



May 2015

**ANNUAL REPORT**

**2014 Annual Ambient Air  
Quality Monitoring and  
Dispersion Modelling Report**

**Submitted to:**  
Richards Bay Clean Air Association (RBCAA)  
Sandy Camminga

**REPORT**



**Report Number.** 12614846-13343-32

**Distribution:**

- 1 x Richards Bay Clean Air Association
- 1 x Golder Associates Africa (Pty) Ltd.





## **Table of Contents**

<b>1.0 INTRODUCTION</b> .....	<b>5</b>
1.1 2014 Synopsis .....	6
<b>2.0 METEOROLOGY</b> .....	<b>6</b>
2.1 Seasonal Wind Roses .....	7
2.2 Diurnal Wind Roses .....	8
<b>3.0 AIR QUALITY COMPLAINTS</b> .....	<b>9</b>
3.1 Field Observations.....	9
3.2 Complaints distribution .....	10
<b>4.0 FINE PARTICULATE MONITORING</b> .....	<b>14</b>
4.1 PM <sub>10</sub> Ambient Air Quality Standards.....	14
4.2 PM <sub>10</sub> Compliance with Ambient Air Quality Standards and Maximums .....	15
4.3 PM <sub>10</sub> Annual Average Trend.....	17
4.4 PM <sub>10</sub> Seasonal Variation.....	17
4.5 PM <sub>10</sub> Diurnal Concentrations .....	18
4.6 PM <sub>10</sub> Daily Average Information .....	18
<b>5.0 SULPHUR DIOXIDE MONITORING AND MODELLED RESULTS</b> .....	<b>19</b>
5.1 SO <sub>2</sub> Ambient Air Quality Standards .....	19
5.2 SO <sub>2</sub> Compliance with Ambient Air Quality Standards and Maximums .....	20
5.3 SO <sub>2</sub> Annual Average Trend .....	22
5.4 SO <sub>2</sub> Seasonal Variation .....	23
5.5 SO <sub>2</sub> Diurnal Concentrations.....	23
5.6 SO <sub>2</sub> Annual Average Information.....	24
5.6.1 SO <sub>2</sub> Annual Average Concentration and Prediction .....	24
5.6.2 SO <sub>2</sub> Predicted Annual Average Concentration.....	24
5.7 SO <sub>2</sub> Daily Average Information .....	27
5.7.1 SO <sub>2</sub> Daily Average Concentrations .....	27
5.7.2 SO <sub>2</sub> Daily Average Concentration and Prediction .....	27
5.7.3 SO <sub>2</sub> Maximum Predicted Daily Average Concentration .....	28
5.8 SO <sub>2</sub> Hourly Average Information.....	31
5.8.1 SO <sub>2</sub> Hourly Average Concentrations.....	31



5.8.2 SO<sub>2</sub> Hourly Average Concentration and Prediction..... 32

5.8.3 SO<sub>2</sub> Maximum Predicted Hourly Average Concentration ..... 32

5.9 SO<sub>2</sub> 10-minute Average Information ..... 35

5.9.1 SO<sub>2</sub> 10-minute Average Concentrations ..... 35

5.9.2 SO<sub>2</sub> 10-minute Average Concentration and Predictions ..... 35

**6.0 TOTAL REDUCED SULPHUR MONITORING (TRS) ..... 36**

6.1 TRS Ambient Air Quality Guidelines ..... 36

6.2 TRS Compliance with Air Quality Guidelines and Maximums..... 37

6.3 TRS Annual Average Trend..... 38

6.4 TRS Seasonal Variation ..... 38

6.5 TRS Diurnal Concentrations ..... 39

6.6 TRS 30-minute Average Information ..... 39

6.7 TRS 10-minute Average Information ..... 40

**7.0 OBJECTIVES FOR 2015 ..... 40**

**8.0 CLOSURE..... 41**

**TABLES**

Table 1: PM<sub>10</sub> ambient air quality standards..... 14

Table 2: Compliance with PM<sub>10</sub> ambient air quality standards ..... 15

Table 3: PM<sub>10</sub> maximum and annual average concentrations in 2014 ..... 16

Table 4: SO<sub>2</sub> ambient air quality standards ..... 19

Table 5: Compliance with SO<sub>2</sub> ambient air quality standards..... 20

Table 6: SO<sub>2</sub> maximum and annual average concentrations in 2014..... 21

Table 7: Compliance with TRS ambient air quality guidelines..... 37

Table 8: TRS maximum and monthly concentrations for 2014..... 37

**FIGURES**

Figure 1: Location of the RBCAA monitoring stations ..... 5

Figure 2: Annual wind roses..... 6

Figure 3: Seasonal wind roses ..... 7

Figure 4: Diurnal wind roses..... 8

Figure 5: Complaints - historical annual comparison..... 9

Figure 6: Complaints - historical monthly comparison ..... 10

Figure 7: Complaints by region in 2014 and 2013..... 11

Figure 8: Complaints by source in 2014 and 2013 ..... 12



Figure 9: Complaints by type in 2014 and 2013 ..... 13

Figure 10: Annual average PM<sub>10</sub> concentrations..... 17

Figure 11: Seasonal variation in PM<sub>10</sub> (monthly average concentrations) ..... 17

Figure 12: PM<sub>10</sub> diurnal concentrations ..... 18

Figure 13: PM<sub>10</sub> daily average concentrations ..... 18

Figure 14: Inter-annual average SO<sub>2</sub> concentrations ..... 22

Figure 15: Seasonal variation in SO<sub>2</sub> (monthly average concentrations) ..... 23

Figure 16: SO<sub>2</sub> diurnal concentrations..... 23

Figure 17: Annual average SO<sub>2</sub> concentration and prediction..... 24

Figure 18: Maximum predicted annual average SO<sub>2</sub> concentration (regional map) ..... 25

Figure 19: Maximum predicted annual average SO<sub>2</sub> concentration (Richards Bay map)..... 25

Figure 20: Maximum predicted annual average SO<sub>2</sub> concentration (Felixton map) ..... 26

Figure 21: Maximum predicted annual average SO<sub>2</sub> concentration (RBM map) ..... 26

Figure 22: SO<sub>2</sub> daily average concentrations ..... 27

Figure 23: Daily average SO<sub>2</sub> concentration and prediction..... 28

Figure 24: Maximum predicted daily average SO<sub>2</sub> concentration (regional map)..... 29

Figure 25: Maximum predicted daily average SO<sub>2</sub> concentration (Richards Bay map) ..... 29

Figure 26: Maximum predicted daily average SO<sub>2</sub> concentration (Felixton map)..... 30

Figure 27: Maximum predicted daily average SO<sub>2</sub> concentration (RBM map) ..... 30

Figure 28: SO<sub>2</sub> hourly average concentrations..... 31

Figure 29: Hourly average SO<sub>2</sub> concentration and prediction ..... 32

Figure 30: Maximum predicted hourly average SO<sub>2</sub> concentration (regional map) ..... 33

Figure 31: Maximum predicted hourly average SO<sub>2</sub> concentration (Richards Bay map)..... 33

Figure 32: Maximum predicted hourly average SO<sub>2</sub> concentration (Felixton map)..... 34

Figure 33: Maximum predicted hourly average SO<sub>2</sub> concentration (RBM map) ..... 34

Figure 34: SO<sub>2</sub> 10 minute average concentrations..... 35

Figure 35: TRS annual average information..... 38

Figure 36: Seasonal variation in TRS (monthly average concentrations)..... 38

Figure 37: TRS diurnal concentration..... 39

Figure 38: TRS 30-minute average concentration..... 39

Figure 39: TRS 10-minute average concentrations ..... 40



**APPENDICES**

**APPENDIX A**

Quality Assurance

**APPENDIX B**

Dispersion Simulation Inputs

**APPENDIX C**

Operational Report

**APPENDIX D**

Exceedance Log

**APPENDIX E**

Complaints Log

**APPENDIX F**

Document Limitations



## 1.0 INTRODUCTION

This 17<sup>th</sup> annual ambient air quality report summarises the meteorology, sulphur dioxide (SO<sub>2</sub>), total reduced sulphur (TRS) and fine particulate (PM<sub>10</sub>) monitoring data gathered by the RBCAA monitoring network during 2014. Monitoring took place at 12 locations, as seen in Figure 1.

The objective of this report is to highlight certain incidents and exceedances of the applicable PM<sub>10</sub>, SO<sub>2</sub> and TRS ambient air quality standards. In addition, measured SO<sub>2</sub> concentrations over various time scales are compared to percentile concentrations predicted by the CALPUFF air pollution dispersion model. The modelled SO<sub>2</sub> concentrations are based on ambient meteorological conditions and the regional emission inventory. Modelled SO<sub>2</sub> concentrations are presented and results are compared to the monitored concentrations.

Figure 1: Location of the RBCAA monitoring stations





## 1.1 2014 Synopsis

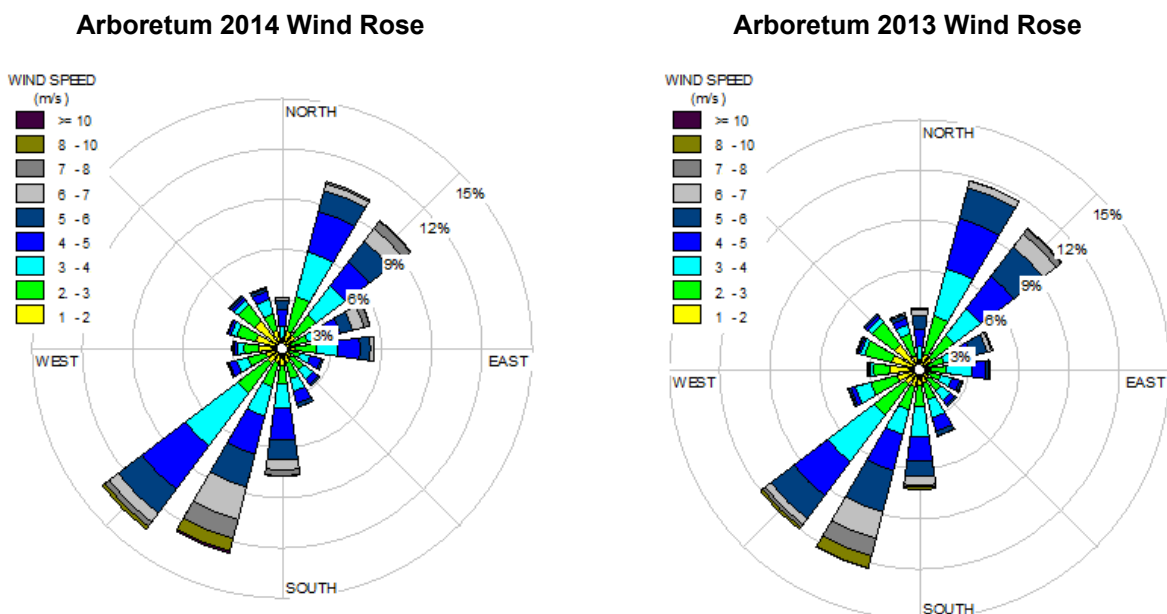
2014 was a busy year for the RBCAA with a number of challenges and achievements, most notably:

- The move of the RBCAA's offices from the Civic Centre to the Smart Plan Offices in Dollar Drive (7<sup>th</sup> of April);
- The implementation of a backup system for the servers (20<sup>th</sup> March);
- The decommissioning of St Lucia station (26<sup>th</sup> of June);
- The closure of Bayside Aluminium (26<sup>th</sup> of June);
- The commissioning of eSikhaleni station (24<sup>th</sup> of July);
- An internal audit according to SANAS requirements (27<sup>th</sup> of August);
- Safety while working at on the stations at heights; and
- Regional load shedding.

## 2.0 METEOROLOGY

Annual wind roses for 2014 and 2013 at Arboretum are presented in Figure 2. They indicate that wind blew predominantly along the NE and SW axis. NE wind is generally associated with fair weather, while SW wind is usually associated with the passage of coastal lows, cold fronts and inclement weather.

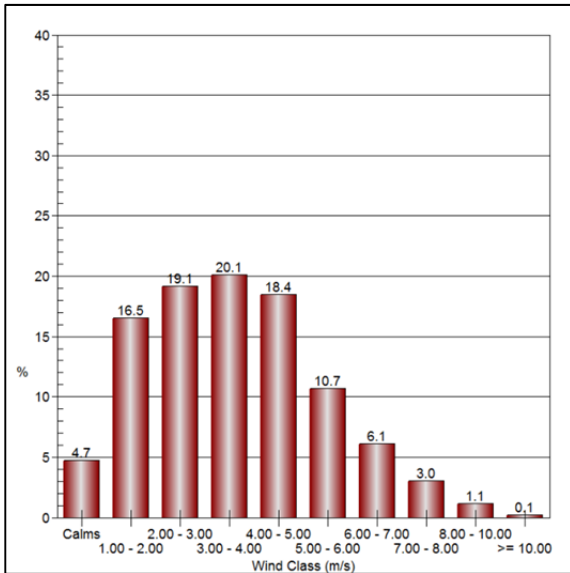
Figure 2: Annual wind roses



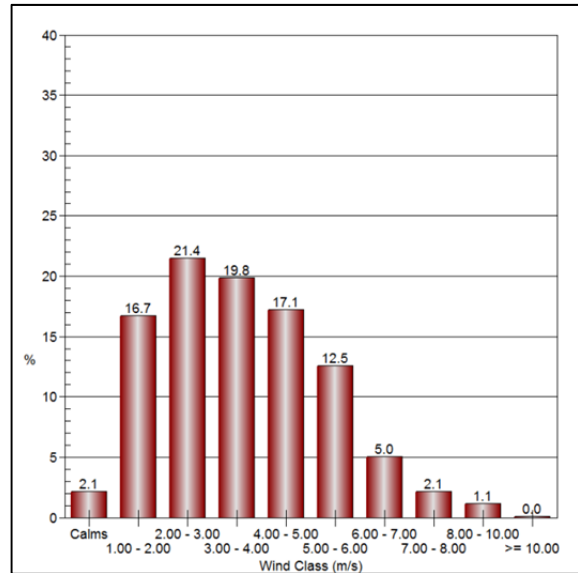
Year	Average Wind Speed (m/s)	Calms	Dominant Wind Sector	Dominant Wind Sector
2014	3.5	4.7%	S – SW (36%)	NNE – NE (21%)
2013	3.6	2.1%	S – SW (33%)	NNE – NE (24%)



### Arboretum 2014 Wind Class Frequency Distribution



### Arboretum 2013 Wind Class Frequency Distribution



## 2.1 Seasonal Wind Roses

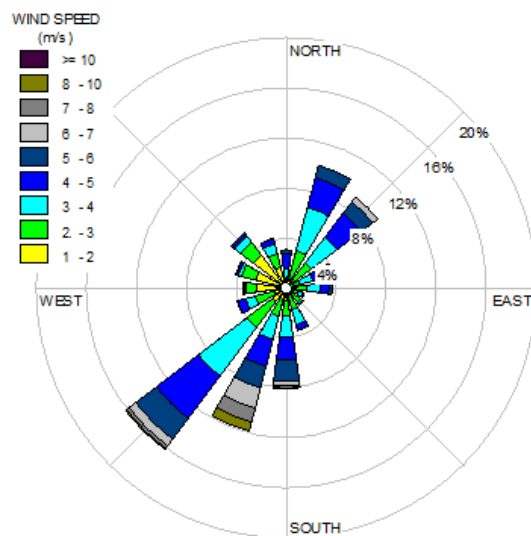
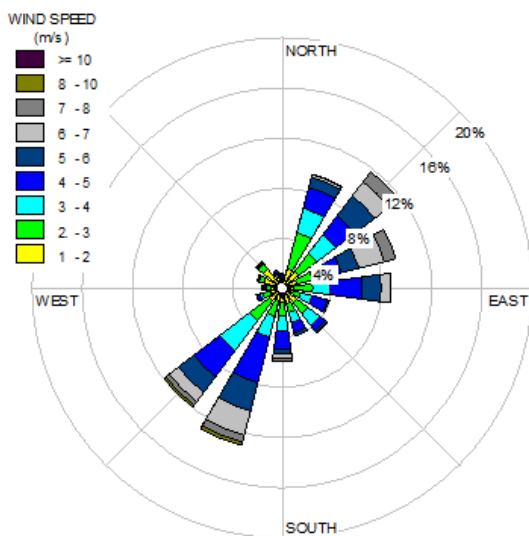
Seasonal wind roses for 2014 at Arboretum are shown in Figure 3 note the increase in light (1 to 3 m/s) to moderate (3 to 6 m/s) wind from the NNW during periods that include autumn and winter conditions (and the seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during periods that include spring and early summer. Strong southerly to SSW wind occurs throughout the year, typically associated with the arrival of coastal lows and cold fronts. Coastal lows tend to be more frequent during the summer months; hence the slightly higher proportion of these winds.

Figure 3: Seasonal wind roses

### Arboretum 2014 - Seasonal Wind Roses

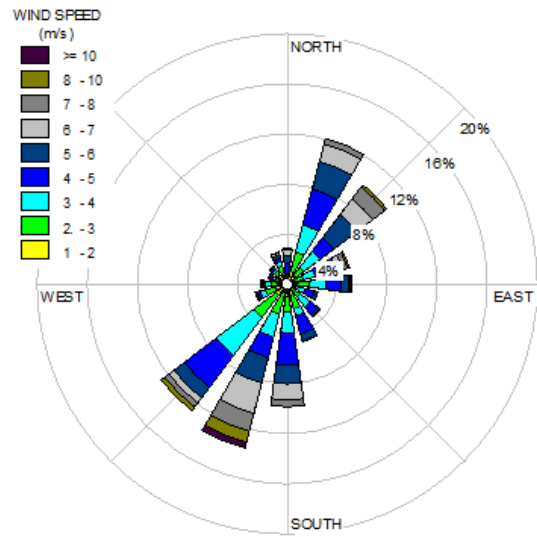
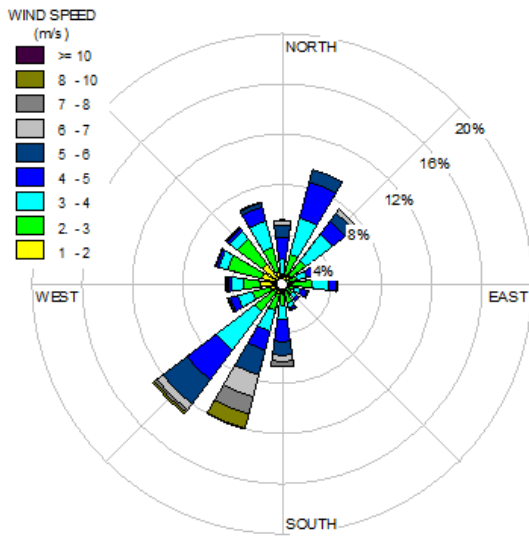
Summer

Autumn



Winter

Spring



## 2.2 Diurnal Wind Roses

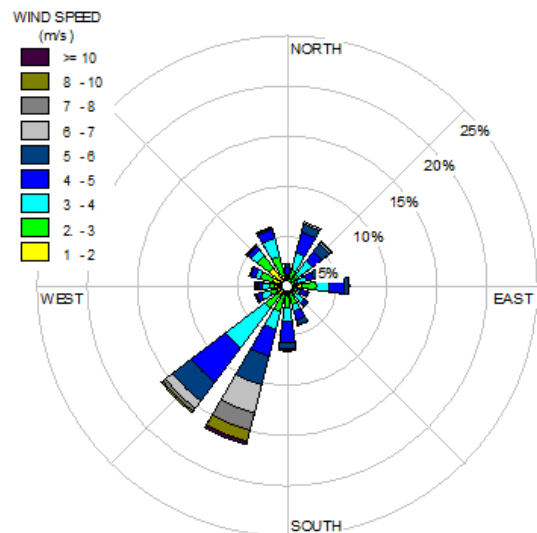
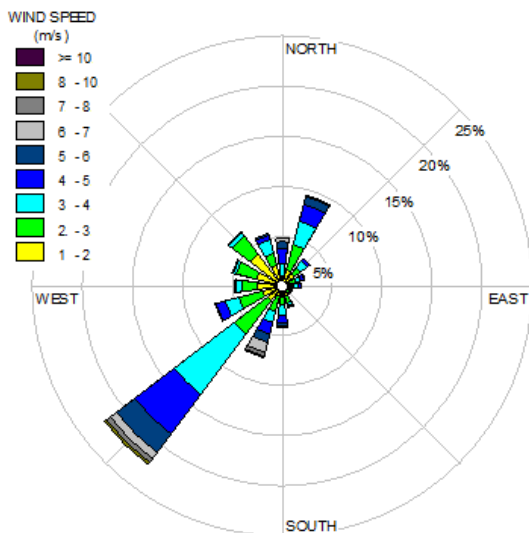
Diurnal wind roses for 2014 at Arboretum can be seen in Figure 4; NNW to WNW wind is largely in the form of land breezes at night and early morning, particularly during the cooler and more stable autumn and winter months.

Figure 4: Diurnal wind roses

### Arboretum 2014 Diurnal Wind Roses

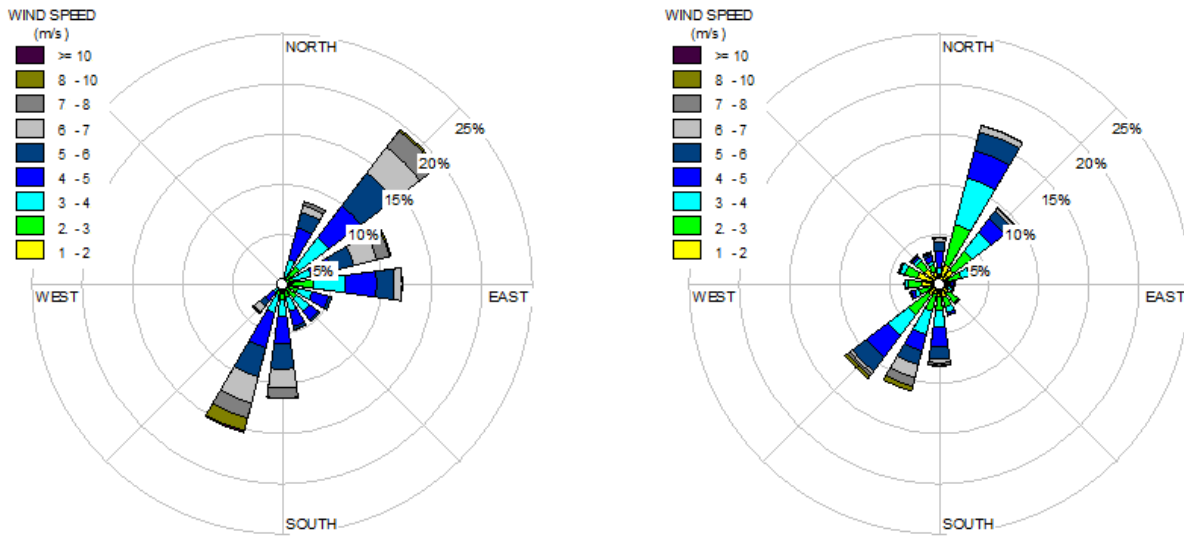
00:00 – 05:59

06:00 – 11:59



12:00 – 17:59

18:00 – 23:59



### 3.0 AIR QUALITY COMPLAINTS

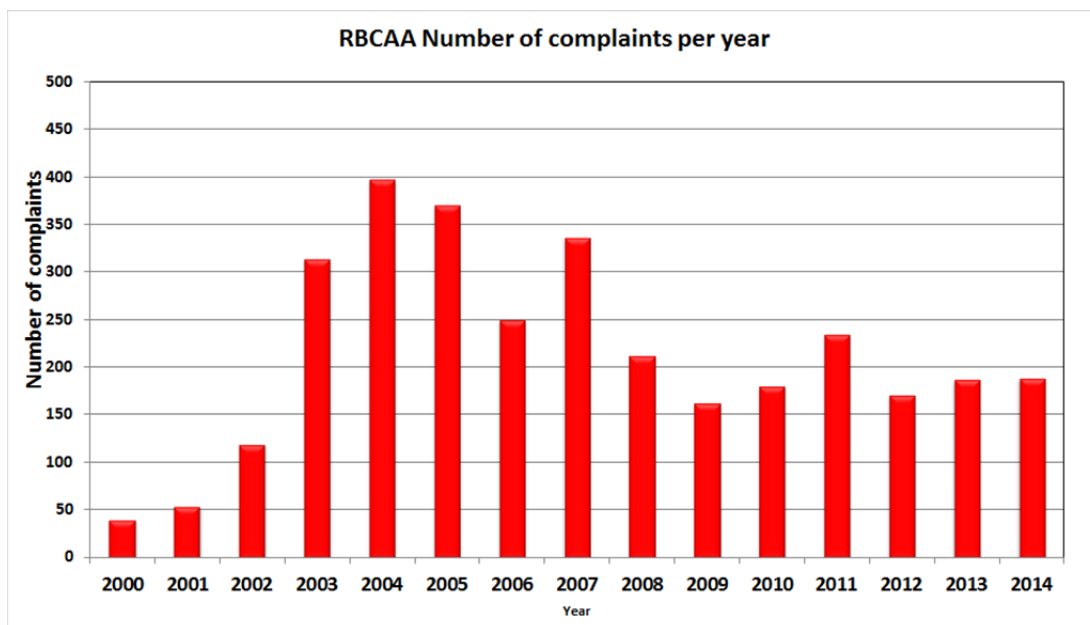
Detailed complaint records are maintained, updated and distributed to the RBCAA mailing list on a weekly basis. The following sections summarise and analyse the complaints received during 2014.

*Note: Complaint Logs are available from the RBCAA complaints database on request.*

#### 3.1 Field Observations

There were 188 air quality complaints received during 2014 compared to 187 logged during 2013 (Figure 5). The maximum number of complaints received in a single year was 397 in 2004, this decreased to 162 in 2009, and seems to have with the exception of 2011 stabilised between 150 and 200 complaints per year since then.

Figure 5: Complaints - historical annual comparison



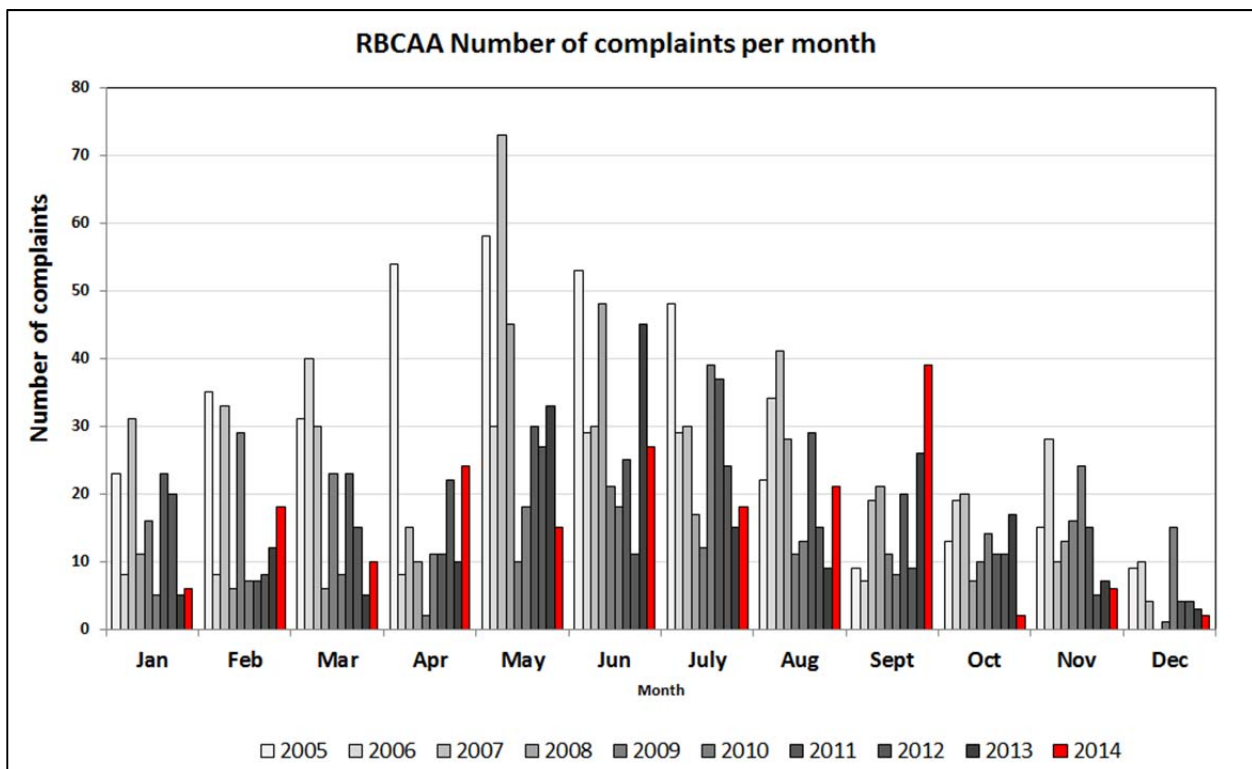


The historical count of complaints per month is reflected below (Figure 6).

Peaks in the number of complaints received (> 20 per month) in 2014 occurred during April, May, August and September. This was as a result of the following incidents:

- In April 2014 numerous complaints were received in response to a pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi (10 complaints);
- In May 2014, due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNCG (Concentrated Non-Condensable Gases) venting (12 complaints); and
- In August and September 2014, internal power outages at Mondi were identified as the source of the odour causing incidents (11 complaints and 25 complaints respectively).

Figure 6: Complaints - historical monthly comparison



### 3.2 Complaints distribution

The distribution of complaints in 2014 by region (Figure 7), source (Figure 8) and type (Figure 9) are presented, similar values for 2013 are included for comparison.

The most common complaints received by the RBCAA in both 2014 and 2013 were in response to odour (and clinical symptoms). These complaints are usually linked to elevated Total Reduced Sulphur (TRS) concentrations, often detected as a rotten egg or cooked cabbage odour and can also be associated with nausea and headaches.

Most of the complaints in 2014 (41%) were allocated to Mondi (an increase from the 23% from 2013); followed by the peat fires (15%), the uMhlathuze Municipality (14%) and Foskor (9%).



Figure 7: Complaints by region in 2014 and 2013

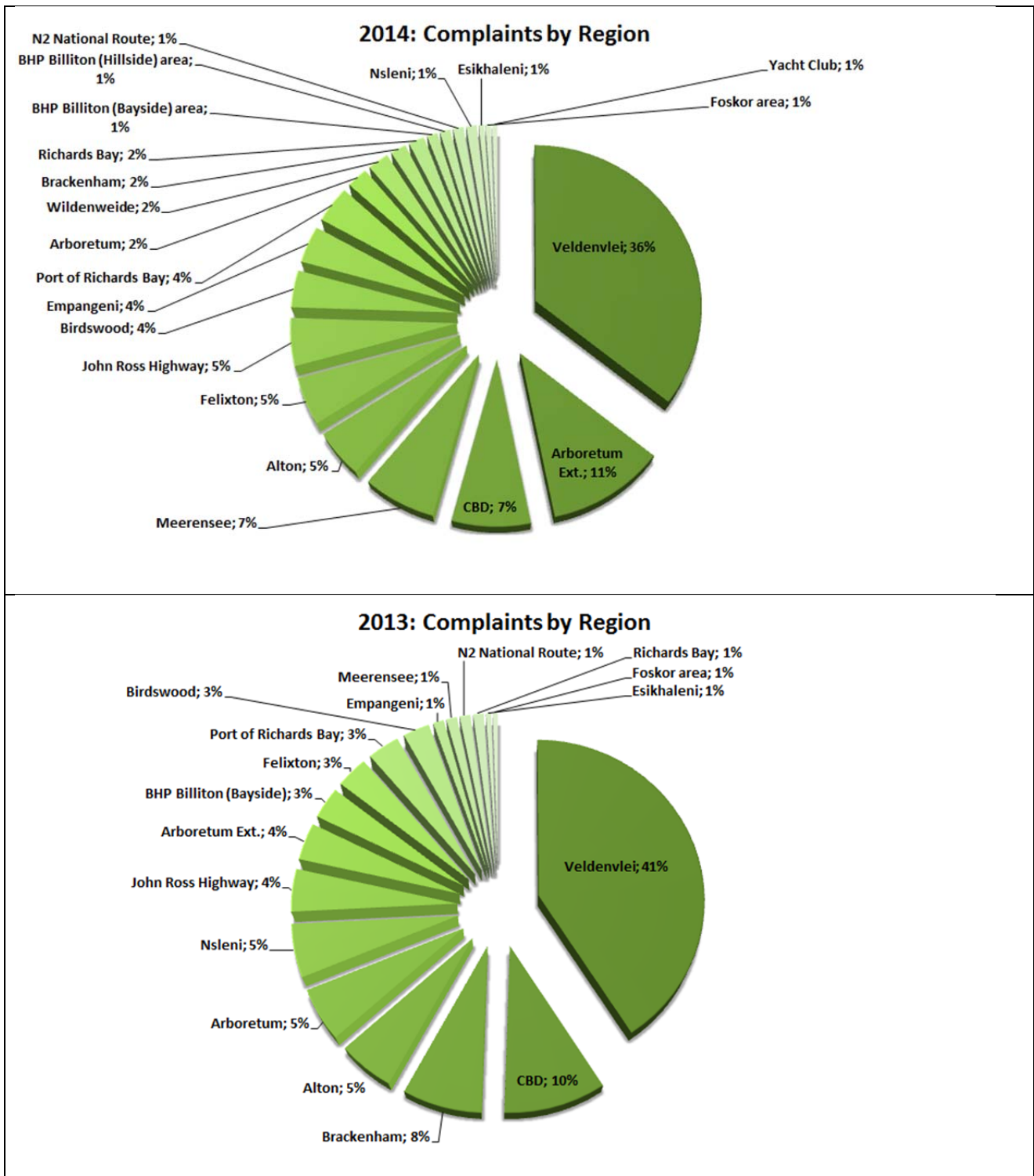




Figure 8: Complaints by source in 2014 and 2013

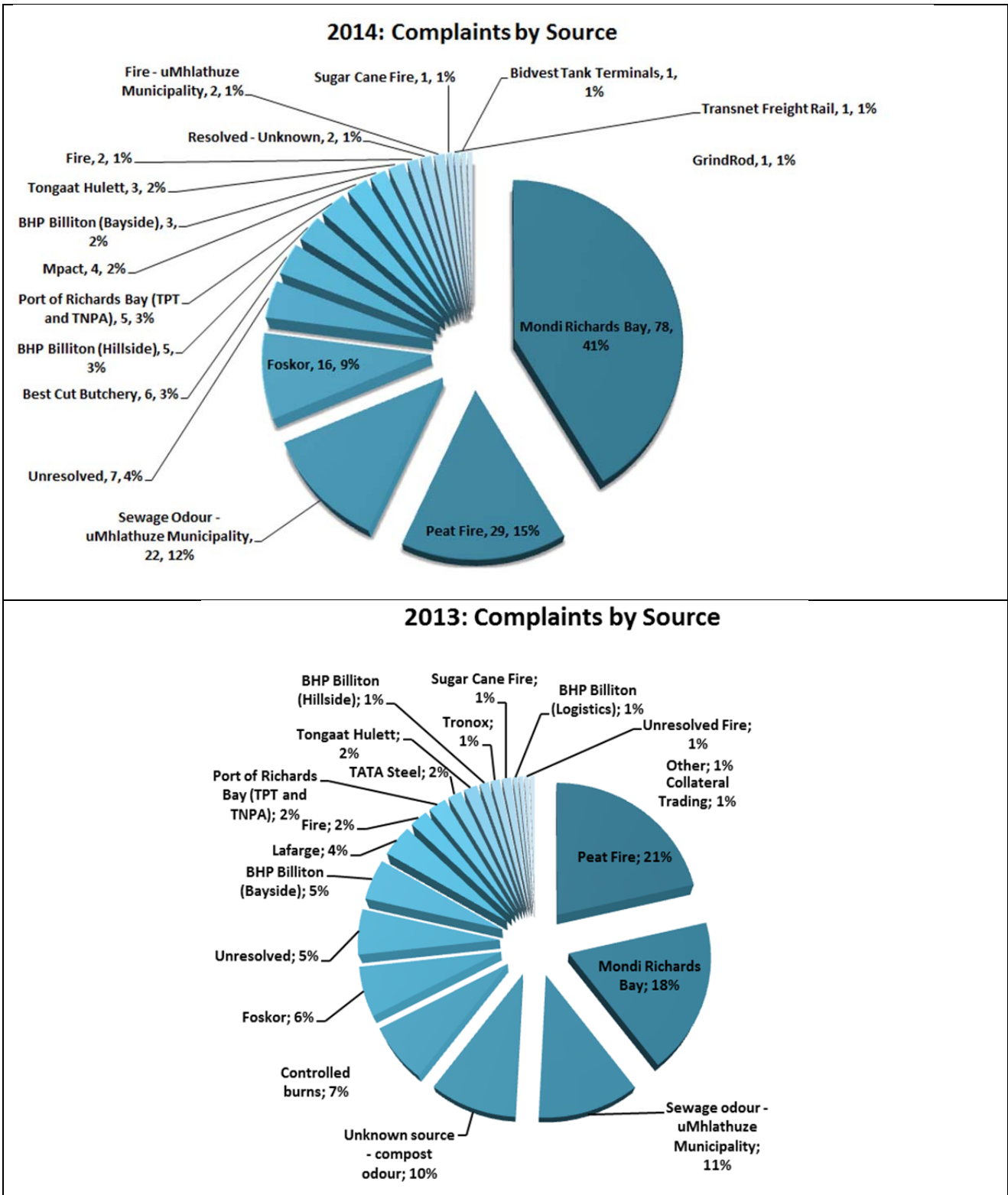
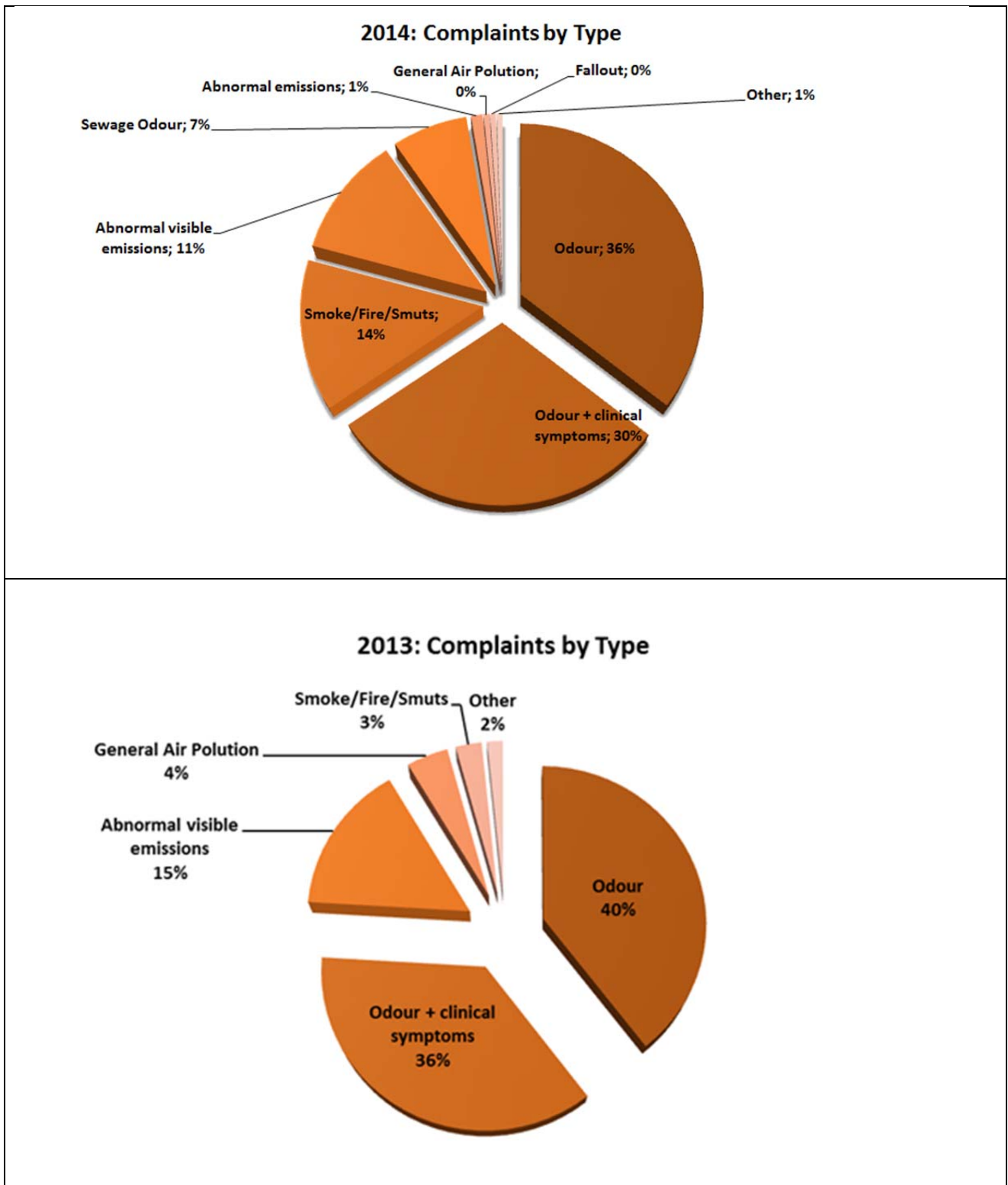




Figure 9: Complaints by type in 2014 and 2013





## 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 ( $\mu\text{m}$ ) in diameter are classified as  $\text{PM}_{10}$ .

$\text{PM}_{10}$  can be inhaled and accumulate 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 the St Lucia station measure  $\text{PM}_{10}$  data continuously.

### 4.1 $\text{PM}_{10}$ Ambient Air Quality Standards

Ambient air quality standards for  $\text{PM}_{10}$  are listed below (Table 1).

**Table 1:  $\text{PM}_{10}$  ambient air quality standards**

Organisation	Variable	Daily average	Annual average
NEM:AQA <sup>[a]</sup>	$\text{PM}_{10}$	$120\mu\text{g}/\text{m}^3$ <sup>[c]</sup>	$50\mu\text{g}/\text{m}^3$ <sup>[d]</sup>
Future NEM:AQA <sup>[b]</sup>	$\text{PM}_{10}$	$75\mu\text{g}/\text{m}^3$ <sup>[c]</sup>	$40\mu\text{g}/\text{m}^3$ <sup>[d]</sup>

Notes:

- a) SA Government Gazette 32816 (24<sup>th</sup> December 2009) in terms of the National Environmental Management: Air Quality Act no. 39 of 2004, effective from 2010.
- b) Effective from 2015.
- c) Not to be exceeded more than 4 times in one year.
- d) Not to be exceeded.



## 4.2 PM<sub>10</sub> Compliance with Ambient Air Quality Standards and Maximums

The number of PM<sub>10</sub> exceedances measured at the various stations is indicated in Table 2, during 2014 Brackenham and CBD did not comply with the Future NEM: AQA PM10 Daily Standard.

**Table 2: Compliance with PM<sub>10</sub> ambient air quality standards**

Standard	Permissible Exceedances	Station	Exceedances 2014	Exceedances 2013
Existing NEM: AQA Daily Standard (120 µg/m <sup>3</sup> )	4	Brackenham	4	0
		CBD	0	0
		Mtunzini	1	1
		St Lucia	0	0
		Felixton	0	-
		eSikhaleni	1	-
Future NEM: AQA Daily Standard (75 µg/m <sup>3</sup> )	4	Brackenham	14	0
		CBD	5	2
		Mtunzini	4	4
		St Lucia	0	1
		Felixton	0	-
		eSikhaleni	3	-
Existing NEM: AQA Annual Standard (50 µg/m <sup>3</sup> )	0	Brackenham	0	0
		CBD	0	0
		Mtunzini	0	0
		St Lucia	0	0
		Felixton	0	-
		eSikhaleni	0	-
Future NEM: AQA Annual Standard (40 µg/m <sup>3</sup> )	0	Brackenham	0	0
		CBD	0	0
		Mtunzini	0	0
		St Lucia	0	0
		Felixton	0	-
		eSikhaleni	0	-

PM<sub>10</sub> exceedances were linked to smoke from fires, construction activities (there was significant road construction activities near the Brackenham station from June to September) and re-suspension of particulates by high wind speeds. Please see APPENDIX D for the detailed exceedance log.



Maximum and annual average concentrations for PM<sub>10</sub> are provided in Table 3.

**Table 3: PM<sub>10</sub> maximum and annual average concentrations in 2014**

Maximum PM <sub>10</sub> concentrations					
Station		10 Minute Average	Hourly Average	Daily Average (Standard 75µg/m <sup>3</sup> )	Annual Average (Standard 40µg/m <sup>3</sup> )
Brackenham	% of guideline	-	-	699%	93%
	µg/m <sup>3</sup> TEOM	3884	2498	524	37
	Date & Time	2014/10/01 08:10	2014/10/01 08:00	2014/10/01	2014
CBD	% of guideline	-	-	143%	73%
	µg/m <sup>3</sup> TEOM	550	374	107	29
	Date & Time	2014/09/18 18:30	2014/09/18 13:00	2014/09/18	2014
eSikhaleni	% of guideline	-	-	231%	90%
	µg/m <sup>3</sup> TEOM	932	605	173	36
	Date & Time	2014/09/18 18:10	2014/09/18 14:00	2014/09/18	2014
Mtunzini	% of guideline	-	-	168%	65%
	µg/m <sup>3</sup> TEOM	494	429	126	26
	Date & Time	2014/03/18 13:20	2014/09/18 12:00	2014/09/18	2014
St Lucia	% of guideline	-	-	89%	55%
	µg/m <sup>3</sup> TEOM	345	142	67	22
	Date & Time	2014/01/20 14:50	2014/06/15 20:00	2014/06/15	2014
Felixton	% of guideline	-	-	53%	25%
	µg/m <sup>3</sup> TEOM	657	208	40	10
	Date & Time	2014/06/13 08:10	2014/11/10 15:00	2014/06/25	2014

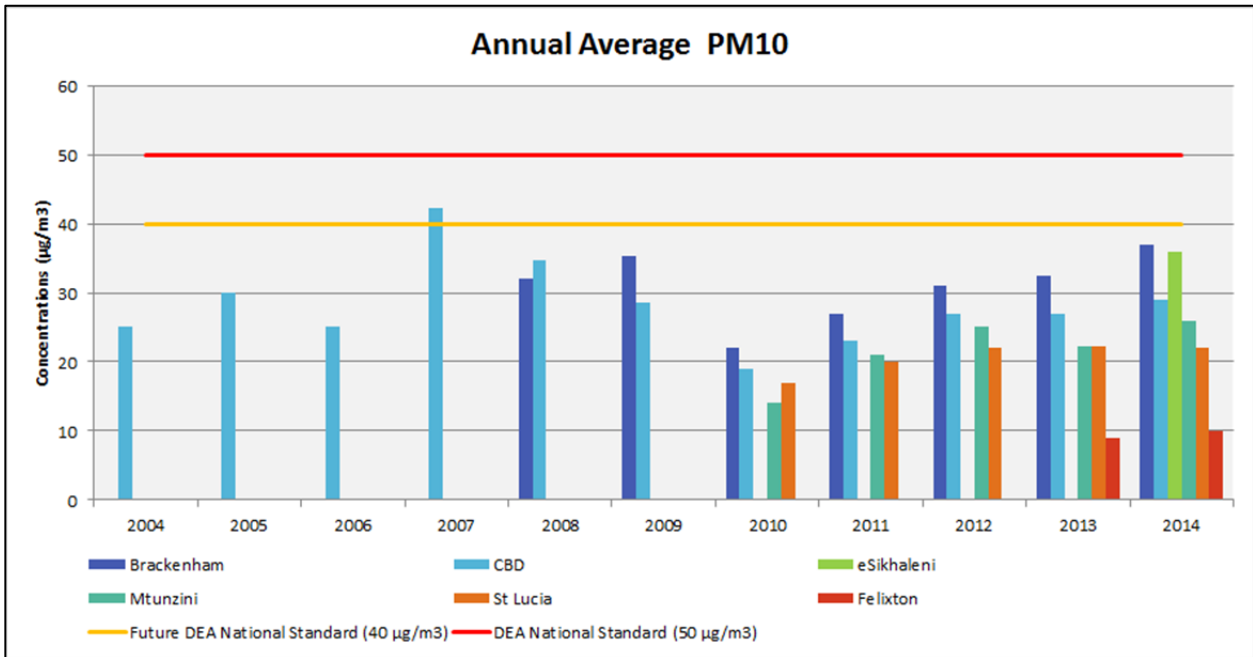
Note: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).



### 4.3 PM<sub>10</sub> Annual Average Trend

Annual average concentrations dating back to 2004 are illustrated in Figure 10. A decreasing trend is noticeable from 2007 to 2010; this has reversed since then and is particularly noticeable at Brackenham.

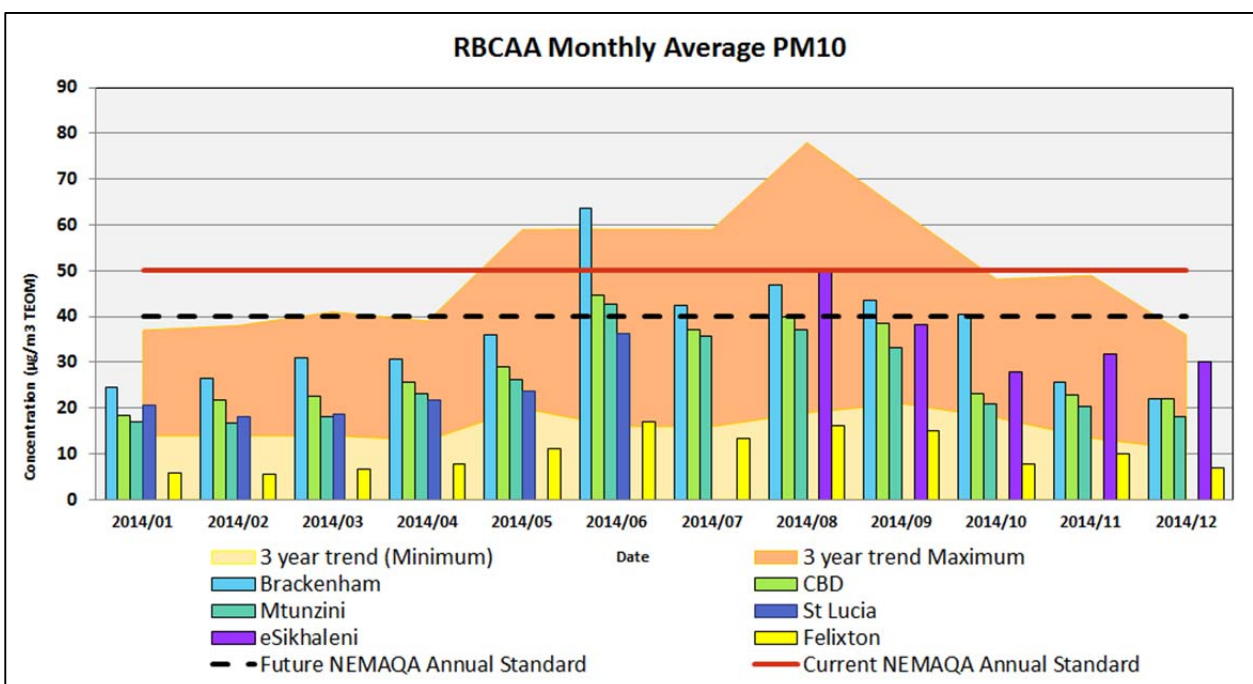
Figure 10: Annual average PM<sub>10</sub> concentrations



### 4.4 PM<sub>10</sub> Seasonal Variation

Monthly PM<sub>10</sub> concentrations for 2014 are provided in Figure 11.

Figure 11: Seasonal variation in PM<sub>10</sub> (monthly average concentrations)

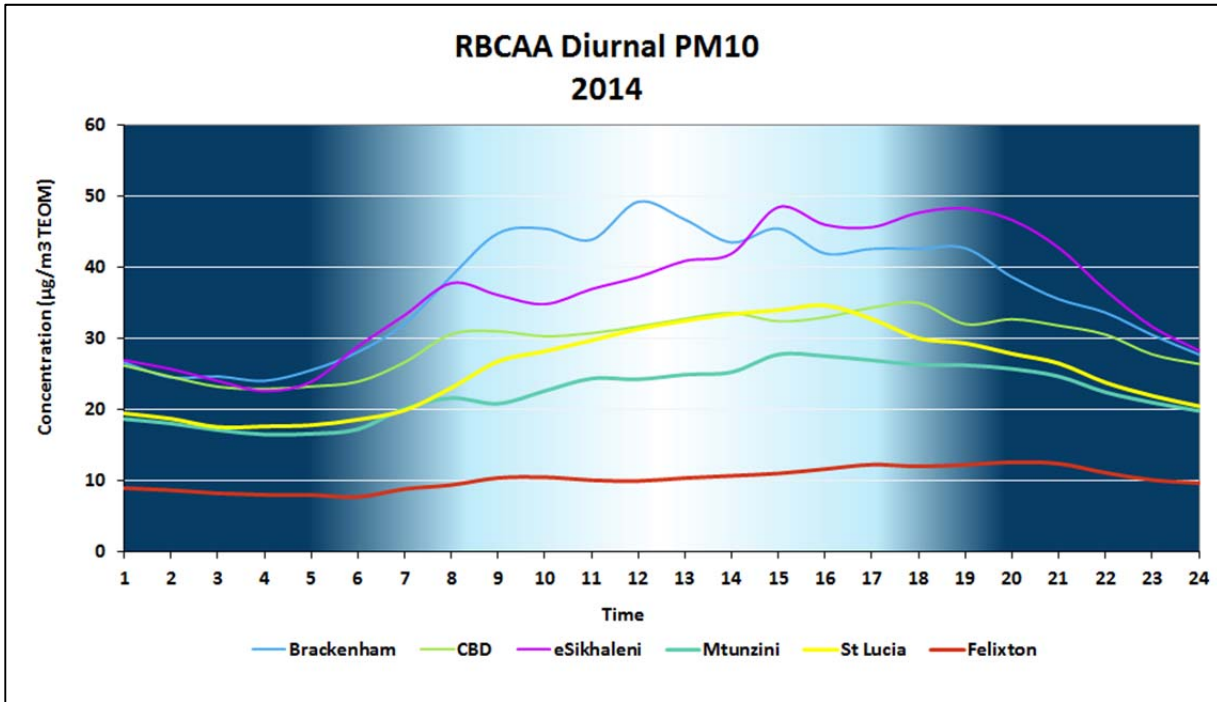




### 4.5 PM<sub>10</sub> Diurnal Concentrations

Diurnal PM<sub>10</sub> concentrations are shown below (Figure 12).

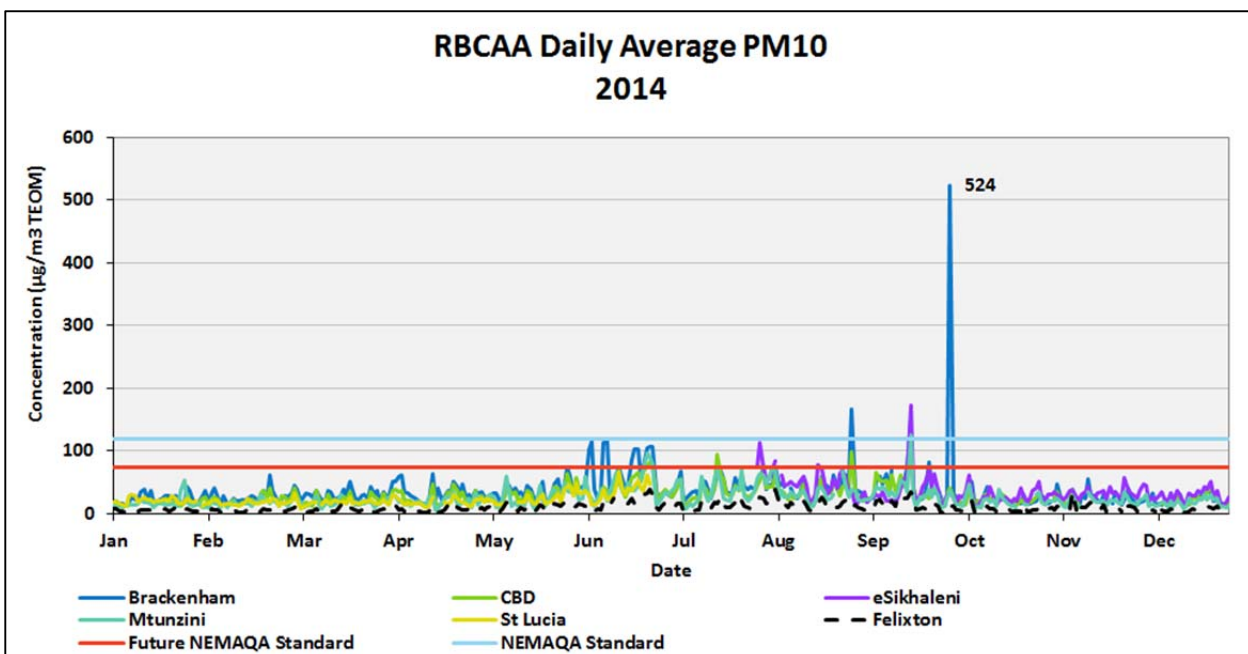
Figure 12: PM<sub>10</sub> diurnal concentrations



### 4.6 PM<sub>10</sub> Daily Average Information

The daily average PM<sub>10</sub> concentrations are shown below (Figure 13). The maximum concentration measured at Brackenham (524 µg/m<sup>3</sup>) was a result of re-suspension of particulates by high wind speeds.

Figure 13: PM<sub>10</sub> daily average concentrations





## 5.0 SULHUR DIOXIDE MONITORING AND MODELLED RESULTS

Sulphur dioxide (SO<sub>2</sub>) 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 SO<sub>2</sub> emissions include; geothermal activity (including hot springs and volcanic activity), and the natural decay of vegetation on land, in wetlands and in oceans.

SO<sub>2</sub> 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, SO<sub>2</sub> 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 SO<sub>2</sub> 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 SO<sub>2</sub> 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. All modelled concentrations are reported at the 99th percentile, unless otherwise stated.

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 SO<sub>2</sub> Ambient Air Quality Standards

South African ambient air quality standards for SO<sub>2</sub> are listed below (Table 4).

**Table 4: SO<sub>2</sub> ambient air quality standards**

Organisation	Variable	10-min average	Hourly average	Daily average	Annual average
NEM:AQA <sup>[a]</sup>	SO <sub>2</sub>	500µg/m <sup>3</sup> <sup>[b]</sup>	350µg/m <sup>3</sup> <sup>[c]</sup>	125µg/m <sup>3</sup> <sup>[d]</sup>	50µg/m <sup>3</sup> <sup>[e]</sup>
		191ppb <sup>[b]</sup>	134ppb <sup>[c]</sup>	48ppb <sup>[d]</sup>	19ppb <sup>[e]</sup>

**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.



## 5.2 SO<sub>2</sub> Compliance with Ambient Air Quality Standards and Maximums

The number of SO<sub>2</sub> exceedances measured at the various stations is indicated in Table 5; during 2014 none of the standards were exceeded.

**Table 5: Compliance with SO<sub>2</sub> ambient air quality standards**

Standard	Permissible Exceedances	Station	Exceedances 2014	Exceedances 2013
<b>NEM: AQA 10-minute Standard (191 ppb)</b>	526	Arboretum	0	0
		Brackenham	0	0
		CBD	0	0
		Harbour West	9	1
		Scorpio	15	64
		Felixton	0	0
		eSikhaleni	0	0
<b>NEM: AQA Hourly Standard (134 ppb)</b>	88	Arboretum	0	0
		Brackenham	0	0
		CBD	0	0
		Harbour West	2	0
		Scorpio	4	48
		Felixton	0	0
		eSikhaleni	0	0
<b>NEM: AQA Daily Standard (48 ppb)</b>	4	Arboretum	0	0
		Brackenham	0	0
		CBD	0	0
		Harbour West	0	0
		Scorpio	1	10
		Felixton	0	0
		eSikhaleni	0	0
<b>NEM: AQA Annual standard (19 ppb)</b>	0	Arboretum	0	0
		Brackenham	0	0
		CBD	0	0
		Harbour West	0	0
		Scorpio	0	0
		Felixton	0	0
		eSikhaleni	0	0

SO<sub>2</sub> 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 SO<sub>2</sub> exceedances recoded during 2014 were as a result of fugitive emissions from Foskor. Please see APPENDIX D for the detailed exceedance log.



Maximum and annual average concentrations for SO<sub>2</sub> are provided in Table 6.

**Table 6: SO<sub>2</sub> maximum and annual average concentrations in 2014**

<b>Maximum SO<sub>2</sub> concentrations</b>					
<b>Station</b>		<b>10 Minute Average Standard (191 ppb)</b>	<b>Hourly Average Standard (134 ppb)</b>	<b>Daily Average Standard (48 ppb)</b>	<b>Annual Average Guideline (19 ppb)</b>
Arboretum	% of guideline	55%	48%	30%	11%
	(ppb)	106	64	14	2
	Date & time	2014/04/30 05:10	2014/04/30 05:00	2014/04/06	2014
Brackenham	% of guideline	25%	25%	21%	8%
	(ppb)	48	34	10	2
	Date & time	2014/04/30 05:10	2014/04/30 05:00	2014/04/06	2014
CBD	% of guideline	44%	47%	56%	28%
	(ppb)	84	63	27	5
	Date & time	2014/10/17 22:20	2014/05/26 02:00	2014/03/27	2014
Harbour West	% of guideline	234%	139%	96%	44%
	(ppb)	447	186	46	8
	Date & time	2014/12/09 00:00	2014/12/09 00:00	2014/07/17	2014
Scorpio	% of guideline	195%	127%	109%	45%
	(ppb)	373	171	52	9
	Date & time	2014/04/17 13:20	2014/04/17 13:00	2014/05/10	2014
Felixton	% of guideline	33%	27%	25%	16%
	(ppb)	62	36	12	3
	Date & time	2014/09/19 15:00	2014/06/17 09:00	2014/09/19	2014
eSikhaleni	% of guideline	19%	9%	17%	5%
	(ppb)	36	12	8	1
	Date & time	2014/08/20 01:30	2014/09/06 18:00	2014/10/09	2014

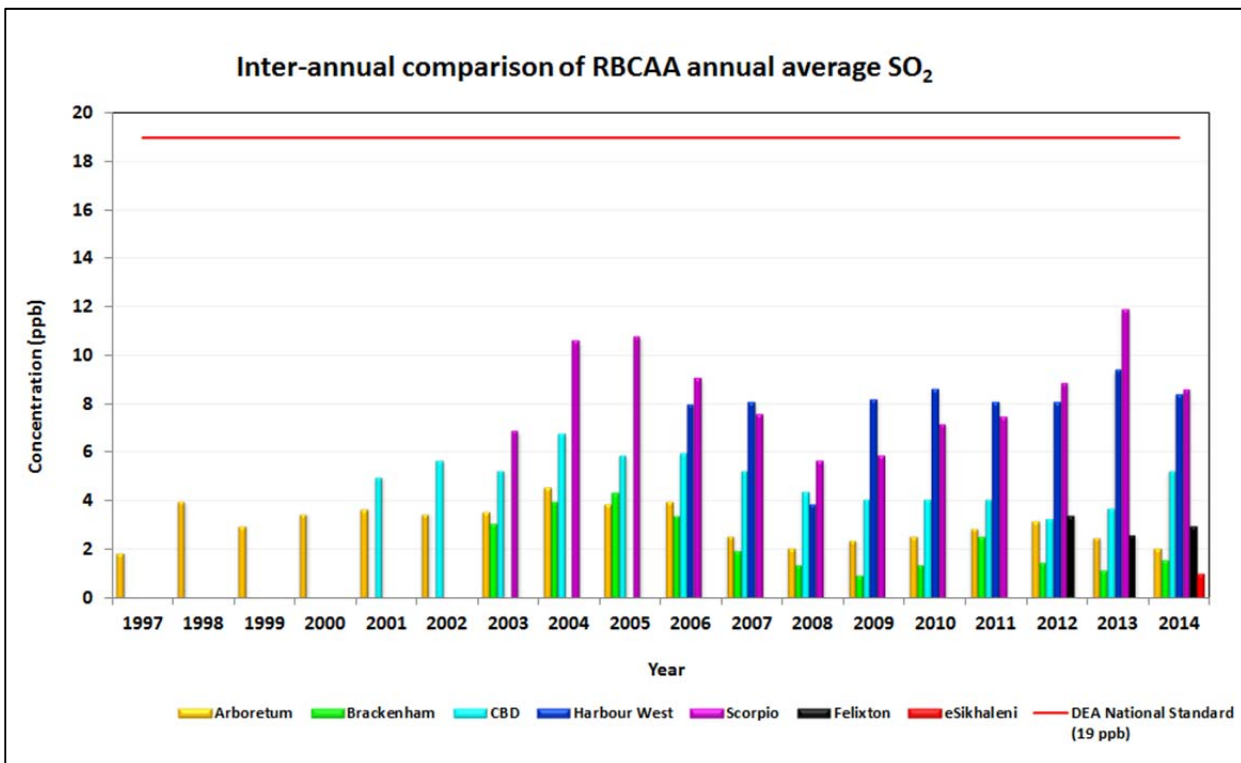
Notes: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).



### 5.3 SO<sub>2</sub> Annual Average Trend

Annual average SO<sub>2</sub> concentrations are illustrated in Figure 14. There was a decrease in average annual SO<sub>2</sub> concentrations from 2005 to 2008, this trend has since then reversed slightly, and with the exception of 2013 stabilised.

Figure 14: Inter-annual average SO<sub>2</sub> concentrations

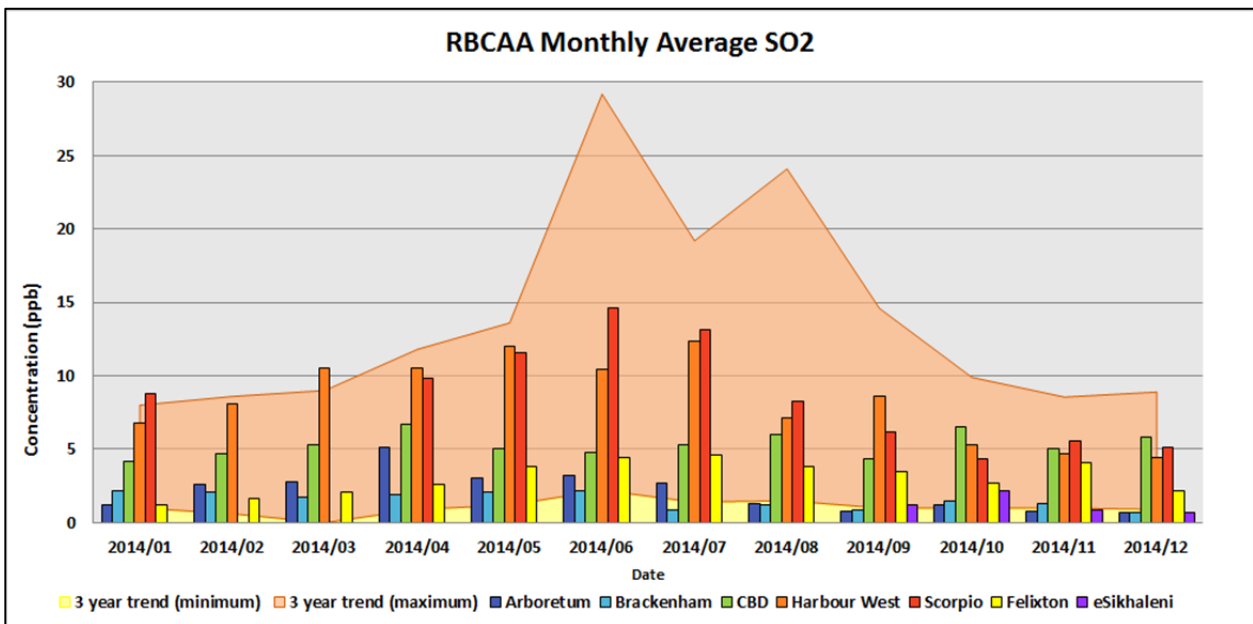




### 5.4 SO<sub>2</sub> Seasonal Variation

Monthly SO<sub>2</sub> concentrations for 2014 are provided in Figure 15. Data from the 16<sup>th</sup> of January to the 10<sup>th</sup> of April was invalidated because of a fault with the analyser at that station; and Bayside Aluminium was decommissioned on the 26<sup>th</sup> of June.

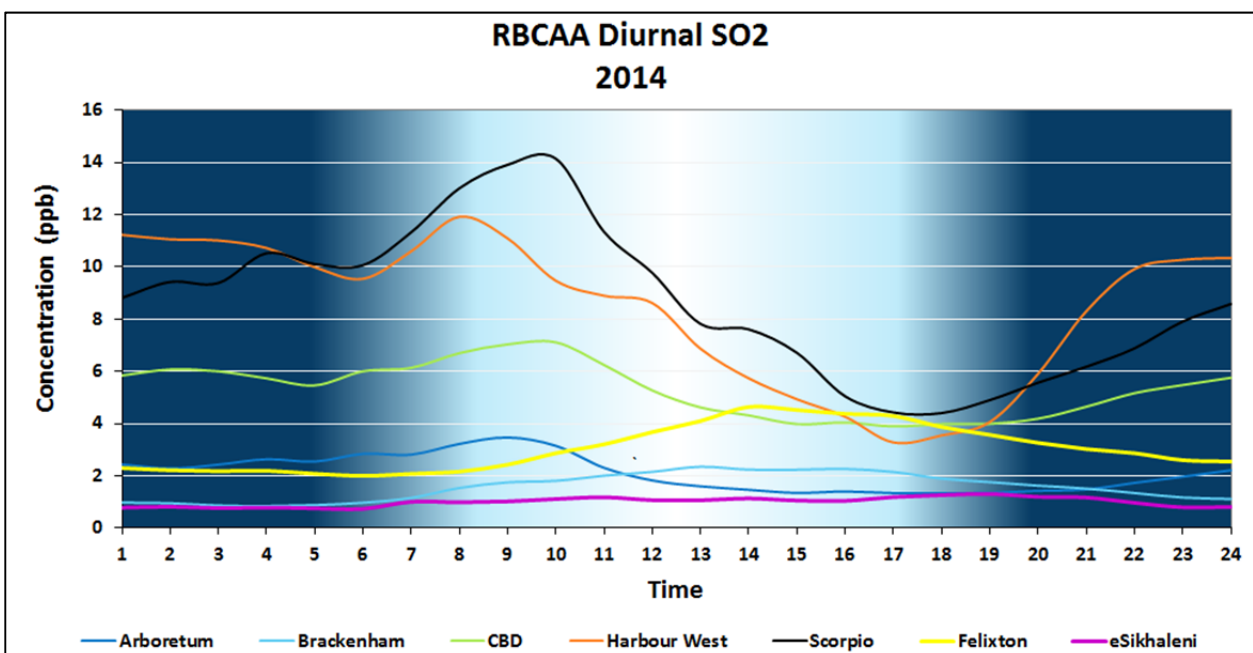
Figure 15: Seasonal variation in SO<sub>2</sub> (monthly average concentrations)



### 5.5 SO<sub>2</sub> Diurnal Concentrations

Diurnal SO<sub>2</sub> concentrations are shown below (Figure 16). Concentrations tend to be higher late at night /early morning and lower in the afternoon correlating to dispersion potential at these times, is particularly noticeable at stations affected by fugitive emissions (Scorpio and Harbour West).

Figure 16: SO<sub>2</sub> diurnal concentrations





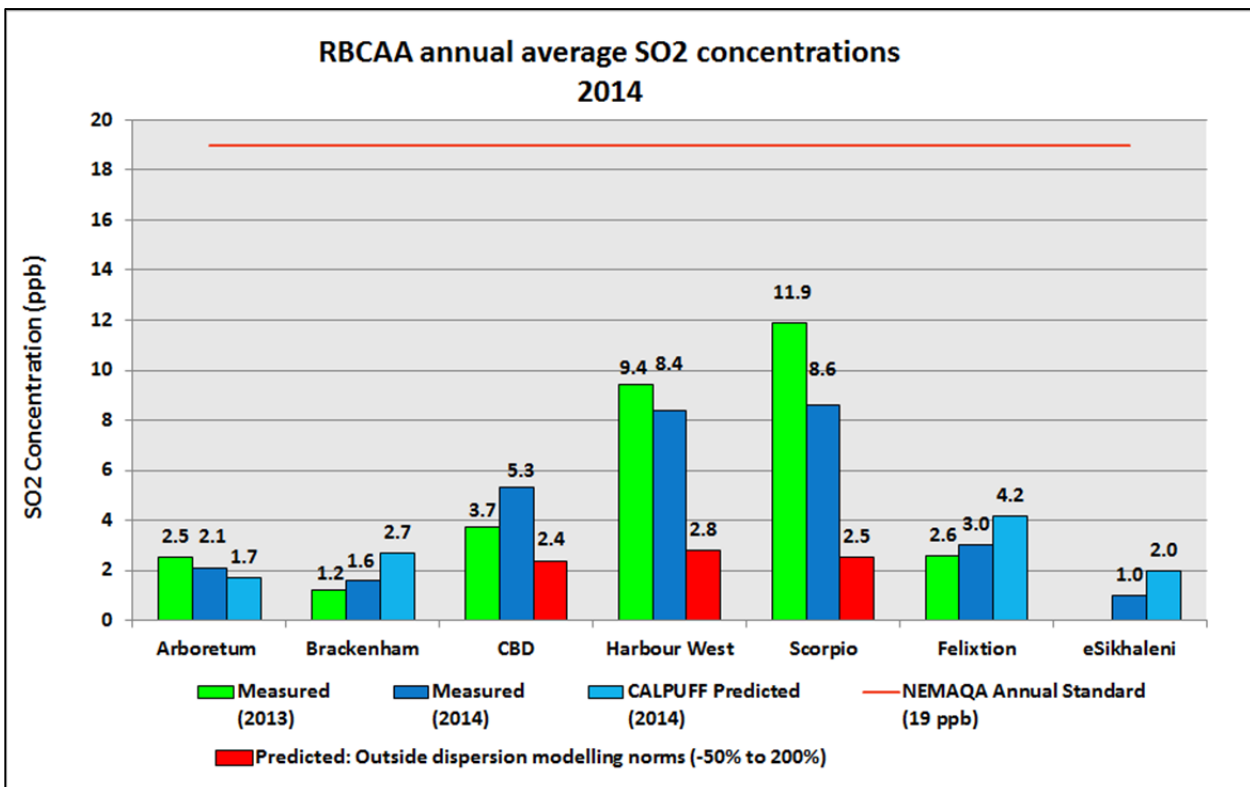
## 5.6 SO<sub>2</sub> Annual Average Information

### 5.6.1 SO<sub>2</sub> Annual Average Concentration and Prediction

Annual average SO<sub>2</sub> concentration measured at each of the RBCAA stations, and the CALPUFF predicted average for the year are shown below. The annual average for the same period the previous year (where available) is also provided (Figure 17).

Compared to the previous year, annual average SO<sub>2</sub> concentrations values at most stations were similar (within 2.0 ppb or 10%), concentrations at Scorpio were lower. Annual average predicted values at all stations were within accepted dispersion modelling norms (-50% to 200) with the exception of CBD, Harbour West, and Scorpio which were under predicted. Compared to the measurements predicted values at CBD, Harbour West, and Scorpio were lower, and at Arboretum, Brackenham, Felixton and eSikhaleni similar (within 2.0 ppb or 10%).

Figure 17: Annual average SO<sub>2</sub> concentration and prediction



Under predictions may indicate higher than normal emissions for the time period concerned, this may be as a result of process upsets or fugitive emissions (leaks in equipment, pipe lines, seals, valves, etc., and not from the usual point sources).

### 5.6.2 SO<sub>2</sub> Predicted Annual Average Concentration

The following plots of the maximum daily average SO<sub>2</sub> concentrations are provided:

- Regional (Figure 18);
- Richards Bay (Figure 19);
- Felixton (Figure 20); and
- RBM (Figure 21).



The model did not predict maximum annual average SO<sub>2</sub> concentrations greater than the NEM: AQA SO<sub>2</sub> Daily Average Standard (48 ppb). Maximum annual average SO<sub>2</sub> concentrations greater than the half-guideline were predicted at Hillside Aluminium.

Figure 18: Maximum predicted annual average SO<sub>2</sub> concentration (regional map)

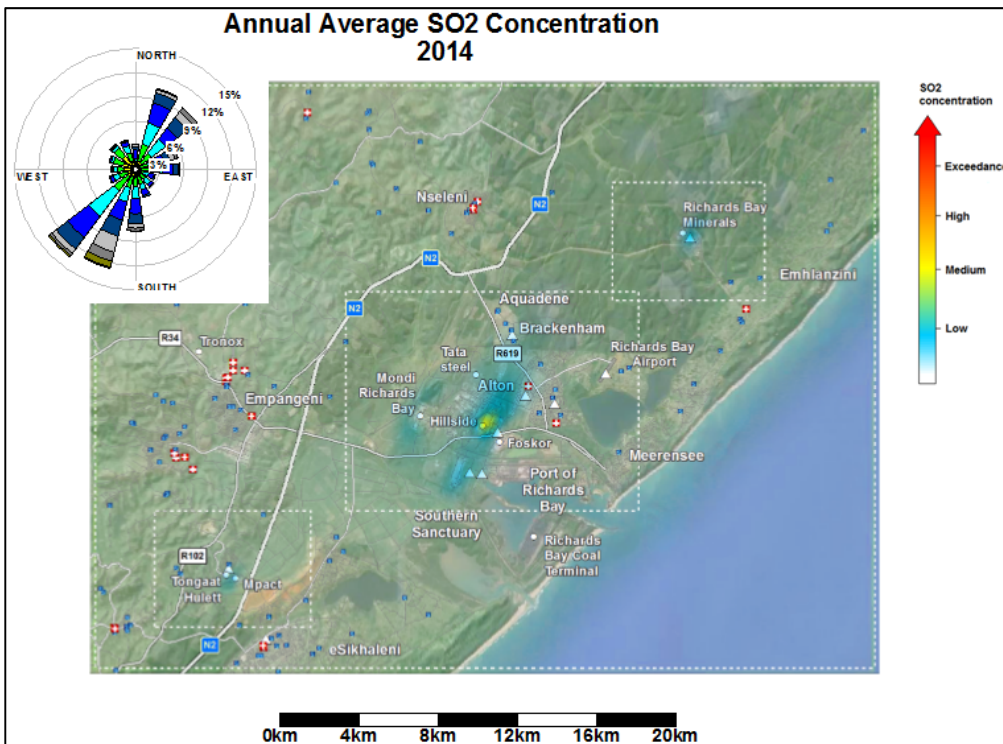


Figure 19: Maximum predicted annual average SO<sub>2</sub> concentration (Richards Bay map)

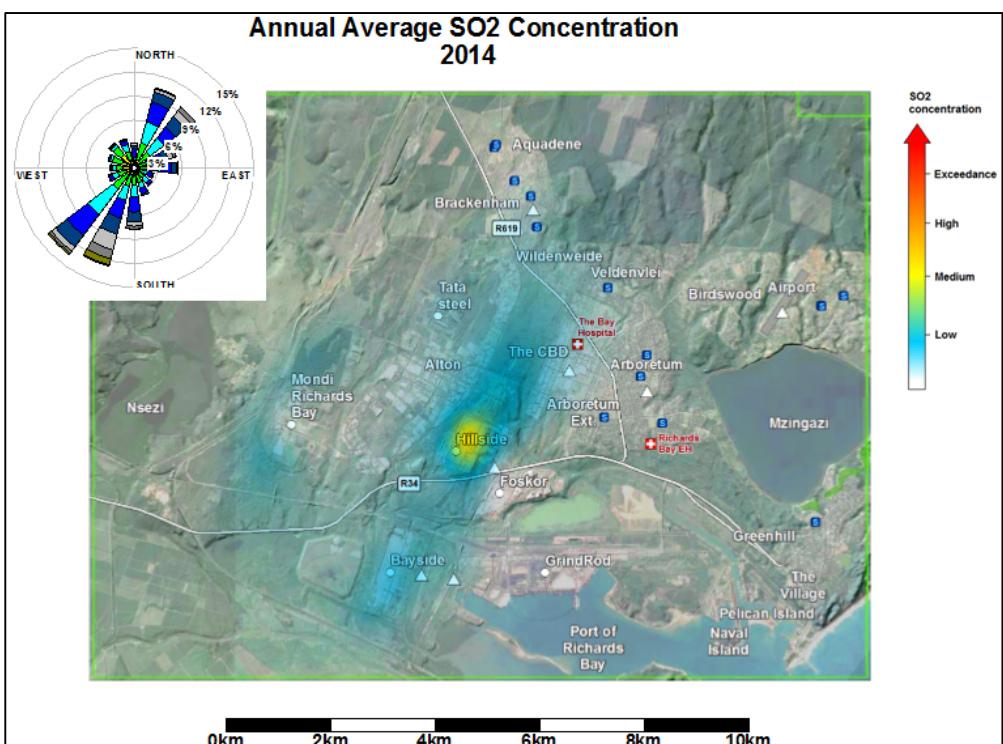




Figure 20: Maximum predicted annual average SO<sub>2</sub> concentration (Felixton map)

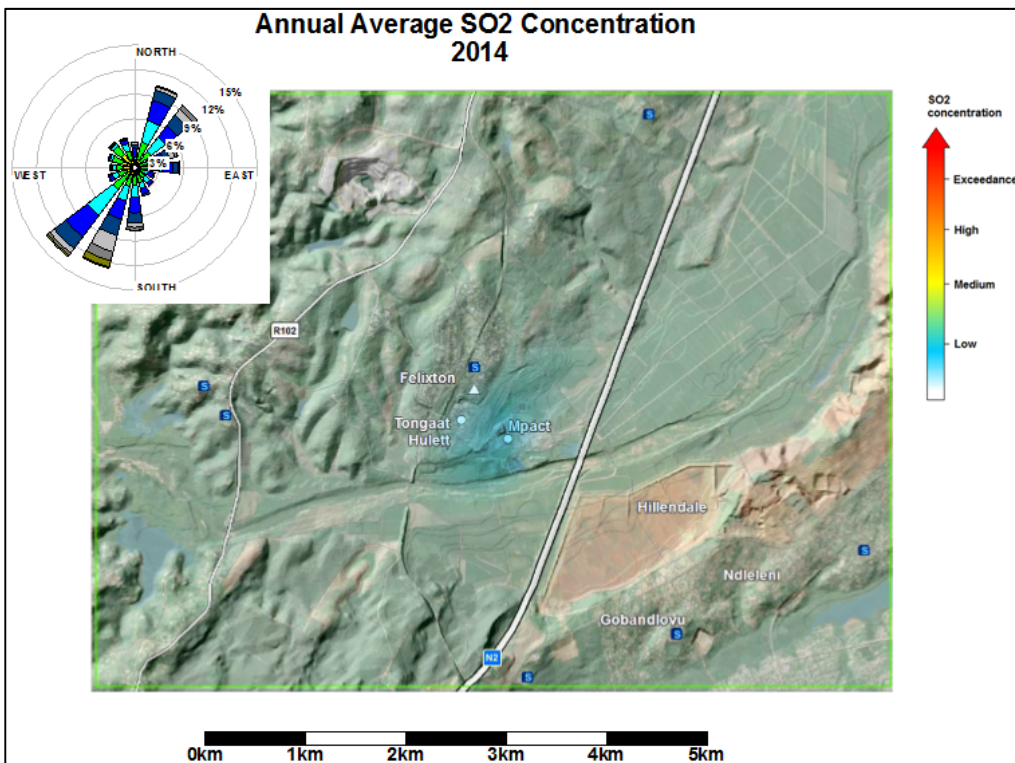
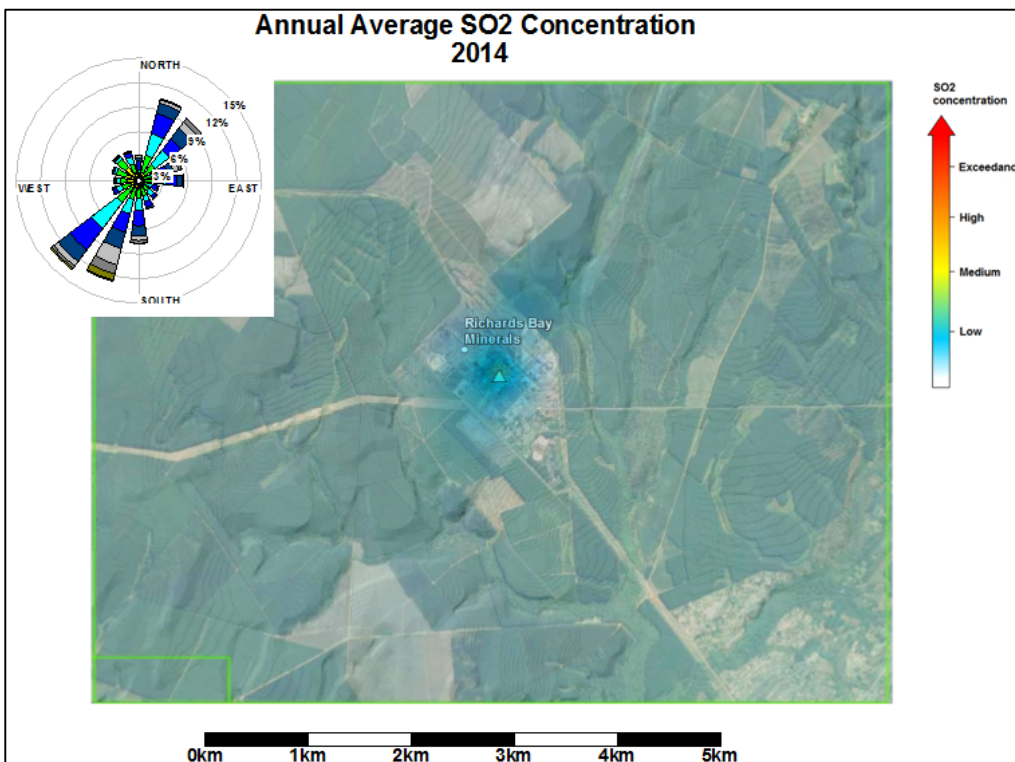


Figure 21: Maximum predicted annual average SO<sub>2</sub> concentration (RBM map)



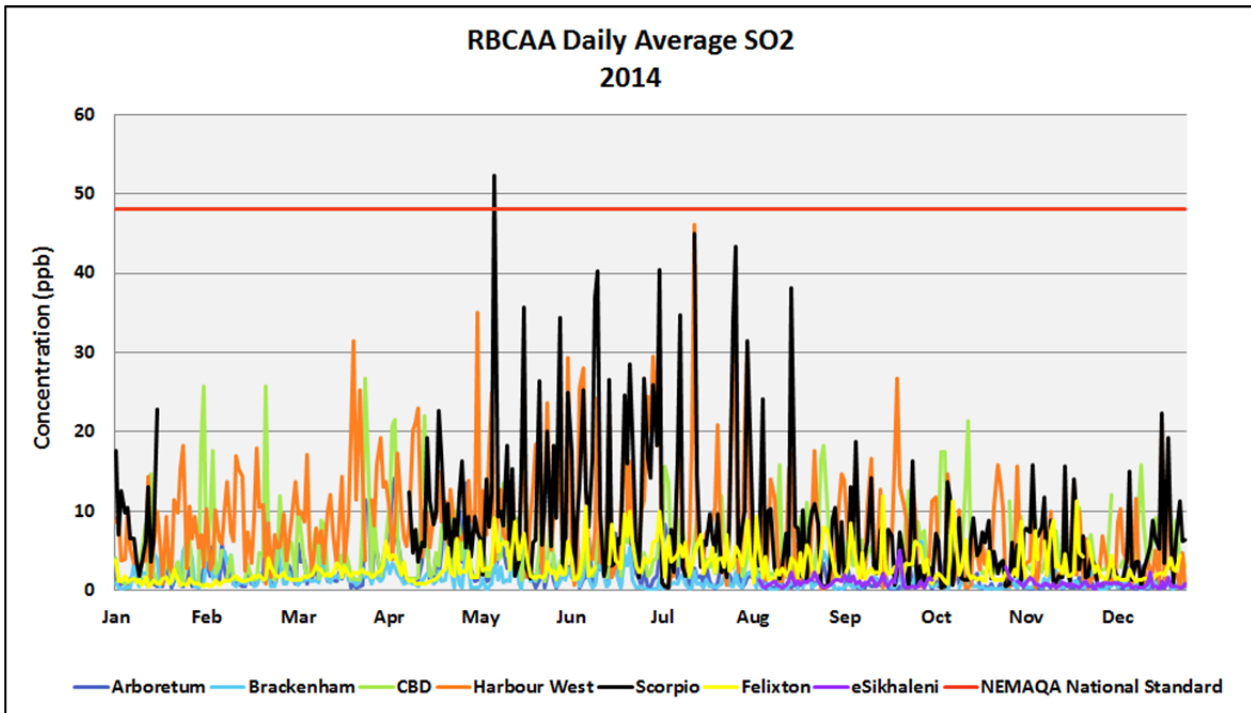


## 5.7 SO<sub>2</sub> Daily Average Information

### 5.7.1 SO<sub>2</sub> Daily Average Concentrations

The daily average SO<sub>2</sub> concentrations are shown below (Figure 22). Scorpio data from the 16<sup>th</sup> of January to the 10<sup>th</sup> of April was invalidated because of a faulty with the analyser at that station; and Bayside Aluminium was decommissioned on the 26<sup>th</sup> of June.

Figure 22: SO<sub>2</sub> daily average concentrations

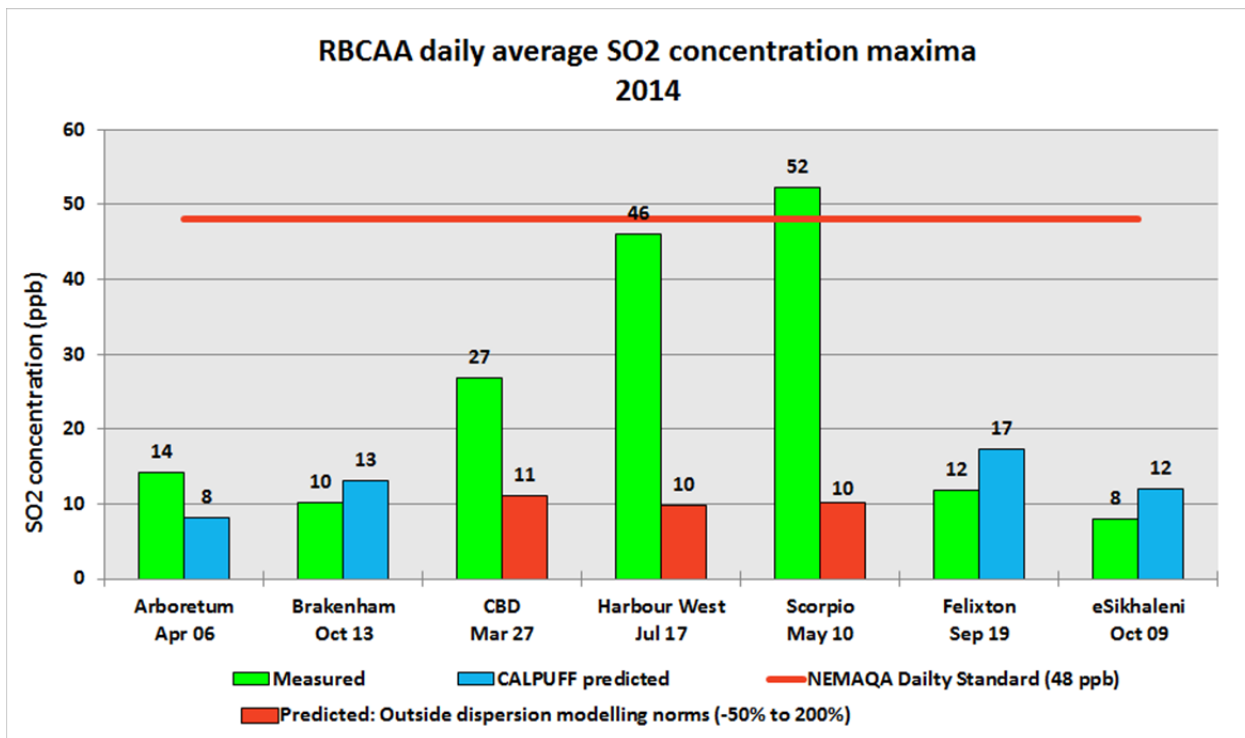


### 5.7.2 SO<sub>2</sub> Daily Average Concentration and Prediction

Daily average predicted values at Arboretum, Brackenheim Felixton and eSikhaleni were within accepted dispersion modelling norms (-50% to 200%), CBD, Harbour West and Scorpio which were under-predicted. Compared to the measurements, the predicted values at Arboretum, CBD; Harbour West and Scorpio were lower, and at Brackenheim, Felixton and eSikhaleni higher (Figure 23).



Figure 23: Daily average SO<sub>2</sub> concentration and prediction



Under predictions may indicate higher than normal emissions for the time period concerned, this may be as a result of process upsets or fugitive emissions (leaks in equipment, pipe lines, seals, valves, etc., and not from the usual point sources). The exceedance of the NEM: AQA Daily Standard Limit (48 ppb) at Scorpio on the 10<sup>th</sup> of May was attributed to fugitive emissions from Foskor.

### 5.7.3 SO<sub>2</sub> Maximum Predicted Daily Average Concentration

The following plots of the maximum daily average SO<sub>2</sub> concentrations are provided:

- Regional (Figure 24);
- Richards Bay (Figure 25);
- Felixton (Figure 26); and
- RBM (Figure 27).

The model did not predict maximum daily average SO<sub>2</sub> concentrations greater than the NEM: AQA SO<sub>2</sub> Daily Average Standard (48 ppb) over Mondi Richards. The half-guideline includes parts of Hillside Aluminium.



Figure 24: Maximum predicted daily average SO<sub>2</sub> concentration (regional map)

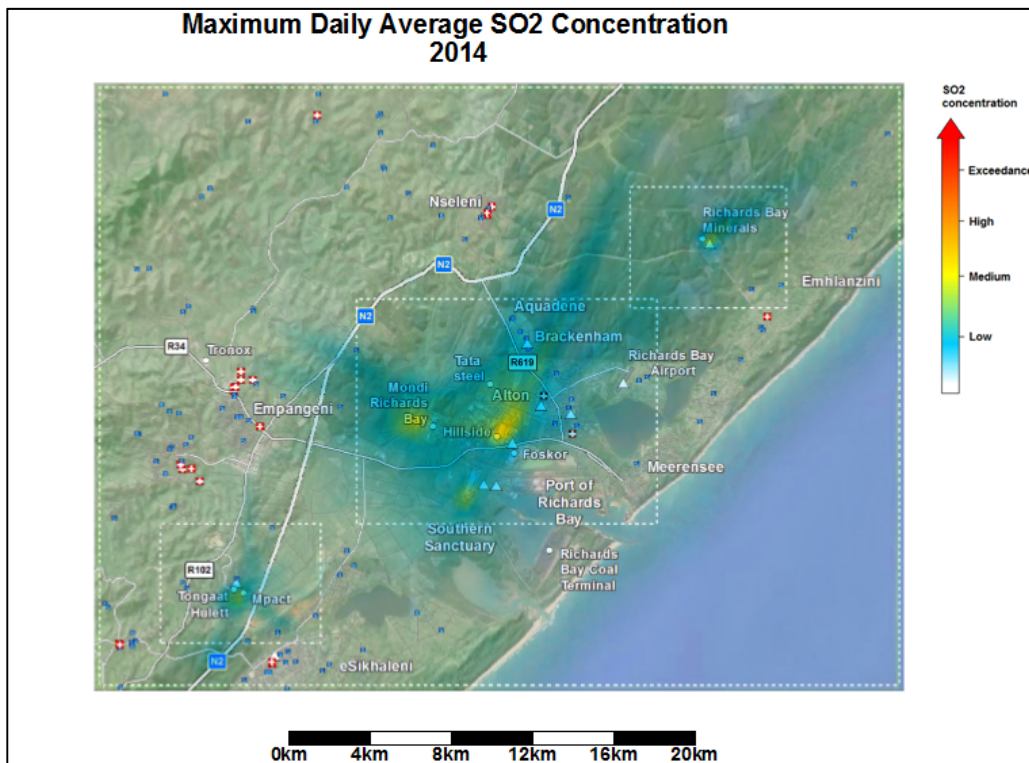


Figure 25: Maximum predicted daily average SO<sub>2</sub> concentration (Richards Bay map)

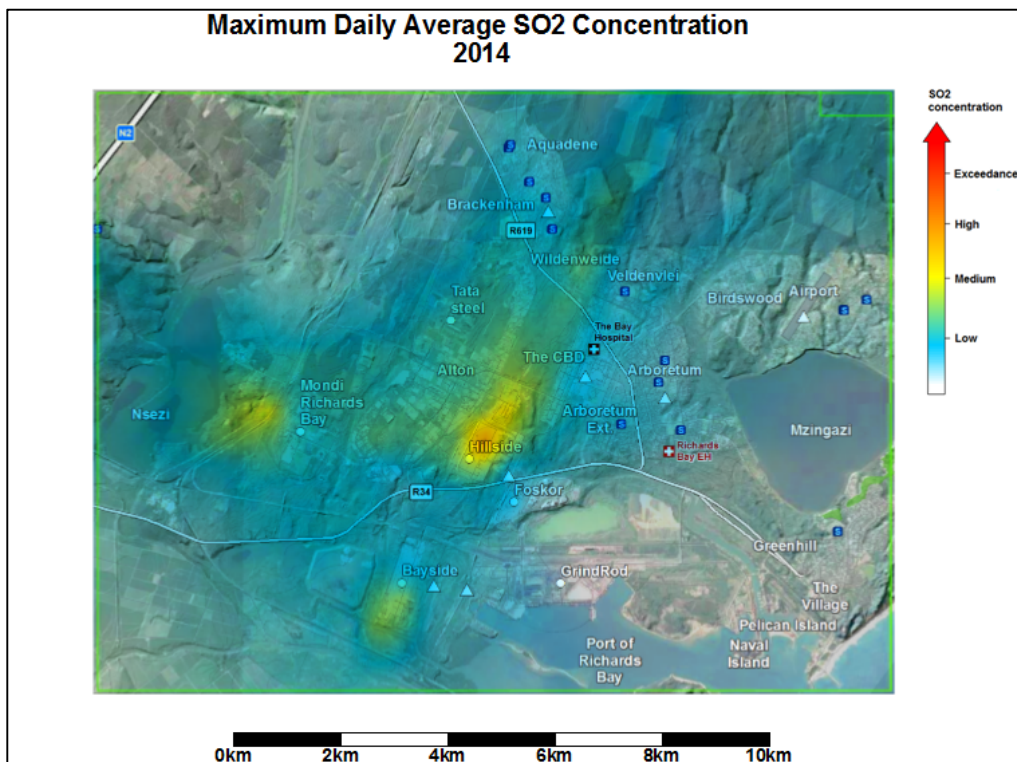




Figure 26: Maximum predicted daily average SO<sub>2</sub> concentration (Felixton map)

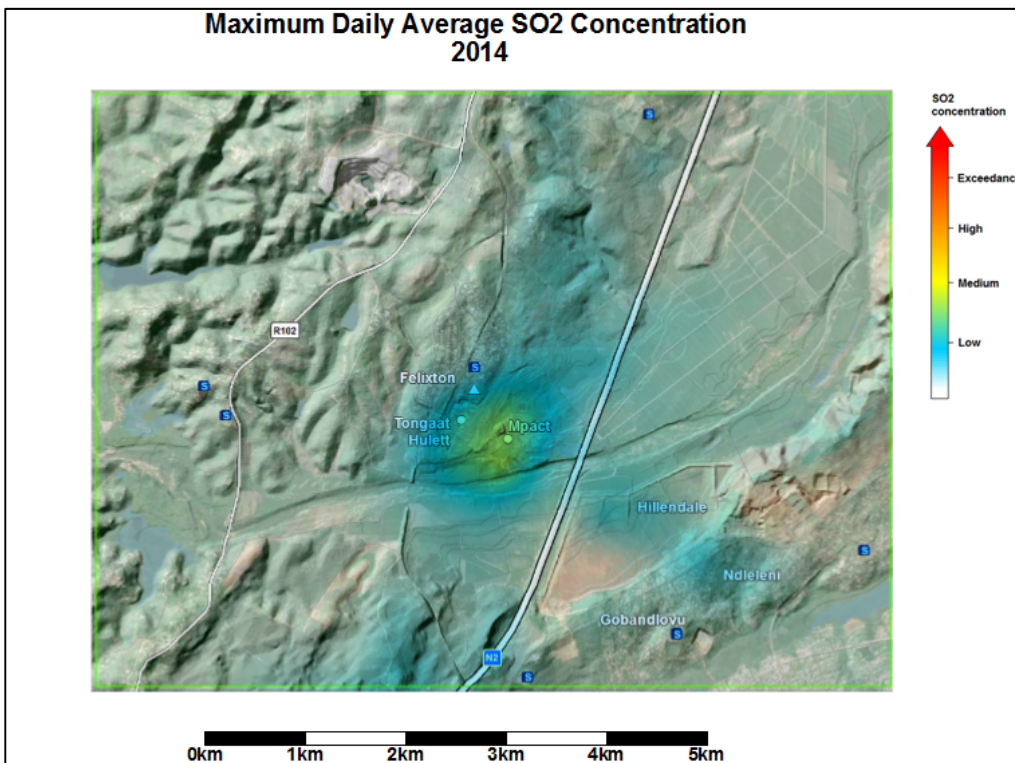
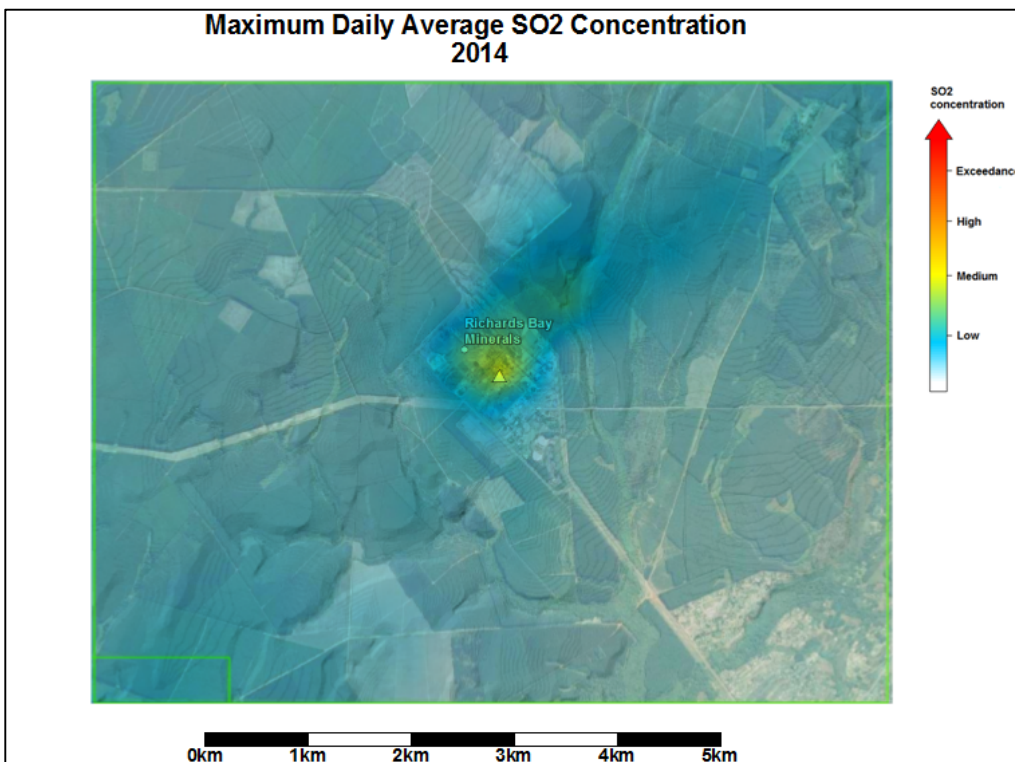


Figure 27: Maximum predicted daily average SO<sub>2</sub> concentration (RBM map)



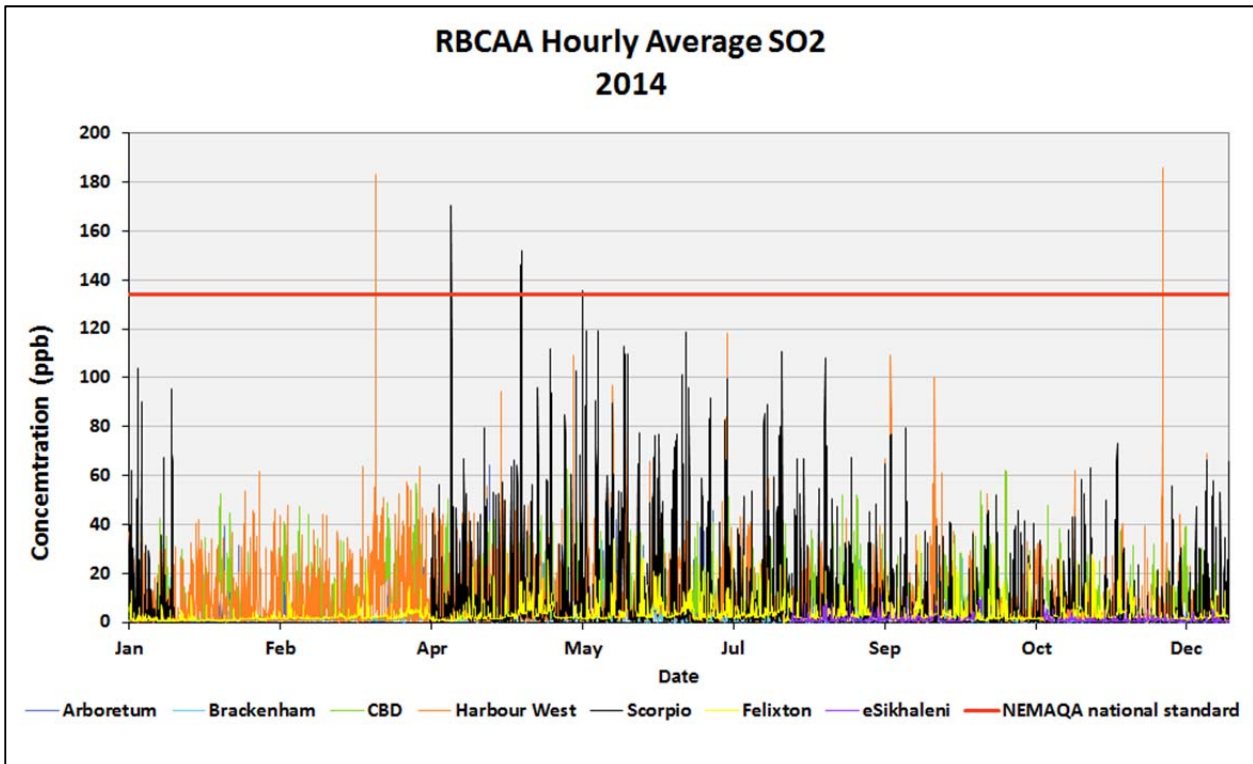


## 5.8 SO<sub>2</sub> Hourly Average Information

### 5.8.1 SO<sub>2</sub> Hourly Average Concentrations

Hourly average SO<sub>2</sub> concentrations are shown below (Figure 28). Scorpio data from the 16<sup>th</sup> of January to the 10<sup>th</sup> of April was invalidated because of a faulty with the analyser at that station; and Bayside Aluminium was decommissioned on the 26<sup>th</sup> of June.

Figure 28: SO<sub>2</sub> hourly average concentrations

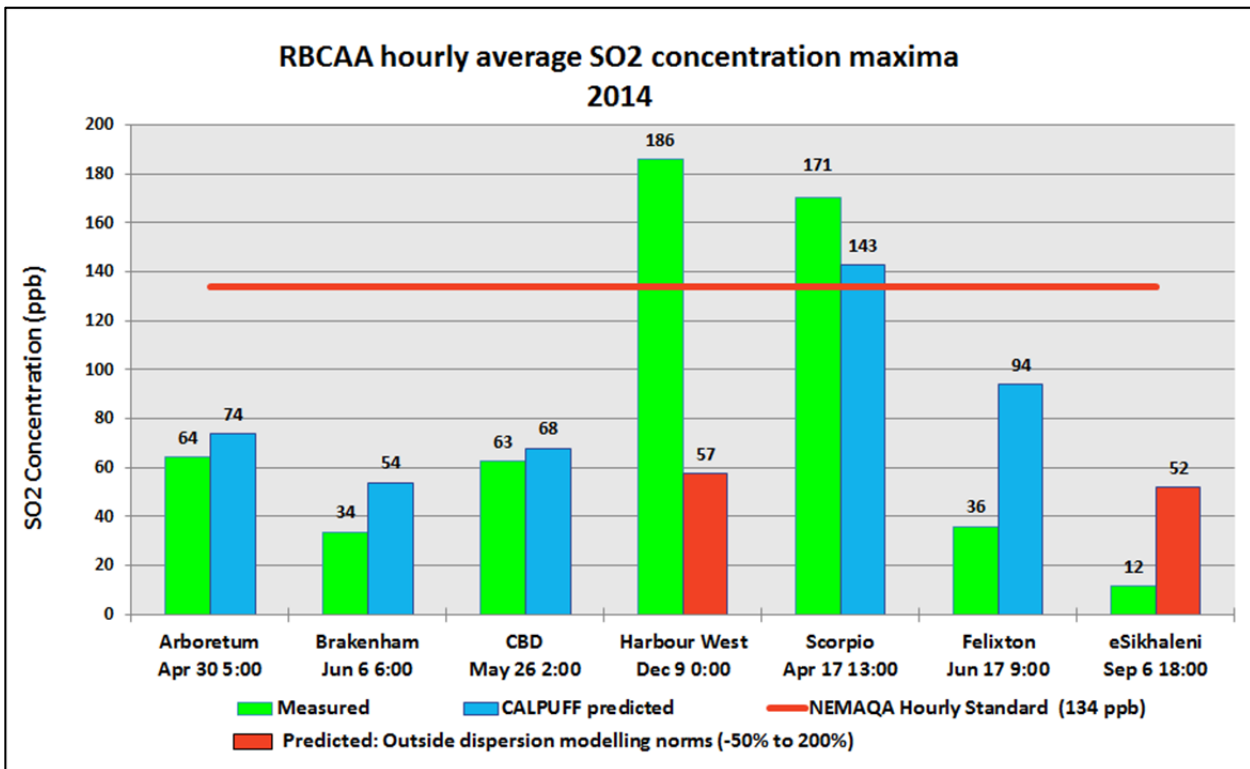




### 5.8.2 SO<sub>2</sub> Hourly Average Concentration and Prediction

All hourly average predicted values were within accepted dispersion modelling norms (-50% to 200%) with the exception of Harbour West which was under-predicted and eSikhaleni which was over predicted. Compared to the measurements, the predicted values at Harbour West and Scorpio were lower; at CBD similar (within 10% or 2ppb), and at Arboretum, Brackenham, CBD and Felixton higher (Figure 29).

Figure 29: Hourly average SO<sub>2</sub> concentration and prediction



Under predictions may indicate higher than normal emissions for the time period concerned, this may be as a result of process upsets or fugitive emissions (leaks in equipment, pipe lines, seals, valves, etc., and not from the usual point sources). The exceedance of the NEM: AQA Hourly Standard Limit (134 ppb) at Scorpio on the 17<sup>th</sup> of April and at Harbour West on the 9<sup>th</sup> of December was attributed to fugitive emissions from Foskor. Over predictions may be associated with lower than normal emissions for the time interval concerned.

### 5.8.3 SO<sub>2</sub> Maximum Predicted Hourly Average Concentration

The following plots of the maximum hourly average SO<sub>2</sub> concentrations are provided:

- Regional (Figure 30);
- Richards Bay (Figure 31);
- Felixton (Figure 32); and
- RBM (Figure 33).

The model predicted maximum hourly average SO<sub>2</sub> concentrations greater than the NEM: AQA SO<sub>2</sub> Hourly Average Standard (134 ppb) over Alton, Foskor, Hillside Aluminium, Mondi Richards Bay and RBM. The half-guideline includes parts of Arboretum, Arboretum Extension, Bayside Aluminium, Birdswood, the CBD, Greenhill, the Port of Richards Bay, Southern Sanctuary, TATA Steel, Veldenvlei and Wildenweide.



Figure 30: Maximum predicted hourly average SO<sub>2</sub> concentration (regional map)

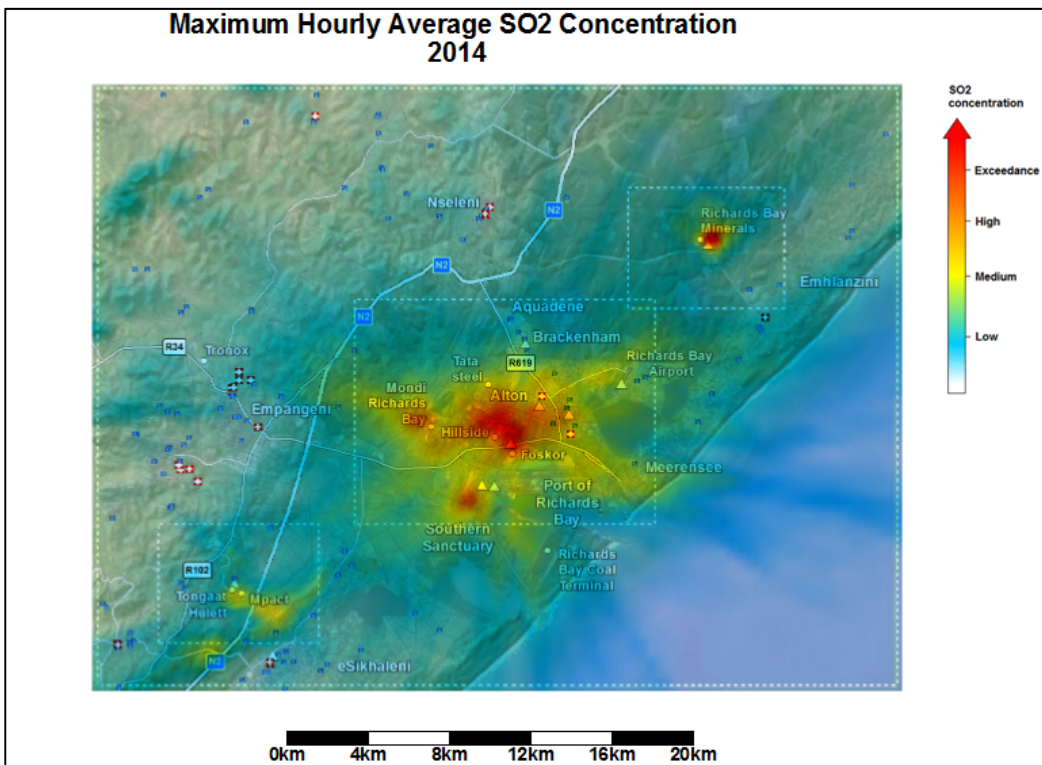


Figure 31: Maximum predicted hourly average SO<sub>2</sub> concentration (Richards Bay map)

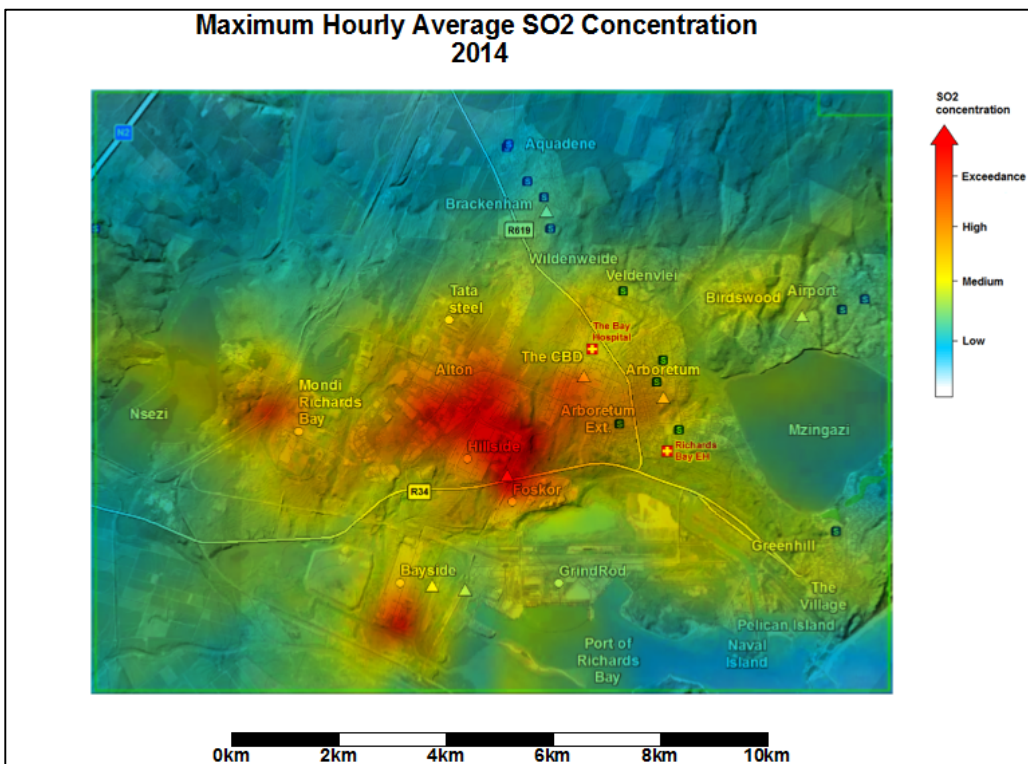




Figure 32: Maximum predicted hourly average SO<sub>2</sub> concentration (Felixton map)

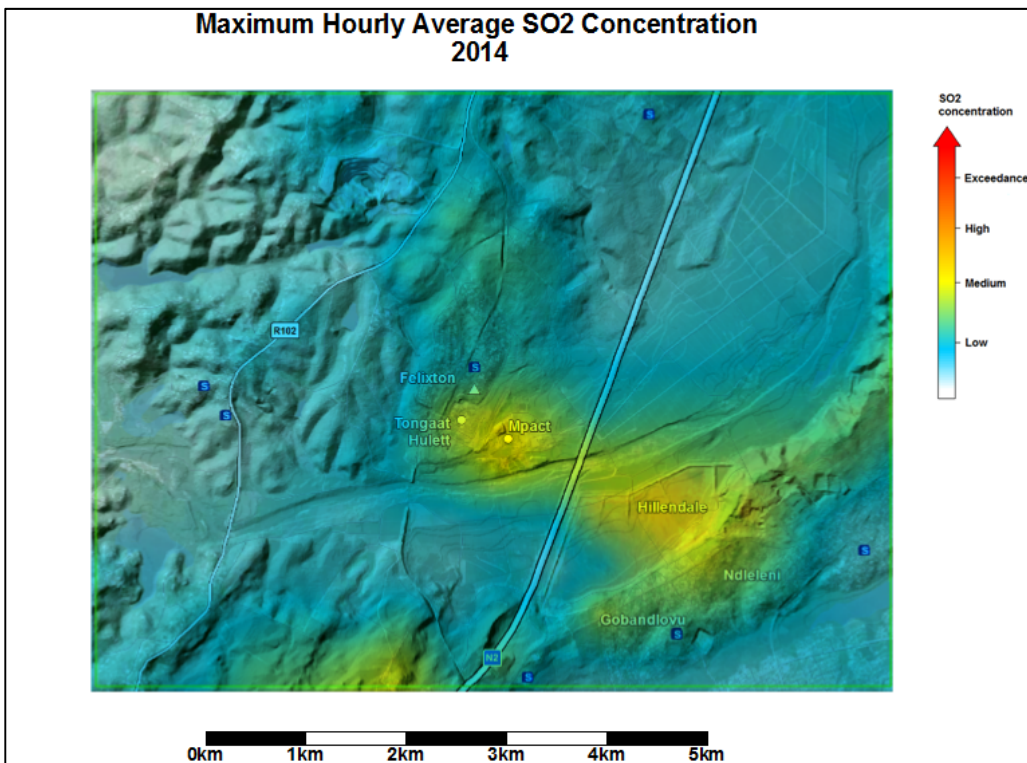
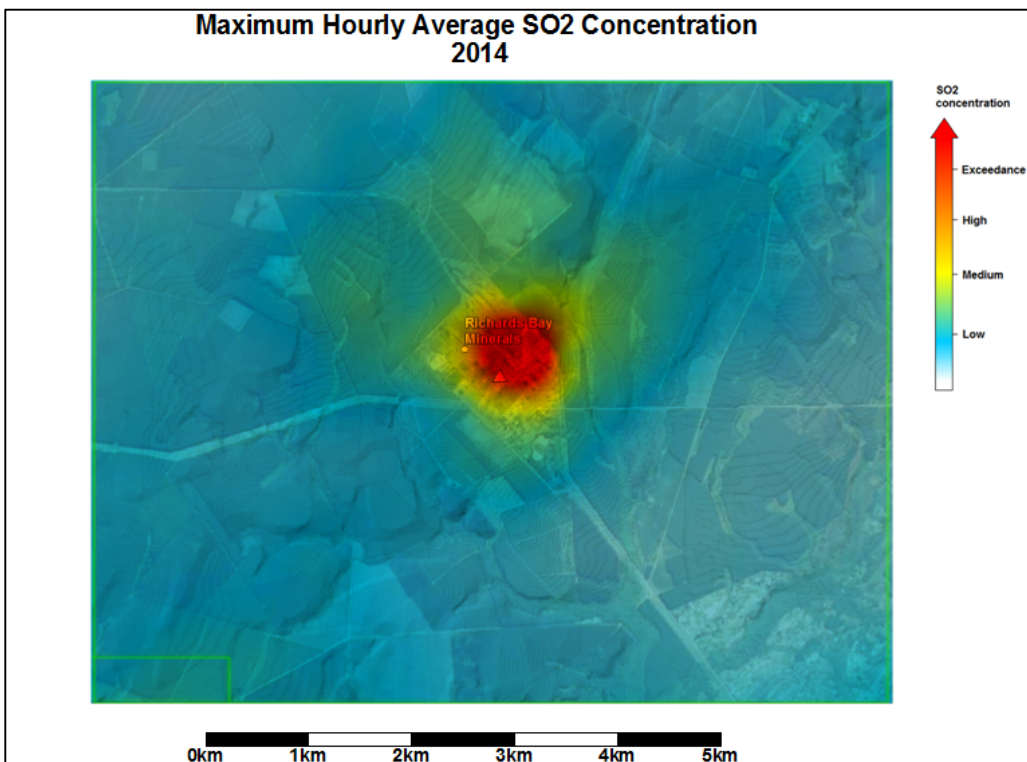


Figure 33: Maximum predicted hourly average SO<sub>2</sub> concentration (RBM map)



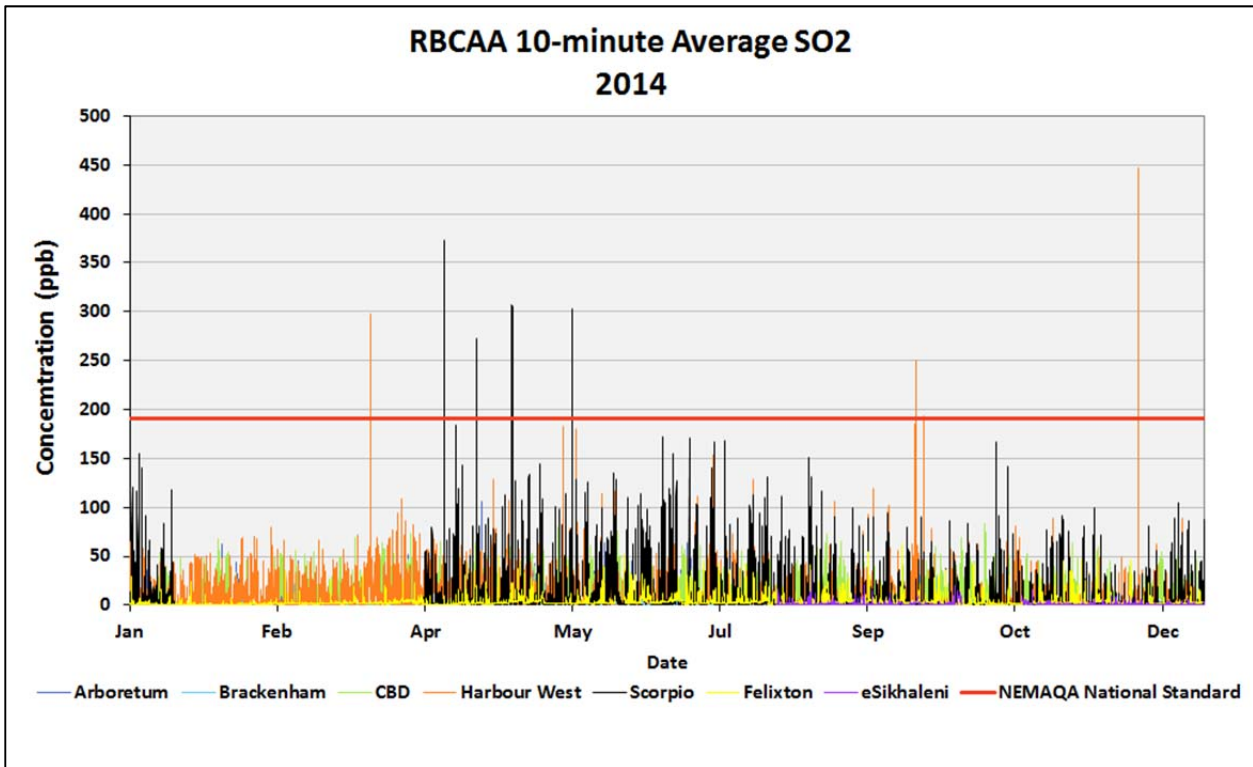


## 5.9 SO<sub>2</sub> 10-minute Average Information

### 5.9.1 SO<sub>2</sub> 10-minute Average Concentrations

The 10-minute average SO<sub>2</sub> concentrations are shown below (Figure 34). Scorpio data from the 16<sup>th</sup> of January to the 10<sup>th</sup> of April was invalidated because of a faulty with the analyser at that station; and Bayside Aluminium was decommissioned on the 26<sup>th</sup> of June.

Figure 34: SO<sub>2</sub> 10 minute average concentrations



### 5.9.2 SO<sub>2</sub> 10-minute Average Concentration and Predictions

The MM5 meteorological data used for the dispersion simulations has a resolution of one hour, therefore maximum 10-minute predictions are not possible.



## 6.0 TOTAL REDUCED SULPHUR MONITORING (TRS)

Total Reduced Sulphur (TRS) is measured at the CBD. Total reduced sulphur compounds, often associated with rotten egg or cooked cabbage odour, refer to a gaseous mixture of compounds consisting mainly of hydrogen sulphide ( $H_2S$ ), methyl mercaptan ( $CH_3S-H$ ), dimethyl sulphide ( $CH_3-S-CH_3$ ) and dimethyl disulphide ( $CH_3-S-S-CH_3$ ). While there are other ambient TRS compounds, these four are the most common, abundant and the ones generally referred to in discussions about TRS. Once released into the atmosphere, oxidation products of TRS compounds, such as sulphuric acid, contribute to the acidity of the environment. The most commonly reported health concerns related to TRS substances are nausea and headaches, although each component has its own characteristics and effects.

### 6.1 TRS Ambient Air Quality Guidelines

There are no South African ambient air quality 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  $7\mu g/m^3$  (5ppb), 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  $14\mu g/m^3$  (10.1ppb) for TRS, based on the adverse effects on the respiratory system (nasal lesions) of this mixture;
- A 10-minute average AAQC of  $13\mu g/m^3$  (9.3ppb) for TRS, based on odour effects; and
- A 30-minute standard of  $10\mu g/m^3$  (7.2ppb) for TRS; based on both odour and health effects of this mixture.

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

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

The RBCAA has decided to implement the WHO 30-minute  $H_2S$  nuisance guideline  $7\mu g/m^3$  (5ppb), the OME 10-minute TRS health standard  $13\mu g/m^3$  (9.3ppb). In addition, the RBCAA established a correlation between TRS concentrations exceeding 4.5ppb and the number of complaints received. Thus the RBCAA has set its own 10-minute target of  $5.9\mu g/m^3$  (4.5ppb).



## 6.2 TRS Compliance with Air Quality Guidelines and Maximums

The number of TRS exceedances measured at the various stations is indicated in Table 7.

**Table 7: Compliance with TRS ambient air quality guidelines**

Standard	Permissible Exceedances	Station	Exceedances 2014	Exceedances 2013
RBCAA 10-minute Target (4.5 ppb)	N/A	CBD	98	163
		eSikhaleni	24	-
OME 10-minute Standard (9.3 ppb)	N/A	CBD	19	13
		eSikhaleni	1	-
WHO 30-minute H2S Guideline (5.0ppb)	N/A	CBD	20	25
		eSikhaleni	2	-

Please see APPENDIX D for the detailed exceedance log.

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 2014 were as a result of emissions from Mondri.

Maximum and monthly average concentrations for TRS are provided in Table 8.

**Table 8: TRS maximum and monthly concentrations for 2014**

Maximum TRS concentrations						
Station		RBCAA 10-minute Target (4.5ppb)	10 Minute Average (Standard 9.3ppb)	30-minute Average (Guideline 5.0ppb)	Daily Average (Standard 10.1ppb)	Annual Average
CBD	% of guideline	627%	303%	414%	37%	-
	(ppb)	28.2	28.2	20.7	3.7	1.3
	Date & time	2014/02/13 23:50	2014/02/13 23:50	2014/02/14 00:00	2014/02/14	2014
eSikhaleni	% of guideline	222%	108%	92%	29%	-
	(ppb)	10.0	10.0	4.6	2.9	1.4
	Date & time	2014/11/26 06:30	2014/11/26 06:30	2014/09/08 03:00	2014/12/21	2014

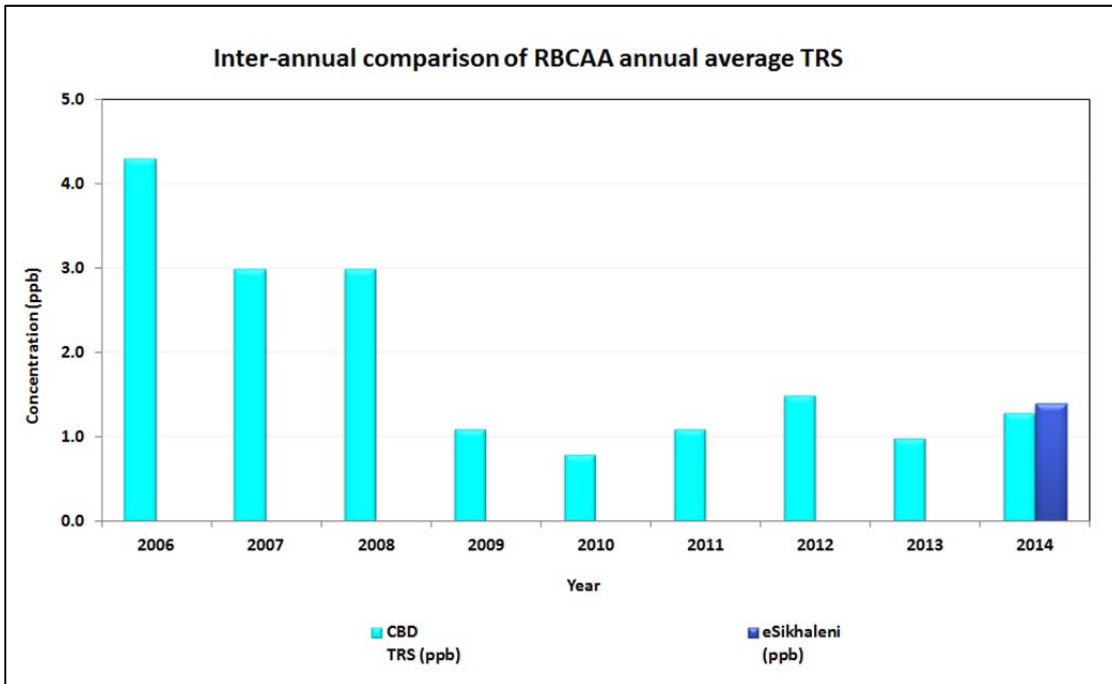
Note: The table is colour coded according to the level of concentration recorded. The colour scale ranges from blue (indicating a low concentration relative to the standard), to red (indicating an exceedance of the standard).



### 6.3 TRS Annual Average Trend

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 2011 though.

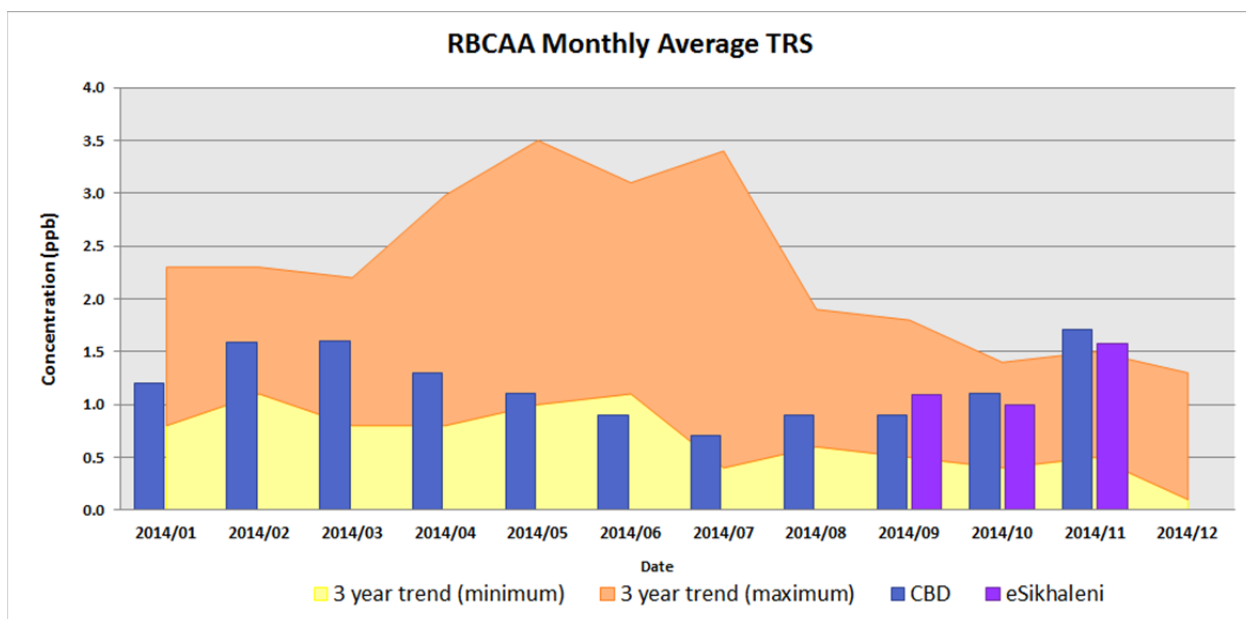
Figure 35: TRS annual average information



### 6.4 TRS Seasonal Variation

Monthly TRS concentrations in 2014 are provided in Figure 36.

Figure 36: Seasonal variation in TRS (monthly average concentrations)

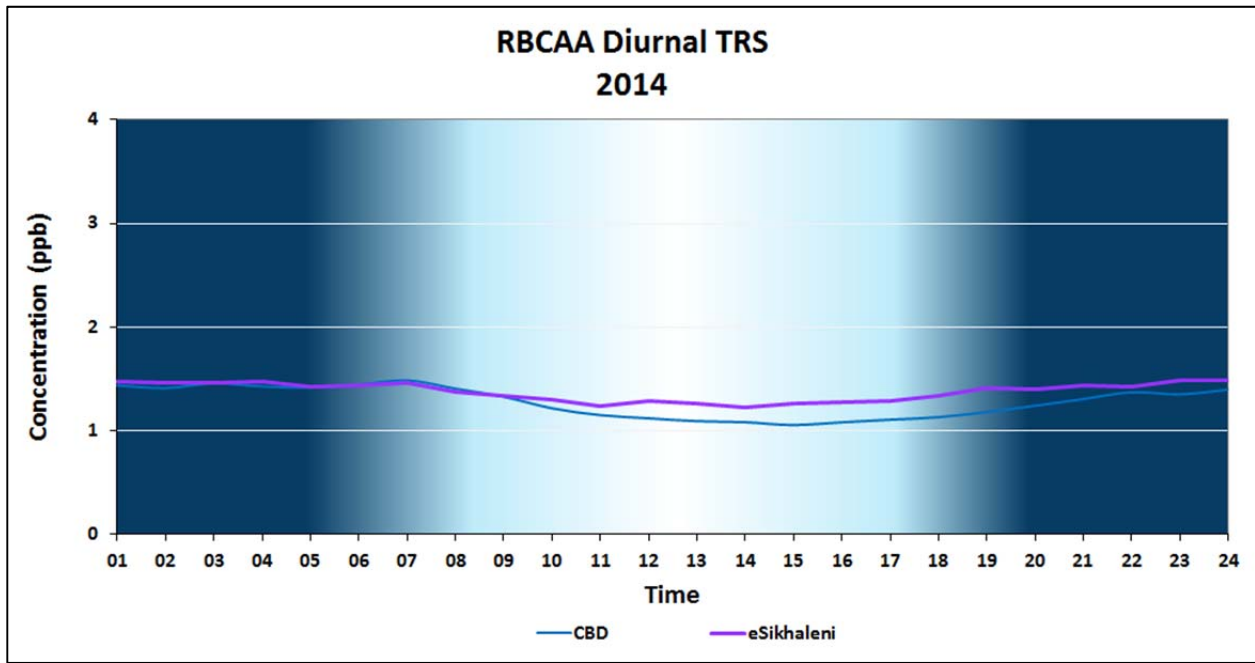




### 6.5 TRS Diurnal Concentrations

The diurnal TRS concentrations are shown below (Figure 37).

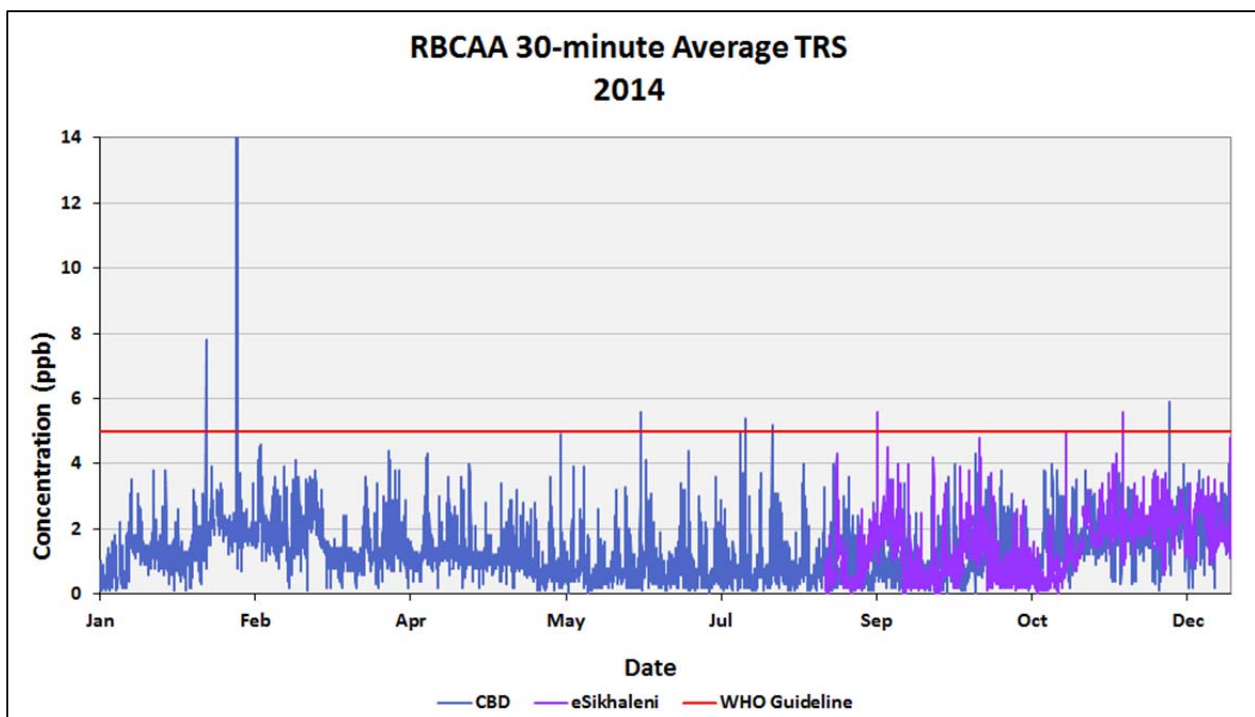
Figure 37: TRS diurnal concentration



### 6.6 TRS 30-minute Average Information

The 30-minute average TRS concentration at CBD is shown below (Figure 38).

Figure 38: TRS 30-minute average concentration

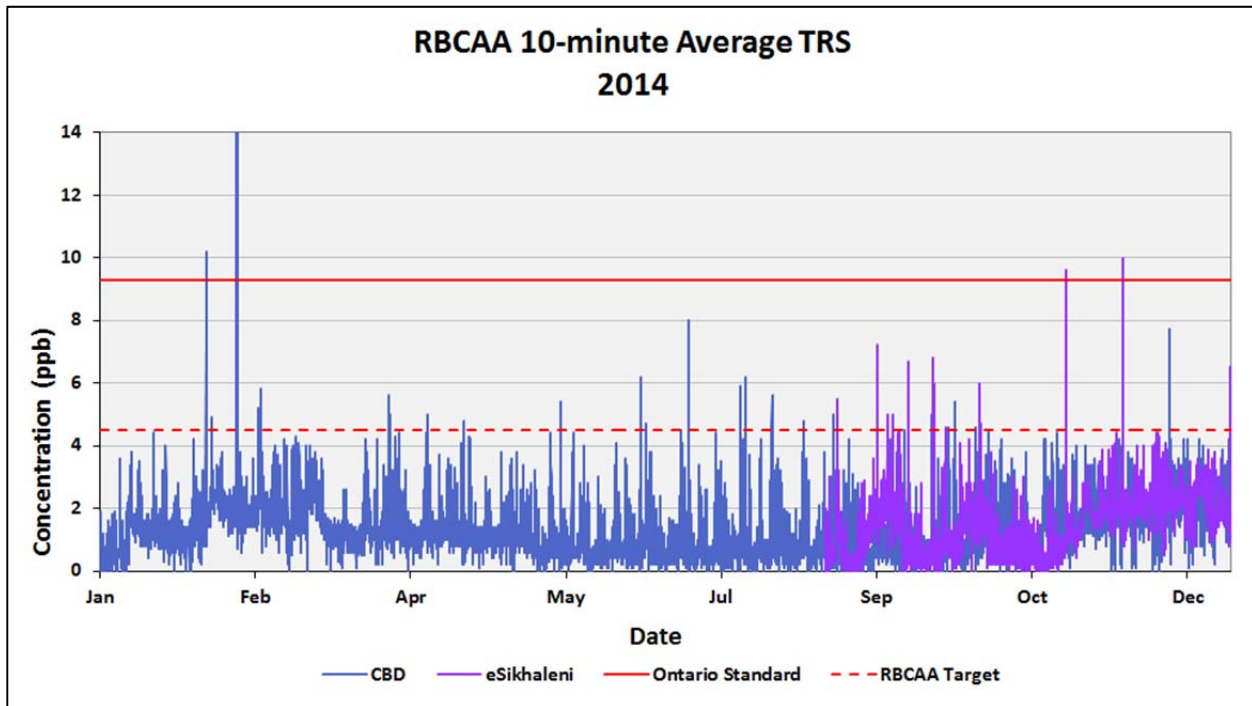




### 6.7 TRS 10-minute Average Information

The 10-minute average TRS concentration is shown below (Figure 39).

Figure 39: TRS 10-minute average concentrations



### 7.0 OBJECTIVES FOR 2015

Golder recommends the following objectives for 2015:

- The external certification of the RBCAA quality system against SANAS;
- To upgrade of the data acquisition system to use 1 minute data;
- The completion of the upgrade of the Hawk, to use real time emissions data;
- The upgrade of the HAWK’s maps;
- A review of the emission inventory;
- The decommissioning of the Mtunzini station;
- The commissioning of the Nseleni station; and
- Resolution of the safety issues while working at heights at the stations.



## **8.0 CLOSURE**

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

- Candice Allan.
- Adam Bennett;
- Lance Coetzee; and
- Francois Nel.

### **GOLDER ASSOCIATES AFRICA (PTY) LTD.**

Lance Coetzee  
Project Manager

Adam Bennett  
Project Director

LC/AB/ck

Reg. No. 2002/007104/07

Directors: SA Eckstein, RGM Heath, SC Naidoo, GYW Ngoma

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation.

t:\drawings\projects\12614846\_rbcca\_aqam\_rbay\5.1\_working\_documents\2014 annual\report\12614846-13412-33\_rbcaa\_2014\_annual\_fnl.docx



# **APPENDIX A**

## **Quality Assurance**



### QUALITY ASSURANCE STATEMENT

The SO<sub>2</sub> concentrations reported are determined by a United States Environmental Protection Agency (US EPA) equivalent method EQSA-0193-092. SO<sub>2</sub> 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.

Test	Range	Action
Zero	Zero 0 to 2 ppb	Leave as is.
	-2 to 0 ppb	Set to zero.
	-5 to -2 ppb and 2 to 5 ppb	Adjust data set to re-zero all data
	Outside above limits invalidate and recalibrate.	If specific reason can be identified for deviation, data may 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 may be adjusted.



# **APPENDIX B**

## **Dispersion Simulation Inputs**



## DISPERSION SIMULATION INPUTS

### Source Emission Data

Industry	Annual SO <sub>2</sub> Emissions (tpa)	Contribution
AAFC	4	0.0%
Bayside Aluminium	1042	5.6%
Foskor	2054	11.0%
Hillside Aluminium	10561	56.7%
Tongaat Hulett	211	1.1%
Mondi	3080	16.5%
Mpact	816	4.4%
RBM	542	2.9%
TATA	64	0.3%
TRONOX	251	1.3%
Total	18625	100.0%

Notes:

- Bayside Aluminium was decommissioned during June (the last pot was switched off on the 26<sup>th</sup> of June);
- Foskor shut down during June and had partial shutdowns during May and November;
- TATA Steel had a winter shutdown / Eskom buy-back during June & July; and
- Tongaat Hulett shuts down (first quarter and last month of the year).



# **APPENDIX C**

## **Operational Report**



### SYNOPSIS

- **Office Move from the Civic Centre to the Smart Plan Offices:** The uMhlatuze Municipality requested that the RBCAA move from the offices in the Civic Centre because they needed the office space. The RBCAA managed to find office space in the Smart Plan Offices at 95 Dollar drive in Richards Bay. The move to the new offices took place on 7 April; an IT company was contracted to move the computers and networking equipment, the ADSL line was also moved;
- **St Lucia Station De-commissioned:** The RBCAA decided to stop monitoring at St Lucia because the objective, to establish a PM<sub>10</sub> base line at that site, had been achieved. The station was switched off on the 26<sup>th</sup> of June, collected by HARS cc, and parked at the Scorpio station the station; it will be deployed at another location;
- **eSikhaleni Station commissioned:** The eSikhaleni monitoring station was commissioned on 24 July, and officially opened on 19<sup>th</sup> of August. The station monitors SO<sub>2</sub>, PM<sub>10</sub>, TRS and meteorology and is located on the premises of the Tisand Technical High school. A palisade Fence and an alarm have been installed to safe guard the station; and
- **Internal Audit and Station Safety:** An internal audit according SANAS requirement found two non-conformances, unsafe working at heights and dirty inlet manifolds as a result thereof. BHP Billiton and Foskor visited the sites and made recommendations to the RBCAA to rectify the situation. BHP Billiton has made engineering drawings available to have safety railing manufactured and installed on all monitoring stations.



## AMBIENT AIR QUALITY DATA CAPTURE

Data capture shows the percentage of the month where the station as a whole was operational, while the SO<sub>2</sub>, PM<sub>10</sub>, and TRS data capture indicate the percentage of valid data received from the respective analysers for the month. Data capture for 2014 is shown in the tables below. SANAS data capture requirement is 90%; the RBCAA target is 98%.

**Table I: Ambient air quality data capture for PM<sub>10</sub>**

Month	Brackenham	CBD	Mtunzini	St Lucia	Felixton	eSikhaleni	Average
Jan 2014	99.4%	71.6% <sup>1</sup>	99.9%	97.7%	99.8%	N/A	93.7%
Feb 2014	98.7%	99.6%	98.2%	99.8%	99.7%	N/A	99.2%
Mar 2014	98.7%	99.4%	98.8%	98.8%	99.6%	N/A	99.1%
Apr 2014	99.7%	99.9%	99.9%	91.8%	99.7%	N/A	98.2%
May 2014	99.9%	99.8%	99.9%	89.4% <sup>2</sup>	99.9%	N/A	97.8%
Jun 2014	99.0%	92.7%	99.9%	97.9%	90.5%	N/A	96.0%
Jul 2014	99.8%	99.8%	99.9%	N/A	99.9%	N/A	99.9%
Aug 2014	98.5%	99.9%	96.4%	N/A	99.9%	N/A	98.7%
Sep 2014	88.7% <sup>3</sup>	97.5%	99.9%	N/A	99.3%	99.9%	97.1%
Oct 2014	98.2%	97.2%	94.6%	N/A	99.4%	99.7%	97.8%
Nov 2014	96.7%	38.0% <sup>1</sup>	96.7%	N/A	95.9%	98.0%	85.1%
Dec 2014	97.3%	75.8% <sup>4</sup>	99.9%	N/A	96.3%	98.6%	93.6%
Average	97.9%	89.3%	98.7%	95.9%	98.3%	99.1%	96.4%

Notes:

<sup>1</sup> Instrumentation failures

<sup>2</sup> Power failure and faulty UPS

<sup>3</sup> Power outages

<sup>4</sup> Instrumentation failure and load shedding



Table II: Ambient air quality data capture for SO<sub>2</sub>

Month	Arboretum	Brackenham	CBD	Harbour West	Scorpio	Felixton	eSikhaleni	Average
Jan 2014	99.8%	97.2%	97.9%	99.9%	48.4% <sup>1</sup>	99.9%	N/A	90.5%
Feb 2014	99.5%	99.8%	97.2%	99.9%	0.0% <sup>1</sup>	99.7%	N/A	82.7%
Mar 2014	99.6%	98.9%	99.2%	97.4%	0.0% <sup>1</sup>	99.8%	N/A	82.5%
Apr 2014	99.9%	99.9%	99.9%	99.8%	66.7% <sup>1</sup>	99.9%	N/A	94.4%
May 2014	99.4%	99.8%	99.6%	99.5%	99.8%	99.6%	N/A	99.6%
Jun 2014	99.9%	99.2%	92.9%	99.9%	99.8%	90.7%	N/A	97.1%
Jul 2014	99.9%	99.9%	99.9%	99.9%	96.1%	99.9%	N/A	99.3%
Aug 2014	99.9%	98.7%	99.7%	99.9%	99.8%	99.4%	N/A	99.6%
Sep 2014	99.9%	87.7% <sup>2</sup>	99.2%	99.9%	99.2%	99.4%	99.8%	97.9%
Oct 2014	96.8%	98.3%	97.6%	99.9%	99.4%	99.7%	30.1% <sup>3</sup>	88.8%
Nov 2014	97.1%	96.5%	98.2%	99.8%	99.5%	96.1%	94.1%	97.3%
Dec 2014	96.9%	97.3%	95.5%	99.9%	99.7%	96.2%	98.6%	97.7%
Average	99.1%	97.8%	98.1%	99.6%	75.7%	98.4%	80.7%	93.9%

Notes:

1 Faulty analyser

2 Power outages

3 Instrumentation failures



**Table III: Ambient air quality data capture for TRS**

Month	CBD	eSikhaleni	Average TRS
Jan 2014	97.7%	N/A	97.7%
Feb 2014	97.0%	N/A	97.0%
Mar 2014	97.9%	N/A	97.9%
Apr 2014	99.9%	N/A	99.9%
May 2014	99.3%	N/A	99.3%
Jun 2014	92.8%	N/A	92.8%
Jul 2014	99.8%	N/A	99.8%
Aug 2014	99.5%	N/A	99.5%
Sep 2014	98.4%	99.8%	99.1%
Oct 2014	97.3%	99.9%	98.6%
Nov 2014	97.6%	97.5%	97.6%
Dec 2014	96.5%	98.5%	97.5%
<b>Average</b>	<b>97.8%</b>	<b>98.9%</b>	<b>98.1%</b>

## NETWORK OPERATION

### General:

- **4 February 2014:** All the SO<sub>2</sub> and TRS analysers were serviced and calibrated by C&M Consulting Engineers, during the week;
- **19 February 2014:** Received all Capex items ordered from C&M Consulting Engineers: SO<sub>2</sub> analyser, TRS Converter Oven and Teflon inlet manifold for St Lucia mobile monitoring station;
- **25 February 2014:** Calspec (Pty) Ltd calibrated the TEOM's at Brackenhams and CBD monitoring stations;
- **26 February 2014:** Calspec (Pty) Ltd calibrated the TEOM's at Mtunzini and St Lucia monitoring stations;
- **6 March 2014:** Load Shedding occurred during the day and affected most of the monitoring stations. Scorpio and Harbour West were the only stations not affected. Arboretum 18:00 to 20:00; Brackenhams 17:55 to 19:50 and CBD monitoring station 11:45 to 13:55;
- **12 March 2014:** Inteltronics CC successfully calibrated all meteorological stations during the week;
- **19 May 2014:** C & M Consulting Engineers service and calibrate all SO<sub>2</sub> analysers;
- **1 July 2014:** HARS cc installed an air conditioner in RBCAA server room at Smart Plan Offices;
- **15 July 2014:** C&M install PVDF manifold into eSikhaleni mobile monitoring station;
- **24 July 2014:** Set up Mobile monitoring station and meteorological mast at eSikhaleni;
- **28 July 2014:** ADT Security installs an alarm system into eSikhaleni mobile monitoring trailer;



- **4 August 2014:** C&M Consulting Engineers do Multi Point Calibrations on all RBCAA SO<sub>2</sub> and TRS analysers;
- **19 August 2014:** Official opening of the eSikhaleni monitoring station;
- **25 August 2014:** Start with HF passive monitoring at 9 locations in Richards Bay;
- **27 August 2014:** An internal SANAS audit was done on Harbour West and Arboretum monitoring stations;
- **6 October 2014:** Calspec CC calibrated all PM10 TEOM Flow rates and verified mass transducer accuracies;
- **3 November 2014:** C&M Consulting Engineers do MP Calibrations on all SO<sub>2</sub> and TRS analysers during the week;
- **10 November 2014:** DPSI service and change all UPS batteries; and
- **21 December 2014:** MULTENET APN down – Service providers ADSL line was down.

### Ambient Air Quality Stations

#### *Arboretum station:*

- **23 February 2013:** The earth leakage at the Arboretum monitoring station tripped on 23 February 2013. No data were collected for a period from 12:35 on 23 February 2013 to 08:10 on 25 February 2013;
- **23 July 2014:** Remove API SO<sub>2</sub> analyser SN 1980 from Arboretum monitoring station to install into eSikhaleni mobile monitoring station;
- **27 August 2014:** An internal SANAS audit was done on Harbour West and Arboretum monitoring stations;
- **October 2014 Power failures:** 16 Oct 2014 16:40 to 17 Oct 2014 10:30 (Earth leakage tripped);
- **27 November 2014:** Replace the logger PC's monitor at the Arboretum monitoring station;
- **November 2014 Power failures:**
  - 2 Nov 2014 12:30 to 15:20.
- **December 2014 Power failures:**
  - 4 Dec 2014 18:10 to 19:45;
  - 5 Dec 2014 15:45 to 20:55;
  - 6 Dec 2014 07:30 to 12:10;
  - 7 Dec 2014 07:40 to 11:55;
  - 8 Dec 2014 11:35 to 16:25; and
  - 11 Dec 2014 09:50 to 10:45.

#### *Brackenham:*

- **13 January 2014:** After a short power failure the SO<sub>2</sub> analyser at Brackenham started up but did not respond to SO<sub>2</sub> gas. The analyser was replaced with a spare SN: ML M2015-M736 and the faulty analyser sent to C&M Consulting Engineers for repairs;



- **19 February 2014:** Received repaired Brackenhams SO2 analyser SN: 92B;
- **19 April 2014:** The Brackenhams SO2 analyser was replaced with the repaired SO2 analyser SN: 92B and the spare analyser returned to the Arboretum monitoring station;
- **17 June 2014:** A general Power failure occurred (load shedding) at the Brackenhams monitoring station from 17:55 to 18:55;
- **31 July 2014:** Install a new permeation tube into the IZS of the Brackenhams SO2 analyser;
- **9 August 2014:** a General power failure occurred at the Brackenhams monitoring station from 07:35 to 11:20;
- **September 2014 Power failures:**
  - 11 Sept 2014 03:15 to 07:30;
  - 11 Sept 2014 09:30 to 09:45;
  - 13 Sept 2014 07:20 to 15 Sept 2014 08:10 (power tripped);
  - 15 Sept 2014 15:25 to 16:00;
  - 18 Sept 2014 23:55 to 19 Sept 2014 10:00;
  - 20 Sept 2014 05:30 to 06:40;
  - 28 Sept 2014 21:45 to 22:40;
  - 29 Sept 2014 09:20 to 11:25;
  - 29 Sept 2014 22:00 to 22:45;
  - 30 Sept 2014 00:00 to 00:45; and
  - 30 Sept 2014 07:55 to 09:00.
- **October 2014 Power failures:**
  - 3 Oct 2014 02:30 to 03:35;
  - 14 Oct 2014 02:55 to 08:15;
  - 17 Oct 2014 13:30 to 14:10; and
  - 30 Oct 2014 16:20 to 17:40.
- **6 November 2014:** Replace the 12 volt power supply for the meteorological equipment at the Brackenhams monitoring station;
- **November 2014 Power failures:**
  - 02 Nov 2014 18:10 to 19:20;
  - 22 Nov 2014 12:10 15:35 and 16:45 to 18:25;
  - 23 Nov 2014 12:00 to 16:30;
  - 27 Nov 2014 08:10 to 09:50; and
  - 29 Nov 2014 12:00 to 16:00.



### ■ **December 2014 Power failures:**

- 5 Dec 2014 08:40 to 09:30;
- 5 Dec 2014 17:25 to 20:45;
- 6 Dec 2014 07:20 to 11:55;
- 7 Dec 2014 07:50 to 12:55; and
- 8 Dec 2014 11:15 to 15:40.

### **CBD:**

- **6 January 2014:** After a power failure that occurred from 19:25 to 20:20, the CBD station's TEOM lost its CPU operating program and could not be re-loaded. The Instrument was removed and sent to ERO Electronic for repairs. The EPROM chips were also changed with ROM chips;
- **15 January 2014:** The CBD TEOM was received back from repairs and was installed at the monitoring station;
- **6 February 2014:** A general power failure occurred at the CBD monitoring station on 6 February 2014 from 23:25 to 24:00. When the power returned a circuit breaker tripped and the SO<sub>2</sub> and TRS analysers did not restart until 14:35 the next day when the circuit breaker was reset;
- **9 March 2014:** The SO<sub>x</sub> scrubber of the TRS converter blocked up and the spare scrubber installed. The blocked scrubber was sent to C&M Consulting Engineers for an Investigation;
- **12 March 2014:** Inteltronics CC assisted in the installation of the rain gauge at the CBD monitoring station;
- **26 June 2014:** The St Lucia monitoring station was switched off at 13:05. (to be moved to eSikhaleni);
- **31 July 2014:** The SO<sub>2</sub> analyser from the CBD monitoring station develops a flow problem; the flow decreased from 600 ml/min to 400 ml/min. C&M to check the problem before calibrations;
- **September 2014 Power failures:**
  - 20 Sept 2014 05:30: 06:40;
  - 28 Sept 2014 21:35 to 22:40.
- **October 2014 Power failures:**
  - 30 Oct 2014 16:20 to 17:40 (Circuit breaker tripped after power was restored);
- **17 November 20-14:** Remove the TEOM PM 10 analyser from the CBD monitoring station and courier to Calspec CC for repairs;
- **5 December 2014:** Receive and install CBD TEOM, after repairs;
- **8 December 2014:** Start up CBD TEOM- after weekend of load shedding;
- **December 2014 Power failures:**
  - 5 Dec 2014 15:10 to 15:50;
  - 6 Dec 2014 14:10 to 15:45; and
  - 7 Dec 2015 18:15 to 19:50.



### *Harbour West:*

- **16 March 2014:** Harbour West monitoring station had a general power failure from 10:40 to 12:35;
- **20 March 2014:** Harbour West monitoring station had a general power failure from 13:00 to 14:10;
- **31 March 2014:** HARS CC serviced the Harbour West air conditioner after a few temperature alarms occurred at the station;
- **2 June 2014:** The Logger PC at the CBD monitoring station becomes faulty and Gerrit from Specialist network Services builds up a PC with the old hard drive and Software. Error messages occurred and no data were collected on the following dates:
  - 2 June 2014 19:30 to 3 June 2014 16:00;
  - 4 June 2014 16:05 to 5 June 2014 07:40;
  - 6 June 2014 00:30 to 6 June 2014 09:10;
  - 7 June 2014 05:55 to 9 June 2014 08:45;
  - 11 June 2014 06:40 to 11 June 2014 10:00; and
- **27 August 2014:** An internal SANAS audit was done on Harbour West and Arboretum monitoring stations.

### *Scorpio:*

- **4 April 2014:** Install a new permeation tube into spare analyser SN: M1912-M714 in The Scorpio monitoring station. SO<sub>2</sub> analyser SN: M1262 – M2812 not functioning properly and data was invalidated back to 15 January 2014;
- **10 April 2014:** The spare analyser at Scorpio SN: M1912 –M 714 was set to measure SO<sub>2</sub> at Scorpio monitoring station and the faulty analyser SN: M1262-M2812 was removed and sent to C&M Cons Engineers for repairs;
- **20 May 2014:** C & M Consulting Engineers remove SO<sub>2</sub> analyser SN: ML M1262-M2812 from the Scorpio monitoring station as the analyser was faulty and could not be calibrated;
- **18 June 2014:** A general Power failure occurred (load shedding) at the Scorpio monitoring station from 21:30 to 22:35;
- **4 July 2014:** Receive repaired Scorpio SO<sub>2</sub> analyser SN M 1262 –M2812 from C&M and install at Scorpio monitoring station for testing. Analyser does not start up properly;
- **10 July 2014:** Remove Scorpio analyser and return to C&M for further repairs;
- **15 July 2014:** The serial data cable from the Scorpio SO<sub>2</sub> analyser comes loose and no data are collected for a period from 15 July 2014 12:40 to 16 July 2014 12:20;
- **31 July 2014:** A general power failure occurred at the Scorpio monitoring station from 16:00 to 20:40.
- **9 September 2014:** The air conditioner unit at the Scorpio monitoring unit iced up inside and HARS CC defrosted and re gassed the air conditioner;
- **September 2014 Power failures:**
  - 18 Sept 2014 08:20 to 09:30;
  - 20 Sept 2014 06:15 to 06:40; and



- 28 Sept 2014 22:15 to 22:40.

### ■ **October 2014 Power failures:**

- 30 Oct 2014 17:05 to 17:45; and

### ■ **November 2014 Power failures:**

- 13 Nov 2014 06:10 to 08:30.

### *Felixton:*

- **14 June 2014:** The power were switched off or tripped at the Felixton monitoring station and no data were collected for the period 14 June 2014 12:55 to 17 June 2014 09:20;
- **22 August 2014:** C&M checks the calibrations at the Felixton monitoring station and do multi point calibrations at the eSikhaleni monitoring station SO<sub>2</sub> and TRS analysers;
- **September 2014 Power failures:**
  - 16 Sept 2014 10:25 to 13:30;
- **November 2014 Power failures:**
  - 11 Nov 2014 21:40 to 12 Nov 2014 09:05;
  - 27 Nov 2014 08:20 to 23:15;
- **December 2014 Power failures:**
  - 8 Dec 2014 16:25 to 21:05; and
  - 30 Dec 2014 14:05 to 31 Dec 2014 08:50.

### *eSikhaleni:*

- **15 July 2014:** C&M install PVDF manifold into eSikhaleni mobile monitoring station;
- **23 July 2014:** Remove API SO<sub>2</sub> analyser SN 1980 from Arboretum monitoring station to install into eSikhaleni mobile monitoring station;
- **24 July 2014:** Set up Mobile monitoring station and meteorological mast at eSikhaleni;
- **28 July 2014:** ADT Security installs an alarm system into eSikhaleni mobile monitoring trailer;
- **8 August 2014:** C&M Consulting Engineers remove the new API SO<sub>2</sub> analyser from the eSikhaleni monitoring station to have it repaired at their laboratory. The UV lamp driver PC board was faulty;
- **15 August 2014:** Receive and install repaired analyser from C&M at the eSikhaleni monitoring station;
- **19 August 2014:** Official opening of the eSikhaleni monitoring station;
- **22 August 2014:** C&M checks the calibrations at the Felixton monitoring station and do multi point calibrations at the eSikhaleni monitoring station SO<sub>2</sub> and TRS analysers;
- **16 September 2014:** The analogue signal plug of the TEOM at eSikhaleni is corroded and lost contact with the logger therefore created large negative signals, this was corrected by cleaning the male plug;
- **13 October 2014:** The SO<sub>2</sub> analyser at eSikhaleni displayed “Dark Cal Warning”, and “PMT Temp Warning” Analyser was removed and sent to C&M Consulting Engineers for repairs;



- **30 October 2014:** Received eSikhaleni SO<sub>2</sub> analyser back from C&M Consulting Engineers and install at monitoring station;
- **2 December 2014:** Reset eSikhaleni router;
- **22 December 2014:** Reset eSikhaleni router;
- **23 December 2014:** Reset eSikhaleni router, install high gain antenna;
- **26 December 2014:** Reset eSikhaleni router; and
- **30 December 2014:** Place eSikhaleni high gain antenna on top of roof of shelter to improve communications.

### ***Mtunzini and St Lucia Mobile PM<sub>10</sub> Monitoring stations:***

- **17 January 2014:** The UPS from St Lucia was collected from the station and given to DPSI Solutions (UPS service provider) for repairs;
- **26 February 2014:** Calspec (Pty) Ltd calibrated the TEOM's at Mtunzini and St Lucia monitoring stations;
- **26 February 2014:** The repaired UPS was installed at the St Lucia monitoring station;
- **16 April 2014:** A general Eskom Power failure occurred at the St Lucia monitoring station from 07:10 on 16 April 2014 to 05:35 on 17 April 2014, after which the temperature cut out contactor burnt out and the power was off until 14:00 on 18 April 2014;
- **7 May 2014:** St Lucia had a general Power failure from 04:30 to 05:35;
- **8 May 2014:** St Lucia had a general Power failure from 02:05 to 06:45;
- **9 May 2014:** St Lucia had a general Power failure from 06:35 to 11:50. When the power returned the UPS got damaged and was responsible for another power failure from 17:25 to 09:20 on 11 May 2014;
- **11 May 2014:** St Lucia UPS down causing power to go down from 12:25 to 10:30 on 12 May 2014;
- **12 May 2014:** Bypass St Lucia UPS and remove from monitoring station. Hand UPS to DPSI (UPS contractor) for repairs;
- **2 July 2014:** HARS cc collects trailer from St Lucia and park it at Scorpio;
- **25 August 2014:** The TEOM at the Mtunzini monitoring station lost its CPU program after a short power failure. The program was reloaded on 26 August 2014 at 11:35;
- **23 October 2014:** The Mtunzini TEOM lost its operating program after a power failure at 23:10 and the OS was reloaded 24 October 2014 at 15:25;
- **27 October 2014:** The Mtunzini TEOM lost its operating program after a power failure at 14:20 and the OS was reloaded 28 October 2014 at 11:45; and
- **13 November 2014:** The Mtunzini TEOM lost its operating program after a power failure at 13:20 and the O S was reloaded on 14 November 2014 11:55.

### **Meteorological stations**

- **12 March 2014:** Inteltronics CC successfully calibrated all meteorological stations during the week. (SANAS).



# **APPENDIX D**

## **Exceedance Log**



### PM<sub>10</sub> Exceedances - Existing NEM: AQA daily Standard (120 µg/m<sup>3</sup>)

Date	Station	Value (µg/m <sup>3</sup> )	Allocation
2014/08/30	Brackenham	166	Veld fire smoke
2014/09/18	Brackenham	155	Veld fire smoke
2014/09/18	eSikhaleni	173	Veld fire smoke
2014/09/18	Mtunzini	126	Veld fire smoke
2014/10/01	Brackenham	524	Re-suspension from high wind speed
2014/06/05	Brackenham	103	Road construction at intersection.

### PM<sub>10</sub> Exceedances - Future NEM: AQA Daily Standard (75 µg/m<sup>3</sup>)

Date	Station	Value (µg/m <sup>3</sup> )	Allocation
2014/06/06	Brackenham	116	Road construction at intersection
2014/06/10	Brackenham	114	Road construction at intersection
2014/06/11	Brackenham	115	Road construction at intersection
2014/06/19	Brackenham	86	Road construction at intersection
2014/06/20	Brackenham	103	Road construction at intersection
2014/06/21	Brackenham	104	Road construction at intersection
2014/06/23	Brackenham	77	Road construction at intersection
2014/06/24	Brackenham	106	Veld fire smoke
2014/06/24	CBD	77	Veld fire smoke
2014/06/24	Mtunzini	95	Veld fire smoke
2014/06/25	Brackenham	108	Veld fire smoke
2014/06/25	CBD	83	Veld fire smoke
2014/06/25	Mtunzini	91	Veld fire smoke
2014/06/26	Brackenham	108	Veld fire smoke
2014/06/26	CBD	78	Veld fire smoke
2014/06/26	Mtunzini	80	Veld fire smoke
2014/07/17	CBD	95	Veld fire smoke
2014/08/05	eSikhaleni	84	Veld fire smoke
2014/08/19	eSikhaleni	79	Veld fire smoke
2014/08/30	Brackenham	166	Veld fire smoke
2014/09/18	Brackenham	155	Veld fire smoke
2014/09/18	eSikhaleni	173	Veld fire smoke
2014/09/18	Mtunzini	126	Veld fire smoke
2014/09/18	CBD	107	Veld fire smoke
2014/09/24	Brackenham	82	Veld fire smoke
2014/10/01	Brackenham	524	Re-suspension of particulates by high wind speed



## SO<sub>2</sub> Exceedances - NEM: AQA Daily standard (48 ppb)

Date and Time	Station	Value (ppb)	Allocation
2014/05/10 00:00	Scorpio	52	Foskor 100%

## SO<sub>2</sub> Exceedances - NEM: AQA Hourly Standard (134 ppb)

Date and Time	Station	Value (ppb)	Allocation
2014/03/23 17:00	Harbour West	183	Foskor 100%
2014/04/17 13:00	Scorpio	171	Foskor 100%
2014/05/10 13:00	Scorpio	146	Foskor 100%
2014/05/10 18:00	Scorpio	152	Foskor 100%
2014/05/31 00:00	Scorpio	136	Foskor 100%
2014/12/09 00:00	Harbour West	186	Foskor 100%

## SO<sub>2</sub> Exceedances - NEM: AQA 10-minute Standard (191 ppb)

Date and Time	Station	Value (ppb)	Allocation
2014/03/23 17:20	Harbour West	195	Foskor 100%
2014/03/23 17:30	Harbour West	195	Foskor 100%
2014/03/23 17:40	Harbour West	297	Foskor 100%
2014/04/17 13:10	Scorpio	285	Foskor 100%
2014/04/17 13:20	Scorpio	373	Foskor 100%
2014/04/17 13:30	Scorpio	298	Foskor 100%
2014/04/28 13:30	Scorpio	272	Foskor 100%
2014/05/10 09:20	Scorpio	154	Foskor 100%
2014/05/10 10:20	Scorpio	151	Foskor 100%
2014/05/10 12:20	Scorpio	157	Foskor 100%
2014/05/10 13:20	Scorpio	150	Foskor 100%
2014/05/10 14:50	Scorpio	153	Foskor 100%
2014/05/10 15:00	Scorpio	153	Foskor 100%
2014/05/10 15:10	Scorpio	153	Foskor 100%
2014/05/10 17:10	Scorpio	149	Foskor 100%
2014/05/10 18:10	Scorpio	153	Foskor 100%
2014/05/31 00:40	Scorpio	304	Foskor 100%
2014/05/31 00:50	Scorpio	222	Foskor 100%
2014/09/24 14:40	Harbour West	221	Hillside Aluminium 100%
2014/09/24 14:50	Harbour West	250	Hillside Aluminium 100%
2014/09/27 02:20	Harbour West	193	Foskor 100%
2014/12/08 23:10	Harbour West	399	Foskor 100%
2014/12/09 00:00	Harbour West	447	Foskor 100%
2014/12/09 00:10	Harbour West	362	Foskor 100%



## TRS exceedances - WHO 30-minute H2S Guideline (5.0 ppb)

Date and Time	Station	Value (ppb)
2014/02/04 02:00	CBD	7.8
2014/02/13 19:30	CBD	7.2
2014/02/13 20:00	CBD	9.0
2014/02/13 21:00	CBD	8.0
2014/02/13 21:30	CBD	19.4
2014/02/13 22:30	CBD	5.5
2014/02/13 23:30	CBD	20.2
2014/02/14 00:00	CBD	26.0
2014/02/14 00:30	CBD	15.4
2014/02/14 01:00	CBD	7.8
2014/02/14 01:30	CBD	19.3
2014/02/14 02:00	CBD	7.1
2014/02/14 02:30	CBD	7.6
2014/02/14 03:00	CBD	6.2
2014/02/14 04:00	CBD	9.0
2014/02/14 04:30	CBD	6.3
2014/06/24 00:00	CBD	5.6
2014/07/27 07:00	CBD	5.2
2014/07/27 20:30	CBD	5.4
2014/09/08 03:00	eSikhaleni	5.6
2014/11/26 06:30	eSikhaleni	5.6
2014/12/11 02:30	CBD	5.9

## TRS exceedances - OME 10-minute TRS health standard (9.3 ppb)

Date and Time	Station	Value (ppb)
2014/02/04 02:10	CBD	10.2
2014/02/13 19:50	CBD	18.2
2014/02/13 20:00	CBD	20.3
2014/02/13 21:20	CBD	20.2
2014/02/13 21:30	CBD	27.4
2014/02/13 21:40	CBD	25.8
2014/02/13 23:40	CBD	25.0
2014/02/13 23:50	CBD	28.2
2014/02/14 00:00	CBD	27.2
2014/02/14 00:10	CBD	26.4
2014/02/14 00:20	CBD	24.4
2014/02/14 00:30	CBD	26.6
2014/02/14 00:40	CBD	11.5
2014/02/14 01:30	CBD	17.2
2014/02/14 01:40	CBD	19.6



## RBCAA 2014 ANNUAL REPORT

Date and Time	Station	Value (ppb)
2014/02/14 01:50	CBD	21.1
2014/02/14 04:10	CBD	10.9
2014/02/14 04:20	CBD	13.2
2014/02/14 04:30	CBD	12.5
2014/11/26 06:30	eSikhaleni	10.0

### TRS exceedances - RBCAA 10-minute Target (4.5ppb)

Date and Time	Station	Value (ppb)
2014/02/04 02:00	CBD	7.6
2014/02/04 02:10	CBD	10.2
2014/02/04 02:20	CBD	5.5
2014/02/05 23:40	CBD	4.9
2014/02/13 19:50	CBD	18.2
2014/02/13 20:00	CBD	20.3
2014/02/13 21:20	CBD	20.2
2014/02/13 21:30	CBD	27.4
2014/02/13 21:40	CBD	25.8
2014/02/13 21:50	CBD	4.9
2014/02/13 22:00	CBD	4.6
2014/02/13 22:10	CBD	4.8
2014/02/13 22:20	CBD	5.0
2014/02/13 22:30	CBD	5.3
2014/02/13 22:40	CBD	5.8
2014/02/13 22:50	CBD	5.4
2014/02/13 23:30	CBD	7.4
2014/02/13 23:40	CBD	25.0
2014/02/13 23:50	CBD	28.2
2014/02/14 00:00	CBD	27.2
2014/02/14 00:10	CBD	26.4
2014/02/14 00:20	CBD	24.4
2014/02/14 00:30	CBD	26.6
2014/02/14 00:40	CBD	11.5
2014/02/14 00:50	CBD	8.0
2014/02/14 01:00	CBD	8.0
2014/02/14 01:10	CBD	7.8
2014/02/14 01:20	CBD	7.6
2014/02/14 01:30	CBD	17.2
2014/02/14 01:40	CBD	19.6
2014/02/14 01:50	CBD	21.1
2014/02/14 02:00	CBD	7.6
2014/02/14 02:10	CBD	6.4



## RBCAA 2014 ANNUAL REPORT

Date and Time	Station	Value (ppb)
2014/02/14 02:20	CBD	7.3
2014/02/14 02:30	CBD	7.6
2014/02/14 02:40	CBD	7.4
2014/02/14 02:50	CBD	7.8
2014/02/14 03:00	CBD	7.4
2014/02/14 03:10	CBD	6.6
2014/02/14 03:20	CBD	4.6
2014/02/14 04:10	CBD	10.9
2014/02/14 04:20	CBD	13.2
2014/02/14 04:30	CBD	12.5
2014/02/21 02:50	CBD	5.2
2014/02/21 03:00	CBD	5.1
2014/02/21 05:20	CBD	5.0
2014/02/21 11:00	CBD	4.5
2014/02/21 15:50	CBD	5.8
2014/02/21 16:40	CBD	4.5
2014/02/21 18:40	CBD	4.5
2014/02/21 18:50	CBD	4.8
2014/02/21 19:10	CBD	4.6
2014/02/21 19:30	CBD	4.6
2014/02/21 19:40	CBD	4.6
2014/02/21 20:00	CBD	4.7
2014/02/21 21:20	CBD	5.1
2014/02/21 21:30	CBD	5.0
2014/04/14 00:50	CBD	5.7
2014/04/14 02:30	CBD	5.4
2014/04/14 06:00	CBD	5.0
2014/04/16 08:30	CBD	5.0
2014/04/28 02:50	CBD	4.8
2014/05/29 04:00	CBD	5.0
2014/05/29 04:10	CBD	5.4
2014/06/24 00:00	CBD	5.1
2014/06/24 00:10	CBD	6.2
2014/06/24 00:20	CBD	5.6
2014/06/24 00:30	CBD	5.9
2014/06/24 00:40	CBD	5.2
2014/06/25 18:30	CBD	4.7
2014/06/25 19:20	CBD	4.7
2014/06/25 19:30	CBD	4.7
2014/07/09 10:30	CBD	4.7
2014/07/09 10:40	CBD	8.0
2014/07/26 05:20	CBD	4.6



## RBCAA 2014 ANNUAL REPORT

Date and Time	Station	Value (ppb)
2014/07/26 06:40	CBD	5.9
2014/07/26 06:50	CBD	5.3
2014/07/26 07:00	CBD	4.8
2014/07/27 06:50	CBD	4.7
2014/07/27 07:00	CBD	5.6
2014/07/27 07:10	CBD	5.6
2014/07/27 07:20	CBD	4.6
2014/07/27 20:20	CBD	6.2
2014/07/27 20:30	CBD	6.1
2014/07/27 20:40	CBD	4.9
2014/07/27 20:50	CBD	5.3
2014/07/27 21:00	CBD	5.9
2014/08/15 08:00	CBD	4.8
2014/08/25 01:30	CBD	5.0
2014/08/26 02:20	eSikhaleni	5.4
2014/08/26 02:50	eSikhaleni	5.0
2014/08/26 03:00	eSikhaleni	5.5
2014/09/08 03:00	eSikhaleni	7.2
2014/09/08 03:10	eSikhaleni	6.4
2014/09/08 04:10	eSikhaleni	5.0
2014/09/11 07:40	eSikhaleni	4.7
2014/09/11 07:50	eSikhaleni	5.0
2014/09/11 08:00	eSikhaleni	4.9
2014/09/13 08:20	eSikhaleni	5.0
2014/09/18 02:10	eSikhaleni	6.7
2014/09/25 19:20	CBD	5.0
2014/09/25 21:00	CBD	5.0
2014/09/26 06:40	eSikhaleni	6.8
2014/09/26 07:10	eSikhaleni	6.0
2014/09/30 03:40	eSikhaleni	4.6
2014/10/01 03:50	CBD	4.6
2014/10/03 03:50	CBD	4.7
2014/10/03 06:00	CBD	5.4
2014/10/09 22:40	CBD	4.6
2014/10/09 23:40	CBD	4.6
2014/10/11 00:20	eSikhaleni	6.0
2014/10/11 07:00	eSikhaleni	4.7
2014/10/11 07:10	eSikhaleni	4.6
2014/11/08 00:50	eSikhaleni	9.6
2014/11/08 01:00	eSikhaleni	9.2
2014/11/26 06:20	eSikhaleni	5.0
2014/11/26 06:30	eSikhaleni	10.0



## RBCAA 2014 ANNUAL REPORT

<b>Date and Time</b>	<b>Station</b>	<b>Value (ppb)</b>
2014/11/26 06:40	eSikhaleni	4.9
2014/12/11 02:30	CBD	5.5
2014/12/11 02:40	CBD	7.7
2014/12/30 23:00	eSikhaleni	5.0
2014/12/30 23:30	eSikhaleni	6.5



# **APPENDIX E**

## **Complaints Log**



## RBCAA 2014 ANNUAL REPORT

### January

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	10/01/2014 07:40	33 Heideheuvel, Veldenvlei	Foskor odour causing burning sensation of the eyes and nose.	<b>Foskor 10/01/2014:</b> Mannana Ntoampe responded: One hour before the complaint was logged; the wind was blowing towards the Harbour in the West North West direction. However the wind direction changed towards Hillside (South East) 20 minutes before the complaint was logged. Based on wind direction, Foskor could have impacted Veldenvlei at the time. Peak Concentrations of Emissions: The highest SO2 emissions of 318 ppm were recorded during this period on C-plant; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits.	Resolved - Foskor
2	S Camminga (0357860076)	11/01/2014 16:00	Vicinity of Hillside	Alumina dust emanating from the conveyor adjacent to the ESD Village.	<b>BHP Billiton 14/01/2014:</b> Wendy Botes responded: Nature of Complaint: Alumina dust emanating from the conveyor adjacent to the ESD Village Source and nature of emissions: No alumina was being discharge from 11:00 on 11 Jan 2014 and there were no cleaning activities taking place. Compliance with Permit/s: N/A Root Cause identified: Wind blowing alumina spillages resulting in a dust emission. Corrective Action : Regular cleaning of alumina spillages from conveyor system	Resolved - BHP Billiton (Hillside)
3	Raymond 0834171620	13/01/2014 07:40	28 Brake Fern- Brackenham	"Bad compost odour"		Unresolved
4	B Gilbert	14/01/2014 08:20	Vicinity of Bayside	Good day I have noticed lots of yellow smoke coming from a chimney at Bayside carbon plant	<b>BHP Billiton 15/01/2014:</b> Wendy Botes responded: Nature of Complaint : Yellow smoke from Bayside stack Source and nature of emissions : There was a low draft due to both fires being on the same ring main line causing low temperatures and high opacities. There was a fire move at 11am which was going to start separating the fires from the same ring main. The fire move will increase the temperatures which will result in the stack emission reducing back to normal within a few hours. Compliance with Permit/s: N/A Root Cause identified: Low temperatures due to fire position. Corrective Action: Move one fire out of same ring main to increase the temperatures.	Resolved - BHP Billiton (Bayside)
5	J Roselt	14/01/2014 11:00	Vicinity of Renault Garage in Alton	A white powder was covering all the cars. I suspect it is alumina powder. Please can this be investigated?	<b>BHP Billiton 16/01/2014:</b> Wendy Botes responded: GTC 5 at Hillside had a bag leak, which resulted in alumina dust emissions from the stack. The bag leak was repaired thus stopping the emission. Based on the wind direction and location of GTC 5, Hillside caused the alumina dust on the vehicles.	Resolved - BHP Billiton (Hillside)
6	C Wissekerke 082 659 9941	22/01/2014 07:00	Vicinity of Bell Equipment – Alton	A very strong chemical odour in Alton this morning, the smell is difficult to describe but my throat constricts if I try to take a normal breath!	<b>BHP Billiton 5/02/2014:</b> Shaloshini Naidoo responded: 1. Nature of Complaint: C Wissekerke 082 659 9941 , Vicinity of Bell Equipment – Alton , 22 Jan, 07h00, "A very strong chemical odour in Alton this morning, the smell is difficult to describe but my throat constricts if I try to take a normal breath! 2. Source and nature of emissions Based on the wind direction 2 hours prior and during the time of the complaint, Hillside did not contribute to the complaint. FTCs and GTCs were operating at 100 percent uptime at the time of the complaint. *wind data extracted from CBD station: 3. Peak and Average concentrations. 4. Compliance with	Unresolved



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>Permit/s. No permit contraventions noted. 5. Root Cause identified None. 6. Corrective Action: None. <b>Mondi RB 5/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has investigated the complaint and it is not likely that Mondri was the source of the strong chemical odour. All processes, including our SO2 plant (in reference to the "Strong Chemical Odour" comment) were stable prior to and at the time of the complaint. <b>Foskor 06/02/2014:</b> Mannana Ntoampe responded: One hour before the complaint, the wind was blowing towards the airport in the South West direction. Based on wind direction, Foskor could not have impacted Alton at the time the complaint was logged. Peak Concentrations of Emissions The highest SO2 emissions of 349 ppm were recorded for C-plant; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits There was no contravention in existing permits. Root Cause of Incident and Corrective Action None.</p>	



## RBCAA 2014 ANNUAL REPORT

### February

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Conrad 082 413 7166	05/02/2014 20:35	35 Marlynhoek – Meerensee	"Guava" odour causing irritation and headache. The RBCAA contacted Mondi's shift co-ordinator, at approximately 20h45, who confirmed that a problem had been experienced earlier at the mill.	<b>Mondi RB 10/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions Mondi has been identified as the source of the odour. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The evaporation plant vacuum pump tripped due to an overload of foul condensate, resulting in a vent of NCG gases to atmosphere. A plant modification has been submitted to address the issue of the foul condensate overload on this system.	Resolved - Mondi Richards Bay
2	Anonymous	05/02/2014 20:55	Brackenham	"Strong guava odour"	<b>Mondi RB 10/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions Mondi has been identified as the source of the odour. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The evaporation plant vacuum pump tripped due to an overload of foul condensate, resulting in a vent of NCG gases to atmosphere. A plant modification has been submitted to address the issue of the foul condensate overload on this system.	Resolved - Mondi Richards Bay
3	S Camminga (0357860076)	07/02/2014 07:00	Heideheuwel – Veldenvlei	Mondi odour causing nausea and headache.	<b>Mondi RB 7/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Peak and Average Ambient Concentrations of Emissions and Met Conditions Mondi has been identified as the source of the odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an upset on our NCG system, we had NCG vents through two of our carbon filters and experienced odour around this time. We are currently investigating this incident and the related odour experienced.	Resolved - Mondi Richards Bay
4	R Camminga (0357860076)	07/02/2014 07:00	Heideheuwel – Veldenvlei	Mondi odour causing nausea and headache.	<b>Mondi RB 7/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Peak and Average Ambient Concentrations of Emissions and Met Conditions Mondi has been identified as the source of the odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an upset on our NCG system, we had NCG vents through two of our carbon filters and experienced odour around this time. We are currently investigating this incident and the related odour experienced.	Resolved - Mondi Richards Bay
5	K Camminga (0357860076)	07/02/2014 07:00	Heideheuwel – Veldenvlei	Mondi odour causing nausea and headache.	<b>Mondi RB 7/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Peak and Average Ambient Concentrations of Emissions and Met Conditions Mondi has been identified as the source of the odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an upset on our NCG system, we had NCG vents through two of our carbon filters and experienced odour around this time. We are currently investigating this incident and the related odour experienced.	Resolved - Mondi Richards Bay
6	S Camminga (0357860076)	10/02/2014 11:25	Richards Bay CBD	Excessive emissions emanating from FTC's at Hillside.	<b>BHP Billiton 11/02/2014:</b> Shaloshini Naidoo responded: 2. Source and nature of emissions Visible emissions from Hillside Fume Treatment Centres 1 & 2. Peak and Average concentrations: Compliance with Permit/s: FTC 1 uptime for the month is 99.78% and FTC2 uptime is at 99.96% against 99% permitted minimum utilization. FTC 1 SO2 analyser readings	Resolved - BHP Billiton (Hillside)



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					are trending high against the permitted limit of 250 mg/Nm <sup>3</sup> and are currently under investigation. Root Cause identified: The fume treatment centres tripped due to a loss of compressed air. A detailed investigation as to why the compressed air outage occurred is pending. Details will be forwarded to the RBCAA as soon as the investigation has been concluded. Corrective Action: To be determined from the detailed investigation and forwarded to the RBCAA as soon as the investigation has been concluded.	
7	Ms Myburgh (083 650 5156)	13 &14/02/2014 20:00	Kurper Kurwe Meerensee - Richards Bay Golf Estate	"Chemical" smells causing burning nose, headache and discomfort in the chest.	<p><b>Mondi RB 17/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has investigated the complaint and found wind direction excludes Mondi as a possible source of the odour. In addition Mill conditions were stable and ambient TRS at all four monitoring stations show low ambient TRS. Compliance with Permits: There was no contravention in existing permits for point source emissions. <b>BHP Billiton 18/02/2014:</b> Shaloshini Naidoo responded: Nature of Complaint: Ms Myburgh (083 650 5156), Kurper Kurwe Meerensee - Richards Bay Golf Estate, 13 &amp; 14 February during the night (last night particularly around 20h00), "Chemical" smell causing burning nose, headache and discomfort in the chest. Source and nature of emissions: Wind direction 2 hours prior and during the time of the complaint, excludes Hillside as a possible source of the odour. FTCs and GTCs were operating at 100 percent uptime at the time of the complaint.</p> <p>*wind data extracted from CBD station. Peak and Average concentrations: Compliance with Permit/s: No permit contraventions noted. Root Cause identified: Corrective Action: None.</p> <p><b>Foskor 18/02/2014:</b> Mannana Ntoampe responded: One hour before the complaint was logged; the wind was blowing in the North direction towards the Harbour. Based on wind direction, Foskor could not have impacted Meerensee at the mentioned time (20h00). Peak Concentrations of Emissions</p> <p>The highest SO<sub>2</sub> emissions of 377 ppm were recorded for C-plant; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: N/A. <b>RBM 10/3/2014:</b> Michelle Boshoff responded: Wind direction on 14 February 2014 was predominantly north-north easterly blowing at about 0.8m/s. The complainant's property is located 10.2km from our operations.</p> <p>Upon inquiry from the various plants – no upset/abnormal plant conditions were recorded. RBM's concentrations and venting figures were within the compliance limits. Please see below: Venting figures for whole of Feb 2014 (Max venting per month = 4%): Furnace one – 3.74% Furnace two – 3.96% Furnace three – 3.27% Furnace four – 2.92%</p> <p>All bag houses were operating at 100%. There was thus no contravention of existing permit conditions.</p>	Unresolved
8	D Savides (072 392 0511) & Staff at the Zululand Observer D Savides (072	17/02/2014 07:45	CBD Richards Bay	Pungent "ash type" odour.	<p><b>Mondi RB 18/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has investigated the complaint and found that the prevailing wind direction, as well as the nature of the complaint ("ash type odour"), excludes Mondi as a possible source of the odour. In addition Mill conditions were stable and our ambient TRS at all four monitoring stations show low ambient TRS as well as SO<sub>2</sub>. Compliance with Permits</p> <p>There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: <b>BHP Billiton 18/02/2014:</b> Shaloshini Naidoo responded: Nature</p>	Unresolved



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	392 0511)				of Complaint: D Savides (072 392 0511) & Staff at the Zululand Observer – CBD Richards Bay, 17 February, 07h45, Pungent “ash type” odour. Source and nature of emissions: Wind direction 2 hours prior and during the time of the complaint, excludes Hillside as a possible source of the odour. FTCs and GTCs were operating at 100 percent uptime at the time of the complaint. *wind data extracted from CBD station. Peak and Average concentrations: Compliance with Permit/s: No permit contraventions noted. Root Cause identified: None. Corrective Action: None <b>Foskor 05/03/2014:</b> Mannana Ntoampe responded: Based on wind direction, Foskor could have impacted CBD at the time, however, the nature of the complaint (“ash type odour”), excludes Foskor as a possible source as none of Foskor operations could have resulted in the “ash type” odour on the day. Peak Concentrations of Emissions: The highest SO2 emissions of 334 ppm were recorded for C-plant; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: N/A	
9	Carol Page	15 to 17/02/2014	Honeysuckle, Veldenvlei	Pungent sewage odour emanating from contaminated stream below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water Cause: The RBCAA notified the Ward Cllr who upon investigation was informed by a City Official that a “Distribution Board at the Municipal pump station had blown up”. The photo bottom left shows the normal brown colour before contamination spread and this is the colour of the water		Resolved – Sewage Odour / uMhlatuze Municipality
10	Sias Van Schalkwyk	15 to 17/02/2014	Honeysuckle, Veldenvlei	Pungent sewage odour emanating from contaminated stream below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water Cause: The RBCAA notified the Ward Cllr who upon investigation was informed by a City Official that a “Distribution Board at the Municipal pump station had blown up”. The photo bottom left shows the normal brown colour before contamination spread and this is the colour of the water		Resolved – Sewage Odour / uMhlatuze Municipality
11	Erika v.d	15 to	Honeysuckle,	Pungent sewage odour emanating from		Resolved –



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	Spuy	17/02/2014	Veldenvlei	contaminated stream below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water Cause: The RBCAA notified the Ward Cllr who upon investigation was informed by a City Official that a "Distribution Board at the Municipal pump station had blown up". The photo bottom left shows the normal brown colour before contamination spread and this is the colour of the water		Sewage Odour / uMhlathuze Municipality
12	Tanya Naude	15 to 17/02/2014	Honeysuckle, Veldenvlei	Pungent sewage odour emanating from contaminated stream below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water Cause: The RBCAA notified the Ward Cllr who upon investigation was informed by a City Official that a "Distribution Board at the Municipal pump station had blown up". The photo bottom left shows the normal brown colour before contamination spread and this is the colour of the water		Resolved – Sewage Odour / uMhlathuze Municipality
13	Dr Terrence Kelly	15 to 17/02/2014	Honeysuckle, Veldenvlei	Pungent sewage odour emanating from contaminated stream below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water Cause: The RBCAA notified the Ward Cllr who upon investigation was informed by a City Official that a "Distribution Board at the Municipal pump station had blown up". The photo bottom left shows the normal brown colour before contamination spread and this is the colour of the water		Resolved – Sewage Odour / uMhlathuze Municipality
14	R Camminga 083 251 4969	19/02/2014 08:30	Bay Hospital – R.Bay CBD	Pungent Foskor odour causing eye and nose irritation.	<b>Foskor 21/02/2014:</b> Mannana Ntoampe responded: One hour prior to the complaint, the wind was blowing in the South East direction towards Hillside, the same pattern continued until the time the complaint was logged. Even though the wind direction was towards Hillside, Foskor could have impacted CBD at the time. Peak Concentrations of Emissions The highest SO2 emissions of 347 ppm were recorded for C-plant; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits. Root	Resolved - Foskor



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					Cause of Incident and Corrective Action: N/A	
15	D Savides & Staff	19/02/2014 15:15	Zululand Observer Offices in Empangeni	Pungent Mondi "Cabbage" odour forcing staff to close doors and windows.	<p><b>Mondi RB 21/2/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Peak and Average Ambient Concentrations of Emissions and Met Conditions. Compliance with Permits: There was no contravention in existing permits for point source emissions.</p> <p>Root Cause of Incident and Corrective Action: Carbon filter efficiency testing was being carried out on our chemical plant carbon filter but the correct procedures were not followed; consequently the testing had an impact on odour.</p> <p>An official procedure will be drawn up, outlining the process to be followed for carbon filter efficiency testing.</p>	Resolved - Mondi Richards Bay
16	Anonymous	20/02/2014 06:30	Port of Richards Bay	Clouds of black dust emanating from vessel berthed at 703		Resolved - Port of Richards Bay (TPT and TNPA)
17	S Camminga (0357860076)	20/02/2014 08:00	Heideheuwel – Veldenvlei	Nauseating "burning rubber" smell. Same odour experienced with Peat Fires. I have contacted Tony Roberts at ZFPA and he has confirmed the existence of a peat fire in the Brackenham area. Currently under investigation. Feedback to be provided.		Resolved - Peat Fire
18	Anonymous	21/02/2014 09:30	Port of Richards Bay	Extreme dust levels from within the Port.		Resolved - Port of Richards Bay (TPT and TNPA)



## RBCAA 2014 ANNUAL REPORT

### March

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Mr Strange 078 537 2185	08/03/2014 20:35	"Marlin Park " Tassleberry (R.Bay CBD)	"The Air is very bad tonight. The odour is very pungent. It is very offensive! We have experienced the bad odour several times during the past 2 weeks".	<b>Foskor 11/03/2014:</b> Mannana Ntoampe responded: One hour before the complaint, the wind was blowing in the South West direction towards the airport. The wind blew in the same direction until the complaint was logged. Based on wind direction Foskor could have impacted CBD at the time. Peak Concentrations of Emissions: The highest SO2 emissions of 344 ppm were recorded for the A&B main stack; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Even though Foskor could have impacted the area based on wind direction, no specific source could be identified. All plants operations were normal and emissions were within specified limits. <b>Mondi RB 11/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, it is possible that Mondi contributed to the odour in the CBD at the time. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Based on wind direction, Mondi could have contributed to the odour experienced in the CBD at the time of the complaint; however, the Mill operation was stable at the time and prior to the complaint.	Resolved - Foskor
2	Mrs Strange 078 537 2185	08/03/2014 20:35	"Marlin Park " Tassleberry (R.Bay CBD)	"The Air is very bad tonight. The odour is very pungent. It is very offensive! We have experienced the bad odour several times during the past 2 weeks".	<b>Foskor 11/03/2014:</b> Mannana Ntoampe responded: One hour before the complaint, the wind was blowing in the South West direction towards the airport. The wind blew in the same direction until the complaint was logged. Based on wind direction Foskor could have impacted CBD at the time. Peak Concentrations of Emissions: The highest SO2 emissions of 344 ppm were recorded for the A&B main stack; however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Even though Foskor could have impacted the area based on wind direction, no specific source could be identified. All plants operations were normal and emissions were within specified limits. <b>Mondi RB 11/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, it is possible that Mondi contributed to the odour in the CBD at the time. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Based on wind direction, Mondi could have contributed to the odour experienced in the CBD at the time of the complaint; however, the Mill operation was stable at the time and prior to the complaint.	Resolved - Mondi Richards Bay
3	Mr Page	09 & 10/03/2014 20:35	48 Honeysuckle Veldenvlei	Sewage Odour from sewage spill into wetland. I did send you msg yesterday icw with sewer in the wetland area at the bottom end of our houses in Honeysuckle. This was before the rain last night and the river is pitch black again. Once again this is not acceptable and is becoming more frequent as nothing has been done. The smell is revolting. We actually watched the water level change when I contacted you yesterday. We cannot even keep		Resolved - Sewage Odour / uMhlathuze Municipality



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				windows open at some times as smell is so bad.		
4	Mrs Page	09 & 10/03/2014 20:35	48 Honeysuckle Veldenvlei	Sewage Odour from sewage spill into wetland. I did send you msg yesterday icw with sewer in the wetland area at the bottom end of our houses in Honeysuckle. This was before the rain last night and the river is pitch black again. Once again this is not acceptable and is becoming more frequent as nothing has been done. The smell is revolting. We actually watched the water level change when I contacted you yesterday. We cannot even keep windows open at some times as smell is so bad.		Resolved – Sewage Odour / uMhlathuze Municipality
5	Natasha Dhaver	09/03/2014 12:17	Residential area in the CBD opposite the Boardwalk/Civic Centre.	I got home a short while ago and when we got out of our vehicle the smell of chemicals in the air was very strong. I am very concerned. Can you please give me some feedback as to what is going on as I am worried	<b>Foskor 12/03/2014:</b> Mannana Ntoampe responded: One hour prior the complaint, the wind was blowing in the South West direction towards the airport. Based on wind direction, Foskor could have contributed to the chemical smell in Arboretum. Peak Concentrations of Emissions The highest SO2 emissions of 326 ppm were recorded for A&B main stack, however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal. Compliance with Permits There was no contravention in existing permits. Root Cause of Incident and Corrective Action: None identified. All plant operations were normal and stable on the day.	Resolved - Foskor
6	S Camminga (0357860076)	10/03/2014 06:15	Heideheuvel – Veldenvlei	Pungent Foskor odour causing irritation of eyes and nose.	<b>Foskor 26/03/2014:</b> Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 362 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: • There was no contravention in existing permits. Findings/ Root Cause of Incident and/or Corrective Action • There was no root cause identified. • All plant operations were normal and emissions were within specified limits. Based on wind direction, Foskor could have contributed to the odour.	Resolved - Foskor
7	Anonymous	13/03/2014 08:10	Alton – Vicinity of Bell Equipment	Very strong Mondi odour.	<b>Mondi RB 13/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at Bell Equipment at time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an unplanned shutdown, we had green liquor spillages and contaminated condensate going to drain. Thus the odour is originating from our Effluent Plant.	Resolved - Mondi Richards Bay
8	S Camminga (0357860076)	13/03/2014 08:25	Heideheuvel – Veldenvlei	Pungent Mondi Odour.	<b>Mondi RB 13/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at Veldenvlei at time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an unplanned shutdown, we had green liquor spillages and contaminated condensate going to drain. Thus the	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					odour is originating from our Effluent Plant.	
9	R Camminga (0357860076)	13/03/2014 08:25	Heideheuvel – Veldenvlei	Pungent Mondi Odour.	<b>Mondi RB 13/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at Veldenvlei at time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an unplanned shutdown, we had green liquor spillages and contaminated condensate going to drain. Thus the odour is originating from our Effluent Plant.	Resolved - Mondi Richards Bay
10	Mrs Savides (072 392 0511)	31/03/2014 08:45	Cassia Close – Arboretum Extension	"Cabbage" Odour.	<b>Mondi RB 13/3/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to a pump failure on our continuous digester, the plant experienced an unplanned shutdown at 01:00 am on 31/03/2014. This led to black liquor to drain, causing odour from our Effluent plant.	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

### April

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Savides	05/04/2014 22:00	Cassia Close – Arboretum Extension	Foskor odour causing burning of the eyes and nose. Two of the complainants report suffering nasal discomfort the next day.	<b>Foskor 17/04/2014:</b> Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 428 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Findings/ Root Cause of Incident and/or Corrective Action: No root cause identified. All plant operations were normal and emissions were within specified limits. There was no start up during that period. Based on wind direction alone, Foskor may have contributed to the odour.	Resolved - Foskor
2	L Savides	05/04/2014 22:00	Cassia Close – Arboretum Extension	Foskor odour causing burning of the eyes and nose. Two of the complainants report suffering nasal discomfort the next day.	<b>Foskor 17/04/2014:</b> Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 428 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Findings/ Root Cause of Incident and/or Corrective Action: No root cause identified. All plant operations were normal and emissions were within specified limits. There was no start up during that period. Based on wind direction alone, Foskor may have contributed to the odour.	Resolved - Foskor
3	D Savides	05/04/2014 22:00	Cassia Close – Arboretum Extension	Foskor odour causing burning of the eyes and nose. Two of the complainants report suffering nasal discomfort the next day.	<b>Foskor 17/04/2014:</b> Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 428 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Findings/ Root Cause of Incident and/or Corrective Action: No root cause identified. All plant operations were normal and emissions were within specified limits. There was no start up during that period. Based on wind direction alone, Foskor may have contributed to the odour.	Resolved - Foskor
4	Carol Page	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		Resolved – Sewage Odour / uMhlathuze Municipality
5	Sias Van Schalkwyk	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		Resolved – Sewage Odour / uMhlathuze Municipality
6	Mr V.d Spuy	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		Resolved – Sewage Odour / uMhlathuze Municipality
7	Mrs V.d Spuy	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving		Resolved – Sewage Odour /



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		uMhlathuze Municipality
8	Dr Terrence Kelly	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		Resolved – Sewage Odour / uMhlathuze Municipality
9	Mrs Terrence Kelly	05 & 06/04/2014	Honeysuckle, Veldenvlei, Richards Bay	Pungent sewage odour emanating from contaminated water body below properties as a result of raw sewage spilling into the receiving environment, including a stream that feeds into Lake Mzingazi, our source of drinking water.		Resolved – Sewage Odour / uMhlathuze Municipality
10	Mike Carter 083 458 1157	10/04/2014 05:15	Vicinity of Virgin Active – R.Bay CBD	"Strong sewage smell".		Resolved – Sewage Odour / uMhlathuze Municipality
11	Pieter Mans	10/04/2014 05:15	East Central Arterial	Strong sewage farm / macerator plant smell half kilometre off the faulty John Ross Robot between John Ross and CBD		Resolved – Sewage Odour / uMhlathuze Municipality
12	Complaint via Zululand Observer	10/04/2014 08:30	R. Bay CBD	Observed smoke emanating from Hillside from what appeared to be a fire Hillside was contacted by the RBCAA and confirmed an onsite fire. Report to follow.	<b>BHP Billiton 14/04/2014:</b> Shaloshini Naidoo responded: 1. Nature of Complaint: Complaint via Zululand Observer, R. Bay CBD, 10 April, 08h30, Complainant observed smoke emanating from Hillside from what appeared to be a fire. Hillside was contacted by the RBCAA and confirmed an onsite fire. Report to follow. 2. Source and nature of emissions: Smoke from Hillside Cast house. 3. Peak and Average concentrations: N/A. 4. Compliance with Permit/s N/A: 5. Root Cause identified: At approximately 02h50, a tilter driver was tilting ladle number 11 into furnace number 13. The furnace was over-filled and metal flowed out of the furnace. This metal caused the LTTV to catch alight. Team members attempted to extinguish the fire, however they were unsuccessful. The LTTV burnt out. 6. Corrective Action To be determined during ICAM investigation.	Resolved - BHP Billiton (Hillside)
13	S Camminga (0357860076)	13/04/2014 15:00	John Ross Highway	Abnormal emissions (black) emanating from Bayside stack. BHP Billiton was notified.	<b>BHP Billiton 17/04/2014:</b> Shaloshini Naidoo responded: 1. Nature of Complaint: S Camminga, John Ross Highway, 13 April, 15h00, Abnormal emissions (black) emanating from Bayside stack. BHP Billiton was notified. 2. Source and nature of emissions. Possibly intermittent puffs of dust from the anode plant however the anode plant's ball mill was not running at the time of the complaint. There was no fire move at the Bake furnace on the day of the complaint. Fire 2 opacity trends were higher due to the blocked flue wall number 1 at section 14; this condition results in yellow smoke being emitted. 3. Peak and Average concentrations Trend showing Fire 2 at 82% opacity. 4. Compliance with Permit/s: N/A 5. Root Cause identified:	Resolved - BHP Billiton (Bayside)



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					Process investigations regarding the complaint could not identify a plausible root cause. 6. Corrective Action: Flue wall to be unblocked after fire has been moved from the section.	
14	R Camminga (0357860076)	16/04/2014 16:00	Small Craft Harbour – Vicinity of Porky's Restaurant	Pungent sewage odour, as a result of sewage overflowing onto the pavement area (see attached photo). The Municipality has been informed.		Resolved – Sewage Odour / uMhlathuze Municipality
15	Porky's Clients	16/04/2014 16:00	Small Craft Harbour – Vicinity of Porky's Restaurant	Pungent sewage odour, as a result of sewage overflowing onto the pavement area (see attached photo). The Municipality has been informed.		Resolved – Sewage Odour / uMhlathuze Municipality
16	Anonymous	22/04/2014 12:35	Vicinity of Foskor on the John Ross	"Very strong chemical odour"	<b>Foskor 06/05/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions: Foskor could have contributed to the odour however all plant operations were normal and emissions were within specified limits. There were also no start-ups or reported leaks during that period. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 364 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: • There was no contravention in existing permits. Root Cause and Corrective Action: Non identified	Resolved - Foskor
17	Anonymous	25/04/2014 08:10	Port of Richards Bay	SIGNIFICANT Alumina Dust emanating from a chute discharging alumina into a skip, located along Newark road just past the BHP silos where the conveyor systems intersect.	<b>BHP Billiton 25/04/2014:</b> Shaloshini Naidoo responded: Source and nature of emissions: Based on the description of the location of the complaint, Hillside Aluminium operations could not be identified as the source. Peak and Average concentrations: None. Compliance with Permit/s: N/A. Root Cause identified: None. Corrective Action: None.	Resolved - Port of Richards Bay
18	Anonymous	25/04/2014 08:00	Port of Richards Bay	Magnetite dust emanating from the magnetite stockpile. Sprinkler system reportedly not being used.		Resolved - Port of Richards Bay
19	S Camminga (0357860076)	25/04/2014 08:00	Vicinity of Bayside	Excessive emissions emanating from Bayside stack.	<b>BHP Billiton 30/04/2014:</b> Shaloshini Naidoo responded: Source and nature of emissions: Bayside Aluminium's Carbon plant has been identified as the source of the emissions. Peak and Average concentrations: Quarterly external sampling conducted as per APPA requirement. Compliance with Permit/s: N/A. Root Cause identified: After the fire moved to the following section, there was a network fault in the plant resulting in equipment not extracting fumes at the correct time. The fumes were trapped inside the flue walls for 3 hours. When the program started, all the fumes were extracted out into the stack. Therefore the black emissions were from the 3 hour delay and 2 hours that were required for stack emissions to clear after fire move. Corrective Action: Standby automation and artisan was called out to correct the communication fault in the plant. Preventative actions include minimizing breakdown time and to vent the fire when the program is not running.	Resolved - BHP Billiton (Bayside)
20	Anonymous	25/04/2014 12:25	Arboretum	"Very bad sulphur smell and brown emissions coming from Foskor stack".	<b>Foskor 30/04/2014:</b> Mannana Ntoampe responded: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 475 ppm were recorded for B stack; however these emissions were still within permit limits. Compliance with Permits: N/A Findings/ Root Cause of Incident: All plant	Resolved - Foskor



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				Foskor has been notified.	operations were normal and emissions were within specified limits. Sulphur filter was being cleaned around that time. The cleaning of the filter involves opening the filter and that could have resulted in the sulphur smell. Based on the process of sulphuric acid production, brown stack emissions would have resulted in huge deviations in product quality which was not the case on the day. This is being investigated further and the outcome will be communicated. Corrective Action: N/A	
21	Raymond - 083 417 1620	25/04/2014 09:48	28 Brakefern – Brackenheim	"Bad odour on and off from morning coming from Tata Steel, smells like something burnt."	<b>Tata Steel 05/05/2014:</b> Ndumiso Ngongoma responded: Nature of Complaint: Raymond - 083 417 1620, 28 Brakefern – Brackenheim, 25 April, 09h48, "Bad odour on and off from morning coming from Tata Steel, smells like something burnt." Source and nature of emissions: Wind direction 3 hours prior and during the time of the complaint, indicates Tata Steel/Mondi/Alton North as a possible sources of the bad odour. Tata Steel was operating at normal capacity with scrubbers fully functional at the time of the complaint. No abnormal activities or odours were reported during and prior to the complaint. No fires in the direct vicinity of Tata Steel reported. Wind direction and speed data (wind data extracted from Brackenheim station) °	Unresolved
22	S Camminga (0357860076)	29/04/2014 22:30	Heideheuvel – Veldenvlei	Mondi Odour causing headache.	<b>Mondi RB 05/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at time of the complaint, however, no root cause could be identified as all Mill operations were stable prior to and at the time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: None identified.	Resolved - Mondi Richards Bay
23	R Camminga (0357860076)	29/04/2014 22:30	Heideheuvel – Veldenvlei	Mondi Odour causing headache.	<b>Mondi RB 05/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at time of the complaint, however, no root cause could be identified as all Mill operations were stable prior to and at the time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: None identified.	Resolved - Mondi Richards Bay
24	K Camminga (0357860076)	29/04/2014 22:30	Heideheuvel – Veldenvlei	Mondi Odour causing headache.	<b>Mondi RB 05/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction, Mondi could have contributed to the odour experienced at time of the complaint, however, no root cause could be identified as all Mill operations were stable prior to and at the time of the complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: None identified.	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

### May

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Marge 035-7911770	12/05/2014 14:00	Felixton	"A lot of brown smoke coming from the sugar mill and onto the houses" The complainant also reported the presence of an odour.	Source and Nature of Emissions: The boilers were being brought up for the weekly Monday start-up; there were episodes of incomplete combustion of the fuel as a result of damp bagasse which resulted in additional fuel firing. Peak and Average Concentrations of Emissions and Met Conditions (if relevant): The peak was over 120 mg/m <sup>3</sup> but the average concentrations remained below 100 mg/m <sup>3</sup> The boilers settled after approximately 30 minutes and our permit condition was met. Compliance with Permits: There was no contravention of our permit requirement. Root Cause of Incident and Corrective Action: It is common practice to bring these boilers up with coal for start-up and then trickle some bagasse to accelerate the firing and steaming rate. Unfortunately, the bagasse was a bit damp and not burning properly, which meant that more fuel input was required for the same heat output hence the rather more brown smoke emission compared to other start-ups. The brown smoke emission happened intermittently between 14H00 to about 14H30 when the necessary operational adjustments were being made. Thereafter the boiler was fully steaming and better quality bagasse was received from the mills.	Resolved - Tongaat Hulett
2	R Camminga (0357860076)	13/05/2014 06:42	Heideheuwel – Veldenvlei	I live at 33 HEIDEHEUWEL and awoke this morning to a most awful nauseating smell drifting through my vents, doors and windows. It smelled like guava pulp and was REALLY sickening!!!	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNCG (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
3	S Camminga (0357860076)	13/05/2014 06:40	Heideheuwel – Veldenvlei	Extremely bad Mondi "guava" odour causing severe nausea. Mondi was contacted reported that Mondi had experienced an Eskom power outage.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNCG (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
4	K Camminga (0357860076)	13/05/2014 06:40	Heideheuwel – Veldenvlei	Extremely bad Mondi "guava" odour causing severe nausea. Mondi was contacted reported that Mondi had experienced an Eskom power outage.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNCG (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
5	R Koogje	13/05/2014 06:35	Heideheuwel – Veldenvlei	Very bad odour.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNCG (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
6	R Camminga	13/05/2014	Heideheuwel –	Extremely bad Mondi "guava" odour causing	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions:	Resolved -



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	(0357860076)	06:40	Veldenvlei	severe nausea.	Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNGC (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Mondi Richards Bay
7	Pam Schofield 035-7860631	13/05/2014 06:40	Disa Dives – Veldenvlei	Very bad odour causing nausea and nasal congestion.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNGC (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
8	Rob Schofield 035-7860631	13/05/2014 06:40	Disa Dives – Veldenvlei	Very bad odour causing nausea and nasal congestion.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNGC (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
9	RBM Employees	13/05/2014 07:15	RBM	A "guava" odour has been reported by persons working at RBM. The smell was reported as being "persistent throughout the morning, and even inside some office buildings and appeared to have a nauseating effect." Staff residing in Birdwood and Veldenvlei reported having experienced the same odour earlier at their homes.	<b>Mondi RB 13/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an Eskom power failure, Mondi experienced a crash shutdown which caused CNGC (Concentrated Non-Condensable Gases) venting. Mondi will notify the RBCAA as soon as the Mill is up and running again.	Resolved - Mondi Richards Bay
10	S Camminga (0357860076)	14/05/2014 10:15	John Ross\Alton Intersection	Excessive emissions emanating from Mondi.	<b>Mondi RB 16/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: It is possible that the plume observed in the photo could have been due to a temporary problem experienced on one of our electrostatic precipitators. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The plume observed in the photo could have resulted from a temporary problem experienced on one of our precipitators. The problem was rectified within 10 minutes and particulate emissions were still within the specified permit for particulate point source emissions.	Resolved - Mondi Richards Bay
11	R Camminga (0357860076)	14/05/2014 21:10	Heideheuwel – Veldenvlei	Nauseating Mondi "cat urine" odour. Attempts to contact Mondi Shift Co-Ordinator were unsuccessful.	<b>Mondi RB 16/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power failure, Mondi experienced a crash shutdown on the morning of the 13th of May, which caused losses of odorous substances to the effluent plant. This results in odour being released from the effluent plant and unfortunately this odour release could continue for days after a crash shut.	Resolved - Mondi Richards Bay
12	S Camminga	14/05/2014	Heideheuwel –	Nauseating Mondi "cat urine" odour.	<b>Mondi RB 16/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions:	Resolved -



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	(0357860076)	21:10	Veldenvlei	Attempts to contact Mondi Shift Co-Ordinator were unsuccessful.	Mondi has been identified as the source of the odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power failure, Mondi experienced a crash shutdown on the morning of the 13th of May, which caused losses of odorous substances to the effluent plant. This results in odour being released from the effluent plant and unfortunately this odour release could continue for days after a crash shut.	Mondi Richards Bay
13	K Camminga (0357860076)	14/05/2014 21:10	Heideheuvel – Veldenvlei	Nauseating Mondi "cat urine" odour. Attempts to contact Mondi Shift Co-Ordinator were unsuccessful.	<b>Mondi RB 16/5/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power failure, Mondi experienced a crash shutdown on the morning of the 13th of May, which caused losses of odorous substances to the effluent plant. This results in odour being released from the effluent plant and unfortunately this odour release could continue for days after a crash shut.	Resolved - Mondi Richards Bay

### May - Indirect

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Mr Du Toit 083 231 7581	14/05/2014 21:21	12 Flame Tree Arboretum	Petroleum / chocking burning rubber smell affecting throat and chest		Resolved - Peat Fire
2	Gugu Gazu 035 907 5252	15/05/2014 08:00	City of uMhlatuze -CBD	Compost smell		Unresolved



## RBCAA 2014 ANNUAL REPORT

### June

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Anonymous	01/06/2014 13:00	Vicinity of Arboretum Macerator Station	Very strong sewage smell. Complainant states that this is a regular occurrence.		Resolved – uMhlathuze Municipality
2	Anonymous	10/06/2014 12:45	John Ross Highway	Significant dust emanating from coal stockpiles at Grindrod Terminals.		Resolved - Grindrod
3	S Camminga (0357860076)	11/06/2014 08:50	Heideheuvel – Veldenvlei	Pungent nauseating Mondi odour.	<b>Mondi RB 12/6/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The cause of the incident has been identified as low effluent pH, and odour released into the atmosphere from the effluent plant as a result. An incident has been logged onto the electronic incident system for root cause investigation and the identification of preventative measures.	Resolved - Mondi Richards Bay
4	K Camminga (0357860076)	11/06/2014 08:50	Heideheuvel – Veldenvlei	Pungent nauseating Mondi odour.	<b>Mondi RB 12/6/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The cause of the incident has been identified as low effluent pH, and odour released into the atmosphere from the effluent plant as a result. An incident has been logged onto the electronic incident system for root cause investigation and the identification of preventative measures.	Resolved - Mondi Richards Bay
5	S Camminga (0357860076)	11/06/2014 08:50	Richards Bay	I wish to log a complaint regarding the POOR AIR QUALITY being experienced due to the presence of a smoke haze. This has become a regular early morning occurrence over the past 2 weeks and is affecting our health, with me and my family experiencing headaches, eye irritation, sinus and coughing. It is particularly bad this morning. I have made enquiries with Zululand Fire Protection Association and was informed that, due to abnormal wind speeds and directions, the only permitted burning which has taken place in the past 14 days was on Wednesday 11 June on a southerly wind. There has also been no sugar cane burning for the last 3 weeks due to the mills being closed. It can therefore be assumed that the smoke is emanating from domestic use. If this is the case, I would like to know how the Municipality intends addressing this issue as it is affecting our health.	<b>uMhlathuze Municipality 17/6/2014:</b> Gugu Gazu responded: I would like to acknowledge the complaint logged on Friday. I have requested fire statistics for the past two weeks from our Fire Section and been informed that none have been reported. I noticed that you made enquiries with Zululand Fire Protection Association and was informed that, due to abnormal wind speeds and directions, the only permitted burning which has taken place in the past 14 days was on Wednesday 11 June on a southerly wind. I have requested the fire stats from ZFPA (Tony Roberts to be precise) to confirm his response and will get back to you as soon as I receive his responds as I have observed burning activities out of the area of my jurisdiction more than once. I do not dispute the possibilities of domestic activities having an impact, however it leaves one wonders since rural settlement have been in existence more than the period stipulated. I agree with you it is not an easy task. This serves to confirm that your complaint is under investigation. <b>uMhlathuze Municipality 23/6/2014:</b> Gugu Gazu responded: In response to this complaint, I spoke to Tony from ZFPA who reported 33 illegal fires (referred as bees fires) which formed 80% of fires, the other 20% he referred to as deliberate fires, whereby the Sokhulu Community deliberately light up fires for no reasons. These fires are for the period of such complaint received. I also requested fire statistics from our Fire Section. I was informed that no fires at were reported for the said period. I have requested results of AQMP from uMoya-NILU for biomass fuel in our rural residential areas. I guess we might be able to draw up some facts around them.	Resolved – Smoke / Fire



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
6	Marge 035-7911770	12/06/2014 07:40	Felixton Village	Thick smoke causing irritation of the nose.		Resolved – Smoke / Fire
7	R Camminga (0357860076)	15/06/2014 09:30	Heideheuvel – Veldenvlei	Offensive smoke smells causing upper respiratory irritation.		Resolved - Peat Fire
8	S Camminga (0357860076)	15/06/2014 09:30	Heideheuvel – Veldenvlei	Offensive smoke smells causing upper respiratory irritation.		Resolved - Peat Fire
9	K Camminga (0357860076)	15/06/2014 09:30	Heideheuvel – Veldenvlei	Offensive smoke smells causing upper respiratory irritation.		Resolved - Peat Fire
10	S Camminga (0357860076)	15/06/2014 09:30	Heideheuvel – Veldenvlei	Smuts fallout.		Resolved - Peat Fire
11	R Camminga (0357860076)	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
12	S Camminga (0357860076)	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
13	B Camminga (0357860076)	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
14	K Camminga (0357860076)	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
15	S Dewey	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
16	W Vickers	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
17	T E'Silva	16/06/2014 19:50	Heideheuvel – Veldenvlei	Offensive “burning rubber/tar” odour.		Resolved - Peat Fire
18	Tracy	23/06/2014 12:15	25 Suikerbos Sirkel Veldenvlei	It is 22h15 at night, 23 June, and the air is suffocating to say the least. I live in Veldenvlei/Birdswood and would be interested to know what this smell is.	<b>Mondi RB 01/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the 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 investigated the exceedances and identified the root cause as poor quality effluent as a result of instability in the Evaporation plant. Odour was released from the effluent plant. An Environmental Incident has been logged and an investigation into possible preventative measures in currently underway.	Resolved - Mondi Richards Bay
19	S Camminga (0357860076)	24/06/2014 11:15	Civic Centre Parking Lot	Acid Foskor odour. Foskor was notified at the time.	<b>Foskor 02/07/2014:</b> Mannana Ntoampe responded: 1. Nature of the complaint : S Camminga, Civic Centre Parking Lot, 24 June, 11h15, Acid Foskor odour. Source and Nature of Emissions: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 325 ppm were recorded for A&B stack; however these emissions were still within permit limits. Compliance with Permit's: There was no contravention in existing permits. Root Cause and Corrective Action: As soon as Foskor was notified, measurements were taken at the Parking lot and no SO2 was picked up around the area. Based on wind direction, Foskor could have contributed to the odour however all plant operations	Resolved - Foskor



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					were normal and emissions were within specified limits. There were also no reported leaks at the time.	
20	Anonymous	25/06/2014 12:15	Empangeni Rail	Plumes of black smoke emanating from the "Best Cut Butchery" facility located in 5th Street, Empangeni Rail (photograph attached). The complainant says that this occurs intermittently on a daily basis. The complaint will be referred to the Municipality for investigation.	<b>uMhlathuze Municipality 27/6/2014:</b> Gugu Gazu responded: We visited the facility on Friday and was told that the gearbox of the boiler was on repairs. We discussed with the company at length and came to the conclusion that they will have to get the new one. We reckon that the problem will be solved even at this stage if they feed their boilers gradually. The facility will get their new gearbox this week. I am working out of town, should there be any burning concerns please forward them to Vusi Zungu.	Resolved - Best Cut Butchery
21	Anonymous	27/06/2014 16:30	Empangeni Rail	Plumes of black smoke emanating from the "Best Cut Butchery" facility located in 5th Street, Empangeni Rail (photograph attached). The complaint will be referred to the Municipality for investigation.	<b>uMhlathuze Municipality 27/6/2014:</b> Gugu Gazu responded: We visited the facility on Friday and was told that the gearbox of the boiler was on repairs. We discussed with the company at length and came to the conclusion that they will have to get the new one. We reckon that the problem will be solved even at this stage if they feed their boilers gradually. The facility will get their new gearbox this week. I am working out of town, should there be any burning concerns please forward them to Vusi Zungu.	Resolved - Best Cut Butchery
22	S Camminga (0357860076)	30/06/2014 09:27	Richards Bay	I wish to log a complaint regarding POOR AIR QUALITY. This morning we once again could not open our doors and windows because of the pungent "burning rubber" odour. Over the past 3 weeks the smell has been present most mornings and has also been present in the evenings when we have ventured out. It is causing my family and me to experience headaches and upper respiratory irritation.	<b>uMhlathuze Municipality 30/6/2014:</b> Gugu Gazu responded: Thank you for informing us. It is a truth that can never be denied and also have experienced it. We had a joint-inspection with Fire Section last week Thursday and identified several peat fire areas. Our Fire Section drew up a plan and had to engage other stakeholders to assist. Further to that, there is a report that will be rendered to our Council regarding the above since this is a serious concern that needs our full attention. I am out of town and will request Mr Rumba also to respond to the plan at hand.	Resolved - Peat Fire
23	Mr Poole (035-789 5929)	30/06/2014 11:55	27 Via Verbena – Veldenvlei	Poor Air Quality and pungent odour experienced over the past couple of weeks, very bad the past week, causing coughing and tight chest. This complaint will forwarded to uMhlathuze Municipality for investigation.		Resolved - Peat Fire
24	Mrs Poole (035-789 5929)	30/06/2014 11:55	27 Via Verbena – Veldenvlei	Poor Air Quality and pungent odour experienced over the past couple of weeks, very bad the past week, causing coughing and tight chest. This complaint will forwarded to uMhlathuze Municipality for investigation.		Resolved - Peat Fire
25	David Davidson 082 887 0221	30/06/2014 12:19	Nseleni	Peat Fire near Kwambonambi is affecting air quality. Complainant alleges that Kwambonambi Municipality is not taking any corrective action. This complaint will be referred to uMhlathuze		Resolved - Peat Fire



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				and uThungulu Municipality.		



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Gugu Gazu	11/06/2014 08:10	John Ross Highway, passing Mondi Robots	Mondi Odour	<b>Mondi RB 12/6/2014:</b> Nadia Rowling responded: Source and Nature of Emissions: Based on wind direction at the time of and prior to the complaint, Mondi could have contributed to the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: All major Mill Processes were stable, however it is possible that the odour could have originated from our effluent plant due to plant upset conditions (Mill shutdown) earlier in the week. We are reclaiming effluent from our emergency ponds as fast as possible, without compromising on the effluent to sea quality.	Resolved - Mondi Richards Bay
2	Gugu Gazu	11/06/2014 07:00	City of uMhlathuze	Mondi Odour	<b>Mondi RB 12/5/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has been identified as the source of the odour. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: The cause of the incident has been identified as low effluent pH, and odour released into the atmosphere from the effluent plant as a result. An incident has been logged onto the electronic incident system for root cause investigation and the identification of preventative measures.	Resolved - Mondi Richards Bay

### July

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Celeste Morkel	09/07/2014 10:30	BELL- Alton	The smell is awful, smells like Mondi is in my office.	<b>Mondi RB 15/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
2	Conrad van Niekerk	09/07/2014 10:35	Bell Equipment premises Alton	"Severe guava smell coming from Mondi".	<b>Mondi RB 15/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
3	R Camminga (0357860076)	09/07/2014 14:45	Heideheuvel – Veldenvlei	PUNGENT NAUSEATING Mondi Odour. Having been away, on entering our home we were overcome by a pungent Mondi stench that	<b>Mondi RB 11/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits:	Resolved - Mondi Richards



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				had infiltrated our closed up house. The stench was so bad that I became physically ill.	There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Bay
4	S Camminga (0357860076)	09/07/2014 14:45	Heideheuvel – Veldenvlei	PUNGENT NAUSEATING Mondi Odour. Having been away, on entering our home we were overcome by a pungent Mondi stench that had infiltrated our closed up house. The stench was so bad that I became physically ill.	<b>Mondi RB 11/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
5	K Camminga (0357860076)	09/07/2014 14:45	Heideheuvel – Veldenvlei	PUNGENT NAUSEATING Mondi Odour. Having been away, on entering our home we were overcome by a pungent Mondi stench that had infiltrated our closed up house. The stench was so bad that I became physically ill.	<b>Mondi RB 11/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
6	ANNA VD WESTHUIZEN	09/07/2014 20:30	WILDENWEIDE.	As I am writing to you, the fumes from Sappi adjacent to Wildenweide are overwhelming. complaints have been submitted to the RBCAA last year as well and lame excuses were made by the Municipality, who authorised this practice of making firebreaks, at night. The other Industries in Richards Bay have to Comply to the rules set down for pollution, except for Sappi. Can you explain why, you as the environmental body, that is supposed to police this, is not doing something about this pollution and the complaints from the residents? Several residents are suffering from asthma and breathing problems, directly linked to this pollution. Our dogs, sleeping outside, are distressed and vomiting, yet not RBCAA or the SPCA is bothered. As we are not getting any positive response, I will place an advertisement, calling for other affected residents to lodge their complaints to Carte	<b>RBCAA 14/7/2014</b> Sandy Camminga responded: Your complaint has been logged with the Richards Bay Clean Air Association (RBCAA), and will be forwarded to the relevant parties for investigation. It is important for us to point out that the RBCAA does not have any regulatory powers. It is the responsibility of the Authorities to take action against perpetrators. The RBCAA is aware of a Peat fire in the area, which we assume to be the source of the "fumes" you describe in your e-mail. The complaints submitted last year also related to a Peat fire, which was in fact located due to the efforts of the RBCAA. At the request of the RBCAA a meeting was held last week, attended by Zululand Fire Protection Association (ZFPA) and uMhlathuze Municipality, to discuss the issue of Peat fires, and to adopt Best Operating Practices to deal with these fires. The RBCAA has been assured by the Municipality and ZFPA that the Peat fires when detected receive immediate attention. These fires are however extremely difficult to extinguish. Early detection is key, and we would encourage residents to immediately report any sign of smoke, or the presence of an offensive odour. The odour emanating from these fires is usually described as "rubber" or "tar" like. We are truly sorry for your experience, and assure you that the RBCAA remains committed to improving air quality in the area. Please feel free to contact me should you have any queries, or require additional information.	Resolved - Peat Fire



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				Blanche to investigate our little town and the way it is run. A copy of this email will be sent to various recipients, which I feel will listen, outside of Richards Bay.		
7	Liz Savides 072 392 0511	09/07/2014	Cassia Close – Arboretum Extension	Pungent “Rotten Cabbage Odour”	<b>Mondi RB 11/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage earlier in the day as the time of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
8	Liz Savides 072 392 0511	14/07/2014 09:20	John Ross Highway	Significant white dust emanating from an uncovered wagon train heading away from the Port. The RBCAA has informed Transnet Freight Rail’s environmental section.		Resolved - Transnet Freight Rail
9	Anonymous	16/07/2014	Empangeni Rail, 5th Street	Plumes of black smoke continue to emanate from the “Best Cut Butchery, The complaint will be referred to the Municipality for investigation.	<b>uMhlathuze Municipality 31/7/2014:</b> Lindiwe Khumalo responded: As per our telephonic discussion this afternoon. we visited Best Cut on 22 July 2014 and the Factory Manager was requested to submit an email with regards to the corrective action taken for the complaint in question. The uMhlathuze Municipality has issued a non-compliance notice reference no. DMS 979242 which will be hand delivered to Best Cut on 1 August 2014, as we were out of the office yesterday and today.	Resolved - Best Cut Butchery
10	R Camminga (0357860076)	19/07/2014 06:00	Heideheuvel – Veldenvlei	On rising and entering my garden this morning at 06h00 (19/07/2014) I was met by an unbearable smell likened to a mix of bush fire smoke and tar. This smell is beginning to permeate my home, despite all efforts to keep all doors and windows shut. I have irritated eyes and am developing a headache. My throat is sore and has developed a post nasal discharge which is now posing a upper respiratory tract infection! The prevalence of this kind of smoke and smell appears to be on the increase of late and is quite unacceptable!!!		Resolved - Peat Fire
11	S Camminga (0357860076)	21/07/2014 09:42	Heideheuvel – Veldenvlei	Mr Vumba. The ongoing noxious odour and smoke from the Peat fires has become intolerable. It is particularly bad from early evening to mid-morning. The health effects are significant with nausea, headaches, sinus irritation and sore throats being experienced by	<b>uMhlathuze Municipality 21/7/2014:</b> Andrew Vumba responded: We have 3 Peat Fires behind Wildenweide and we busy fighting them but is taking time to totally extinguish them.	Resolved - Peat Fire



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				myself and my family on a daily basis. Please could you provide an update on the progress being made to extinguish these fires, because in 3 weeks it appears to have gotten worse and not better?		
12	Anonymous	21/07/2014 14:00	Empangeni Rail, 5th Street	Plumes of black smoke continue to emanate from the "Best Cut Butchery" facility located in 5th Street, Empangeni Rail. (photograph attached)The complaint will be referred to the Municipality for investigation.	<b>uMhlathuze Municipality 31/7/2014:</b> Lindiwe Khumalo responded: As per our telephonic discussion this afternoon. we visited Best Cut on 22 July 2014 and the Factory Manager was requested to submit an email with regards to the corrective action taken for the complaint in question. The uMhlathuze Municipality has issued a non-compliance notice reference no. DMS 979242 which will be hand delivered to Best Cut on 1 August 2014, as we were out of the office yesterday and today.	Resolved - Best Cut Butchery
13	Anonymous	22/07/2014 14:00	Empangeni Rail, 5th Street	Plumes of black smoke continue to emanate from the "Best Cut Butchery" facility located in 5th Street, Empangeni Rail. (photograph attached)The complaint will be referred to the Municipality for investigation.	<b>uMhlathuze Municipality 31/7/2014:</b> Lindiwe Khumalo responded: As per our telephonic discussion this afternoon. we visited Best Cut on 22 July 2014 and the Factory Manager was requested to submit an email with regards to the corrective action taken for the complaint in question. The uMhlathuze Municipality has issued a non-compliance notice reference no. DMS 979242 which will be hand delivered to Best Cut on 1 August 2014, as we were out of the office yesterday and today.	Resolved - Best Cut Butchery
14	D Ellen, 073 096 0526	24/07/2014 02:20	Armelino Crescent Felixton	Pungent "BagasseToxic smell" - Complainant reported that he could "hardly breathe at one stage last night".	<b>Tongaat-Hulett 28/7/2014:</b> Sagran Govindasamy responded: Source and Nature of Emissions: On the morning of Friday, 24 July 2014 an investigation was conducted by visiting the factory area where bagasse is produced and found no odour. Peak and Average Concentrations of Emissions and Met Conditions (if relevant) Not relevant. Compliance with Permits: There was no contravention of any permit requirement. Root Cause of Incident and Corrective Action: The pungent odour would originate from degradation of bagasse as a result of it being stored for a long period. As we do not store bagasse on site it unlikely that the source of the odour is from our mill. <b>Mpact 28/7/2014:</b> Siyabonga Buthelezi responded: Source and Nature of Emissions: Based on wind direction Mpact Felixton is unlikely the source of the complaint. The Mill was receiving bagasse imports from the sugar mill during this period which is no different to any other period of receipts in cane season. The bagasse smell could be from our stockpile of stored bagasse and the complainant is urged to more closely identify the source as there were no abnormal operating conditions during this period. The complainant should also assess whether the smell could originate from the sewerage treatment plant and is mistakenly identified as bagasse smell. Odour conditions on the bagasse pile do not fluctuate over short periods which make the bagasse pile unlikely to be the source. Compliance with Permits: There was no contravention of any permit requirement. Peak and Average Concentrations of RBCAA stations were within ambient air quality standards. Root Cause of Incident and Corrective Action: The bagasse heap smell is and has been an integral part of this business for over 40 years. Ritter water is pumped over the heap to preserve the bagasse. Ritter system does not only assist in bagasse preservation but also mitigate potential spontaneous fire hazards during hot & dry periods and wind dispersion. The Ritter water has a slightly acidic smell which dissipates readily in fairly close proximity to the heap. The mill is remodelling the plant to eliminate the bagasse in 2017.	Resolved - Mpact Felixton
15	Anonymous	24/07/2014 07:22	N2 Towards Felixton	Driving towards Richards Bay on the N2 I often smell a very bad odour opposite Felixton	<b>Mpact 01/8/2014:</b> Siyabonga Buthelezi responded: Source and Nature of Emissions: Based on RBCAA data the wind was blowing WNW i.e. from Felixton location. However, Mpact Felixton does	Resolved - Tongaat



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				industry. This morning it was particularly bad.	not employ processes that are associated with the release of TRS odours (rotten egg smell & effluent type smell) such as an sewerage treatment plant that may undergo anaerobic digestion during upset operating conditions. Based on this Mpac Felixton is unlikely to be the source of the complaint. In future such incidents/complaints will be jointly investigated by both Mpac and THS. Compliance with Permits: There were no contraventions of any permit requirement during the period. Root Cause of Incident and Corrective Action: None identified.	Hulett

### July - Indirect

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Richlen Properties 035-751-1972	09/07/2014 10:40	Macgra Park, Brasslink, Alton	Terrible gas smell in the air	<b>Mondi RB 14/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage as the source of the odour causing incident. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
2	Francois 082-821-8233	09/07/2014 10:49	16 Brasslink, Alton	Gas leak with severe odour in the air	<b>Mondi RB 14/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage as the source of the odour causing incident. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay
3	Monica 083-253-3406	09/07/2014 10:45	55 Ceramic Curve, Alton	Pungent Smell in the air	<b>Mondi RB 14/7/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified a power outage as the source of the odour causing incident. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time.	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

### August

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Xolani Mhlongo	07/08/2014 10:46	WILDENWEIDE (JAKKALSDRAAI)	I would like to lodge a complaint of air pollution that we are experiencing in Wildenweide; I live in Jakkalsdraai and behind our house there is a greenbelt/Mondi Forest, there is something that they are always burning at night in the forest and a lot of smoke fumes come through our section. I do not feel those burning trees as the smell seems like some industrial waste. Please assist us with an investigation as this has been happening for a number of weeks.	<b>RBCAA 07/08/2014</b> Sandy Camminga responded: This complaint is related to the ongoing Peat fires. I have telephonically notified ZFPA of the complaint, and they believe that the Peat Fire adjacent to Wildenweide may have flared up again. ZFPA will send someone to investigate. I have spoken with the complainant, who further reported that the smoke fumes were causing a sore throat, and I have explained the issue surrounding the peat fires.	Resolved - Peat Fire
2	Anonymous	14/08/2014 09:00	Port of Richards Bay	Excessive coal dust emanating from stockpile. TPT has been telephonically notified. Excessive coal dust emanating from stockpile. TPT has been telephonically notified.	<b>TPT 15/8/2014:</b> Nokhutula Mthembu responded: TPT has been monitoring the operation very closely. Dust mitigation measures put in place have been very effective thus it is disappointing to receive a "community" complaint. Sprinklers system has been supplemented with mobile units to ensure the entire stockpile coverage. The only dust experienced is during the pay loading activity reclaiming from the stockpile It should be noted that according to the TPT Safety procedures, The cargo cannot be wetted during the off loading since it becomes muddy and slippery and this could result in machines slipping. This is contained entirely within our operations and we do have a suitable monitoring system in place to gauge community impact. The minimal dust arising from pay loading is not visible from our terminal boundaries.	Resolved - Port of Richards Bay
3	Marius Dreyer 0834170949	14/08/2014 10:30	Jakkalsdraai Wildenweide	Included are emails sent previously regarding bushfires in Wildenweide and more particular the effect on the residents staying in Jakkalsdraai. As I am typing this email, Jakkalsdraai is still filled with smoke and foul, stinking air. We are a family of four. We all suffer from respiratory problems and are receiving treatment. My children are unable to attend school and both my wife and I have been booked off sick. The fire department was notified of bushfires on Saturday (09th August 2014). My wife personally spoke to both Gugu Gazu and Andrew Vumba. In all instances we were treated professionally and the fire department did respond. However, after months off polluted air and specifically from Friday (08th August 2014) we have not had clean air 24/7. The situation has now reached a point where it can be deemed a crisis. Throughout the week we have called and complained to various people. Andrew Vumba		Resolved - Peat Fire



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				visited us personally on Tuesday (12th August) and experienced our problem first hand. It is now Thursday and still the problem persists. I am off the opinion that although the fire department responds, they are not doing a proper job of extinguishing the fires. This fire is in the greenbelt area behind houses number 38 and 36 in Jakkalsdraai and has been there since Friday. I urgently request that this problem be solved ASAP. Our health is at stake.		
4	D Savides 072 392 0511	16/08/2014 07:00	Cassia Close – Arboretum Ext	"Very bad Mondi smell causing headache".	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
5	L Savides 072 392 0511	16/08/2014 07:00	Cassia Close – Arboretum Ext	"Very bad Mondi smell causing headache".	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
6	Mrs Laubscher 083 417 0866	16/08/2014 08:30	Knorhaanbaai – Meerensee	"Very Strong "Cat urine" smell causing "burning of the nose and feeling like we can't breathe"	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015;	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	
7	Mrs Laubscher Family 083 417 0866	16/08/2014 08:30	Knorhaanbaai – Meerensee	“Very Strong “Cat urine” smell causing “burning of the nose and feeling like we can’t breathe”	<p><b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits</p> <p>There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.</p>	Resolved - Mondi Richards Bay
8	Trynie	16/08/2014 09:00	Arboretum, Rooibosrand, Raphia Palm and Raasblaarlaagte.	This morning (16 August 2014) @ 7.30 one can't open a door or a window here in Arboretum in the vicinity of Rooibosrand, Raphia Pal, Raasblaarlaagte, etc. Which factory is to be blame of this awful air pollution?	<p><b>Foskor 19/08/2014:</b> Mannana Ntoampe responded: 1. Nature of the complaint: This morning (16 August 2014) @ 07.30 one can't open a door or a window here in Arboretum in the vicinity of Rooibosrand, Raphia Pal, Raasblaarlaagte, etc. Which factory is to be blame of this awful air pollution? Source and Nature of Emissions: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 324 ppm were recorded for C- stack; nonetheless these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: No root cause identified. All plant operations were normal. There was no start-up during that period. here were no reported gas leaks. Based on wind direction, Foskor could have contributed to the odour. <b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits</p> <p>There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.</p>	Resolved - Mondi Richards Bay
9	Mr Eaton 035-786 0451	16/08/2014 09:10	Pelican Place – Birdswood	Very bad Mondi odour causing tight chest.	<p><b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits</p> <p>There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected</p>	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	
10	Mrs Eaton 035-786 0451	16/08/2014 09:10	Pelican Place – Birdswood	Very bad Mondi odour causing tight chest.	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
11	S Camminga (0357860076)	16/08/2014 09:20	33 Heideheuwel - Veldenvlei	PUNGENT Mondi odour, causing nausea and headache.	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
12	R Camminga (0357860076)	16/08/2014 09:20	33 Heideheuwel - Veldenvlei	PUNGENT Mondi odour, causing nausea and headache.	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
13	K Camminga	16/08/2014	33 Heideheuwel -	PUNGENT Mondi odour, causing nausea and	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions:	Resolved -



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	(0357860076)	09:20	Veldenvlei	headache.	Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Mondi Richards Bay
14	D Savides 072 392 0511	16/08/2014 10:00	ZO Offices - R.Bay CBD	Bad Mondi odour in the office.	<b>Mondi RB 26/8/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. Two projects have been approved directly after the incident to improve the robustness of islanding the mill from external supply. The lead time for this is the annual shut in March 2015; however some work will be initiated this year. Note that when the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Improved insulation for the 132Kv line will also be installed in the next annual shut to address root cause.	Resolved - Mondi Richards Bay
15	Dave Savides (072 392 0511)	23/08/2014 01:00	Cassia Close – Arboretum Extension	Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. The RBCAA has contacted Foskor and been informed that the alarm was related to an ammonia gas release.	<b>Foskor 27/08/2014:</b> Mannana Ntoampe responded: 1. Nature of the complaint : Dave , Liz and Simon Savides (072 392 0511), Cassia Close – Arboretum Extension, 23 August, 01h00, Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 354 ppm were recorded for A&B stack: however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: Based on SO2 emissions data on the day, there was no anomalies that could have caused the smell. here was no start-up during that period. The investigation confirms that the alarm went off an hour after the complaint was logged. Based on wind direction, Foskor could have contributed to the odour in Arboretum.	Resolved - Foskor
16	Liz Savides (072 392 0511)	23/08/2014 01:00	Cassia Close – Arboretum Extension	Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. The RBCAA has contacted Foskor and been informed that the alarm was related to an ammonia gas release.	<b>Foskor 27/08/2014:</b> Mannana Ntoampe responded: 1. Nature of the complaint : Dave , Liz and Simon Savides (072 392 0511), Cassia Close – Arboretum Extension, 23 August, 01h00, Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 354 ppm were recorded for A&B stack: however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: Based on SO2 emissions data on the day, there was no anomalies that could have caused the smell. here was no start-up during that period. The investigation confirms that the alarm went off an hour after the complaint was logged. Based on wind direction, Foskor could have contributed to the odour in Arboretum.	Resolved - Foskor



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
17	Simon Savides (072 392 0511)	23/08/2014 01:00	Cassia Close – Arboretum Extension	Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. The RBCAA has contacted Foskor and been informed that the alarm was related to an ammonia gas release.	<b>Foskor 27/08/2014:</b> Mannana Ntoampe responded: 1. Nature of the complaint : Dave , Liz and Simon Savides (072 392 0511), Cassia Close – Arboretum Extension, 23 August, 01h00, Pungent Foskor odour accompanied by the sounding of an alarm. Complainant reported that they had to close their windows and Mrs Savides experienced a headache. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 354 ppm were recorded for A&B stack; however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: Based on SO2 emissions data on the day, there was no anomalies that could have caused the smell. here was no start-up during that period. The investigation confirms that the alarm went off an hour after the complaint was logged. Based on wind direction, Foskor could have contributed to the odour in Arboretum.	Resolved - Foskor
18	Nick 0834484912	29/08/2014 12:07	N2 travelling towards Empangeni and opposite Felixton industry	"Odour was so bad I felt nauseous." Note* Mondi, Tongaat-Hulett and Mpac are kindly requested to investigate.	<b>Mondi RB 11/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has investigated the compliant and based on wind direction is excluded as a source of the odour. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Not applicable. <b>Tongaat Hulett 12/9/2014</b> Sagran Govindasamy responded: Nature of Complaint On 03 September 2014 received a complaint from RBCAA that whilst Nick was traveling towards Empangeni on 29 August 2014 he experienced a strong odour in the Felixton area. Source and Nature of Emissions: On the morning of 03 September 2014 a joint investigation between Tongaat Hulett Sugar and Mpac was conducted. The effluent ponds of both industries were visited and the concentrations of odours were not significant. In other words, the odour was only experienced when the investigation team were close to the effluent ponds. We can therefore conclude that Tongaat Hulett could have contributed to the odour. Peak and Average Concentrations of Emissions and Met Conditions (if relevant) Both industries do not have limits for odour. Compliance with Permits there was no contravention of any permit requirement. Root Cause of Incident and Corrective Action As mentioned above there was odour present during the time of the incident, but we did not experience any problems with their processes. Tongaat Hulett Sugar – Felixton Mill will continue to operate its effluent treatment ponds in a responsible manner.	Resolved - Tongaat Hulett
19	Mike Van Rooyen 071 413 0534	31/08/2014	7 Tinkinkie Tuiste, Birdswood	Severe and unbearable smoke coming from activities within the Shembe area in Birdswood. Complainant stated that his daughter was affected by the smoke. The RBCAA will forward this complaint to the Municipality for investigation.	<b>uMhlathuze Municipality 03/9/2014</b> Andrew Vumba responded: We received the complaint yesterday and responded a vehicle. The crew found small areas of fire mouldering and put them out. I have sent somebody today as well to check if the problem still persists.	Resolved – Fire / uMhlathuze Municipality
20	Mike Van Rooyen's Family 071 413 0534	31/08/2014	7 Tinkinkie Tuiste, Birdswood	Severe and unbearable smoke coming from activities within the Shembe area in Birdswood. Complainant stated that his daughter was affected by the smoke. The RBCAA will forward this complaint to the Municipality for investigation.	<b>uMhlathuze Municipality 03/9/2014</b> Andrew Vumba responded: We received the complaint yesterday and responded a vehicle. The crew found small areas of fire mouldering and put them out. I have sent somebody today as well to check if the problem still persists.	Resolved – Fire / uMhlathuze Municipality
21	D Ellens (073 0960526)	31/08/2014	Armelino Crescent –	"The last 3 nights have been really bad in Felixton; there has been an intoxicating	<b>Mpac 11/09/2014:</b> Charles van der Merwe responded: With regards to the complaint of a Bagasse odour in Felixton as received on 2/09/2014 =, we wish to affirm the possibility that the	Resolved - Mpac



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
			Felixton	Bagasse smell, some stages it smells so bad it makes you feel nauseous."	<p>odour emanated from our bagasse storage pile. We also wish to state that at the time of the complaint we had no upset conditions in the Mpac plant that could have led to an increase in ambient air concentrations of SO2. It is highly unlikely that the increase in SO2 as measured was due to any operation at the Mpac plant.</p> <p>There is however a distinctive odour associated with our Bagasse storage pile. That being said, we have been storing bagasse since 1953, and the current storage conditions of the bagasse are no different to the conditions over the last 60 years. In all this time we have rarely had any complaints regarding this odour, as it is not normally detectable at distance.</p> <p>Furthermore there is little that can be done in the short term to eliminate the Bagasse odour in the vicinity of the plant which may be carried to surrounding areas on strong southerly winds. We are however in the process of modifying the plant which will result in the bagasse storage pile being made obsolete in 2017.</p> <p>Should the complaint persist we would encourage the complainant to contact us directly at the time of the odour to ascertain the nature of the odour at their location which will help to identify the actual source from the factories which operate in the area. Our Environmental Technologist, Siyabonga Buthelezi can be contacted at 0357916081.</p>	

### September

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Mike Van Rooyen 071 413 0534	1/09/2014	7 Tinkinkie Tuiste, Birdswood	Severe and unbearable smoke coming from activities within the Shembe area in Birdswood. Complainant stated that his daughter was affected by the smoke. The RBCAA will forward this complaint to the Municipality for investigation.	<b>uMhlathuze Municipality 03/9/2014</b> Andrew Vumba responded: We received the complaint yesterday and responded a vehicle. The crew found small areas of fire mouldering and put them out. I have sent somebody today as well to check if the problem still persists.	Resolved - uMhlathuze Municipality
2	Mike Van Rooyen's Family 071 413 0534	1/09/2014	7 Tinkinkie Tuiste, Birdswood	Severe and unbearable smoke coming from activities within the Shembe area in Birdswood. Complainant stated that his daughter was affected by the smoke. The RBCAA will forward this complaint to the Municipality for investigation.	<b>uMhlathuze Municipality 03/9/2014</b> Andrew Vumba responded: We received the complaint yesterday and responded a vehicle. The crew found small areas of fire mouldering and put them out. I have sent somebody today as well to check if the problem still persists.	Resolved - uMhlathuze Municipality
3	D Ellens (073 0960526)	1/09/2014	Armelino Crescent – Felixton	"The last 3 nights have been really bad in Felixton; there has been an intoxicating Bagasse smell, some stages it smells so bad it makes you feel nauseous."	<p><b>Mpac 11/09/2014:</b> Charles van der Merwe responded: With regards to the complaint of a Bagasse odour in Felixton as received on 2/09/2014 =, we wish to affirm the possibility that the odour emanated from our bagasse storage pile. We also wish to state that at the time of the complaint we had no upset conditions in the Mpac plant that could have led to an increase in ambient air concentrations of SO2. It is highly unlikely that the increase in SO2 as measured was due to any operation at the Mpac plant.</p> <p>There is however a distinctive odour associated with our Bagasse storage pile. That being said, we have been storing bagasse since 1953, and the current storage conditions of the bagasse are no different to the conditions over the last 60 years. In all this time we have rarely had any complaints</p>	Resolved - Mpac



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					regarding this odour, as it is not normally detectable at distance. Furthermore there is little that can be done in the short term to eliminate the Bagasse odour in the vicinity of the plant which may be carried to surrounding areas on strong southerly winds. We are however in the process of modifying the plant which will result in the bagasse storage pile being made obsolete in 2017. Should the complaint persist we would encourage the complainant to contact us directly at the time of the odour to ascertain the nature of the odour at their location which will help to identify the actual source from the factories which operate in the area. Our Environmental Technologist, Siyabonga Buthelezi can be contacted at 0357916081.	
4	D Ellens (073 0960526)	2/09/2014	Armelino Crescent – Felixton	"The last 3 nights have been really bad in Felixton; there has been an intoxicating Bagasse smell, some stages it smells so bad it makes you feel nauseous."	<b>Mpact 11/09/2014:</b> Charles van der Merwe responded: With regards to the complaint of a Bagasse odour in Felixton as received on 2/09/2014 =, we wish to affirm the possibility that the odour emanated from our bagasse storage pile. We also wish to state that at the time of the complaint we had no upset conditions in the Mpact plant that could have led to an increase in ambient air concentrations of SO2. It is highly unlikely that the increase in SO2 as measured was due to any operation at the Mpact plant. There is however a distinctive odour associated with our Bagasse storage pile. That being said, we gave been storing bagasse since 1953, and the current storage conditions of the bagasse are no different to the conditions over the last 60 years. In all this time we have rarely had any complaints regarding this odour, as it is not normally detectable at distance. Furthermore there is little that can be done in the short term to eliminate the Bagasse odour in the vicinity of the plant which may be carried to surrounding areas on strong southerly winds. We are however in the process of modifying the plant which will result in the bagasse storage pile being made obsolete in 2017. Should the complaint persist we would encourage the complainant to contact us directly at the time of the odour to ascertain the nature of the odour at their location which will help to identify the actual source from the factories which operate in the area. Our Environmental Technologist, Siyabonga Buthelezi can be contacted at 0357916081.	Resolved - Mpact
5	S Camminga (0357860076)	2/09/2014 10:30	Richards Bay CBD	Abnormal emissions emanating from Hillside FTC stack.	<b>BHP Billiton 05/09/2014</b> Shaloshini Naidoo responded. Nature of Complaint: Abnormal emissions emanating from Hillside FTC stack. Source and nature of emissions: Hillside FTC – pale emissions, possibly dust from FTC1. Root Cause identified: Decrease in number of filters operational due to three monthly service. Corrective Action: Filter change-out took place on the same day during the service.	Resolved - BHP Billiton (Hillside)
6	Ms J Potgieter 035- 907 9159	3/09/2014 05:00	Umzimbete Farm NNE of Felixton	Bad Odour: "We live on a farm 2km's or so, North of Felixton and have noticed that the smell from the South is getting worse - stronger and more of a chemical smell. At 5am this morning, the odour was so strong and toxic smelling that I had to close the window."	<b>Mpact 09/9/2014</b> Siyabonga Buthelezi responded: Based on the available data for wind direction Mpact Felixton is unlikely the source of the "Chemical smell" complaint.	Resolved – Unknown Source
7	Anonymous	3/09/2014 08:18	John Ross Highway	Abnormal black emissions emanating from Mondri stack.	<b>Mondi RB 09/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondri has identified the Recovery Boilers as the source of the emissions. Peak and Average Ambient Concentrations of PM Emissions during Start up on 03/09/2014 Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action At the time of the incident Mondri was in the process of starting up the	Resolved - Mondri Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					Recovery Boilers after a planned outage. As the boilers were cold, Heavy Fuel Oil is used to warm up the boilers before black liquor is introduced into the boilers as fuel. Emissions from Heavy Fuel Oil are darker in colour than black liquor. This process typically takes up to 6 hours, however, Mondi does make every effort to expedite this, and in this instance emissions were brought into spec within 5 hours.	
8	R Camminga (0357860076)	3/09/2014 08:30	John Ross Highway	"Black smoke coming from Mondi"	<b>Mondi RB 09/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified the Recovery Boilers as the source of the emissions. Peak and Average Ambient Concentrations of PM Emissions during Start up on 03/09/2014 Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action At the time of the incident Mondi was in the process of starting up the Recovery Boilers after a planned outage. As the boilers were cold, Heavy Fuel Oil is used to warm up the boilers before black liquor is introduced into the boilers as fuel. Emissions from Heavy Fuel Oil are darker in colour than black liquor. This process typically takes up to 6 hours, however, Mondi does make every effort to expedite this, and in this instance emissions were brought into spec within 5 hours.	Resolved - Mondi Richards Bay
9	D Savides	3/09/2014 10:52	John Ross Highway	"Black smoke from Mondi stack"	<b>Mondi RB 09/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified the Recovery Boilers as the source of the emissions. Peak and Average Ambient Concentrations of PM Emissions during Start up on 03/09/2014 Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action At the time of the incident Mondi was in the process of starting up the Recovery Boilers after a planned outage. As the boilers were cold, Heavy Fuel Oil is used to warm up the boilers before black liquor is introduced into the boilers as fuel. Emissions from Heavy Fuel Oil are darker in colour than black liquor. This process typically takes up to 6 hours, however, Mondi does make every effort to expedite this, and in this instance emissions were brought into spec within 5 hours.	Resolved - Mondi Richards Bay
10	J Potgieter	8/09/2014 19:10	Umzimbete Farm NNE of Felixton	"I've just returned home from work and there is a terrible, chemical smell in the air."	<b>Mpact 12/9/2014</b> Siyabonga Buthelezi responded: Source and Nature of Emissions: There were not abnormal operating conditions experienced by Mpact Felixton during the period of the complaint. Peak and Average Ambient Concentrations of Emissions and Met Conditions: Mpact Felixton processes are unlikely to result to sudden peaks (9 -25 -54 ppb) in SO2 levels recorded by RBCAA's Felixton monitoring station during the period of complaint. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There were not abnormal operating conditions experienced by Mpact Felixton during the period of the complaint. <b>Tongaat Hulett 30/9/2014</b> Sagra Govindasamy responded: Nature of Complaint: On 08 September 2014 received a complaint from J Potgieter from Umzimbete Farm that at approximately 19h10 he arrived home and experienced a strong chemical smell. Source and Nature of Emissions: The incident was investigated on the morning of 09 September 2014 and there were no trace of any chemical smell. Also no complaints were received from residents in the village of any chemical smell. Peak and Average Concentrations of Emissions and Met Conditions (if relevant): Not relevant: Compliance with Permits: There was no contravention of any permit requirement. Root Cause of Incident and Corrective Action: As we could not determine the nature of the chemical smell it was difficult to find the root cause.	Resolved – Unknown Source
11	Anonymous,	9/09/2014 07:48	Alton area	Strong Mondi Odour	<b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident.	Resolved - Mondi



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>Compliance with Permits            There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.</p>	Richards Bay
12	D Savides (072 392 0511)	9/09/2014 00:45	Cassia Close Arboretum Ext	Very strong odour – “Woke us up and we had to close windows”	<p><b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident.            Compliance with Permits            There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.</p>	Resolved - Mondi Richards Bay
13	Liz Savides (072 392 0511)	9/09/2014 00:45	Cassia Close Arboretum Ext	Very strong odour – “Woke us up and we had to close windows”	<p><b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident.            Compliance with Permits            There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.</p>	Resolved - Mondi Richards Bay
14	D Savides	9/09/2014 07:00	Richards Bay CBD	Pungent odour in the offices on opening.	<p><b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident.            Compliance with Permits            There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.</p>	Resolved - Mondi Richards Bay
15	S Camminga (0357860076)	9/09/2014 07:00	33 Heideheuvel - Veldenvlei	Nauseating Mondi Odour.	<p><b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident.            Compliance with Permits            There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.</p>	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
16	R Camminga (0357860076)	9/09/2014 07:00	33 Heideheuvel - Veldenvlei	Nauseating Mondi Odour.	<b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.	Resolved - Mondi Richards Bay
17	K Camminga (0357860076)	9/09/2014 07:00	33 Heideheuvel - Veldenvlei	Nauseating Mondi Odour.	<b>Mondi RB 12/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi will provide the RBCAA with a detailed investigation report by close of business today.	Resolved - Mondi Richards Bay
18	Mr Van Niekerk 082 413 7166	13/09/2014 06:20	Marlynhoek - Meerensee	Pungent "Guava" odour	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
19	Debbie Laubscher 083 417 0866	13/09/2014 07:00	Knorhaanbaai - Meerensee	"Very strong sulphur smell trapped in my house. Hard to breathe it in"	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi has communicated its action plan to address these incidents to the RBCAA. <b>Foskor 23/9/2014</b> Mannana Ntoampe responded: Peak concentrations of SO2 Emissions: The highest SO2 emissions of 387 ppm were recorded for the A&B stack; however these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified. All plant operations were normal and emissions were within specified limits. hour and 40 minutes prior the complaint, the wind direction changed from West towards North away from Meerensee towards the Harbour. Based on wind direction, Foskor could not have contributed to the odour at the time, as such, other sources should be investigated.	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
20	S Camminga (0357860076)	13/09/2014 07:50	33 Heideheuwel - Veldenvlei	Mondi "guava" odour	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
21	K Camminga (0357860076)	13/09/2014 07:50	33 Heideheuwel - Veldenvlei	Mondi "guava" odour	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an internal power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: There was a flashover on the Mondi incoming 132Kv electrical supply line within the mill boundaries. This resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
22	Marge 035-7911770	13/09/2014 07:50	Felixton	Severe smuts fallout. "Everything is covered in large pieces of ash "The RBCAA telephonically referred the complaint to the City of uMhlatuze Air Quality Unit at 08h00 on 11 September.		Resolved - Sugar Cane Fire
23	S Camminga (0357860076)	14/09/2014 07:00	33 Heideheuwel - Veldenvlei	On opening our doors we are faced with a Pungent Mondi odour that is so nauseating that we have been forced to retreat indoors and close our house up. On enquiring with Mondi we have been informed that the mill has experienced a power outage.	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an external power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
24	R Camminga (0357860076)	14/09/2014 07:00	33 Heideheuwel - Veldenvlei	On opening our doors we are faced with a Pungent Mondi odour that is so nauseating that we have been forced to retreat indoors and close our house up. On enquiring with Mondi we have been informed that the mill has experienced a power outage.	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an external power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
25	K Camminga (0357860076)	14/09/2014 07:00	33 Heideheuwel -	On opening our doors we are faced with a Pungent Mondi odour that is so nauseating that	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an external power outage as the source of the odour causing incident.	Resolved - Mondi



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
			Veldenvlei	we have been forced to retreat indoors and close our house up. On enquiring with Mondi we have been informed that the mill has experienced a power outage.	Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time. Mondi has communicated its action plan to address these incidents to the RBCAA.	Richards Bay
26	T E' Silva (0357860076)	14/09/2014 07:00	33 Heideheuvel - Veldenvlei	On opening our doors we are faced with a Pungent Mondi odour that is so nauseating that we have been forced to retreat indoors and close our house up. On enquiring with Mondi we have been informed that the mill has experienced a power outage.	<b>Mondi RB 18/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has identified an external power outage as the source of the odour causing incident. Compliance with Permits There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Relevant authorities were notified at the time. Mondi has communicated its action plan to address these incidents to the RBCAA.	Resolved - Mondi Richards Bay
27	Azele du Toit	16/09/2014 08:50	Birdswood area	Hereby I would like to lodge a complaint regards to the burning of field/bush in the Birdswood area. This odour is unbearable and early morning Birdswood is covered in a blanket of smoke. I do not think. This is healthy at all. We do experience the following due the smoke/odour: • Headache • Sour eyes & throat • Nausea • Irritation of the nose /hay fever • Sleep deprivation because of the terrible odour early morning. My understanding is unwanted fires from squatters sets the peat alight and therefore unwanted fires and odour. Please investigate.		Resolved - Peat Fire
28	Martin Fastenau	21/09/2014 13:00	Nondi Leap and Octopus arms intersection	This morning (Sunday 21/09) I noticed, and smelt! the sewage pipeline overflowing at the manhole cover at the Nondi Leap and Octopus arms intersection in Meerensee. Thanks to your intervention the pump station has been guarded since we had repeated incidences last year, seems the Munic has lost focus since. I contacted them, all plumbers are apparently busy... The sewage flows into the storm water drain on the road, and back into the lake from which our		Resolved - uMhlatuze Municipality



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				drinking water is extracted.		
29	D Savides (072 392 0511)	28/09/2014 21:30	8 Cassia Close – Arboretum Extension	Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.”	<p><b>Mondi RB 30/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: At the time of the incident Mondi experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Consequently, Mondi maybe the source of the complaint, however wind direction and TRS levels at the monitoring stations do not implicate Mondi as the source. Perhaps a case study could assist in confirming the source. Compliance with Permits: There was no contravention in existing permits for point source emissions. <b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: D Savides (072 392 0511) L Savides, S Savides, N Parent &amp; B Parent – 8 Cassia Close – Arboretum Extension, 28 September, around 21h30, Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.” Source and Nature of Emissions: Peak Concentrations of SO2 Emissions The highest SO2 emissions of 306 ppm were recorded for the C stack but these emissions were still within permit limits. There was an external power outage however this should not have resulted in any upset conditions or increased emissions and consequent start-up was done with start-up scrubbers in operation. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified Odour description excludes Foskor as a possible source and as such other sources may need to be investigated.</p>	Resolved - Mondi Richards Bay
30	L Savides (072 392 0511)	28/09/2014 21:30	8 Cassia Close – Arboretum Extension	Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.”	<p><b>Mondi RB 30/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: At the time of the incident Mondi experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Consequently, Mondi maybe the source of the complaint, however wind direction and TRS levels at the monitoring stations do not implicate Mondi as the source. Perhaps a case study could assist in confirming the source. Compliance with Permits: There was no contravention in existing permits for point source emissions. <b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: D Savides (072 392 0511) L Savides, S Savides, N Parent &amp; B Parent – 8 Cassia Close – Arboretum Extension, 28 September, around 21h30, Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.” Source and Nature of Emissions: Peak Concentrations of SO2 Emissions The highest SO2 emissions of 306 ppm were recorded for the C stack but these emissions were still within permit limits. There was an external power outage however this should not have resulted in any upset conditions or increased emissions and consequent start-up was done with start-up scrubbers in operation. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified Odour description excludes Foskor as a possible source and as such other sources may need to be investigated.</p>	Resolved - Mondi Richards Bay
31	S Savides (072 392 0511)	28/09/2014 21:30	8 Cassia Close – Arboretum Extension	Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.”	<p><b>Mondi RB 30/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: At the time of the incident Mondi experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Consequently, Mondi maybe the source of the complaint, however wind direction and TRS levels at the monitoring stations do not implicate Mondi as the source. Perhaps a case study could assist in confirming the source. Compliance with Permits:</p>	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>There was no contravention in existing permits for point source emissions. <b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: D Savides (072 392 0511) L Savides, S Savides, N Parent &amp; B Parent – 8 Cassia Close – Arboretum Extension, 28 September, around 21h30, Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.” Source and Nature of Emissions: Peak Concentrations of SO2 Emissions The highest SO2 emissions of 306 ppm were recorded for the C stack but these emissions were still within permit limits.</p> <p>There was an external power outage however this should not have resulted in any upset conditions or increased emissions and consequent start-up was done with start-up scrubbers in operation.</p> <p>Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified Odour description excludes Foskor as a possible source and as such other sources may need to be investigated.</p>	
32	N Parent	28/09/2014 21:30	8 Cassia Close – Arboretum Extension	Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.”	<p><b>Mondi RB 30/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: At the time of the incident Mondi experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Consequently, Mondi maybe the source of the complaint, however wind direction and TRS levels at the monitoring stations do not implicate Mondi as the source. Perhaps a case study could assist in confirming the source. Compliance with Permits: There was no contravention in existing permits for point source emissions. <b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: D Savides (072 392 0511) L Savides, S Savides, N Parent &amp; B Parent – 8 Cassia Close – Arboretum Extension, 28 September, around 21h30, Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.” Source and Nature of Emissions: Peak Concentrations of SO2 Emissions The highest SO2 emissions of 306 ppm were recorded for the C stack but these emissions were still within permit limits.</p> <p>There was an external power outage however this should not have resulted in any upset conditions or increased emissions and consequent start-up was done with start-up scrubbers in operation.</p> <p>Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified Odour description excludes Foskor as a possible source and as such other sources may need to be investigated.</p>	Resolved - Mondi Richards Bay
33	B Parent	28/09/2014 21:30	8 Cassia Close – Arboretum Extension	Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.”	<p><b>Mondi RB 30/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: At the time of the incident Mondi experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. Consequently, Mondi maybe the source of the complaint, however wind direction and TRS levels at the monitoring stations do not implicate Mondi as the source. Perhaps a case study could assist in confirming the source. Compliance with Permits: There was no contravention in existing permits for point source emissions. <b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: D Savides (072 392 0511) L Savides, S Savides, N Parent &amp; B Parent – 8 Cassia Close – Arboretum Extension, 28 September, around 21h30, Pungent nauseating “Cabbage” smell – “The worst we have ever experienced.” Source and Nature of Emissions: Peak Concentrations of SO2 Emissions The highest SO2 emissions of 306 ppm were recorded for the C stack but these emissions were still within permit limits.</p>	Resolved - Mondi Richards Bay



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					There was an external power outage however this should not have resulted in any upset conditions or increased emissions and consequent start-up was done with start-up scrubbers in operation. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified Odour description excludes Foskor as a possible source and as such other sources may need to be investigated.	
34	Hendrik Louw 082 963 5287	28/09/2014 22:40	Knorhaanbaai, Meerensee	My wife and I suddenly started to smell a choking gas from outside. I cannot say exactly what it was, but it was very strong, choking and irritating out throats. It was definitely coming from outside. I cannot say until what time it lasted, but it was quite a long time (we eventually fell asleep). Perhaps contributing circumstances: the power went off earlier the evening and came back on around 22:40. We only woke up then and checked everything when we suddenly experienced this from the outside - it could have been there earlier. It was also not only from one window - it was round the house. This was something totally out of the ordinary. I would suggest that the model be run if something cannot be pinpointed easily.	<b>Foskor 01/10/2014:</b> Mannana Ntoampe responded: Nature of the complaint: My wife and I suddenly started to smell a choking gas from outside. I cannot say exactly what it was, but it was very strong, choking and irritating out throats. It was definitely coming from outside. I cannot say until what time it lasted, but it was quite a long time (we eventually fell asleep). Perhaps contributing circumstances: the power went off earlier the evening and came back on around 22:40. We only woke up then and checked everything when we suddenly experienced this from the outside - it could have been there earlier. It was also not only from one window - it was round the house. This was something totally out of the ordinary. I would suggest that the model be run if something cannot be pinpointed easily. Source and Nature of Emissions. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 306 ppm were recorded for the C stack and these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits. Root Cause and Corrective Action: None Identified All plant operations were normal and emissions were within specified limits. Prior to the complaint, the wind was blowing in the South West direction towards the Airport, after which it changed direction into the North towards the Harbour: Based on wind direction, Foskor could not have contributed to the odour at the time. <b>Mondi RB 01/10/2014:</b> Candice Webb responded: Source and Nature of Emissions: Prior to the incident Mondri experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. However, wind direction and subsequent discussions with the complainant on the description of the odour do not implicate Mondri as the source. Mondri would like to request further investigation into this complaint.	Resolved - Peat fire
35	DJ Merryweather	28/09/2014 23:30	Arboretum Ward 3	Last night Sunday 28th September we awoke at about 11:30 coughing our lungs out with a terrible acrid stench.	<b>Mondi RB 02/10/2014:</b> Candice Webb responded: Source and Nature of Emissions: Prior to the incident Mondri experienced an external power outage. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases. However, wind direction and subsequent discussions with the complainant on the description of the odour do not implicate Mondri as the source. Mondri would like to request further investigation into this complaint.	Resolved - Peat fire
36	Mr Nel 072 321 5061	29/09/2014 04:00	Marlynhoek – Meerensee	Pungent Mondri odour	<b>Mondi RB 29/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondri has identified an external power outage last night as the source of the odour causing incident. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases.	Resolved - Mondri Richards Bay
37	Mrs Nel 072 321 5061	29/09/2014 04:00	Marlynhoek – Meerensee	Pungent Mondri odour	<b>Mondi RB 29/9/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondri has identified an external power outage last night as the source of the odour causing incident. Compliance with Permits:	Resolved - Mondri Richards



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Due to an external power supply problem, the mill experienced a sudden unexpected shutdown. When the external power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases.	Bay
38	Noen (083 230 9413)	29/09/2014 21:30	27 Avokadokroon, Arboretum Extension	"There was a strong smell similar to paraffin or fuel, It was particularly bad and my chest closed up completely."	<b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 395 ppm were recorded for the A&B stack; nonetheless these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits: Root Cause and Corrective Action: None Identified; All plant operations were normal and emissions were within specified limits; one of Foskor operations could emit paraffin or fuel /burning plastic odour. The nature of the complaints ("paraffin/burning plastic type odour") excludes Foskor as a possible source as none of Foskor operations could have resulted in described odour types.	Resolved - Peat Fire
39	Annelize Mulligan (0845065852)	29/09/2014 21:30	20 Elephant Walk - Wildenweide	"Strong smell of "burning plastic"	<b>Foskor 06/10/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions: Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 395 ppm were recorded for the A&B stack; nonetheless these emissions were still within permit limits. Compliance with Permits: There was no contravention in existing permits: Root Cause and Corrective Action: None Identified; All plant operations were normal and emissions were within specified limits; one of Foskor operations could emit paraffin or fuel /burning plastic odour. The nature of the complaints ("paraffin/burning plastic type odour") excludes Foskor as a possible source as none of Foskor operations could have resulted in described odour types.	Resolved - Peat Fire



## RBCAA 2014 ANNUAL REPORT

### October

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Monika 078 268 4066	4/10/2014 21:30	J1 eSikhaleni	Very strong "Tar" smell. Complainant stated that the "tar" smell has been present for the past 2 weeks and is affecting her health. The RBCAA has contacted Mr Roberts (ZFPA) who has confirmed the presence of a Peat fire south of eSikhaleni on land belonging to SiyaQhubeka Forests. Access to the area has hampered efforts to extinguish the fire. The RBCAA will forward this complaint to the City of uMhlathuze.		Resolved - Peat Fire
2	Anonymous	31/10/2014 13:10	John Ross at Foskor traffic lights	Very bad "rotten egg" smell. The RBCAA has telephonically notified Foskor.	<b>Foskor 06/11/2014:</b> Mannana Ntoampe responded: The complaint was at the Foskor Robots which means possible fugitive emissions. <ul style="list-style-type: none"> <li>The wind was blowing in the South Easterly direction towards Hillside and the 'rotten egg' could have been the molten sulphur smell</li> <li>The melter pit pump failed and filters had to be opened to access the pump</li> <li>The smell possibly came from the smelter section during pump replacement.</li> </ul>	Resolved - Foskor

### November

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	D Savides (072 392 0511)	4/11/2014 19:25	Cassia Close - Arboretum Extension	"Strong smell seems a bit acidic" causing burning of the nose.	<b>Foskor 06/11/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 421 ppm were recorded for the Main stack; nonetheless these emissions were still within permit limits. Compliance with Permit there was no contravention in existing permits. Root Cause and Corrective Action: None Identified. Emissions were within specified limits. There were no start-ups during that time period. Based on wind direction, Foskor could have contributed to the smell experienced in Arboretum however; we could not have impacted Meerensee 10 min later as the wind direction remained fairly constant after 19:25pm).	Resolved - Foskor
2	L Savides (072 392 0511)	4/11/2014 19:25	Cassia Close - Arboretum Extension	"Strong smell seems a bit acidic" causing burning of the nose.	<b>Foskor 06/11/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 421 ppm were recorded for the Main stack; nonetheless these emissions were still within permit limits. Compliance with Permit there was no contravention in existing permits. Root Cause and Corrective Action: None Identified. Emissions were within specified limits. There were no start-ups during that time period. Based on wind direction, Foskor could have contributed to the smell experienced in Arboretum however; we could not have impacted Meerensee 10 min later as the wind direction remained fairly constant after 19:25pm).	Resolved - Foskor
3	C Van Niekerk (082	4/11/2014 19:35	35 Marlynhoek - Meerensee	Bad odour	<b>Foskor 06/11/2014:</b> Mannana Ntoampe responded: Source and Nature of Emissions. 3. Peak Concentrations of SO2 Emissions: The highest SO2 emissions of 421 ppm were recorded for the	Resolved - Mondi



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
	413 7166),				<p>Main stack; nonetheless these emissions were still within permit limits. Compliance with Permit there was no contravention in existing permits. Root Cause and Corrective Action: None Identified• Emissions were within specified limits• There were no start-ups during that time period. Based on wind direction, Foskor could have contributed to the smell experienced in Arboretum however; we could not have impacted Meerensee 10 min later as the wind direction remained fairly constant after 19:25pm). <b>Mondi RB 17/11/2014:</b> Candice Webb responded: Source and Nature of Emissions</p> <p>Mondi experienced an internal power outage on the 3rd of November, the mill was still down on the 4th of November and fugitive emissions from the effluent plant has been identified as the source of the odour. Compliance with Permits:</p> <p>There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Transformer failure resulted in the mill experiencing a sudden and unexpected shutdown. When the power supply is interrupted suddenly, mill equipment is forced to shut down, resulting in the venting of malodorous gases.</p>	Richards Bay
4	Roland Moodley 074 965 6164	7/11/2014 11:00	Empangeni Rail	Black smoke emanating from the "Best Cut Butchery" facility located in 5th Street, Empangeni Rail The RBCAA has forwarded the complaint to the City's Air Quality Management Unit for investigation.	<p><b>uMhlathuze Municipality 17/11/2014:</b> Lindiwe Khumalo responded: Please see below the response from Best Cut regarding the black smoke complaint : As per you visit this morning 2014/11/12 the following:</p> <ol style="list-style-type: none"> <li>As per visit on the boiler sight the smoke that you have experienced the last few days were due to a break down, the automatic feeder. As you sow for yourself it is repaired.</li> <li>As per our inspection report the following repairs were done to get a certificate of fitness.               <ol style="list-style-type: none"> <li>2.1 Repair top dome</li> <li>2.2 1.3 Ton vertical water pipe.</li> <li>2.3 Water softener fix.</li> </ol> </li> <li>As per your input, we shall visit the sugar mill in Felixton to see if we can utilize an alternative fuel.</li> <li>The quality of the coal will definitely be under scrutinizing (we shall demand a washed coal on our next order.</li> </ol>	Resolved - Best Cut Butchery
5	June (082 731 3280)	8/11/2014 02:30	Nseleni	"Rotten Smell".	<p><b>Mondi RB 14/11/2014:</b> Candice Webb responded: Source and Nature of Emissions: Mondi has investigated the complaint. Although all ambient monitoring stations indicated low TRS both prior and post the time of the complaint, Mondi's effluent pH was low at this time and could have contributed to the odour. Compliance with Permits.</p> <p>There was no contravention in existing permits for point source emissions.</p>	Resolved - Mondi Richards Bay
6	MAR	26/11/2014 18:52	Corner Nondi Leap and Octopus Arm in Meerensee	<p>Please lodge an emission complaint against uMhlathuze; the sewage manhole corner Nondi Leap and Octopus Arm in Meerensee is overflowing into the road junction and storm water drain again, same as on the 21 September!</p> <p>I have lodged an incident; case CMM14110001449 for attention of the plumbing dept. (~18:00 26/11), hopefully this will receive speedy attention; my home is only a</p>		Resolved – uMhlathuze Municipality



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
				few meters from the sewage pipe, so these incidences are rather distressing. Is there any indication from the Munic whether they are able to resolve this sewage overflow incidences, in the past guards were placed at the pump station to prevent cable theft, are they still deployed?		

### December

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	Danie Esterhuyzen 035 7893571	2/12/2014 16:02	58 Mkhulu Crescent, Arboretum	For the past two evenings, between midnight and 1am, we have experienced the most awful stench coming into our house. We have to close all the windows as once the smell gets in it really difficult to get rid of again. It smells like rubbish of some sort that is being burnt - not a veld fire or the usual Mondli, Foskor or Hillside smells. With the intensity of the smell, it seems to be in close proximity of our home: 58 Mkhulu Crescent, Arboretum and it is when a NE wind blows. We have never had this smell during the day. We do not know if you have had other reports of this problem. We will check again tonight and give you feedback on whether or not we got the smell again. Complainant has further confirmed the smell as being like burning rubber \ tar/		Resolved - Peat Fire
2	Mr Nel 0723215061	2/12/2014 21:30	Zululand Yacht Club - Meerensee	"Heavy Smell of Ammonia".	<b>Bidvest Tank Terminals 22/12/2014:</b> Silindile Mchunu responded: Incident Description: The RBCAA received a complaint at 21h30 from a member of the public at the Yacht Club. The odour was described as a strong ammonia odour. Investigation Findings: the Tank Pressures were high due to the presence of Nitrogen in the rail tankers that were received. When the stock tank pressures are high, normally the tank contents can be flared, allowing the tank pressure to go back to normal. In order to keep the stock tank pressures at bay, the flare was started. Due to the high Nitrogen content, the flare was tripped several times, which possibly resulted in the escape of un-flared Ammonia and the cause for the odour. The incident is not a regular occurrence. Root Cause: High content of Nitrogen in the tank thus the excess pressure could not be reduced with the use of the flare. Tank Pressures at the time of Venting: The tank pressures are monitored on an hourly basis and are recorded and reported to Management. Corrective Action: A depressurising procedure is in place (OPR-WI-03-5) Tank pressures are logged hourly.	Resolved - Bidvest Tank Terminals



## RBCAA 2014 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
					BTT has an Emergency Procedure in place. For the incident uMhlatuze was not activated as it was noted that the pressures came down with the flaring (see table above).  BTT Operations are trained Emergency Response Personnel.	



# **APPENDIX F**

## **Document Limitations**



### DOCUMENT LIMITATIONS

This Document has been provided by Golder Associates Africa Pty Ltd (“Golder”) subject to the following limitations:

- i) This Document has been prepared for the particular purpose outlined in Golder’s proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.
- ii) The scope and the period of Golder’s Services are as described in Golder’s proposal, and are subject to restrictions and limitations. Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Golder in regards to it.
- iii) Conditions may exist which were undetectable given the limited nature of the enquiry Golder was retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.
- iv) In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. Golder’s opinions are based upon information that existed at the time of the production of the Document. It is understood that the Services provided allowed Golder to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.
- v) Any assessments made in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.
- vi) Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Golder for incomplete or inaccurate data supplied by others.
- vii) The Client acknowledges that Golder may have retained sub-consultants affiliated with Golder to provide Services for the benefit of Golder. Golder will be fully responsible to the Client for the Services and work done by all of its sub-consultants and subcontractors. The Client agrees that it will only assert claims against and seek to recover losses, damages or other liabilities from Golder and not Golder’s affiliated companies. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any legal recourse, and waives any expense, loss, claim, demand, or cause of action, against Golder’s affiliated companies, and their employees, officers and directors.
- viii) This Document is provided for sole use by the Client and is confidential to it and its professional advisers. No responsibility whatsoever for the contents of this Document will be accepted to any person other than the Client. Any use which a third party makes of this Document, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this Document.

### GOLDER ASSOCIATES AFRICA (PTY) LTD



# RBCAA 2014 ANNUAL REPORT

---