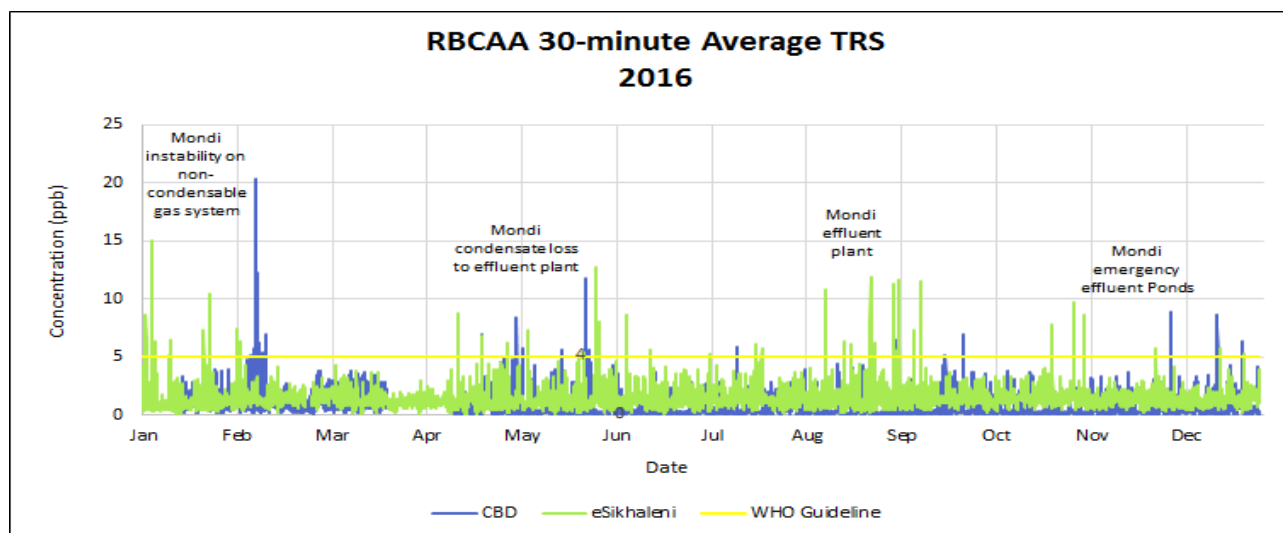


Figure 36: TRS 30-minute average concentration

6.8 TRS 10-minute Average Concentrations

The 10-minute average TRS concentrations are shown below (Figure 37). There were 613 exceedances of the RBCAA 10-minute Target (4.5ppb), and 98 exceedances of the OME 10-minute TRS health standard (9.3ppb). A list of TRS 10-minute exceedances can be found in APPENDIX E.

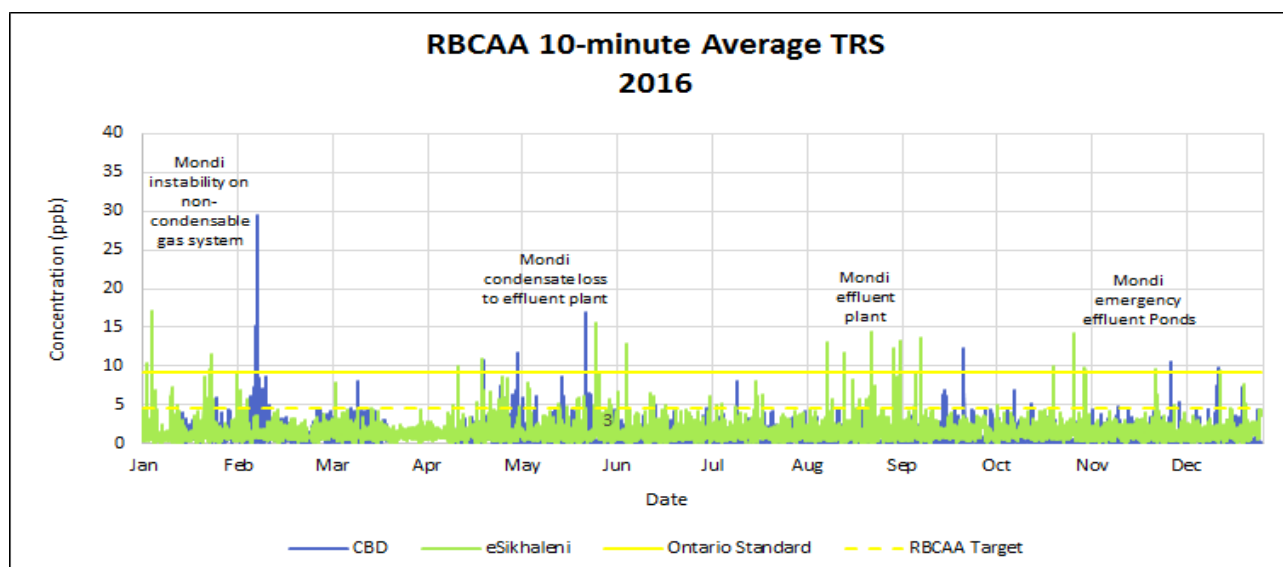


Figure 37: TRS 10-minute average concentrations



This report was compiled by Golder Associates Africa for the Richards Bay Clean Air Association, contributors included:

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APPENDIX A

Document Limitations



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APPENDIX B

Quality Assurance



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 80% to be valid for statistical analysis.

Table B1: Quality assurance

Test	Range	Action
Zero	Zero 0 to 2 ppb	Leave as is.
	-2 to 0ppb	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 C

Emissions Inventory



Emission Inventory

Table C1: SO₂ emission inventory 2016

Industry	Description	SO ₂ Emission (g/s)	SO ₂ Emission (t)	Contribution (%)
Foskor	Acid Plant	75.79	183.4	13.6%
	Boiler	0.34	0.8	
Tongaat Hulett	Boiler	0.00	0.0	0.0%
Mondi	Flume 1	44.94	108.7	17.5%
	Flume 2	26.51	64.1	
	Power Boiler	25.21	61.0	
	Incinerator	0.27	0.6	
	Bleach Plant	0.75	1.8	
Mpact	Babcock	8.91	21.6	4.6%
	JT Boiler	16.62	40.2	
	Oil Burner	0.35	0.8	
RBM	Char Plant	14.85	35.9	3.1%
	Miscellaneous	1.08	2.6	
	MSP (Drier)	1.22	3.0	
	Smokers	0.03	0.1	
South32	FTC	59.78	144.6	59.8%
	GTC 1	61.99	150.0	
	GTC 2	53.28	128.9	
	GTC 3	50.06	121.1	
	GTC 4	50.06	121.1	
	GTC 5	51.67	125.0	
	Potrooms	8.05	19.5	
Tronox	Tank 1	7.97	19.3	1.4%
Total		559.73	1354.1	100%

Notes: Tongaat Hullet shuts down during the 1st quarter and last month of the year.



APPENDIX D

Operational Report



OPERATIONAL REPORT

General

Table D1: Data Capture

Station	Station Availability (%)	PM ₁₀ (%)	SO ₂ (%)	TRS (%)
Arboretum	92	-	67	-
Brackenham	96	95	95	-
CBD	98	95	96	90
Harbour West	100	-	91	-
Scorpio	98	-	97	-
Felixton	99	99	94	-
eSikhaleni	98	98	98	97
Mtunzini	99	95	-	-
Average	98	96	91	94

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%)

Blue - RBCAA Target (>=98%)

Missing Data:

Arboretum – faulty analyser, faulty data logger (Jan – Apr, Dec)

Table D2: Calibrations

Analyser	Type	Company	SANAS Accredited	Month
Particulates (PM ₁₀)	TEOM flow & mass transducer	Calspec cc	No	January
Particulates (PM ₁₀)	TEOM flow & mass transducer	Calspec cc	No	August
Traces Gas (SO ₂ & TRS)	Multi-point calibrations	C&M	Yes	March
Traces Gas (SO ₂ & TRS)	Multi-point calibrations	C&M	Yes	July
Traces Gas (SO ₂ & TRS)	Multi-point calibrations	C&M	Yes	November
Meteorological Calibrations		Inteltronics	Yes	April

Analyser Status

Table D3: Particulate analyser status

Serial	Purchased	Age	Type	Site	Status
248970311	Jan 2004	13 years	PM ₁₀	eSikhaleni	OK
274100812	Dec 2008	08 years	PM ₁₀	Mtunzini	OK
273580810	Feb 2009	08 years	PM ₁₀	CBD	OK
206850912	Jan 2010	07 years	PM ₁₀	Brackenham	OK
E-sampler	Mar 2012	05 years	PM ₁₀	Felixton	OK



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Table D4: Trace gas analyser status

Serial	Purchased	Age	Type	Location	Status	Feedback
85B	Jan 1997	20 years	SO ₂	Written off.		
92B	Mar 1997	20 years	SO ₂	Brackenheim	OK	
M2015-M736	Mar 1997	20 years	SO ₂	Scorpio	OK installed at Scorpio monitoring SO ₂ on 28 October 2016	
M714	Oct 2005	11 years	SO ₂	C&M	Faulty reset itself and was replaced on 28 October 2016	Cannot repair
M2812	Sep 2006	10 years	SO ₂	Harbour West	OK	
1980	Jul 2008	08 years	SO ₂	C&M	Removed to C&M lab for repairs response very bad.	Repaired
3055	May 2011	05 years	TRS	CBD TRS	OK	
253	Mar 2012	05 years	SO ₂	Felixton	OK	
593	Apr 2013	04 years	SO ₂	CBD	OK	
1049	Feb 2014	03 years	TRS	eSikhaleni	Received Internal pump to replace before next calibrations	
1540	Mar 2015	02 years	SO ₂	eSikhaleni	OK	



APPENDIX E

Exceedance Log



EXCEEDANCE LOG

Table E1: PM₁₀ Exceedance Log

Standard/Guideline/Target	Station	Date	Value (µg/m ³)	Allocation
NEMAQA PM ₁₀ Daily Standard (75 µg/m ³)	Brackenham	2016/08/01	83	Spray painting adjacent to the monitoring shelter
	eSikhaleni	2016/06/10	78	Fires and high wind speed.
WHO PM ₁₀ Daily Guideline (50 µg/m ³)	Brackenham	2016/03/02	51	Suspension of particulates by high wind speed.
		2016/04/21	52	Lots of smoke/smog around from peat fires burning
		2016/04/23	61	Smoke from peat fires burning, high wind speed
		2016/05/17	55	
		2016/07/01	70	
		2016/08/01	83	Spray painting adjacent to the monitoring shelter
		2016/08/08	56	High wind speeds from cold front
		2016/09/01	52	High wind speeds and dry dusty conditions.
		2016/09/02	66	Dry dusty conditions
		2016/09/06	65	High wind speeds and dry dusty conditions.
		2016/09/09	60	High wind speeds and dry dusty conditions.
		2016/09/16	68	High wind speeds and dry dusty conditions.
		2016/12/04	63	High wind speeds.
	CBD	2016/03/02	52	Suspension of particulates by high wind speed.
		2016/04/21	56	Lots of smoke/smog around from peat fires burning
		2016/04/23	59	Smoke from peat fires burning, high wind speed
		2016/07/01	57	
		2016/09/02	54	Dry dusty conditions
		2016/09/06	53	High wind speeds and dry dusty conditions.
		2016/09/16	56	High wind speeds and dry dusty conditions
	eSikhaleni	2016/01/24	57	Suspension of particulates by high wind speed.



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Standard/Guideline/Target	Station	Date	Value ($\mu\text{g}/\text{m}^3$)	Allocation
		2016/04/19	52	Lots of smoke/smog around from peat fires burning
		2016/04/21	56	Lots of smoke/smog around from peat fires burning
		2016/04/29	59	Lots of smoke/smog around from peat fires burning
		2016/05/24	59	
		2016/06/10	78	
		2016/06/15	54	
		2016/06/27	64	
		2016/09/01	57	High wind speeds and dry dusty conditions.
		2016/09/02	60	Dry dusty conditions
		2016/09/05	60	High wind speeds and dry dusty conditions
		2016/09/06	59	High wind speeds and dry dusty conditions
		2016/09/12	63	High wind speeds and dry dusty conditions
		2016/09/16	61	High wind speeds and dry dusty conditions
	Mtunzini	2016/04/01	58	Lots of smoke/smog around from peat fires burning
		2016/06/10	56	
		2016/07/01	66	
		2016/08/08	52	High wind speeds from cold front
		2016/08/31	58	High wind speeds and dry conditions
		2016/09/01	58	High wind speeds and dry dusty conditions
		2016/09/12	56	High wind speeds and dry dusty conditions
		2016/09/16	53	High wind speeds and dry dusty conditions



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Table E2: SO₂ Exceedance Log.

Standard/Guideline/Target	Station	Date	Value (µg/m ³)	Allocation
NEMAQA SO ₂ 10-minute Standard (191 ppb)	Harbour West	2016/04/19 00:00	354	South32
		2016/07/14 20:30	197	Foskor
		2016/07/14 20:40	301	Foskor
		2016/07/14 21:00	415	Foskor
		2016/07/14 21:10	198	Foskor
		2016/07/14 21:20	313	Foskor
	Scorpio	2016/05/05 11:50	199	Unresolved
		2016/07/31 14:10	245	Unresolved
		2016/08/26 13:30	194	South32
		2016/09/13 18:10	204	Foskor
		2016/09/13 20:10	260	Foskor
		2016/09/13 20:20	200	Foskor
		2016/09/13 20:30	289	Foskor
NEMAQA SO ₂ Hourly Standard (134 ppb)	Harbour West	2016/07/14 21:00	196	Foskor
	Scorpio	2016/07/31 14:00	146	Unresolved
		2016/09/13 20:10	150	Foskor
WHO SO ₂ 10-minute Standard (191 ppb)	Harbour West	2016/04/19 00:00	354	South32
		2016/07/14 20:30	197	Foskor
		2016/07/14 20:40	301	Foskor
		2016/07/14 21:00	415	Foskor
		2016/07/14 21:10	198	Foskor
		2016/07/14 21:20	313	Foskor
	Scorpio	2016/05/05 11:50	199	Unresolved
		2016/07/31 14:10	245	Unresolved
		2016/08/26 13:30	194	South32



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/09/13 18:10	204	Foskor
		2016/09/13 20:10	260	Foskor
		2016/09/13 20:20	200	Foskor
		2016/09/13 20:30	289	Foskor
WHO SO ₂ Daily Guideline (8 ppb)	CBD	2016/01/29 00:00	8	*
		2016/02/04 00:00	11	*
		2016/02/05 00:00	14	*
		2016/02/09 00:00	14	*
		2016/02/17 00:00	9	*
		2016/02/21 00:00	9	*
		2016/02/27 00:00	9	*
		2016/03/08 00:00	15	*
		2016/03/09 00:00	14	*
		2016/03/11 00:00	10	*
		2016/03/14 00:00	13	*
		2016/04/06 00:00	9	*
		2016/04/07 00:00	9	*
		2016/04/22 00:00	9	*
		2016/04/30 00:00	14	*
		2016/05/04 00:00	11	*
		2016/05/20 00:00	12	*
		2016/05/25 00:00	22	*
		2016/06/04 00:00	17	*
		2016/06/05 00:00	8	*
		2016/06/28 00:00	8	*
		2016/07/07 00:00	10	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/07/16 00:00	9	*
		2016/07/24 00:00	15	*
	Harbour West	2016/02/14 00:00	11	*
		2016/02/24 00:00	12	*
		2016/02/25 00:00	14	*
		2016/02/26 00:00	12	*
		2016/03/01 00:00	11	*
		2016/03/24 00:00	10	*
		2016/03/25 00:00	16	*
		2016/03/26 00:00	20	*
		2016/03/27 00:00	12	*
		2016/03/30 00:00	12	*
		2016/04/01 00:00	11	*
		2016/04/04 00:00	13	*
		2016/04/11 00:00	17	*
		2016/04/12 00:00	14	*
		2016/04/14 00:00	14	*
		2016/04/15 00:00	15	*
		2016/04/16 00:00	15	*
		2016/04/19 00:00	14	*
		2016/04/21 00:00	9	*
		2016/04/25 00:00	11	*
		2016/04/27 00:00	13	*
		2016/04/29 00:00	12	*
		2016/05/10 00:00	22	*
		2016/05/11 00:00	23	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/05/12 00:00	14	*
		2016/05/13 00:00	15	*
		2016/05/14 00:00	9	*
		2016/05/16 00:00	10	*
		2016/05/19 00:00	20	*
		2016/05/22 00:00	21	*
		2016/05/23 00:00	29	*
		2016/05/24 00:00	12	*
		2016/05/29 00:00	8	*
		2016/05/30 00:00	18	*
		2016/06/03 00:00	9	*
		2016/06/06 00:00	10	*
		2016/06/07 00:00	9	*
		2016/06/08 00:00	9	*
		2016/06/09 00:00	22	*
		2016/06/10 00:00	12	*
		2016/06/13 00:00	18	*
		2016/06/14 00:00	27	*
		2016/06/18 00:00	24	*
		2016/06/19 00:00	9	*
		2016/06/24 00:00	22	*
		2016/06/25 00:00	31	*
		2016/06/26 00:00	17	*
		2016/06/27 00:00	15	*
		2016/06/29 00:00	12	*
		2016/06/30 00:00	12	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/07/01 00:00	31	*
		2016/07/05 00:00	27	*
		2016/07/06 00:00	12	*
		2016/07/08 00:00	12	*
		2016/07/12 00:00	14	*
		2016/07/14 00:00	26	*
		2016/07/15 00:00	27	*
		2016/07/19 00:00	12	*
		2016/07/20 00:00	15	*
		2016/07/21 00:00	9	*
		2016/08/03 00:00	15	*
		2016/08/05 00:00	10	*
		2016/08/06 00:00	9	*
		2016/08/07 00:00	12	*
		2016/08/11 00:00	10	*
		2016/08/12 00:00	17	*
		2016/08/13 00:00	16	*
		2016/08/18 00:00	15	*
		2016/08/19 00:00	22	*
		2016/08/24 00:00	11	*
		2016/08/27 00:00	15	*
		2016/08/28 00:00	22	*
		2016/08/29 00:00	14	*
		2016/08/30 00:00	18	*
		2016/08/31 00:00	19	*
		2016/09/01 00:00	11	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/09/05 00:00	13	*
		2016/09/07 00:00	8	*
		2016/09/09 00:00	9	*
		2016/09/12 00:00	27	*
		2016/09/14 00:00	9	*
		2016/09/15 00:00	17	*
		2016/09/16 00:00	15	*
		2016/09/20 00:00	16	*
		2016/09/21 00:00	11	*
		2016/09/26 00:00	23	*
		2016/09/27 00:00	18	*
		2016/10/06 00:00	10	*
		2016/10/09 00:00	10	*
		2016/10/11 00:00	16	*
		2016/10/15 00:00	17	*
		2016/10/19 00:00	12	*
		2016/10/21 00:00	19	*
		2016/11/03 00:00	13	*
		2016/11/08 00:00	13	*
		2016/11/12 00:00	16	*
		2016/11/16 00:00	17	*
		2016/11/21 00:00	15	*
		2016/11/24 00:00	17	*
		2016/11/28 00:00	12	*
		2016/12/03 00:00	10	*
		2016/12/08 00:00	22	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/12/15 00:00	15	*
		2016/12/18 00:00	11	*
		2016/12/19 00:00	15	*
		2016/12/26 00:00	16	*
		2016/12/27 00:00	12	*
	Scorpio	2016/01/11 00:00	8	*
		2016/01/12 00:00	9	*
		2016/01/16 00:00	11	*
		2016/01/27 00:00	12	*
		2016/02/10 00:00	10	*
		2016/03/12 00:00	11	*
		2016/03/15 00:00	10	*
		2016/04/09 00:00	11	*
		2016/04/10 00:00	15	*
		2016/04/21 00:00	10	*
		2016/04/23 00:00	24	*
		2016/04/27 00:00	19	*
		2016/04/29 00:00	26	*
		2016/05/01 00:00	9	*
		2016/05/02 00:00	24	*
		2016/05/05 00:00	11	*
		2016/05/06 00:00	12	*
		2016/05/09 00:00	20	*
		2016/05/11 00:00	13	*
		2016/05/14 00:00	14	*
		2016/05/15 00:00	8	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/05/16 00:00	8	*
		2016/05/19 00:00	8	*
		2016/05/21 00:00	17	*
		2016/05/22 00:00	15	*
		2016/05/24 00:00	23	*
		2016/05/27 00:00	10	*
		2016/05/28 00:00	18	*
		2016/05/29 00:00	15	*
		2016/05/30 00:00	13	*
		2016/05/31 00:00	19	*
		2016/06/01 00:00	15	*
		2016/06/07 00:00	29	*
		2016/06/08 00:00	8	*
		2016/06/10 00:00	17	*
		2016/06/13 00:00	16	*
		2016/06/14 00:00	18	*
		2016/06/15 00:00	17	*
		2016/06/16 00:00	11	*
		2016/06/18 00:00	23	*
		2016/06/19 00:00	17	*
		2016/06/25 00:00	9	*
		2016/06/26 00:00	18	*
		2016/06/27 00:00	12	*
		2016/06/29 00:00	10	*
		2016/07/04 00:00	11	*
		2016/07/05 00:00	9	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/07/06 00:00	8	*
		2016/07/08 00:00	18	*
		2016/07/14 00:00	10	*
		2016/07/19 00:00	23	*
		2016/07/20 00:00	17	*
		2016/07/21 00:00	16	*
		2016/07/22 00:00	8	*
		2016/07/23 00:00	16	*
		2016/07/25 00:00	16	*
		2016/07/28 00:00	24	*
		2016/07/31 00:00	15	*
		2016/08/01 00:00	18	*
		2016/08/03 00:00	10	*
		2016/08/05 00:00	10	*
		2016/08/06 00:00	22	*
		2016/08/11 00:00	18	*
		2016/08/13 00:00	11	*
		2016/08/15 00:00	18	*
		2016/08/19 00:00	15	*
		2016/08/23 00:00	9	*
		2016/08/24 00:00	17	*
		2016/08/26 00:00	18	*
		2016/08/27 00:00	16	*
		2016/09/01 00:00	9	*
		2016/09/07 00:00	9	*
		2016/09/09 00:00	11	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/09/12 00:00	15	*
		2016/09/13 00:00	20	*
		2016/09/14 00:00	13	*
		2016/09/15 00:00	11	*
		2016/09/19 00:00	9	*
		2016/09/20 00:00	10	*
		2016/09/21 00:00	13	*
		2016/09/26 00:00	11	*
		2016/09/27 00:00	19	*
		2016/10/01 00:00	19	*
		2016/10/05 00:00	11	*
		2016/10/06 00:00	13	*
		2016/10/08 00:00	12	*
		2016/10/09 00:00	13	*
		2016/10/11 00:00	11	*
		2016/10/12 00:00	16	*
		2016/10/15 00:00	17	*
		2016/10/16 00:00	12	*
		2016/10/19 00:00	10	*
		2016/10/21 00:00	19	*
		2016/10/31 00:00	10	*
		2016/11/12 00:00	14	*
		2016/11/21 00:00	13	*
		2016/11/24 00:00	17	*
		2016/11/29 00:00	10	*
		2016/12/03 00:00	8	*



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/12/08 00:00	20	*
		2016/12/13 00:00	9	*

Note:

* Exceedances of the WHO guideline do not require investigation.



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Table E3: TRS Exceedance Log.

Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
OME TRS 10-minute Health Standard (9.3 ppb)	CBD	2016/02/06 22:30	10	Mondi
		2016/02/06 22:40	10	Mondi
		2016/02/06 22:50	10	Mondi
		2016/02/06 23:40	10	Mondi
		2016/02/07 00:00	13	Mondi
		2016/02/07 00:10	15	Mondi
		2016/02/07 00:20	13	Mondi
		2016/02/07 00:30	11	Mondi
		2016/02/07 00:40	12	Mondi
		2016/02/07 01:20	10	Mondi
		2016/02/07 01:30	13	Mondi
		2016/02/07 01:40	13	Mondi
		2016/02/07 01:50	10	Mondi
		2016/02/07 02:40	13	Mondi
		2016/02/07 02:50	15	Mondi
		2016/02/07 03:00	14	Mondi
		2016/02/07 03:10	14	Mondi
		2016/02/07 03:20	16	Mondi
		2016/02/07 03:30	10	Mondi
		2016/02/07 04:00	10	Mondi
		2016/02/07 05:00	11	Mondi
		2016/02/07 05:10	21	Mondi
		2016/02/07 05:20	30	Mondi
		2016/02/07 05:30	13	Mondi
		2016/02/07 05:40	15	Mondi



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/02/07 06:00	13	Mondi
		2016/02/07 06:10	14	Mondi
		2016/02/07 06:20	10	Mondi
		2016/04/21 03:10	11	Mondi
		2016/05/02 06:10	12	Unresolved
		2016/05/02 06:20	11	Unresolved
		2016/05/24 21:20	14	Mondi
		2016/05/24 21:30	17	Mondi
		2016/05/24 21:40	15	Mondi
		2016/09/24 22:00	12	Unresolved
		2016/12/01 23:10	11	Unresolved
		2016/12/17 02:50	10	Unresolved
		2016/12/17 03:10	10	Unresolved
	eSikhaleni	2016/01/02 02:50	10	Mondi
		2016/01/03 21:10	11	Mondi
		2016/01/03 21:20	13	Mondi
		2016/01/03 21:30	12	Mondi
		2016/01/03 21:40	16	Mondi
		2016/01/03 21:50	17	Mondi
		2016/01/03 22:00	14	Mondi
		2016/01/04 00:10	10	Mondi
		2016/01/04 01:00	11	Mondi
		2016/01/04 01:10	14	Mondi
		2016/01/04 01:20	14	Mondi
		2016/01/04 01:30	11	Mondi
		2016/01/04 01:40	10	Mondi



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/01/04 01:50	10	Mondi
		2016/01/22 23:20	10	Mondi
		2016/01/23 03:40	11	Mondi
		2016/01/23 03:50	10	Mondi
		2016/01/23 04:00	10	Mondi
		2016/01/23 04:10	12	Mondi
		2016/01/23 04:20	10	Mondi
		2016/04/13 00:20	10	Unresolved
		2016/04/20 23:00	11	Mondi
		2016/05/27 20:40	15	Unresolved
		2016/05/27 20:50	15	Unresolved
		2016/05/27 21:00	16	Unresolved
		2016/05/27 21:10	10	Unresolved
		2016/06/07 02:10	10	Mondi
		2016/06/07 02:40	13	Mondi
		2016/08/11 07:20	10	Mondi
		2016/08/11 07:30	12	Mondi
		2016/08/11 07:40	13	Mondi
		2016/08/17 07:30	12	Mondi
		2016/08/25 20:10	11	Mondi
		2016/08/25 20:20	12	Mondi
		2016/08/25 20:30	10	Mondi
		2016/08/25 20:40	11	Mondi
		2016/08/25 20:50	14	Mondi
		2016/09/02 03:00	12	Unresolved
		2016/09/02 03:10	11	Unresolved



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/09/02 03:20	11	Unresolved
		2016/09/02 03:30	11	Unresolved
		2016/09/04 04:00	11	Mondi
		2016/09/04 04:10	10	Mondi
		2016/09/04 04:20	11	Mondi
		2016/09/04 04:30	13	Mondi
		2016/09/04 04:40	11	Mondi
		2016/09/04 04:50	11	Mondi
		2016/09/04 05:00	10	Mondi
		2016/09/11 05:00	10	Unresolved
		2016/09/11 05:10	14	Unresolved
		2016/09/11 05:20	11	Unresolved
		2016/09/11 05:30	10	Unresolved
		2016/10/24 06:40	10	Mondi
		2016/10/31 04:20	10	Unresolved
		2016/10/31 04:40	10	Unresolved
		2016/10/31 04:50	11	Unresolved
		2016/10/31 05:00	14	Unresolved
		2016/11/03 17:30	10	Mondi
		2016/11/26 21:40	10	Unresolved
		2016/12/18 01:00	9	Mondi
WHO 30-minute H2S Guideline (5.0 ppb)	CBD	2016/02/05 06:00	5	Mondi
		2016/02/06 03:30	6	Mondi
		2016/02/06 04:30	5	Mondi
		2016/02/06 05:00	5	Mondi
		2016/02/06 22:00	8	Mondi



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/02/06 22:30	10	Mondi
		2016/02/06 23:00	7	Mondi
		2016/02/06 23:30	9	Mondi
		2016/02/07 00:00	14	Mondi
		2016/02/07 00:30	10	Mondi
		2016/02/07 01:00	7	Mondi
		2016/02/07 01:30	12	Mondi
		2016/02/07 02:30	11	Mondi
		2016/02/07 03:00	14	Mondi
		2016/02/07 03:30	9	Mondi
		2016/02/07 04:00	6	Mondi
		2016/02/07 04:30	6	Mondi
		2016/02/07 05:00	20	Mondi
		2016/02/07 05:30	12	Mondi
		2016/02/07 06:00	12	Mondi
		2016/02/07 06:30	6	Mondi
		2016/02/08 02:30	6	Mondi
		2016/02/09 03:30	5	Mondi
		2016/02/09 04:00	5	Mondi
		2016/02/10 03:00	7	Mondi
		2016/02/10 03:30	6	Mondi
		2016/04/20 23:00	6	Mondi
		2016/04/20 23:30	7	Mondi
		2016/04/21 00:00	7	Mondi
		2016/04/21 02:30	5	Mondi
		2016/04/21 03:00	5	Mondi



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/05/02 06:00	8	Unresolved
		2016/05/04 04:30	6	Mondi
		2016/05/05 21:00	6	Mondi
		2016/05/17 01:00	6	Mondi
		2016/05/24 21:00	7	Mondi
		2016/05/24 21:30	12	Mondi
		2016/05/25 22:30	6	Unresolved
		2016/07/13 00:30	6	Mondi
		2016/09/02 21:30	6	Unresolved
		2016/09/03 01:00	6	Mondi
		2016/09/19 05:00	5	Unresolved
		2016/09/19 07:00	5	Unresolved
		2016/09/24 22:00	7	Unresolved
		2016/09/25 05:00	5	Unresolved
		2016/12/01 23:00	9	Unresolved
		2016/12/01 23:30	5	Unresolved
		2016/12/02 01:00	6	Mondi
		2016/12/17 00:30	5	Unresolved
		2016/12/17 02:30	6	Unresolved
		2016/12/17 03:00	9	Unresolved
		2016/12/17 03:30	5	Unresolved
		2016/12/17 04:30	7	Unresolved
		2016/12/17 05:00	5	Unresolved
		2016/12/25 05:00	6	Mondi
		2016/12/25 05:30	5	Mondi
	eSikhaleni	2016/01/02 01:30	8	Mondi



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/01/02 02:00	6	Mondi
		2016/01/02 02:30	9	Mondi
		2016/01/02 03:00	6	Mondi
		2016/01/03 21:00	10	Mondi
		2016/01/03 21:30	15	Mondi
		2016/01/03 22:00	8	Mondi
		2016/01/04 00:00	9	Mondi
		2016/01/04 00:30	8	Mondi
		2016/01/04 01:00	13	Mondi
		2016/01/04 01:30	10	Mondi
		2016/01/04 02:00	6	Mondi
		2016/01/04 20:30	5	Mondi
		2016/01/04 21:30	5	Mondi
		2016/01/04 22:00	6	Mondi
		2016/01/09 21:00	5	Mondi
		2016/01/10 08:00	6	Mondi
		2016/01/10 08:30	6	Mondi
		2016/01/20 23:00	6	Mondi
		2016/01/20 23:30	7	Mondi
		2016/01/21 00:00	7	Mondi
		2016/01/22 21:30	6	Mondi
		2016/01/22 23:00	7	Mondi
		2016/01/22 23:30	6	Mondi
		2016/01/23 00:00	7	Mondi
		2016/01/23 00:30	7	Mondi
		2016/01/23 03:30	9	Mondi



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/01/23 04:00	10	Mondi
		2016/01/31 23:00	7	Mondi
		2016/02/01 20:30	6	
		2016/04/13 00:00	10	Unresolved
		2016/04/20 23:00	7	Mondi
		2016/04/20 23:30	6	Mondi
		2016/04/29 04:30	6	Mondi
		2016/04/29 05:00	5	Mondi
		2016/05/06 00:00	7	Mondi
		2016/05/22 07:30	5	Mondi
		2016/05/24 04:00	5	Mondi
		2016/05/27 20:30	13	Unresolved
		2016/05/27 21:00	10	Unresolved
		2016/05/29 01:30	8	Unresolved
		2016/05/29 02:00	7	Unresolved
		2016/06/07 02:00	6	Mondi
		2016/06/07 02:30	9	Mondi
		2016/06/14 19:30	6	Unresolved
		2016/07/04 06:30	5	Mondi
		2016/07/19 05:00	6	Mondi
		2016/07/21 07:00	6	Mondi
		2016/08/11 07:00	7	Mondi
		2016/08/11 07:30	11	Mondi
		2016/08/17 06:00	5	Mondi
		2016/08/17 06:30	6	Mondi
		2016/08/17 07:30	6	Mondi



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/08/19 17:00	6	Mondi
		2016/08/25 20:00	8	Mondi
		2016/08/25 20:30	12	Mondi
		2016/08/25 22:00	5	Mondi
		2016/08/25 23:00	6	Mondi
		2016/08/27 03:30	6	Unresolved
		2016/09/02 03:00	11	Unresolved
		2016/09/02 03:30	9	Unresolved
		2016/09/03 04:30	6	Mondi
		2016/09/04 04:00	11	Mondi
		2016/09/04 04:30	12	Mondi
		2016/09/04 05:00	9	Mondi
		2016/09/04 06:30	6	Mondi
		2016/09/09 04:30	7	Unresolved
		2016/09/09 05:00	7	Unresolved
		2016/09/11 05:00	12	Unresolved
		2016/09/11 05:30	9	Unresolved
		2016/09/11 06:00	6	Unresolved
		2016/10/24 06:30	8	Mondi
		2016/10/31 04:00	6	Unresolved
		2016/10/31 04:30	10	Unresolved
		2016/10/31 05:00	7	Unresolved
		2016/10/31 05:30	5	Unresolved
		2016/11/03 17:30	9	Mondi
		2016/11/03 18:30	7	Mondi
		2016/11/26 21:30	6	Unresolved



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Standard/Guideline/Target	Station	Date	Value (µg/m³)	Allocation
		2016/12/17 22:10	5	Unresolved
		2016/12/18 00:00	6	Mondi
		2016/12/18 00:30	5	Mondi
		2016/12/18 01:00	5	Mondi
		2016/12/25 20:00	5	Mondi
		2016/12/25 21:30	5	Mondi

Notes:

There were 613 exceedances of the RBCAA TRS 10-minute Target (4.5 ppb), a list of these are available from RBCAA.



APPENDIX F

Complaints Log



COMPLAINTS LOG

January Exceedance Log.

There were no complaints received during January 2016.

Table F1: February Exceedance Log

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Reinette Britz 035-907 5763	11/02/2016 15:00	Empangeni Fire Station – Weightman Avenue	“Foul odour coming through Empangeni it smells like Mondi and burns my nose.”	Mondi RB 12/02/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: As the Mondi mill is currently down for maintenance purposes, it is likely that fugitive emissions were the source of the odour. Mondi will continue to investigate means of addressing fugitive emissions during shut down periods.	Resolved - Mondi Richards Bay
2	Reinette Britz 035-907 5763	12/02/2016 14:10	Empangeni Fire Station – Weightman Avenue	“Foul odour is starting to come through Empangeni again. It's a very sharp smell that burns my nose and affects my throat. It's a combination of Mondi and fertilizer.”	Mondi RB 15/02/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: As the Mondi mill is currently down for maintenance purposes, it is likely that fugitive emissions were the source of the odour. Mondi will continue to investigate means of addressing fugitive emissions during shut down periods.	Resolved - Mondi Richards Bay



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Table F2: March Exceedance Log

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	Jane Conradie (035) 9075720	07/03/2016 16:10	Pelican Parade Birdswood	I arrived at my residence in Pelican Parade at approximately 16H10 on the 7th of March 2016 and was surrounded by excessive smoke from a bush fire in the Pelican Parade area. The smoke density did not decrease well in to the night (23H00 the smell and smoke was still in the air). I believe that this has an effect on all residents health.....one could not even open ones doors or windows for fresh air due to the smell and smoke.		Resolved - Smoke/Fire/Smuts
2	Dave Conradie 082 959 5897	09/03/2016 11:15	TWK Agri (next to Foskop)	"Acidic foam balls falling out on TWK premises coming from Foskop" The foam had been going on for a period of 5 hours. RBCAA notified Foskop and City of uMhlathuze Air Quality Unit.	Foskop 15/03/2016: Mannana Ntoampe responded: At approximately 11h15 on the 9th of March 2016, a complaint concerning foam balls was received via RBCAA. Forming was observed at CTC, the Foskop parking lot and inside the plant. This was coming from the cooling towers. The foaming observed is formed during production of phosphoric acid as a result of a detergent used to improve crystal morphology. Failure of the original de-foaming system at the old reactor with low temperatures and wind at the time resulted in increased stability in the foam and the spread of the foam beyond Foskop boundaries. The de-foaming was manually dosed at the cooling tower to prevent any further foam formation.	Resolved - Foskop



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					To prevent recurrence another automated de-foaming system is currently being constructed. The system should be ready for commissioning on 18 March 2016. Even though foaming is part of normal operation, Foskor commits to taking all the necessary steps to ensure that this does not affect the public.	
3	S Camminga (0357860076)	23/03/2016 08:30	John Ross	"Mondi Odour"	Mondi RB 30/03/2016: Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Root Cause of Incident and Corrective Action Mondi has identified NCG venting as the source of the odour. The venting occurred as a result of the incinerator tripping due to a faulty thermocouple. The thermocouple has been addressed, and we are in the process of identifying preventative measures.	Resolved - Mondi Richards Bay

General

No.	Complainant	Date and Time	Location	Description	Results	Resolution
4	Gugu Gazu	23/03/2016 08:30	John Ross	"Mondi Odour"	Mondi RB 30/03/2016: Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Root Cause of Incident and Corrective Action: Mondi has identified fugitive emissions from the effluent plant as the source of the odour. We have a number of projects in place to address odour from our effluent plant, and will provide feedback on the progress of these projects in the next Mondi Environmental Liaison Forum Meeting. However, please don't hesitate to contact me should you require the information before the next meeting.	Resolved - Mondi Richards Bay



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Table F3: April Exceedance Log

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	03/04/2016 11:15	33 Heideheuvel - Veldenvlei	Pungent peat fire odour.		Resolved - Mondi Forests Peat Fire
2	Denis Viviers (083 456 1938)	04/04/2016 13:50	12 Gemsbokgang – Wildenweide	Smoke & Odour being experienced. Complainant is an asthmatic so his health is being affected.	Mondi Forests 4 April 2016: Responded: The RBCAA was notified by Mondi Forests on 1st April of a Ground Fire adjacent to Wildenweide.	Resolved - Fire
3	S Camminga (0357860076)	05/04/2016 06:00	33 Heideheuvel - Veldenvlei	Suffocating smoke and peat fire odour causing nausea and respiratory irritation.		Resolved - Mondi Forests Peat Fire
4	R Camminga (0357860076)	05/04/2016 06:00	33 Heideheuvel - Veldenvlei	Suffocating smoke and peat fire odour causing nausea and respiratory irritation.		Resolved - Mondi Forests Peat Fire
5	R Camminga (0357860076)	05/04/2016 07:30	Port area	Pungent Mondi “cabbage” odour.	Mondi RB 12/04/2016: Candice Webb responded: Mondi has identified poor effluent quality as the source of the odour. Mondi currently working on a number of projects to improve the effluent quality and control of effluent pH. We are happy to provide feedback at the next Mondi forum meeting.	Resolved - Mondi Forests Peat Fire
6	S Camminga (0357860076)	07/04/2016 05:30	33 Heideheuvel - Veldenvlei	PUNGENT Mondi “Methanol type” odour permeating throughout our home, despite all doors and windows being closed, so clearly the odour has been present for quite some length of time during the night. As a result we are suffering with nausea and headache. Mondi has been informed.	Mondi RB 12/04/2016: Candice Webb responded: During this time Mondi experienced difficulty in identifying the source of the odour as both internal and external odour indicators were within specification. Process engineers together with senior management met throughout the day to trouble shoot the problem.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					The following was implemented: 1) All external ambient TRS analysers were recalibrated and checked, 2) Original Equipment Manufacturers were called out to check Lime Kiln TRS analyser, 3) The Lime Kiln was shut down to check and clean the TRS Scrubber to ensure maximum circulation, 4) The Evaporator plant was shut down to fix a black liquor leak into the effluent drain, 5) A gland seal on top of the Digester was tightened, 6) Laboratory technicians drove through the community at 4 hourly intervals to monitor ambient H₂S as a precautionary measure. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible.	
7	R Camminga (0357860076)	07/04/2016 05:30	33 Heideheuwel - Veldenvlei	PUNGENT Mondi "Methanol type" odour permeating throughout our home, despite all doors and windows being closed, so clearly the odour has been present for quite some length of time during the night. As a result we are suffering with nausea and headache. Mondi has been informed.	Mondi RB 12/04/2016: Candice Webb responded: During this time Mondi experienced difficulty in identifying the source of the odour as both internal and external odour indicators were within specification. Process engineers together with senior management met throughout the day to trouble shoot the problem.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					The following was implemented: 1) All external ambient TRS analysers were recalibrated and checked, 2) Original Equipment Manufacturers were called out to check Lime Kiln TRS analyser, 3) The Lime Kiln was shut down to check and clean the TRS Scrubber to ensure maximum circulation, 4) The Evaporator plant was shut down to fix a black liquor leak into the effluent drain, 5) A gland seal on top of the Digester was tightened, 6) Laboratory technicians drove through the community at 4 hourly intervals to monitor ambient H₂S as a precautionary measure. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible.	
8	Anonymous (Mr)	07/04/2016 06:30	Bristle Beam – Brackenham	“Very strong odour” - Complainant said it could be a heavy fuel oil or methanol odour.	Mondi RB 12/04/2016: Candice Webb responded: During this time Mondi experienced difficulty in identifying the source of the odour as both internal and external odour indicators were within specification. Process engineers together with senior management met throughout the day to trouble shoot the problem.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					The following was implemented: 1) All external ambient TRS analysers were recalibrated and checked, 2) Original Equipment Manufacturers were called out to check Lime Kiln TRS analyser, 3) The Lime Kiln was shut down to check and clean the TRS Scrubber to ensure maximum circulation, 4) The Evaporator plant was shut down to fix a black liquor leak into the effluent drain, 5) A gland seal on top of the Digester was tightened, 6) Laboratory technicians drove through the community at 4 hourly intervals to monitor ambient H₂S as a precautionary measure. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible.	
9	Anonymous (Mrs)	07/04/2016 06:30	Bristle Beam – Brackenham	"Very strong odour" - Complainant said it could be a heavy fuel oil or methanol odour.	Mondi RB 12/04/2016: Candice Webb responded: During this time Mondi experienced difficulty in identifying the source of the odour as both internal and external odour indicators were within specification. Process engineers together with senior management met throughout the day to trouble shoot the problem.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					The following was implemented: 1) All external ambient TRS analysers were recalibrated and checked, 2) Original Equipment Manufacturers were called out to check Lime Kiln TRS analyser, 3) The Lime Kiln was shut down to check and clean the TRS Scrubber to ensure maximum circulation, 4) The Evaporator plant was shut down to fix a black liquor leak into the effluent drain, 5) A gland seal on top of the Digester was tightened, 6) Laboratory technicians drove through the community at 4 hourly intervals to monitor ambient H₂S as a precautionary measure. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible.	
10	RBM Employees	07/04/2016 08:00	RBM site	"Nauseating choking smell"	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's. There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action:	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
11	R Camminga (0357860076)	07/04/2016 07:50	Brackenham Intersection	Pungent Mondi odour.	Mondi RB 12/04/2016: Candice Webb responded: During this time Mondi experienced difficulty in identifying the source of the odour as both internal and external odour indicators were within specification. Process engineers together with senior management met throughout the day to trouble shoot the problem. The following was implemented: 1) All external ambient TRS analysers were recalibrated and checked, 2) Original Equipment Manufacturers were called out to check Lime Kiln TRS analyser, 3) The Lime Kiln was shut down to check and clean the TRS Scrubber to ensure maximum circulation, 4) The Evaporator plant was shut down to fix a black liquor leak into the effluent drain, 5) A gland seal on top of the Digester was tightened, 6) Laboratory technicians drove through the community at 4 hourly intervals to monitor ambient H ₂ S as a precautionary measure. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
12	S Camminga (0357860076)	07/04/2016 18:30	33 Heideheuvel - Veldenvlei	Pungent Mondi "guava" odour" causing severe nausea. The stench has permeated throughout our home. We woke up this morning being suffocating by Mondi and are ending our day in the same position. Mondi has been notified.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
13	R Camminga (0357860076)	07/04/2016 18:30	33 Heideheuvel - Veldenvlei	Pungent Mondi "guava" odour" causing severe nausea. The stench has permeated throughout our home. We woke up this morning being suffocating by Mondi and are ending our day in the same position. Mondi has been notified.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
14	Gerrit (081 723 4221)	07/04/2016 21:00	Perinea Park – Birdswood	Very bad Mondi odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
15	S Govender 082 450 4187	08/04/2016 05:00	Pelican Parade – Birdwood	Pungent cabbage\ guava smell causing nausea and headache. Complainant described odour as a very strong cabbage \ guava odour. Complainant also stated that the odour was more pungent inside the house than outside.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold:	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
16	Mr Poole (083 280 1465)	08/04/2016 05:00	Essen wood Way – Arboretum	Pungent Mondi odour	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
17	Mrs Poole (083 280 1465)	08/04/2016 05:00	Essen wood Way – Arboretum	Pungent Mondi odour	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
18	Liz Savides (072 392 0511)	08/04/2016 06:00	Cassia Close - Arboretum	Odour causing irritation of eyes and throat.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
19	Cher Lawrence 073 244 1733	08/04/2016 07:00	Pelserplaat – Meerensee	Pungent cabbage smell was present when I arrived. Complainant described odour as a very strong cabbage odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's: There was no contravention in existing permits for point source emissions.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
20	N Redinger (082 040 5978)	08/04/2016 07:10	Vicinity of Christian School – Via Verbena Veldenvlei	“Acrid odour” - Complainant concerned for her children’s health.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit/s There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc’s that were suspected to be passing were replaced.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
21	S Govender 082 450 4187	08/04/2016 08:00	CBD – Vicinity of Civic Centre	Pungent cabbage odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
22	Mr York (035- 789 2106)	08/04/2016 08:45	Essenwood Way - Arboretum	Bad Mondi	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
23	Mrs York (035- 789 2106)	08/04/2016 08:45	Essenwood Way - Arboretum	Bad Mondi	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action:	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
24	Mr Edwards (035- 786 0430)	08/04/2016 09:00	Disa Dives – Veldenvlei	Very Bad Mondi odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit/s There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
25	RBM Employees	08/04/2016 09:00	RBM site	"Nauseating choking smell"	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
26	Mrs Edwards (035- 786 0430)	08/04/2016 09:00	Disa Dives – Veldenvlei	Very Bad Mondi odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
27	R Camminga (082 251 4969)	08/04/2016 09:10	Vicinity of Central Sports Complex	Suffocating Mondi smell	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action:	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
28	Dave Savides (072 392 0511)	08/04/2016 09:30	Arboretum and CBD	8 April, from 06h00 still present in CBD at 09h30, Pungent odour.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit/s There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
29	S Camminga (083 515 2384)	08/04/2016 10:25	33 Heideheuvel - Veldenvlei	Nauseating Mondi "guava" odour. Lasted about 10 mins and was very strong.	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April). The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
30	Ledean	9/04/2016 23:00	Jakkals Draai- Wildenweide	Hi this fire, smoke , chemical fumes are worst in jakkals draai from early morning till late morning, and in the evening this smoke ,fumes hang over jakkals draai because it's a low laying area, this smoke is every year and I'm staying here now for the last 10years , over the last 3 years it been the worst.		Resolved - Mondi Forests Peat Fire
31	Mrs De Jager (071 605 4165)	10/04/2016 19:25	Giraffevue – Wildenweide	Bad smoke and odour from fire causing chest to close up.		Resolved - Mondi Forests Peat Fire
32	Pieter	11/04/2016 06:00	Wildenweide	This complaint is related to the Ground\ Peat Fire adjacent to Wildenweide. "I am disappointed that this smog has not been resolved.		Resolved - Mondi Forests Peat Fire



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
				Fire and smoke has not dissipated for days and everyone is struggling with sinus issues. Please find a solution. "		
33	Puren Kowlassur (035-789 7884)	11/04/2016 09:50	Jakkalsdraai – Wildenweide	Significant smoke and odour from ground fire.		Resolved - Mondi Forests Peat Fire
34	S Camminga (083 515 2384)	13/04/2016 06:00	33 Heideheuwel - Veldenvlei	PUNGENT nauseating peat fire odour and choking smoke. While we appreciate the challenges surrounding this issue, to simply take a position that "it has to burn out" is no longer acceptable, especially given the significant impact this ground fire is having on the health of the surrounding community.		Resolved - Mondi Forests Peat Fire
35	R Camminga (083 515 2384)	13/04/2016 06:00	33 Heideheuwel - Veldenvlei	PUNGENT nauseating peat fire odour and choking smoke. While we appreciate the challenges surrounding this issue, to simply take a position that "it has to burn out" is no longer acceptable, especially given the significant impact this ground fire is having on the health of the surrounding community.		Resolved - Mondi Forests Peat Fire
36	Mrs Hendrikse 035-789 8235 (084 559 6320)	14/04/2016 06:00	Elephant Walk – Wildenweide	Ongoing smoke & odour from the ground fire causing coughing and burning eyes.		Resolved - Mondi Forests Peat Fire



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
37	Ester (074 877 0091)	18/04/2016 00:00	Elephant Walk – Wildenweide	Terrible smoke and smell for the past number of weeks. Complainant's husband has a severely compromised immune system and the complainant is of the view that the smoke and smell have significantly affected her husband's health to the point where last week he had to hospitalised, and was fighting for his life. The RBCAA has explained the situation regarding the Peat Fire, and invited the complainant to the public meeting being held tomorrow.		Resolved - Mondi Forests Peat Fire
38	S Camminga (083 515 2384)	20/04/2016 20:00	33 Heideheuvel - Veldenvlei	Heavy smoke and pungent peat fire odour causing nausea, sore throat and headache. Persisted into the next day.		Resolved - Mondi Forests Peat Fire
39	R Camminga (083 515 2384)	20/04/2016 20:00	33 Heideheuvel - Veldenvlei	Heavy smoke and pungent peat fire odour causing nausea, sore throat and headache. Persisted into the next day.		Resolved - Mondi Forests Peat Fire
40	Elaine de Klerk 082 448 2518	20/04/2016 20:30	Geranium Place – Veldenvlei	"Very bad thick smoke causing headache, burning eyes and sore throat".		Resolved - Mondi Forests Peat Fire
41	S Camminga (083 515 2384)	21/04/2016 00:00	Veldenvlei, Arboretum and CBD	From last night into the day, pungent peat fire odour causing nausea, sore throat and headache. The air quality is VERY POOR and is without a doubt significantly affecting our health.		Resolved - Mondi Forests Peat Fire



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
42	Jonathan (083 980 0713)	22/04/2016 19:30	Wildenweide	Odour & smoke causing burning of the nose and throat.		Resolved - Mondi Forests Peat Fire
43	Marlini (083 384 9397)	22/04/2016 20:00	Via Mammalia – Wildenweide	Odour & smoke causing nausea, headache and sinus.		Resolved - Mondi Forests Peat Fire
44	Mr Naidoo (035 789 1064)	25/04/2016 00:00	Wildenweide	For weeks there has been a bad odour and smoke, mostly in the evenings, which is affecting my asthmatic children.”		Resolved - Mondi Forests Peat Fire

General

No.	Complainant	Date and time	Location	Description	Results	Resolution
45	Lindiwe Khumalo	08/04/2016 10:25	CBD – Vicinity of Civic Centre	Mondi Unbearable Odour	Mondi RB 12/04/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit/s There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Root cause is twofold: 1) At 18h30 the evening of the 7th of April a condensate tank overflowed due to faulty level control device – the situation was rectified by 19h00, however, the condensate entered the effluent plant which is a 12 hour treatment process. This had a compounding effect on odour on Friday morning (8th of April).	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
					The faulty level control device is already on an existing maintenance programme, going forward it will be added to area operator visual check lists. 2) At 21h00 on the 7th of April, a 5 minute vent of malodorous gases occurred as the system experienced a sudden pressure increase. The Lime Kiln was shut down in order to check and clean the TRS Scrubber to ensure maximum circulation. In addition, two bursting disc's that were suspected to be passing were replaced. Mondi's engineers continue to monitor all odour indicators closely and manage any suspected odour contributors within the shortest time frame possible. Mondi regrets the impact that the odour had on the community over these two days.	
46	Gugu Gazu	4/10/16 11:30	John Ross	Mondi Unbearable Odour	Mondi RB 12/04/2016: Candice Webb responded: Mondi has identified poor effluent quality as the source of the odour. Mondi currently working on a number of projects to improve the effluent quality and control of effluent pH. We are happy to provide feedback at the next Mondi forum meeting.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F4: May Exceedance Log

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Sandy Camminga (083 515 2384)	02/05/2016 18:30	33 Heideheuvel - Veldenvlei	Noxious peat fire odour causing nausea and headache.		Resolved - Mondi Forests Peat Fire
2	Renee V D Merwe (084 549 6431)	02/05/2016 19:15	Buttercup Cord-Veldenvlei	Really bad odour causing headache.		Resolved - Mondi Forests Peat Fire
3	Rakesh (035-786 1310)	02/05/2016 19:20	Geranium Place – Veldenvlei	Noxious Odour and smoke haze. Concerned for the health of his 2 small children.		Resolved - Mondi Forests Peat Fire
4	Dave Allen	02/05/2016 00:00	Arboretum (near Boardwalk)	I've never lodged a complaint before and not sure whether there's any real point. However, in case there is, in Arboretum (near Boardwalk) there was pollution in the form of smoke for the whole of Sunday, 1 May, going into 2 May. I was trying to get over the flu. This pollution has worsened my health. I'm really so sick & tired of the frequent disgusting state of the air in Arboretum. Can anything be done?		Resolved - Mondi Forests Peat Fire
5	S Camminga (0357860076)	05/05/2016 00:00	33 Heideheuvel - Veldenvlei	From early hours of the morning a pungent peat fire odour causing nausea and headache.		Resolved - Mondi Forests Peat Fire
6	R Camminga (0357860076)	05/05/2016 00:00	33 Heideheuvel - Veldenvlei	From early hours of the morning a pungent peat fire odour causing nausea and headache.		Resolved - Mondi Forests Peat Fire



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
7	Jeanette De Bruin (079 828 4850)	05/05/2016 00:00	82 Via Verbena - Veldenvlei	Ongoing smell and smoke affecting throat, and difficulty breathing.		Resolved - Mondi Forests Peat Fire
8	Sen De Bruin (079 828 4850)	05/05/2016 00:00	82 Via Verbena - Veldenvlei	Ongoing smell and smoke affecting throat, and difficulty breathing.		Resolved - Mondi Forests Peat Fire
9	Vickash Ishwar (082 600 9615)	05/05/2016 00:00	7 Bosvlier – Arboretum	For the past 2 weeks in the evenings and mornings there has been acrid smell similar to burning rubber		Resolved - Mondi Forests Peat Fire
10	Elaine (082 448 2518)	05/05/2016 17:00	51 Geranium Place – Veldenvlei	Terrible smell and smoke causing nausea, headache and burning eyes. Child has been very ill suffering with ongoing headaches.		Resolved - Mondi Forests Peat Fire
11	S Camminga (0357860076)	05/05/2016 18:00	33 Heideheuvel - Veldenvlei	PUNGENT Peat Fire odour causing nausea and headache.		Resolved - Mondi Forests Peat Fire
12	R Camminga (0357860076)	05/05/2016 18:00	33 Heideheuvel - Veldenvlei	PUNGENT Peat Fire odour causing nausea and headache.		Resolved - Mondi Forests Peat Fire
13	S Camminga (0357860076)	06/05/2016 19:30	33 Heideheuvel - Veldenvlei	Pungent peat fire odour causing nausea. We have been exposed to the noxious emissions from this fire for the past 5 weeks. The long term exposure to the smoke and fumes has caused severe and lingering irritation of the eyes and throat.		Resolved - Mondi Forests Peat Fire
14	Tanja Arts	06/05/2016 00:00	Richards Bay	There is a horrific smell in the air, it smells like plastic mixed with who knows what that's getting burnt and it's been around the whole week, I'm 25 weeks pregnant and I'm battling to breath.		Resolved - Mondi Forests Peat Fire



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No.	Complainant	Date and time	Location	Description	Results	Resolution
				I had no sleep last night and I keep throwing up from it. I know it can't be healthy breathing that in. At first we thought it's only in Birdswood but depending on the wind direction the whole town gets it. Please this needs to be stopped, if you know which company is doing this they need to be stopped, my baby deserves clean air and I'll do anything to stop them. Thanks for your time and thanking you in advance for your response.		
15	Kevin Hall (083 5102 101)	06/05/2016 00:00	Whydah Wing – Birdswood	For weeks we have been subjected to an acrid odour causing burning sensation in the nose and tight chest. Complainant wakes up in the middle of the night unable to breathe.		Resolved - Mondi Forests Peat Fire
16	S Camminga (083 515 2384)	08/05/2016 07:40	33 Heideheuvel - Veldenvlei	Nauseating Mondi odour.	Mondi RB 13/05/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit/s: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Mondi has identified fugitive emissions from the Mondi effluent plant as the source of the odour.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
					The Mondi odour abatement task team continues to investigate options of improving the odour from our effluent plant.	
17	Anonymous	31/05/2016 15:30	N2 vicinity of Felixton	Excessive black smoke emanating from stack at Tongaat-Hulett plant. The RBCAA telephonically informed Tongaat-Hulett.	THS 28/06/2016: Zama Nkosi responded: Nature of Complaint: Complaint relayed by RBCAA: R Camminga, N2 Vicinity of Felixton, 31 May 2016, 15h35, Black stack. Source and Nature of Emissions: At 15:30 the boilers were experiencing high steam demand due to a pressure regulating valve (PRV) that was jammed in an open position. That then drained steam from the boilers which caused a drop in the master pressure thus more fuel was fed into the furnace to try and raise the master pressure. This condition created an imbalance between the fuel fed in the furnace and the air supplied to the furnace thus causing the formation of Carbon Monoxide. This resulted in a black stack. The reading was 10% on the Ringelmanns chart for 10 minutes. Compliance with Permit's: No AEL conditions were contravened. Root Cause of Incident and Corrective Action: The PRV was fixed on the run and to rectify the colour of the stack.	Resolved - Tongaathulett



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					The surge tank level containing water was increased allowing more volume of scrubbing water to trap particulate matter.	

General

No.	Complainant	Date and time	Location	Description	Results	Resolution
18	Municipality	30/05/2016 08:20	Foskor	Bad Stack.	"Foskor 9/06/2016: Mannana Ntoampe responded: 1. Nature of complaints: • S Camminga, Richards Bay CBD, 1 June, 08h05, Excessive Emissions emanating from the Foskor Plant. • S Camminga, Richards Bay CBD, 2 June, 09h50, Excessive Emissions emanating from the Foskor Plant	Resolved - Foskor
19	Gugu Gazu	31/05/2016 17:00	Foskor	Irritation of eyes, nose and respiratory system	• Photos indicated both Sulphuric and Granulation Stacks 3. Peak Concentrations of SO ₂ Emissions	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F5: June Exceedance Log

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	S Camminga	01/06/2016 08:05	Richards Bay CBD	Excessive Emissions emanating from the Foskor Plant. Photo attached	Foskor 9/06/2016: Mannana Ntoampe responded: 1. Nature of complaints: • S Camminga, Richards Bay CBD, 1 June, 08h05, Excessive Emissions emanating from the Foskor Plant. • S Camminga, Richards Bay CBD, 2 June, 09h50, Excessive Emissions emanating from the Foskor Plant • Photos indicated both Sulphuric and Granulation Stacks 3. Peak Concentrations of SO₂ Emissions • The highest SO₂ emissions of 321 and 358 ppm were recorded for C Plant Stack On 01 and 02 June respectively, these were however within permit limits. 4. Compliance with Permits: • There was no contravention in existing permits. 5. Root Cause of Incident and Corrective Action Sulphuric Acid Plant: New ceramics were loaded in the final tower as part of refurbishment for A Plant. During the loading of ceramics, some debris were formed which in turn affects acid distribution on the peripheral of the tower. The debris is washed away and removed automatically as the plant continues to run. On 06 June A Plant was stopped to clean the troughs and down comers of the Final Absorption Tower.	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Foskor operators and engineers will continue to closely monitor A plant operating conditions. B Plant is operating normally. Granulation Plant: The stack emissions observed was a result of blocked stack drain. The stack was washed using minimal amount of water and the washing was repeated again on the 2 June. It should be noted that the emissions observed is the water vapour generated during the reaction process resulting in evaporation of excess water from the phosphoric acid which is used in manufacturing of Granular fertilizer. The vapour turns 'darker' when the stack drain is blocked. It should also be noted that the stack cleaning will be done in balance with emissions and water usage. Granulation Plant has three scrubbers that are always operational and there is an interlock to trip the plant if one of the scrubbers is not operating efficiently.	
2	S Camminga	02/06/2016 09:50	Richards Bay CBD	Excessive Emissions emanating from the Foskor Plant. Photo attached	Foskor 9/06/2016: Mannana Ntoampe responded: 1. Nature of complaints: • S Camminga, Richards Bay CBD, 1 June, 08h05, Excessive Emissions emanating from the Foskor Plant. • S Camminga, Richards Bay CBD, 2 June, 09h50,	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Excessive Emissions emanating from the Foskor Plant • Photos indicated both Sulphuric and Granulation Stacks 3. Peak Concentrations of SO₂ Emissions • The highest SO₂ emissions of 321 and 358 ppm were recorded for C Plant Stack On 01 and 02 June respectively, these were however within permit limits. 4. Compliance with Permits: • There was no contravention in existing permits. 5. Root Cause of Incident and Corrective Action Sulphuric Acid Plant: New ceramics were loaded in the final tower as part of refurbishment for A Plant. During the loading of ceramics, some debris were formed which in turn affects acid distribution on the peripheral of the tower. The debris is washed away and removed automatically as the plant continues to run. On 06 June A Plant was stopped to clean the troughs and down comers of the Final Absorption Tower Foskor operators and engineers will continue to closely monitor A plant operating conditions. B Plant is operating normally. Granulation Plant: The stack emissions observed was a result of blocked stack drain. The stack was washed using minimal amount of water and the washing was repeated again on the 2 June.	



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					It should be noted that the emissions observed is the water vapour generated during the reaction process resulting in evaporation of excess water from the phosphoric acid which is used in manufacturing of Granular fertilizer. The vapour turns 'darker' when the stack drain is blocked. It should also be noted that the stack cleaning will be done in balance with emissions and water usage. Granulation Plant has three scrubbers that are always operational and there is an interlock to trip the plant if one of the scrubbers is not operating efficiently.	
3	Dave Savides (072 392 0511)	05/06/2016 22:00	Cassia Close – Arboretum Extension	Pungent Foshkor odour causing burning of the eyes, nose and throat.	Foshkor 9/06/2016: Mannana Ntoampe responded: 1. Nature of the complaint: Liz & Dave Savides (072 392 0511) , Cassia Close – Arboretum Extension, 5 June from 22h00, Pungent Foshkor odour causing burning of the eyes, nose and throat. 2. Source and Nature of Emissions: 3. Peak Concentrations of SO ₂ Emissions • The highest SO ₂ emissions of 387 ppm were recorded for C Plant Stack, these were however within permit limits. 4. Compliance with Permit's: There was no contravention in existing permits. Root Cause and Corrective Actions: • No root cause identified,	Resolved - Foshkor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					• There were no gas leaks reported during this period, • There were no start-ups at the time: Based on wind direction Foskop did impact Arboretum Extension at the time.	
4	Liz Savides (072 392 0511)	05/06/2016 22:00	Cassia Close – Arboretum Extension	Pungent Foskop odour causing burning of the eyes, nose and throat.	Foskop 9/06/2016: Mannana Ntoampe responded: 1. Nature of the complaint: Liz & Dave Savides (072 392 0511) , Cassia Close – Arboretum Extension, 5 June from 22h00, Pungent Foskop odour causing burning of the eyes, nose and throat. 2. Source and Nature of Emissions: 3. Peak Concentrations of SO₂ Emissions • The highest SO₂ emissions of 387 ppm were recorded for C Plant Stack, these were however within permit limits. 4. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Actions: • No root cause identified, • There were no gas leaks reported during this period, • There were no start-ups at the time: Based on wind direction Foskop did impact Arboretum Extension at the time.	Resolved - Foskop
5	S Camminga	06/06/2016 08:30	Richards Bay CBD	Abnormal Emissions emanating from the Foskop Plant. Photo attached	Foskop 9/06/2016: Mannana Ntoampe responded: 1. Nature of complaints: S Camminga, Richards Bay CBD, 6 June, 08h30, Abnormal Emissions emanating from Foskop. 2.	Resolved - Foskop



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Source and Nature of Emissions: 3. Peak Concentrations of SO₂ Emissions • The highest SO₂ emissions of 357 ppm were recorded for C Plant Stack, these were however within permit limits. 4. Compliance with Permit's: • There was no contravention in existing permits. 5. Root Cause of Incident and Corrective Action: New ceramics were loaded in the Final Tower as part of refurbishment for A Plant. During the loading of ceramics, some debris were formed which in turn affect acid is distribution on the peripheral of the tower. The debris is washed away and removed automatically as the plant continues to run. On 06 June, A Plant was stopped to clean the troughs of the Final Absorption Tower. Foscort operators and engineers will continue to closely monitor A plant operating conditions. B Plant is operating normally.	
6	R Camminga (083 251 4969)	06/06/2016 08:40	Port of Richards Bay	Pungent Mondi "cabbage" Odour.	Mondi RB 7/06/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's: Mondi has identified the Lime Kiln as the source of the odour.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Washing efficiency on the lime mud filter decreased resulting in an increase in TRS from the lime kiln stack. In order to prevent a reoccurrence a decision has been made to stop the lime mud filter for washing every three days. This appears to be the optimum run period before washing efficiency drops to levels that place us at risk for increased TRS.	
7	Anonymous	24/06/2016 08:40	eSikhaleni Hostels	IMPROPER REMOVAL AND DISPOSAL OF ASBESTOS SHEETING AT VARIOUS HOSTELS IN ESIKHALENI The complainant alleges the following; 1. The Asbestos sheets being removed from the Hostel Roofs are not being removed and disposed of according to legal requirements. 2. The premises have not been vacated – people are still resident on the premises. 3. The Contractor's workforce are not wearing any form of PEE (Personal Protection Equipment), as prescribed by the law. 4. Residents are moving around the area where work is taking place. 5. Children are playing around the asbestos.		Unresolved



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
				6. Asbestos sheets that are not broken are being allowed to be removed by members of the community for their personal use. 7. Broken asbestos sheets are being removed and dumped in the bush in the eSikhaleni area. 8. According to a reliable source close to the main contractor, the legal requirements are not being adhered to because it is a rural area and the community don't know that the removal should be done in a specific way. So the community doesn't know how dangerous asbestos is to human health, so they won't complain. 9. Only a registered company issued with a certificate may undertake work where the handling of asbestos products forms part of the work, and the asbestos has to be disposed of at a certified dumping site and a certificate to this effect issued. Given the manner in which the asbestos is being removed and disposed of it would appear that the contractor does not hold such a certificate, or has elected to ignore legal requirements. The above allegations have very serious implications for the health of eSikhaleni residents and the receiving environment.		



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
				Please could your department investigate as a matter of urgency?		

General

No.	Complainant	Date and Time	Location	Description	Results	Resolution
8	Gugu Gazu	01/06/2016 12:00	Foskor	Irritation of, eyes, nose and respiratory system	Foskor 10/06/2016: Mannana Ntoampe responded: 1. Nature of complaint: • Irritation of eyes, nose and respiratory system – 01 June, Source and Nature of Emissions SO ₂ data and wind direction. Peak Concentrations of SO ₂ Emissions The highest SO ₂ emissions of 383 and 303 ppm were recorded for the Main Stack on 31 may and 01 June respectively, these were within permit limits. Compliance with Permits • There was no contravention in existing permits. 3. Root Cause and Corrective Actions 01 June 2016 • A Plant was stopped between 13:40 and 19:45 to unblock the troughs and down comers of the Final Absorption Tower • Wind direction was towards the Harbour/Bayside In both days, the wind was predominantly blowing in the North Easterly/ North North Westerly direction and could not have impacted the CBD/Arboretum area.	Unresolved



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
9	City of uMhlathuze Air Quality Management Employee	02/06/2016 12:00	CBD	Mondi Unbearable Odour	Mondi RB 3/06/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permits: There was no contravention in existing permits limits for point source emissions. Root Cause of Incident and Corrective Action: Mondi has investigated and identified fugitive emissions from the Mondi effluent plant as the source of the odour. The Mondi Odour Abatement Task Team is working on several projects to improve the odour from the effluent plant. Should you require any additional information, please don't hesitate to contact me.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F6: July Exceedance Log

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	02/07/2016 22:00	33 Heideheuvel - Veldenvlei	Pungent Mondi odour.	Mondi RB 6/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified a leak on the Soft Wood Non-Condensable Gas line as the source of the odour. The soft wood line was stopped, and the leak temporarily repaired on Sunday the 3rd of July. A permanent repair was undertaken during the Mil outage on Tuesday 5th of July.	Resolved - Mondi Richards Bay
2	R Camminga (0357860076)	02/07/2016 22:00	33 Heideheuvel - Veldenvlei	Pungent Mondi odour.	Mondi RB 6/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified a leak on the Soft Wood Non-Condensable Gas line as the source of the odour. The soft wood line was stopped, and the leak temporarily repaired on Sunday the 3rd of July. A permanent repair was undertaken during the Mil outage on Tuesday 5th of July.	Resolved - Mondi Richards Bay
3	S Camminga (0357860076)	03/07/2016 10:10	33 Heideheuvel - Veldenvlei	Pungent Mondi odour.	Mondi RB 6/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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:	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Mondi identified a leak on the Soft Wood Non-Condensable Gas line as the source of the odour. The soft wood line was stopped, and the leak temporarily repaired on Sunday the 3rd of July. A permanent repair was undertaken during the Mil outage on Tuesday 5th of July.	
4	R Camminga (0357860076)	03/07/2016 10:10	33 Heideheuvel - Veldenvlei	Pungent Mondi odour.	Mondi RB 6/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified a leak on the Soft Wood Non-Condensable Gas line as the source of the odour. The soft wood line was stopped, and the leak temporarily repaired on Sunday the 3rd of July. A permanent repair was undertaken during the Mil outage on Tuesday 5th of July.	Resolved - Mondi Richards Bay
5	R Camminga (0357860076)	05/07/2016 07:50	John Ross Highway vicinity of Mondi	Pungent Mondi "Guava" odour.	Mondi RB 6/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified fugitive emissions during shut down conditions as the source of the odour.	Resolved - Mondi Richards Bay
6	S Camminga (0357860076)	05/07/2016 08:55	Richards Bay CBD	Excessive emissions emanating from Foskor A\B Stack. Foskor was notified at the time.	Foskor 07/07/2016: Mannana Ntoampe responded: 1. Nature of complaints: S Camminga, Richards Bay CBD, 5 July, 08h55, Excessive emissions emanating from Foskor A\B Stack, Source and Nature of Emissions : Peak Concentrations of SO ₂ Emissions :he highest SO ₂ emissions of 280 ppm were recorded for the main Stack, these were within permit limits.	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Compliance with Permit's: • There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Some debris on the spouts /down corners of Final Tower troughs were noticed during cleaning on 5 July. This affects acid distribution on the peripheral of the tower. A Plant operational rates were reduced to clean the troughs on line. As the plant continues to run the debris should be 'washed' out. Foscok operators and engineers will continue to closely monitor the main stack especially 'A' Plant Tower. B Plant is operating normally and C Plant is on 'heat-up' in preparation for start-up.	
7	Steve Woods (079 446 0090)	06/07/2016 12:00	Nseleni	Mondi odour causing severe headache.	Mondi RB 11/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permit's : There were no exceedance of Mondi's TRS Air Emission Licence limits during this time.: Root Cause of Incident and Corrective Action: Mondi identified the source of the odour as venting of malodours gases to atmosphere during start-up of the mill after a planned outage. Mondi is in the process of running an investigation into the cause of the venting.	Resolved - Mondi Richards Bay
8	S Camminga (0357860076)	06/07/2016 16:30	33 Heideheuvel - Veldenvlei	Pungent Foscok odour causing irritation of the eyes and throat.	Foscok 13/07/2016: Mannana Ntoampe responded: Nature of the complaint: Pungent Foscok odour causing irritation of the eyes and throat. Source and Nature of Emissions: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 415 ppm were recorded for the main Stack, these were however within permit limits. Compliance with Permit's: There was no contravention in existing permits. Root Cause and Corrective Actions: No Root cause identified, No gas leaks reported at the time, "C' Plant was still on a heat-up at the time. Based on wind direction Foscok could have impacted Heideheuvel – Veldenvlei at the time.	Resolved - Foscok



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
9	Anonymous	07/07/2016 08:40	N2 between Felixton and Engen garage	Bad Odour.	Mpact 14/07/2016: Siyabonga Buthelezi responded: - Complaint Details: Anonymous, N2 between Felixton and Engen garage, 7 July, 08h40, Bad Odour. - Source and Nature of Emissions: The mill was on total shut over the period 4th - 12th July 2016. Based on this, the mill is unlikely the source of Bad Odour complaint logged 7th July 2016 - Non-Compliance with Permit's: None identified. - Root Cause of Incident and Corrective Action: None identified.	Unresolved
10	R Camminga (0357860076)	07/07/2016 09:40	Richards Bay CBD	Abnormal emissions emanating from the Foskor Plant (photo attached).	Foskor 13/07/2016: Mannana Ntoampe responded: Nature of complaint: Abnormal emissions emanating from the Foskor Plant. Source and Nature of Emissions: Peak Concentrations of SO₂ Emissions The highest SO₂ emissions of 242 ppm were recorded for the main Stack, these were within permit limits. Compliance with Permit's: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: A Plant had been off since December 2015 due to Tower collapse. As part of refurbishment, the new ceramics had to be loaded in the Tower. During the loading of ceramics, some debris formed which in turn affect acid is distribution on the peripheral of the tower. Most of the debris had been washed out of the 'System' prior to the incident however on the 07 July it was noticed that there were remains of the debris in other areas of the tower (especially the corners of the troughs). As the plant continues to run the debris should be 'washed' out. Foskor operators and engineers will continue to closely monitor the main stack especially 'A' Plant Tower... B Plant was operating normally and C Plant was on 'heat-up' in preparation for start-up on the day.	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
11	S Camminga (0357860076)	07/07/2016 12:10	33 Heideheuvel - Veldenvlei	Nauseating Mondi odour	Mondi RB 11/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified the source of the odour as venting of malodours gases to atmosphere during start-up of the mill after a planned outage. Mondi is in the process of running an investigation into the cause of the venting.	Resolved - Mondi Richards Bay
12	Anonymous,	09/07/2016 08:45	N2 in the vicinity of the Felixton	Excessive emissions emanating from the Tongaat Hulett Mill in Felixton. (photos attached) Tongaat Hulett was notified on receipt of the complaint, and a prompt response was received. Tongaat Hulett is kindly requested to formalise their response to the RBCAA	THS 18/08/2016: Nicolas Govender: Nature of Complaint: • Anonymous, N2 in the vicinity of the Felixton, 9 July, 08h45, Excessive emissions emanating from the Tongaat Hulett Mill in Felixton. Source and Nature of Emissions: • Black emission was from boiler 3; this was due to the usage of coal which resulted in boiler 3 tripping. Compliance with Permit's: No AEL conditions were contravened. 3. Root Cause of Incident and Corrective Action • At approximately 06h00 on Saturday 09 July 2016, Extraction Department lost all comms to their control systems which resulted in the entire crushing operation coming to a halt. This affected the constant feed of Bagasse as fuel to the boilers. Boiler operations resorted to retrieve Bagasse from the shed which resulted in excess Bagasse being feed onto a belt which caused a major choke, the choke occurred at approximately 07h45. The choke stopped feed of Bagasse to the boilers and shortly after the boiler tripped. The boiler thereafter had to come up again with only the use of coal therefore dark stacks was noticed for a short period of time.	Resolved - Tongaathulett



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					- The comms was addressed and reset. The choke was cleared and a constant flow of Bagasse was available by 09h15. Normal operations resumed at 09h30. - Notification was sent at 07h38 to UThungulu and uMhlathuze stating that abnormal conditions were experienced during this time. Sandy Camminga will be included in the notification process in the future.	
13	S Camminga (0357860076)	13/07/2016 09:45	33 Heideheuvel - Veldenvlei	Mondi Odour.	Mondi RB 18/07/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 has identified instability in the Non Condensable Gas Line as the source of the odour. The Odour Abatement Task Team are investigating this instability as their main priority. Feedback from the investigation will be provided to the RBCAA at the MANCO Meeting on Thursday.	Resolved - Mondi Richards Bay
14	Annelize Phyffer (076 124 0357)	29/07/2016 19:30	Loerie Park – Olienhoutkoppi e, Arboretum	"Rotten Smell" causing tight chest and coughing, and had to close doors. Complainant is an asthmatic.	Mondi RB 05/08/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified an effluent pH dip as the source of the odour. Mondi currently has an effluent line out of service for maintenance purposes, this has created difficulty in fine control of effluent pH. The effluent line is expected to be back in service by 11 August 2016. Mondi will continue to manage effluent pH to the best of our ability until such time as the line is back in service.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and Time	Location	Description	Results	Resolution
15	S Camminga (0357860076)	30/07/2016 09:10	33 Heideheuvel - Veldenvlei	Pungent Mondi odour. (Mondi were notified at the time)	Mondi RB 05/08/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified an effluent pH dip as the source of the odour. Mondi currently has an effluent line out of service for maintenance purposes, this has created difficulty in fine control of effluent pH. The effluent line is expected to be back in service by 11 August 2016. Mondi will continue to manage effluent pH to the best of our ability until such time as the line is back in service.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F7: August Exceedance Log

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	2/08/2016 08:40	Richards Bay CBD	Excessive emissions emanating from Mondi stack.	Mondi RB 17/08/2016: Candice Webb responded: Source and Nature of Emissions: Mondi has identified the Power Boiler as the source of the emissions. Peak and Average Ambient Concentrations of PM Emissions: Compliance with Permits: No contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Investigation identified that the Power Boiler 1 cyclones were partially blocked, consequently the boiler was shut down to clear the cyclones and repair the cyclone casing.	Resolved - Mondi Richards Bay
2	Andia Pienaar 083 501 7317	16/08/2016 06:38	Arboretum	Pungent odour causing tight chest and headache.	Mondi RB 17/08/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permits There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action: Mondi has investigated and found all known odour sources to be within specification. However, based on weather conditions it is possible that fugitive odour from our effluent plant may have been the source of the odour. Mondi is working on a number of projects which will assist in reducing odour emissions from our effluent plant. Mondi will continue to report progress on these projects to the RBCAA. Foskor 17/08/2016: Mannana Ntoampe responded: The wind direction was dominantly towards Meerensee during this time and it's unlikely that Foskor could have impacted Arboretum	Resolved - Mondi Richards Bay
3	JD Carstens 082 743 5620	23/08/2016 06:27	2 Kiaatkim – Arboretum	"Acidic\pungent odour again in Arboretum this morning. Symptoms include tight chest, upper respiratory irritation and breathing	Foskor 26/08/2016: Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 356 ppm were recorded for the main Stack, these were within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: As part of the investigation, all possible causes were looked at. This included: Mondi Effluent pH which results in H ₂ S production if the pH is above 9.	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
				difficulties. Overwhelming smell"	During this period, the maximum pH recorded was 7.5.Deviations in process parameters. All parameters were within specification as per plant design, Gas leaks from the Sulphuric Acid Plant. None were reported during this period, Excessive SO ₂ stack emissions. The point source emissions were within limits No root cause identified however the melter section was fully operational at the time and there could have been fumes emitted, The pungent odour could have also been a result of temperature inversions due to current weather conditions.	
4	Dave Savides 072 392 0511	23/08/2016 00:00	Cassia Close – Arboretum Extension	"Pungent Foskop odour causing burning of nasal passages"	Foskop 26/08/2016: Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 356 ppm were recorded for the main Stack, these were within permit limits. Compliance with Permit's: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: As part of the investigation, all possible causes were looked at. This included: Mondi Effluent pH which results in H ₂ S production if the pH is above 9. During this period, the maximum pH recorded was 7.5.Deviations in process parameters. All parameters were within specification as per plant design, Gas leaks from the Sulphuric Acid Plant. None were reported during this period, Excessive SO ₂ stack emissions. The point source emissions were within limits No root cause identified however the melter section was fully operational at the time and there could have been fumes emitted, The pungent odour could have also been a result of temperature inversions due to current weather conditions.	Resolved - Foskop
5	Liz Savides 072 392 0511	23/08/2016 00:00	Cassia Close – Arboretum Extension	"Pungent Foskop odour causing burning of nasal passages"	Foskop 26/08/2016: Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 356 ppm were recorded for the main Stack, these were within permit limits. Compliance with Permit's: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: As part of the investigation, all possible causes were looked at. This included: Mondi Effluent pH which results in H ₂ S production if the pH is above 9. During this period, the maximum pH recorded was 7.5.Deviations in process parameters. All parameters were within	Resolved - Foskop



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
					specification as per plant design, Gas leaks from the Sulphuric Acid Plant. None were reported during this period, Excessive SO ₂ stack emissions. The point source emissions were within limits No root cause identified however the melter section was fully operational at the time and there could have been fumes emitted, The pungent odour could have also been a result of temperature inversions due to current weather conditions.	
6	Diana van Niekerk 084 510 1277	23/08/2016 10:10	Kiaatkim – Arboretum	“The acidic \ pungent odour in Kiaatkim \ Essenwood area is unbearable and causes tremendous harm to the health of residents, especially young children, being admitted to hospital on a frequent basis, upper respiratory irritation and breathing problems and eventually permanent lung damage. PLEASE help stop this problem!!”	Foskor 26/08/2016: Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO ₂ Emissions: The highest SO ₂ emissions of 356 ppm were recorded for the main Stack, these were within permit limits. Compliance with Permit/s: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: As part of the investigation, all possible causes were looked at. This included: Mondi Effluent pH which results in H ₂ S production if the pH is above 9. During this period, the maximum pH recorded was 7.5. Deviations in process parameters. All parameters were within specification as per plant design, Gas leaks from the Sulphuric Acid Plant. None were reported during this period, Excessive SO ₂ stack emissions. The point source emissions were within limits No root cause identified however the melter section was fully operational at the time and there could have been fumes emitted, The pungent odour could have also been a result of temperature inversions due to current weather conditions.	Resolved - Foskor

Table F8: September Exceedance Log



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	Dinesh Maharaj 0834406675	6/09/2016 09:30	19 Coral Coppice Arboretum	Strong smell of industrial air pollution in arboretum	Mondi RB 09/09/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction and low levels of ambient TRS, it is unlikely that Mondi is the source of odour. 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 has investigated and found all known odour sources to be within specification. Foskor 09/09/2016: Mannana Ntoampe responded: Source and Nature of Emissions • The wind direction was predominantly towards Arboretum consequently Foskor could have impacted Arboretum at the time. Peak Concentrations of SO₂ Emissions: • The highest SO₂ emissions of 35 ppm were recorded for C Plant, these were however within permit limits. Compliance with Permit's • There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: • A gas leak was reported at Sulphuric Acid 'A' Plant Burner Outlet during that time and this could have been the source • The leak was repaired on line	Resolved - Foskor
2	June (082 731 3280)	9/09/2016 05:30	Nseleni	"Horrible smell". The RBCAA has contacted the complainant who has described the odour as a "sewage type smell".	Mondi RB 12/09/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is unlikely that Mondi is the source of odour. 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 has investigated and found all known odour sources to be within specification.	Unresolved



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
3	D Savides 072 392 0511	9/09/2016 11:40	John Ross Highway Vicinity of Grindrod Stockpiles	Significant Black dust emanating from Grindrod stockpiles opposite Hillside. Grindrod was notified.	Grindrod Terminals 13/09/2016: CJ Lotz responded: On the date in question we experienced very high winds in the R Bay area. The significant black clouds of dust that was seen emanating from the RBT Grindrod stockpiles was due to Coal that was being loaded /off loaded at our Navitrade Site opposite Hillside. The product was abnormally dry and all suppression systems was fully operational which is not always effective. The majority of dust actually emanates from the roads and not from the stockpiles. Due to water crisis the roads are not wetted for dust suppression. We do harvest water for dust suppression but the reservoir was depleted at the time and it is brought to our attention that the SO4 levels was increasing by using grey water. I trust you will find the above in order and should you require any additional info please do not hesitate to contact the undersigned.	Resolved - Grindrod
4	Andia Pienaar (083 501 7317)	14/09/2016 06:40	9 Kiaatkim – Arboretum	“Extremely strong cabbage smell experienced in Arboretum @ 06h40 this morning. Symptoms: sneezing, coughing & difficulty breathing.” Mondi was notified on receipt of the complaint.	Mondi RB 15/09/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 identified fugitive emissions from the Mondi effluent plant as the source of the odour. Mondi is working on a number of projects which will assist in reducing odour emissions from our effluent plant. A progress report on the projects will be provided at the next RBCAA MANCO meeting.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
5	R Camminga (083 251 4969)	18/09/2016 22:30	33 Heideheuvel - Veldenvlei	Nauseating Mondi Guava Odour.	Mondi RB 21/09/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 has investigated and found all known odour sources to be within specification. However, based on weather direction and weather conditions at the time, it is possible that fugitive odour from our effluent plant may have been the source of the odour.	Resolved - Mondi Richards Bay
6	S Camminga (083 251 4969)	20/09/2016 10:55	ZCBF vicinity of Hillside Plant (South 32)	Significant Alumina dust emissions emanating from Hillside (South 32). (photo attached) Conveyors looked like they were covered in snow.	South 32 21/09/2016: Allison Gerber responded: Source and nature of emissions: Fugitive dust emissions from potroom C roof vents. Root Cause identified: There was pot cut out at C137 and busbar cleaning was taking place. Corrective Action: This activity takes place during pot cut out and is part of normal operations. Hillside will monitor the fugitive dust emissions at the next pot cut out.	Resolved - South 32 (Hillside)



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F9: October Exceedance Log

No.	Complainant	Date and Time	Location	Description	Results	Resolution
1	S Camminga (083 251 4969)	02/10/2016 17:25	33 Heideheuvel - Veldenvlei	Pungent Foskop odour causing burning sensation of eyes and nose. Complaint reported to Foskop at the time.	Foskop 04/10/2016: Mannana Ntoampe responded: Peak Concentrations: • The highest SO ₂ emissions of 309 ppm were recorded for 'C' Plant, these were within stipulated AEL limits. Compliance with Permits: • There was no contravention in existing permits. Root Cause of Incident and Corrective Action: • No root identified. • There were no gas leaks reported during this period, • There were no Sulphuric Acid Plant start-ups, • Both Granulation and Phosphoric Acid Plants were operating normally. Based on wind direction, it is likely that Foskop impacted Heideheuvel – Veldenvlei at the time.	Resolved - Foskop
2	Damian van Loggerenberg (082 725 8730)	03/10/2016 20:25	44 Arum Lily – Veldenvlei	Pungent Mondi Odour. Mondi was notified.	Mondi RB 05/10/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. Compliance with Permits: There were no exceedance of Mondi's Air Emission Licence limits during this time. Root Cause of Incident and Corrective Action: Mondi has investigated and identified poor quality effluent in Mondi's effluent plant due to annual shut down conditions as the source of the odour.	Resolved - Mondi Richards Bay
3	Daryl (076 013 1788 or 035 – 797 4069)	11/10/2016 13:15	Adonai Projects – 25 Karbelkring Alton	Significant dust emanating from sand blasting activities at an adjacent premises, resulting in significant dust which is affecting the health of employees at Adonia Projects.	The City of uMhlathuze Air quality Management Unit investigated the sandblasting complaint and telephonically reported that they visited the company (name not given), and issued a directive for the company to comply.	Resolved - Unknown



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
				Complainant alleges that this has been going on for 2 months.		
4	Anonymous	13/10/2016 07:00 & 13/10/2016 16:10	Vicinity of Clariant chemical plant in Alton	"Huge clouds of yellow smoke coming out of the stacks at Clariant Chemical Company" Clariant has been informed.	Clariant 21/10/2016: FJ du Toit responded: Root Cause: Power dips in the Municipal electrical supply caused the calciner off gas incinerator to shut down. Cause Explanation: power dips in the municipal electrical supply caused the incinerator to shut down. The power dip was too short to activate our emergency power supply. The incinerator had to be re-started in a controlled way to prevent proceed hazards. During the emission The NOx emission level from the stack was monitored. Normal NOx emissions runs at 270 mg/m³, while NOx emissions during the complaint were running at 313 mg/m³. The normal ratio of NOx emissions is 25:75 on NO (colourless): NO₂ (brown). The incident caused a shift in equilibrium in this ratio to 15:85. The higher NO₂ content in the off gas then caused a brown discolouration of the off gas from the exhaust stack. The manufacturing process at the Richards Bay site is not a scheduled process as determined by the Air Quality ACT (Act No 39 of 2004) and the site has received an emission exemption. Our process is not categorized in the listed activities for this Act. Our NOx emissions during the reported incident did not create a significantly increased risk to our neighbours or the environment. Although our process is not categorized, our NOx emissions were well below the limits for processes that are categorized in our area or which have got activities similar to our process as mentioned below. Mitigation: Due to the fact that NOX emission did not increase excessively during the incident mitigation will be limited to monitoring of frequency of incinerator trips and to investigate means of limiting the effect of power dips on our calciner incinerators.	Resolved - Clariant



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
5	Dave Savides (072 392 0511)	17/10/2016 07:05	Cassia Close – Arboretum Ext	“Strong Foskop smell causing burning of the eyes, nose and throat.”	Foskop 20/10/2016: Mannana Ntoampe responded: 3. Peak Concentrations: The highest SO ₂ emissions of 325 ppm were recorded for ‘C’ Plant, these were within stipulated AEL limits. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: The Buoyant effluent used to slurry the Gypsum had high sulphide content which favoured hydrogen Sulphide (H ₂ S) production. The Phosphoric Acid Plant was stopped and is still not operational. Currently arrangements are being made for use of sea water as an alternative to slurry the Gypsum. Based on wind direction, it is likely that Foskop impacted Arboretum at the time.	Resolved - Foskop
6	Liz Savides (072 392 0511)	17/10/2016 07:05	Cassia Close – Arboretum Ext	“Strong Foskop smell causing burning of the eyes, nose and throat.”	Foskop 20/10/2016: Mannana Ntoampe responded: 3. Peak Concentrations: The highest SO ₂ emissions of 325 ppm were recorded for ‘C’ Plant, these were within stipulated AEL limits. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: The Buoyant effluent used to slurry the Gypsum had high sulphide content which favoured hydrogen Sulphide (H ₂ S) production. The Phosphoric Acid Plant was stopped and is still not operational. Currently arrangements are being made for use of sea water as an alternative to slurry the Gypsum. Based on wind direction, it is likely that Foskop impacted Arboretum at the time.	Resolved - Foskop
7	S Camminga (083 251 4969)	18/10/2016 12:05	Alton	Clouds of yellow smoke emanating from the CLARIANT Chemical Plant in Alton.	Clariant 21/10/2016: FJ du Toit responded: Root Cause: Failure of calciner door seal during calcination of final product in a box calciner. Cause Explanation: The seal on the door that is used for loading of product into the calciner failed during the high temperature phase of calcination of our final product. The failure occurred due to normal wear of the door seal during operation. Inspection prior to start up did not provide evidence that seal failure could occur. During the failure the NO _x produced inside the calciner at high temperature escaped into the production hall without going through an incinerator.	Resolved - Clariant



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
					Due to the lower temperature inside the production hall it caused a shift in equilibrium in the NO _x emissions resulting in a higher NO ₂ content in the escaped gas which then caused a brown discolouration of the gas. This brown gas then escaped through the roof vent. Production personnel intervened in that calcination process and stopped the emissions. A maintenance notification was loaded to repair the door seal. Mitigation: repaired door seal and seal inspection to be conducted prior to each run.	
8	Anonymous	1810/2016 00:00 past 2-3 months	Felixton Village	"The level of ongoing air pollution from the Mpact plant is of huge concern. Early mornings are the worst concentration. We are also concerned with the fact that the school is within these bounds. We are aware that there are expansion projects on the go as well - how would this impact the air quality." The attached photograph was taken a couple of days ago.	Mpact 29/10/2016: Maggy Odayar responded: Mpact have conducted investigations for the "Pollution Complaint" and hereby reject the complaint. Preliminary Root Cause Investigation: The "haze" that is made reference to is due to temperature difference of hot air being released into the atmosphere from the paper machine building by extraction fans. This is most visible during the mornings during low temperatures and when there is fog / mist present. The hot air does not contribute to air pollution. There is no "Sulphur Odour" found to be emanating from Mpact. Sulphur is not used in the papermaking process at Mpact unlike in the Kraft Mills. The level of sulphur in Coal is very low and is closely monitored. Based on the wind direction from the area photographed, between 2am and 6am on the 27th of October, Mpact is unlikely to contribute to the odour observed. Furthermore, the SO₂ readings at the Felixton College monitoring station were well below the permissible levels during the above time. A more detailed investigation report will follow. We would like to take the opportunity to state that we are deeply concerned about the accusation making reference to "the level of ongoing pollution" from Mpact as we pride ourselves in ensuring we comply with Environmental regulations. We endeavour steadfastly to continue to comply. RBCAA 29/10/2016 Responded : Based on the wind direction from the area photographed, between 2am and 6am on the 27th of October, Mpact is unlikely to contribute to the odour observed.	Unresolved



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and Time	Location	Description	Results	Resolution
				I have had discussions with the complainant who says that the haze is a regular occurrence accompanied by a "sulphur" type odour.	Furthermore, the SO ₂ readings at the Felixton College monitoring station were well below the permissible levels during the above time." - The photograph was not taken on the 27th. As stated in the complaint "The attached photograph was taken a couple of days ago." Mpact's findings in this regard are therefore not accepted. 2. The odour was described as a "sulphur type" odour – which leaves it open to a certain amount of interpretation. I have requested the complainant to immediately contact me the next time they experience the same situation. The RBCAA believes that the complainant's concerns regarding the deterioration of air quality have merit.	



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F10: November Exceedance Log

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Daryl (076 013 1788 or 035 – 797 4069)	1/11/2016	Adonai Projects – 25 Karbelkring Alton	Significant dust emanating from sand blasting activities at an adjacent premises, resulting in significant dust. The problem has got worse since first reported on 11 October and is having a significant impact on the complainant's business and the health of employees.	RBCAA 08/12/2016 Sandy Camminga responded: Despite having requested a formal response the CoU has not responded. They have however informed me verbally that they have visited the site and issued the responsible company with a notice.	Resolved - uMhlathuze Municipality
2	Anonymous	25/11/2016 08:30	Medway Road, Port of Richards Bay	Clouds of black dust emanating from activities within the Port of Richards Bay.	RBCAA 08/12/2016 Sandy Camminga responded: Despite repeated requests from the RBCAA TPT failed to respond. TPT 14/12/2016 Nokuthula Mthembu responded: The root cause for this incident was that “while loading at Berth 705 with Sandvik Loader the Cleveland Dust Chute snapped inside hatch 3”. This then resulted to dust during loading. As an immediate control loading was reduced from 900t/hr to 600t/hr to minimise dust. The matter is being further investigated and corrective action plan has been developed by the Technical Team to avoid recurrence.	Resolved - Port of Richards Bay
3	Anonymous	25/11/2016 08:37	Port of Richards Bay	“black dust which is blowing into our offices”	RBCAA 08/12/2016 Sandy Camminga responded: Despite repeated requests from the RBCAA TPT failed to respond. TPT 14/12/2016 Nokuthula Mthembu responded: The root cause for this incident was that “while loading at Berth 705 with Sandvik Loader the Cleveland Dust Chute snapped inside hatch 3”. This then resulted to dust during loading. As an immediate control loading was reduced from 900 t/hr to 600 t/hr to minimise dust.	Resolved - Port of Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
					The matter is being further investigated and corrective action plan has been developed by the Technical Team to avoid recurrence.	
4	Anonymous	26/11/2016 08:45	Port of Richards Bay	"high levels of black dust"	RBCAA 08/12/2016 Sandy Camminga responded: Despite repeated requests from the RBCAA TPT failed to respond. TPT 14/12/2016 Nokuthula Mthembu responded: The root cause for this incident was that "while loading at Berth 705 with Sandvik Loader the Cleveland Dust Chute snapped inside hatch 3". This then resulted to dust during loading. As an immediate control loading was reduced from 900t/hr to 600t/hr to minimise dust. The matter is being further investigated and corrective action plan has been developed by the Technical Team to avoid recurrence.	Resolved - Port of Richards Bay
General						
5	Anonymous	03/11/2016 17:00	eSikhaleni	Odour Complaint	Mondi RB 04/11/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 investigated and identified a faulty level indicator which resulted in the venting of malodorous gases to atmosphere. The issue has been addressed, Mondi is in the process of identifying preventative measures.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
6	Anonymous	16/11/2016 17:00	John Ross Parkway	Odour Complaint	Mondi RB 04/11/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is likely that Mondi is the source of odour. 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 has investigated and found all known odour sources to be within specification, in addition ambient monitoring station in eSikhaleni showed no elevated levels of TRS at the time of the complaint. However, based on wind direction and weather conditions at the time, it is possible that fugitive odour from our effluent plant may have been the source of the odour.	Resolved - Mondi Richards Bay



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

Table F11: December Exceedance Log

No	Complainant	Date and time	Location	Description	Results	Resolution
1	Daryl (076 013 1788 or 035 – 797 4069)	1/12/2016	Adonai Projects – 25 Karbelkring Alton	Significant dust emanating from sand blasting activities at an adjacent premises, which is having a significant impact on the complainant's business and the health of employees. (See attached email sent by complainant to City of uMhlathuze Air Quality Management Unit.)	RBCAA 08/12/2016 Sandy Camminga responded: Despite having requested a formal response the CoU has not responded. They have however informed me verbally that they have visited the site and issued the responsible company with a notice.	Resolved - Sand Blasting
2	Daryl (076 013 1788 or 035 – 797 4069)	5/12/2016	Adonai Projects – 25 Karbelkring Alton	Significant dust emanating from sand blasting activities at an adjacent premises, which is having a significant impact on the complainant's business and the health of employees. (See attached email received by the RBCAA on 2 December). The RBCAA has this morning made contact with the complainant. The situation remains the same with no response from the City of uMhlathuze.	RBCAA 08/12/2016 Sandy Camminga responded: Despite having requested a formal response the CoU has not responded. They have however informed me verbally that they have visited the site and issued the responsible company with a notice.	Resolved - Sand Blasting
3	Ms Andia Pienaar (083 501 7317)	5/12/2016 07:28	9 Kiaatkim – Arboretum	"Overpowering metallic bitter smell, causing tight chest."	Mondi RB 05/12/2016: Candice Webb responded: Source and Nature of Emissions: Based on wind direction, it is unlikely that Mondi is the source of odour. Foskor 09/12/2016: Mannana Ntoampe responded: Peak Concentrations: The highest SO ₂ emissions of 305 ppm were recorded for the A&B Stack, these were however within stipulated AEL limits. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Sulphuric Acid Plants were operating normally during this time and there were no gas leaks reported.	Resolved - Foskor



RBCAA: ANNUAL AIR QUALITY REPORT - 2016

No.	Complainant	Date and time	Location	Description	Results	Resolution
					Granulation and Phosphoric Acid Plants were also operating normally. Based on wind direction, it is likely that Foskor impacted Arboretum at the time, however, the metallic bitter smell given in the description is not typical of Foskor operations.	



APPENDIX G

Wind Field



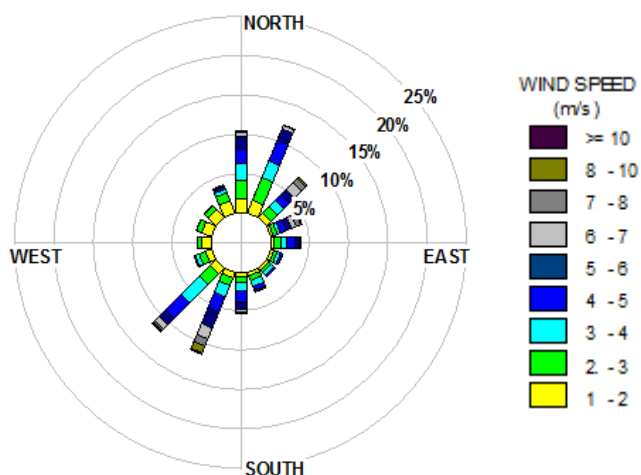
Wind Field

Monthly wind roses for 2016 and 2015 at Arboretum are presented in Figure A. 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. Seasonal wind roses for 2016 can be seen in Figure B and Figure C. 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. NNW to WNW wind is largely in the form of land breezes at night and early morning, particularly during the cooler and more stable autumn and winter months.

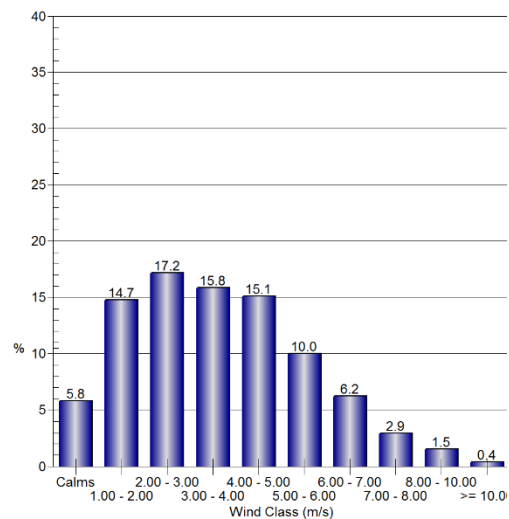


Wind Roses

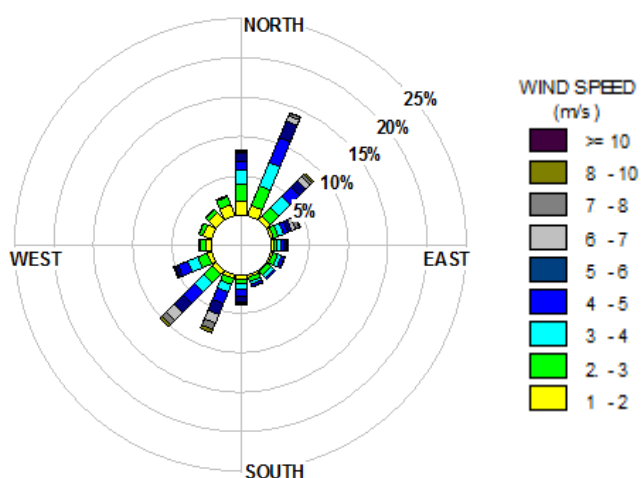
Arboretum 2015 Wind Rose



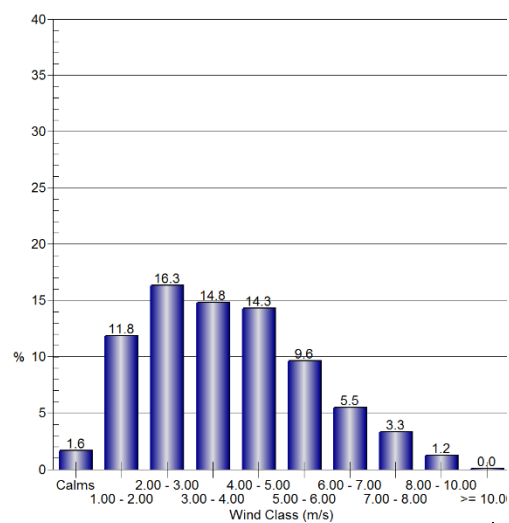
Arboretum 2015 Wind Classes



Arboretum 2016 Wind Rose



Arboretum 2016 Wind Classes



Month	Wind Speed	Missing Data	Calms	Dominant Sector		Dominant Sector	
2015	3.5 m/s	10.5%	5.8%	N-NE	35%	S-SW	33%
2016	3.8 m/s	21.7%	1.6%	N-NE	40%	SSW-WSW	30%

Figure A: General meteorology.



Wind Roses - Seasonal

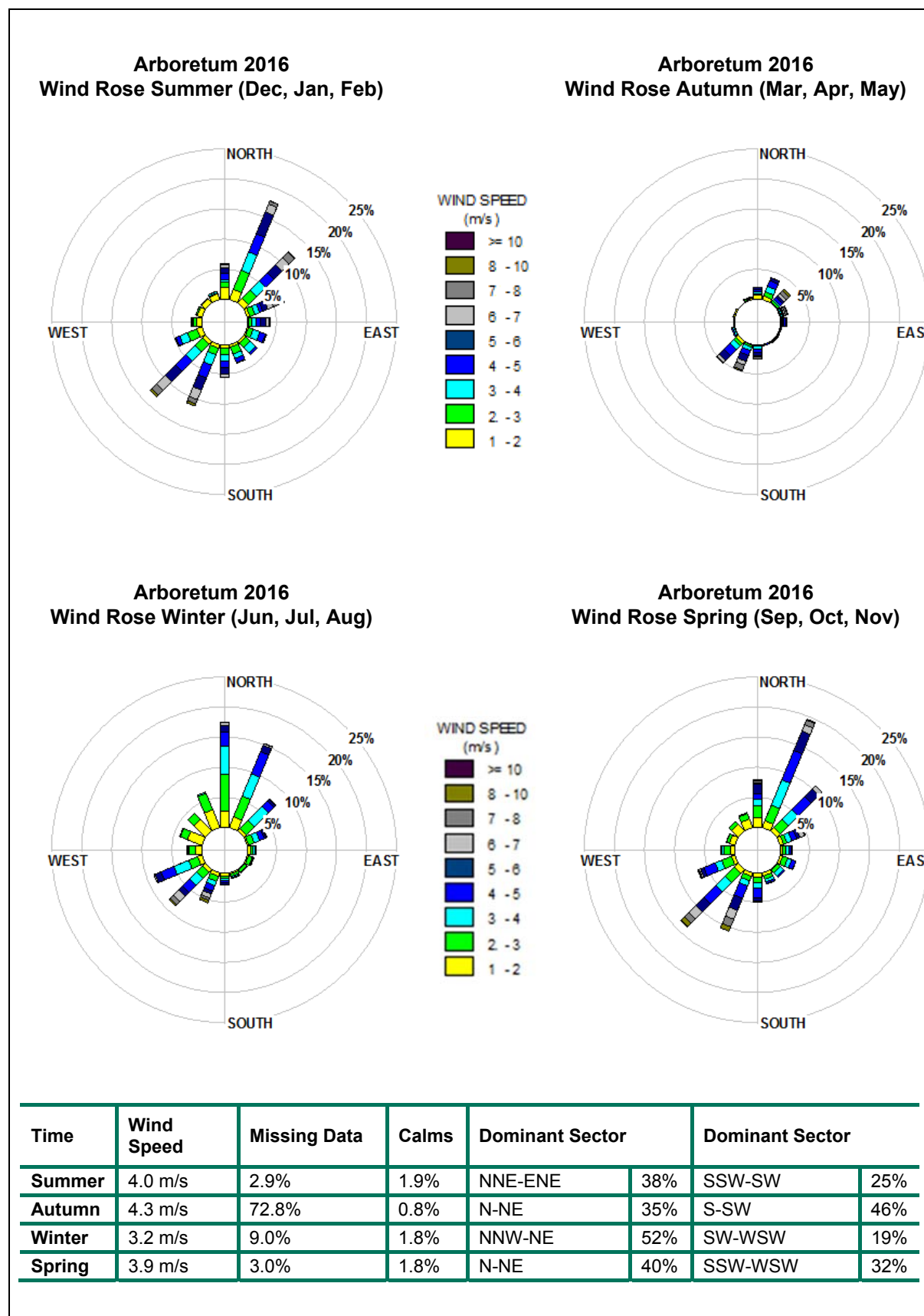


Figure B: Seasonal meteorology.



Wind Roses - Diurnal

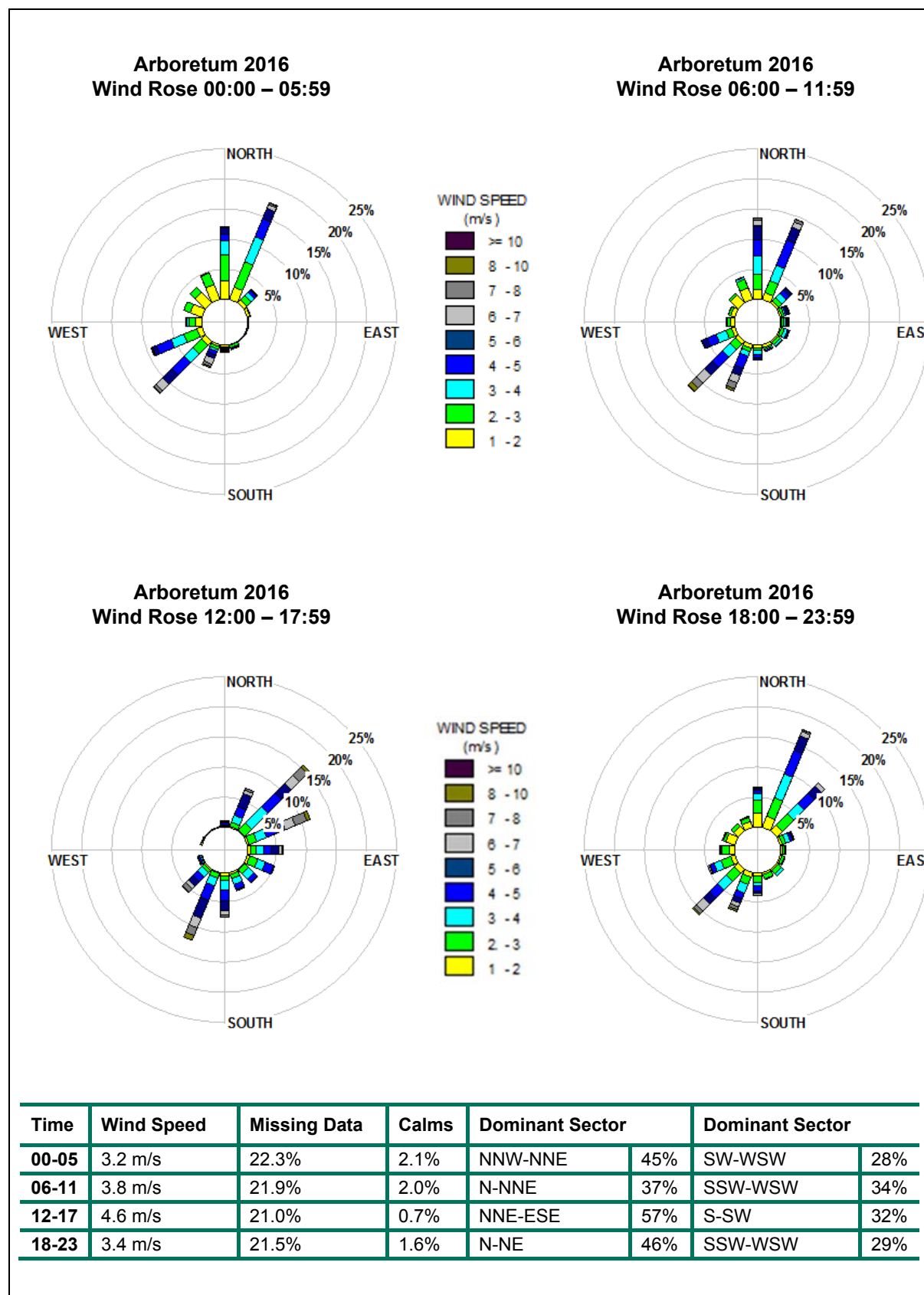


Figure C: Diurnal meteorology.

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