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ANNUAL REPORT FOR 2013

# Annual Ambient Air Quality Monitoring and Dispersion Modelling

**Submitted to:**

Richards Bay Clean Air Association (RBCAA)  
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REPORT



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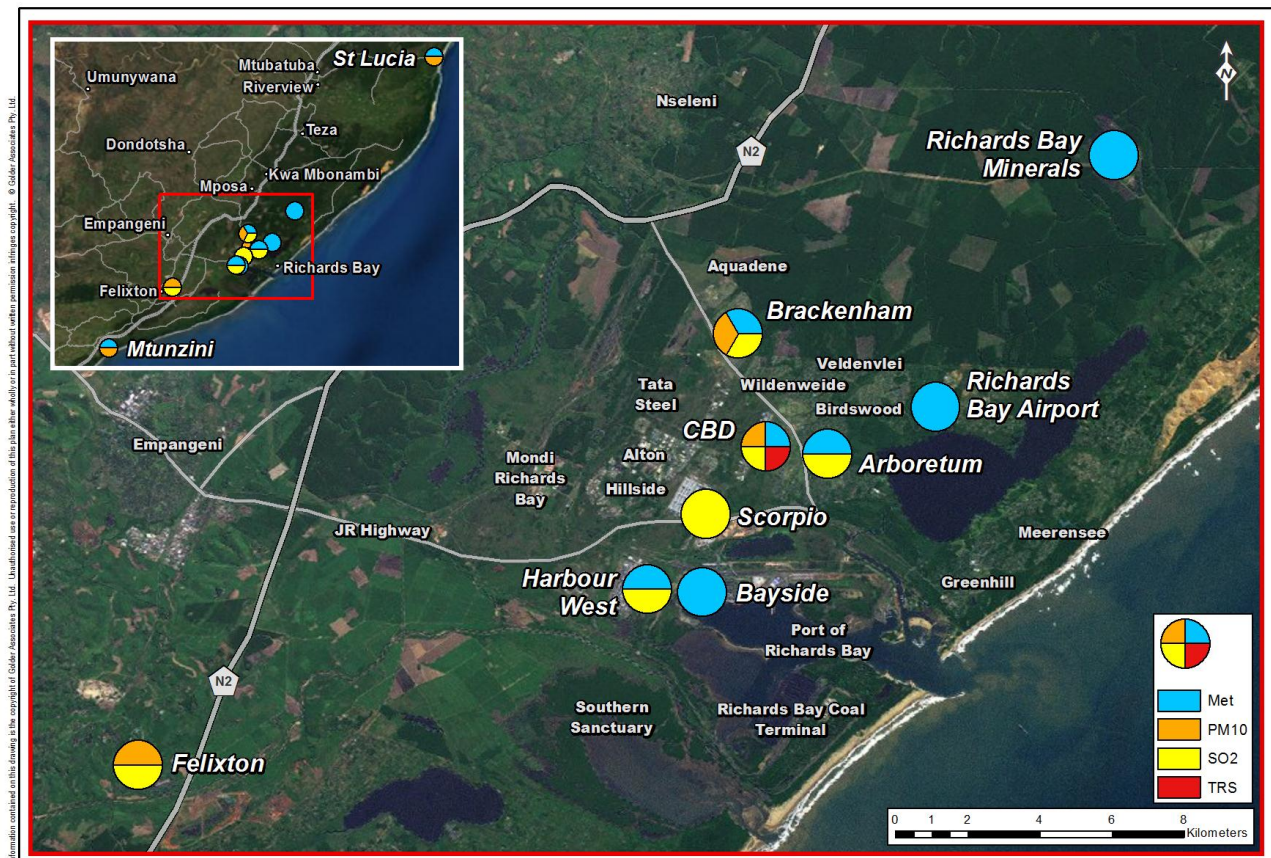
2013 Complaints Log



## 1.0 INTRODUCTION

This 16<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 2013. The monitoring network consists of 11 stations, as seen in Figure 1.

Figure 1: Location of the RBCAA monitoring stations



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 Hawk 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.

### 1.1 2013 Synopsis

2013 was an eventful year for the RBCAA and presented a number of challenges and opportunities, most notably:

- The RBCAA changed atmospheric management service providers in May 2013. The handover from SGS to Golder Associates Africa (GAA) was relatively smooth with little disruption to the operation of the RBCAA monitoring network. GAA was able to address the dispersion modelling backlog from October 2012, as well as compile the 2012 Annual Report.
- The consolidation of the RBCAA's information technology (IT) network in Richards Bay. This included:
  - Moving the RBCAA servers to the current RBCAA office at the Richard Bay Civic Centre;



- The installation of a Business DSL solution in the RBCAA office. This included an ADSL line with 3G failover, allowing access to the local servers in Richards Bay; and
- The setup of a new 3G mini access point network (APN) for remote communication with the stations in the field, replacing the old wireless local area network (LAN).
- The upgrade of the HAWK dispersion model to the latest version; the benefits of which include:
  - The increase in modelling domain (the domain now covers an area of 100km by 100km centred on Arboretum);
  - The use of enhanced elevation (topographical) data; and
  - The inclusion of real time emissions into the simulations. Work on this is ongoing and anticipated to be completed during the 2014.
- Annual network data capture rates for PM<sub>10</sub>, SO<sub>2</sub> and TRS achieved SANAS requirements (90%). A detailed analysis of the network operation is contained in Appendix B.

## 2.0 METEOROLOGY

In 2012, predominant winds blew from two sectors: NNE to E (51.2%) and SSE to SW (35.5%) (Figure 2). In 2013, predominant winds blew from two sectors: NNE to NE (21.2%), and SE to SW (53.8%) (Figure 3).

In 2012 the average wind speed was 2.85m/s, with 9.49% calms (Figure 4). The average wind speed in 2013 was 3.54m/s with 1.56% calms (Figure 5). Arboretum measured approximately 8% more calms in 2012 than in 2011 this may be as a result of a slightly worn bearing on the wind speed indicator during 2012. This is evident when comparing records from Harbour West which indicate 3.93% calms in 2012 and 3.75% calms in 2013.

Figure 2: Arboretum wind rose for 2012

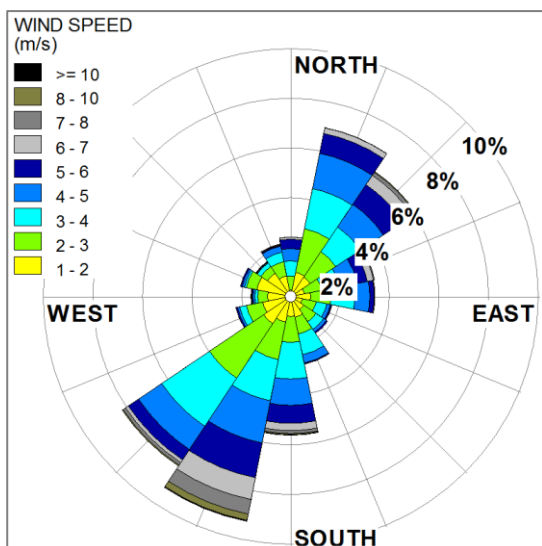


Figure 3: Arboretum wind rose for 2013

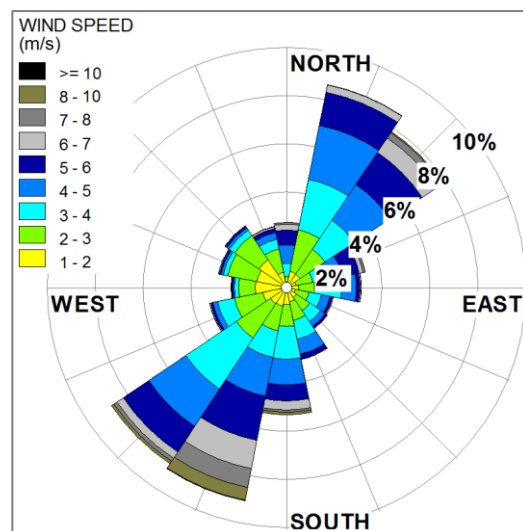




Figure 4: Arboretum wind class frequency distribution for 2012

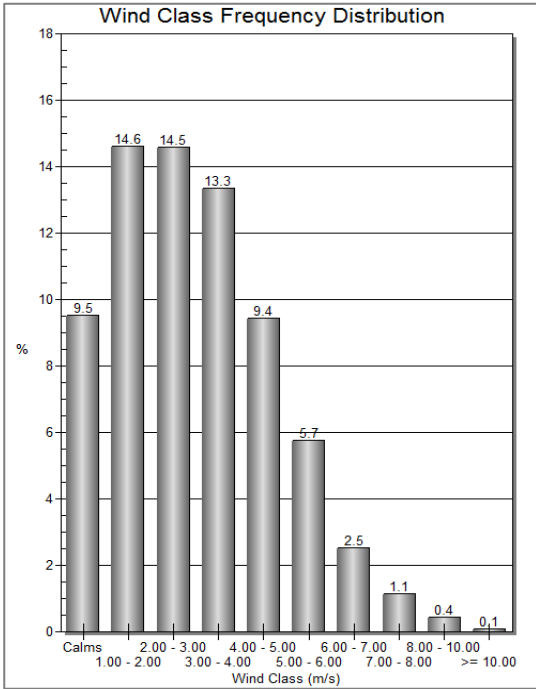
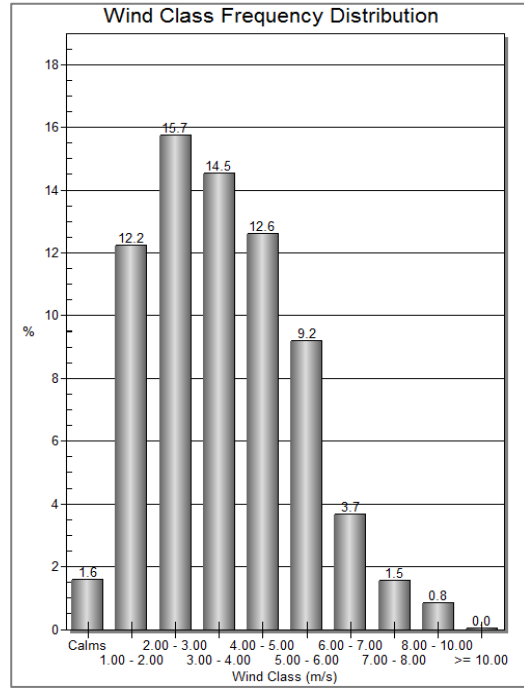


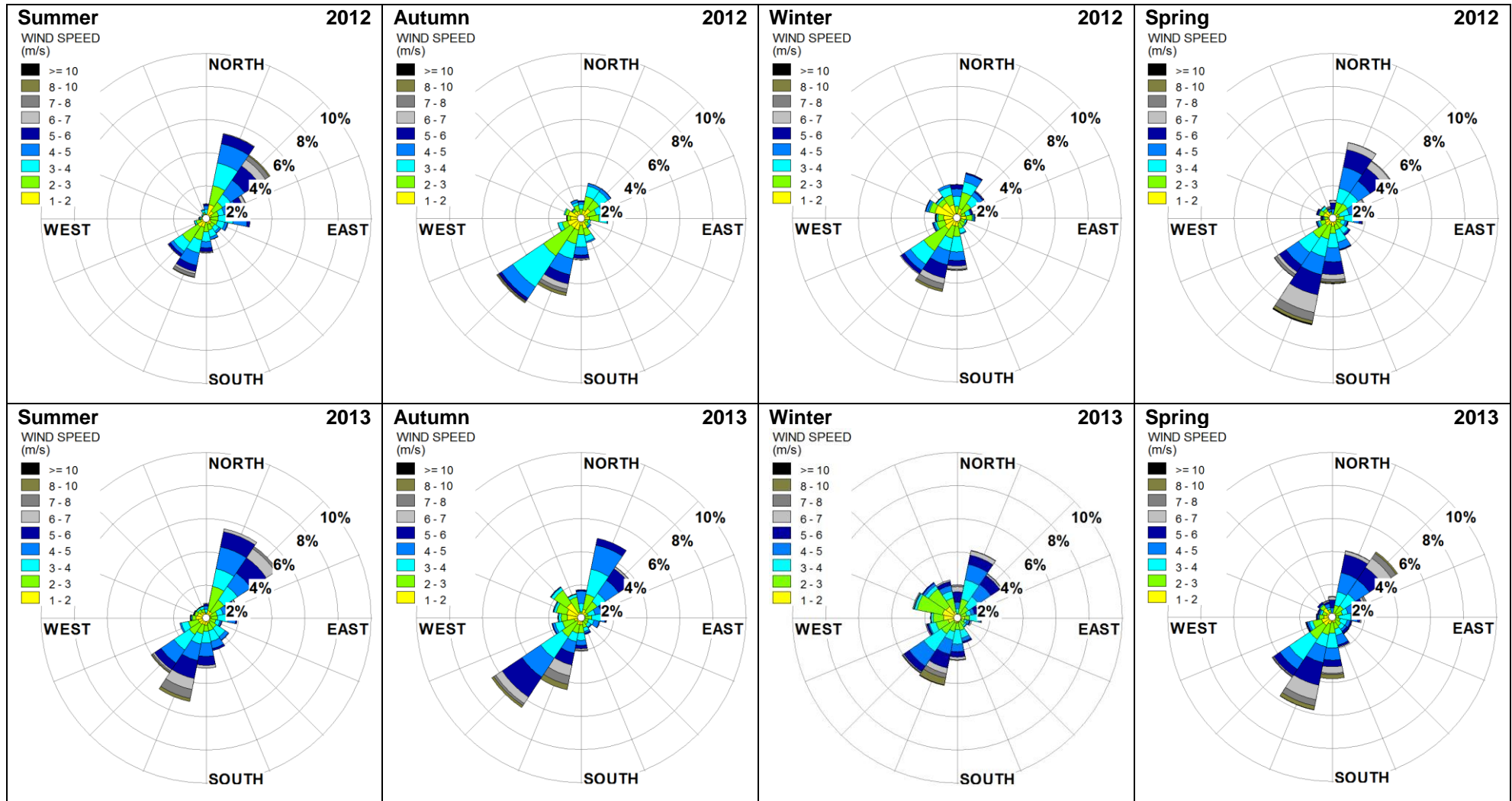
Figure 5: Arboretum wind class frequency distribution for 2013



Quarterly wind roses for Richards Bay can be seen in Figure 6. There is seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during spring and summer (September to February). 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 in September to March.



Figure 6: Arboretum seasonal wind class frequency distribution for 2012 and 2013





### 3.0 AIR QUALITY COMPLAINTS

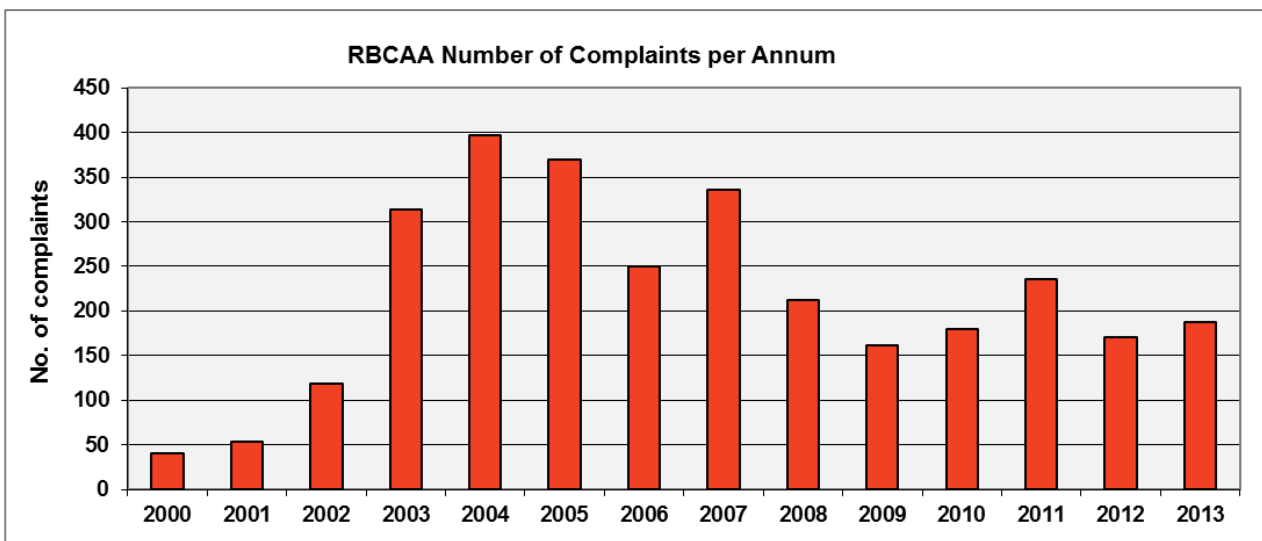
Detailed complaint records are maintained, updated and distributed to the RBCAA mailing list on a weekly basis. The following sections summarise and analyse the complaints received during 2013.

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

#### 3.1 Field Observations

There were one hundred and eighty seven (187) air quality complaints received during 2013. One hundred and seventy one (171) complaints were logged during 2012 (Figure 7).

Figure 7: Complaints - historical annual comparison

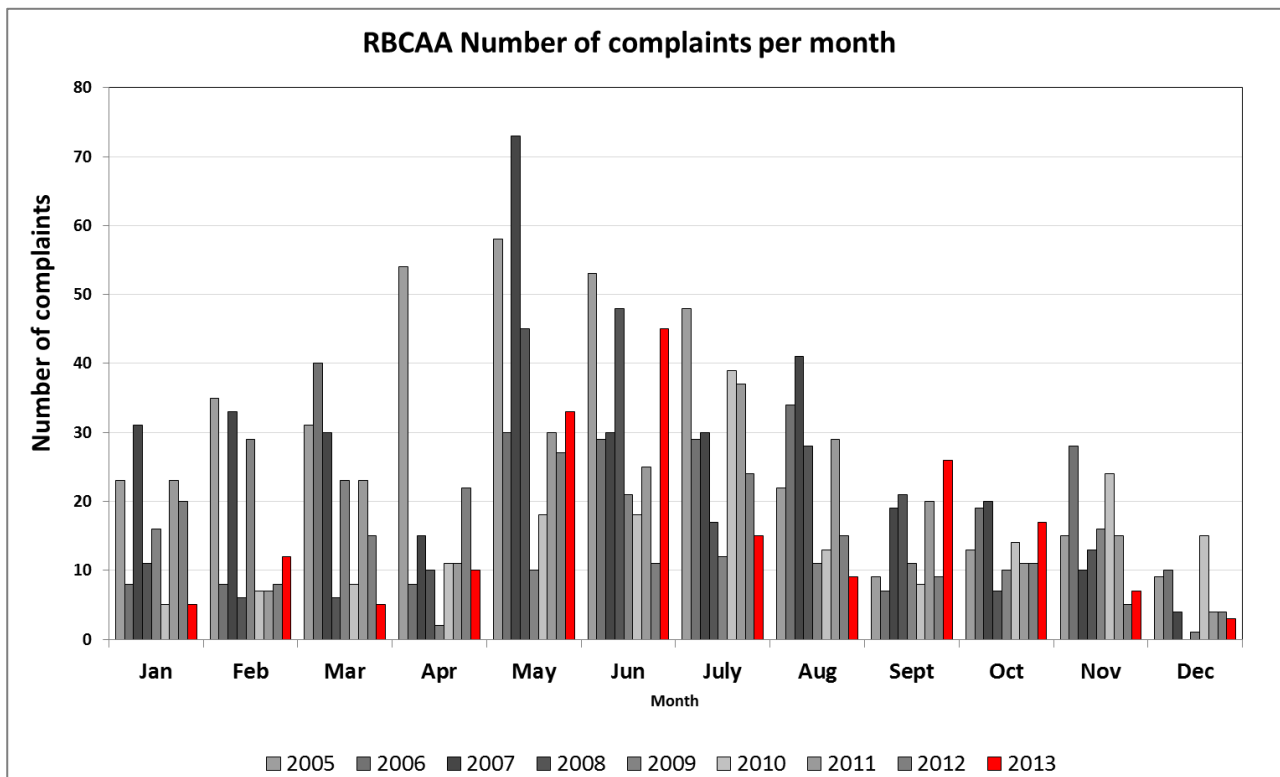


The historical count of complaints per month is reflected below (Figure 8). Peaks in the number of complaints received in 2013 occurred during May, June and September. This was as a result of the following:

- In May 2013 numerous complaints were received in response to two main events:
  - A pungent sewage odour caused by overflow of pump station into stream bordering onto residential properties in Veldenvlei (13 of 33 complaints); and
  - Controlled burns (13 of 33 complaints).
- In June 2013 the elevated number of complaints were primarily in response to a peat fire (37 of 45 complaints);
- In September 2013, numerous power outages resulted in instability in the Mondi Richards Bay process, causing odorous emissions. Ten (10) of the twenty six (26) complaints received during September 2013 were in response to odours apportioned to Mondi Richards Bay.



Figure 8: Complaints - historical monthly comparison



### 3.2 Complaints distribution

The distribution of complaints in 2013 by region (Figure 9), source (Figure 10) and type (Figure 11) are presented. Trends established in 2012 are included for comparison.

The most common complaints received by the RBCAA in both 2012 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.

Elevated TRS concentrations are commonly apportioned to Mondi Richards Bay, as can be seen in the 2012 source chart (Figure 10). The percentage of complainants apportioned to Mondi in 2013 however reduced significantly (to 18%). This is likely due to the success of the Mondi's odour abatement programme.



Figure 9: Complaints by region in 2012 and 2013

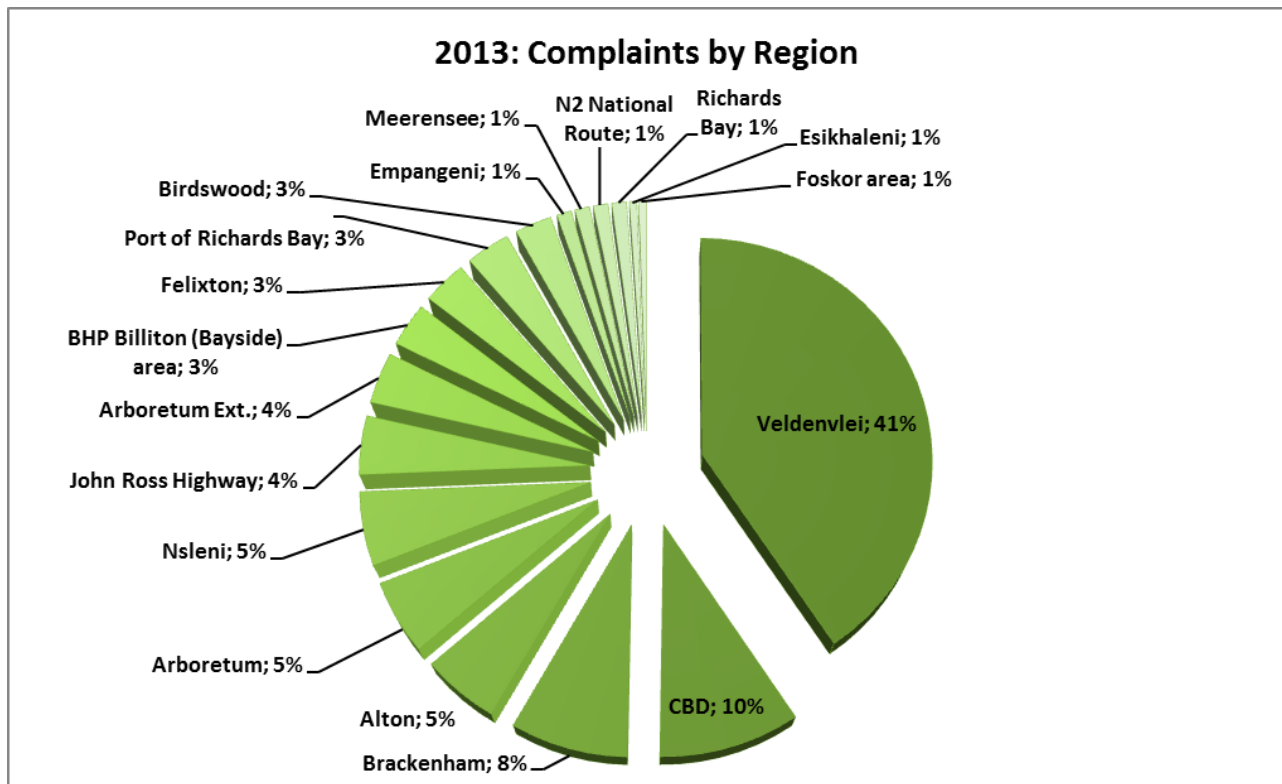
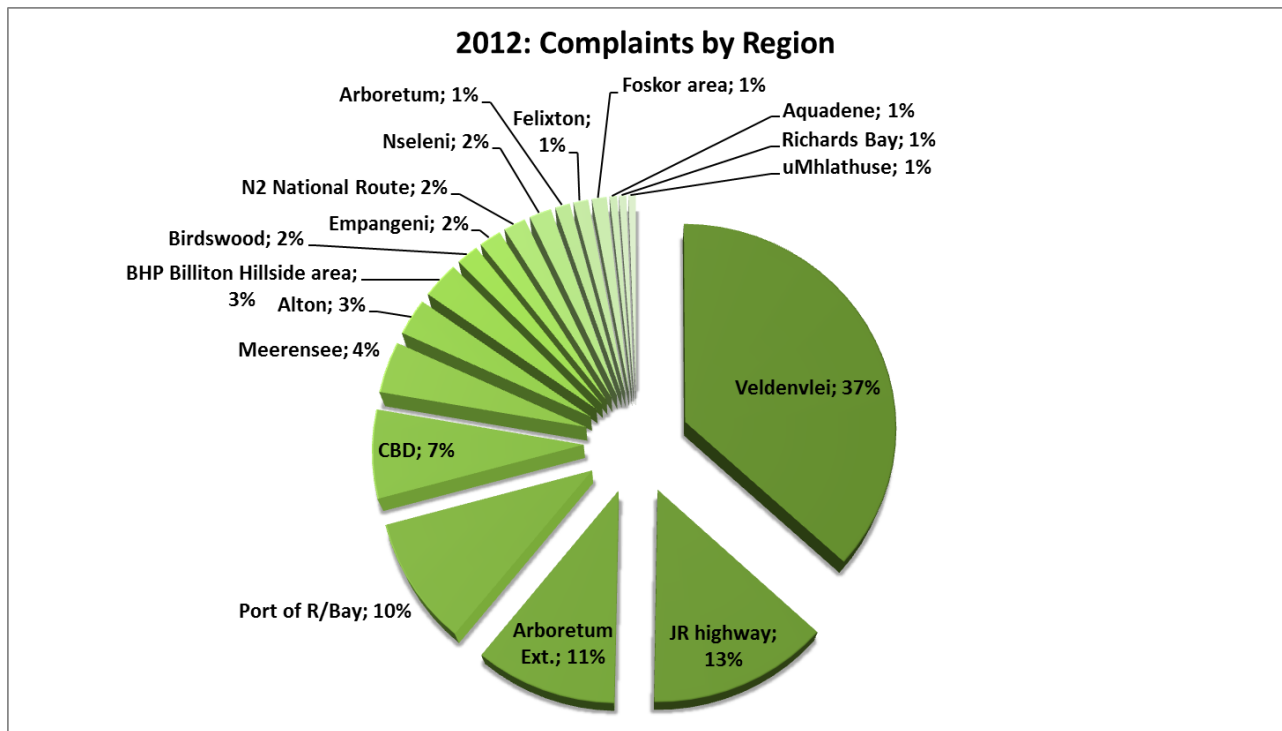




Figure 10: Complaints by source in 2012 and 2013

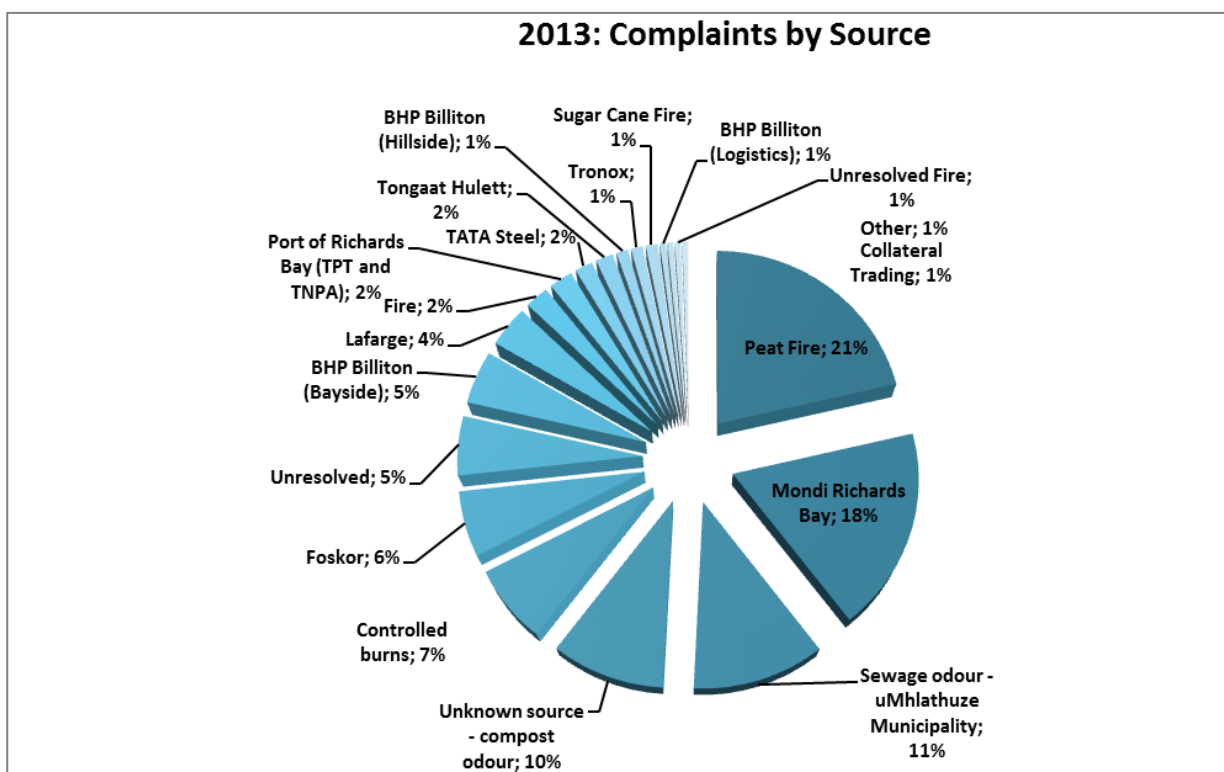
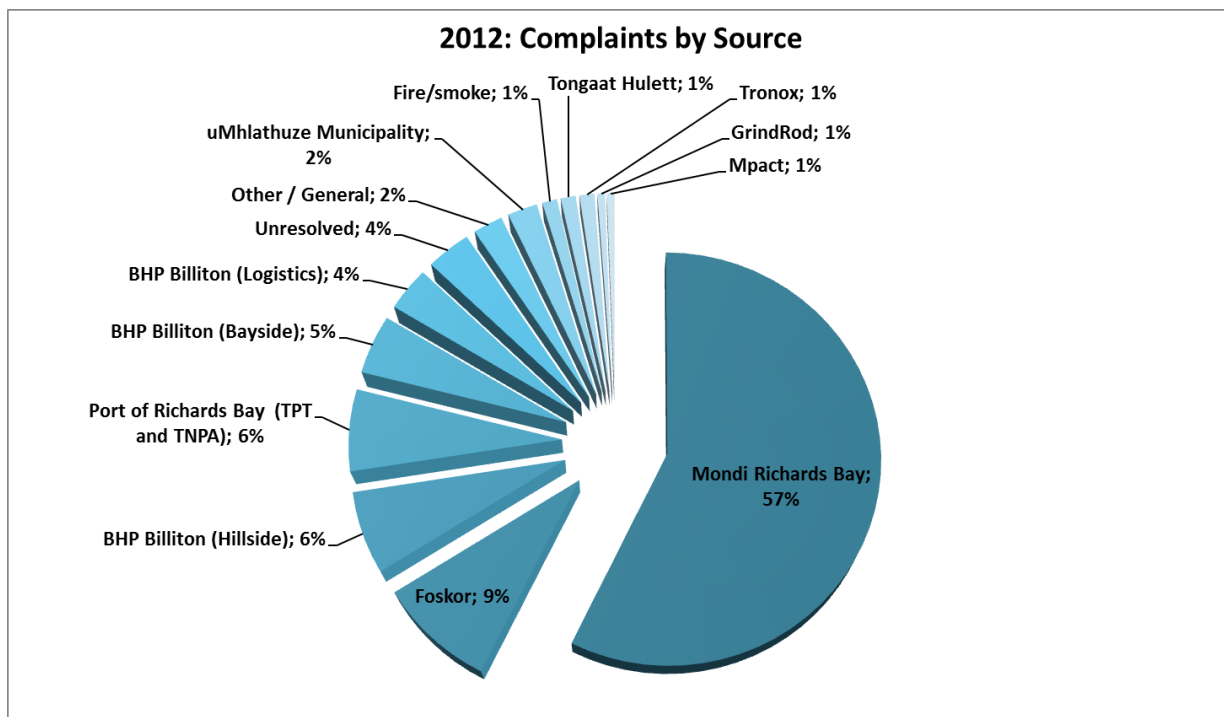
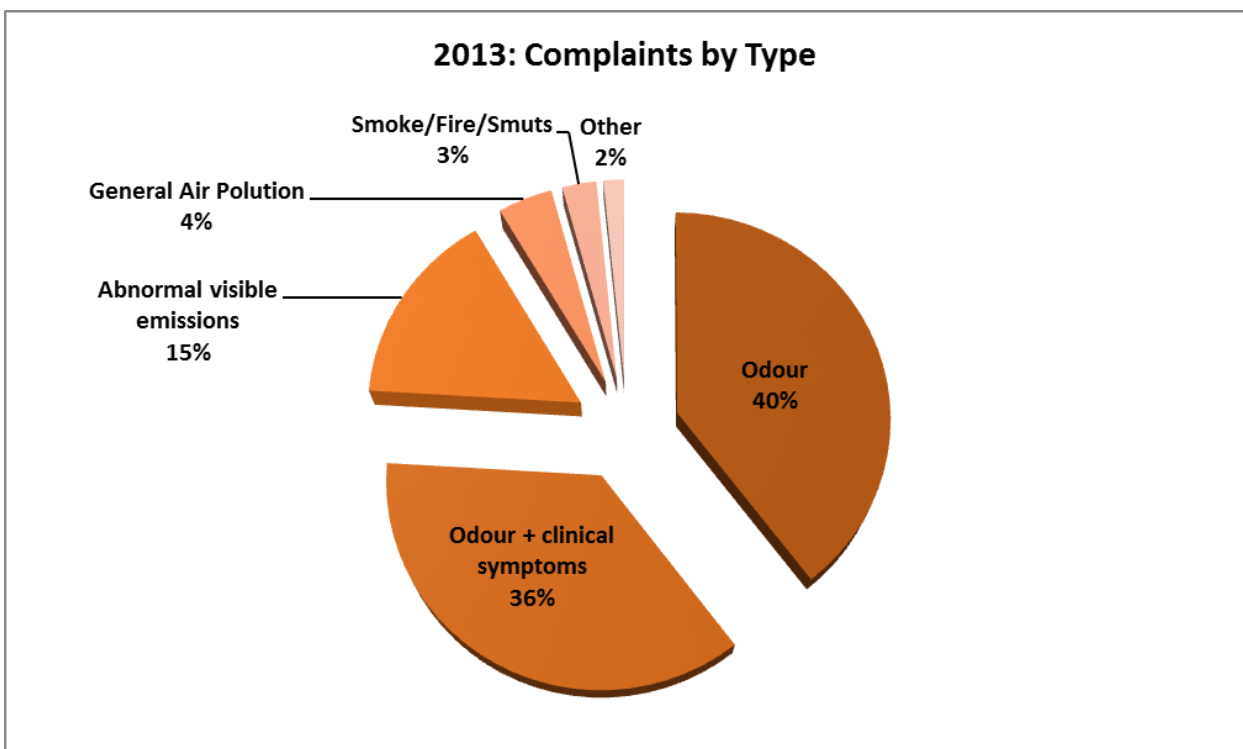
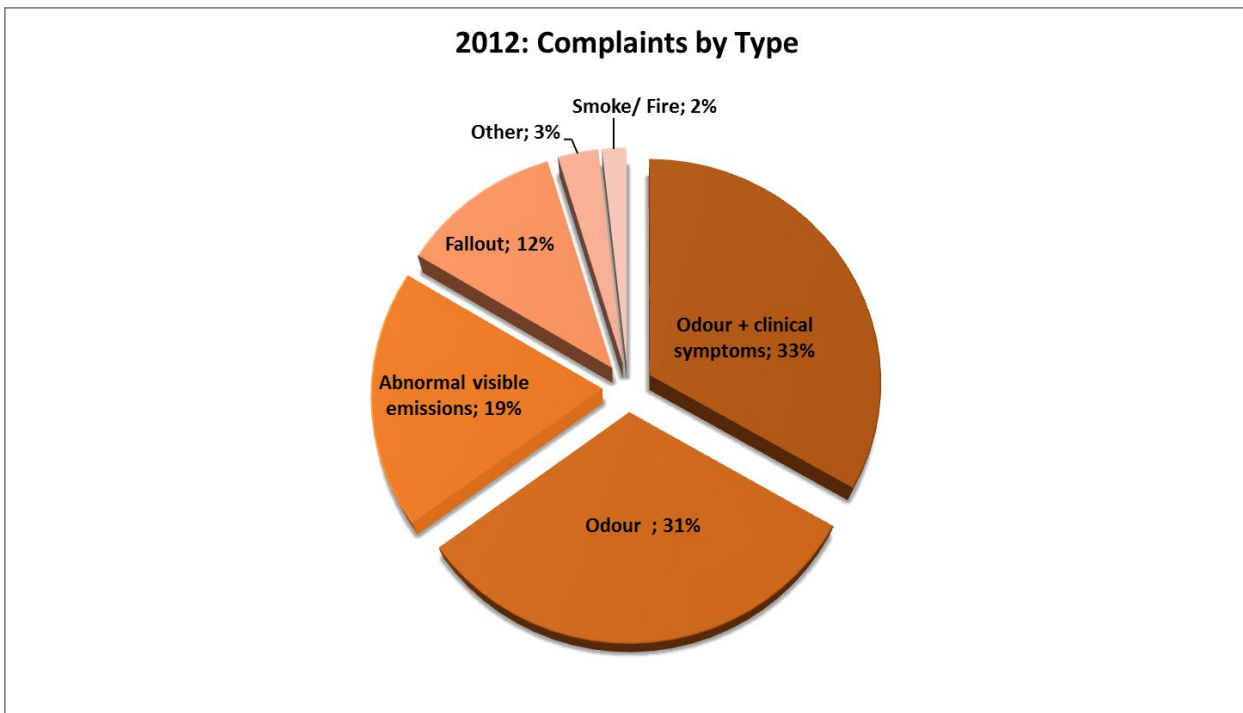




Figure 11: Complaints by type in 2012 and 2013





## 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 in deep within the respiratory system. Exposure to sustained high concentrations may result in:

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

TEOM's (particulate analysers) at Brackenham, CBD, Mtunzini and St Lucia stations 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
NEMAQA <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 NEMAQA <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 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 $\text{PM}_{10}$ Compliance with Ambient Air Quality Standards and Maximums

Current and Future annual average NEMAQA standards were not exceeded during 2013.

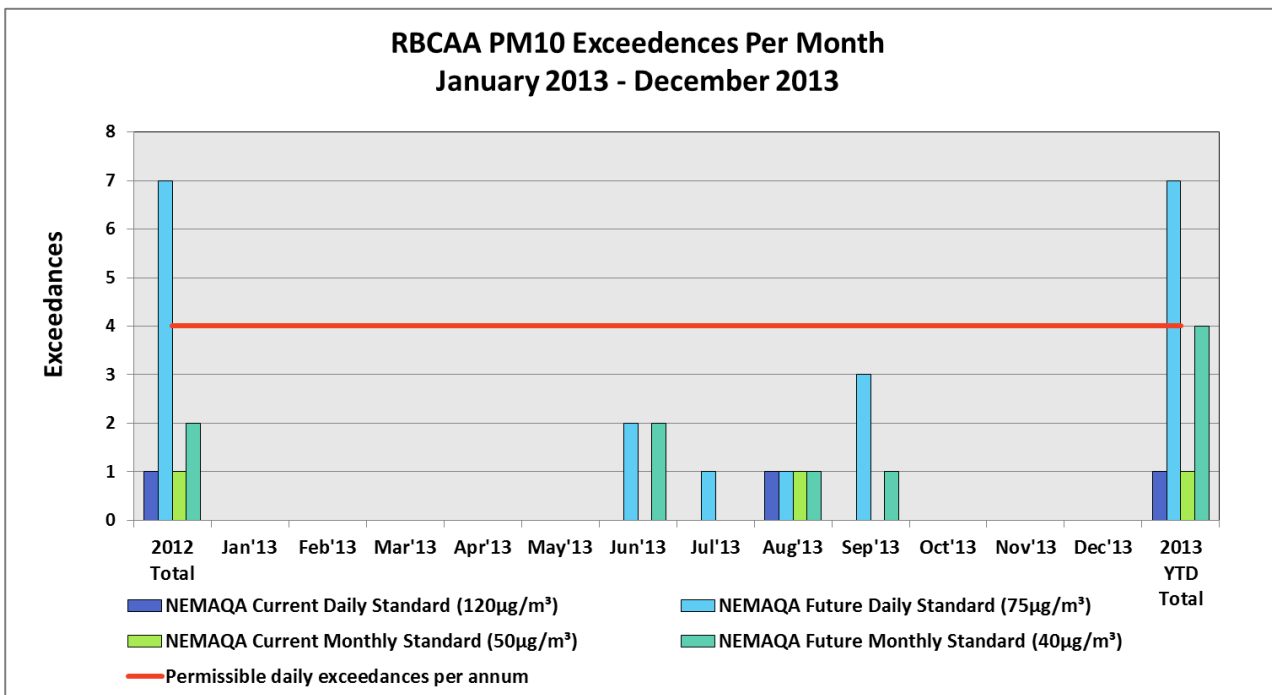
One (1) exceedance of the Current NEMAQA Daily Standard ( $120\mu\text{g}/\text{m}^3$ ) and seven (7) exceedances of the Future NEMAQA Daily Standard ( $75\mu\text{g}/\text{m}^3$ ) were recorded in 2013.

Figure 12 indicates the number of exceedances recorded in 2013 in comparison with 2012.

Please see APPENDIX C for the detailed exceedance log.



Figure 12: PM<sub>10</sub> exceedances of the current and future standards.



Maximum and monthly average concentrations for PM<sub>10</sub> are provided in Table 2. The NEMAQA annual standard (40µg/m<sup>3</sup>) is used for comparative purposes.

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).

Table 2: PM<sub>10</sub> maximum and monthly average concentrations in 2013

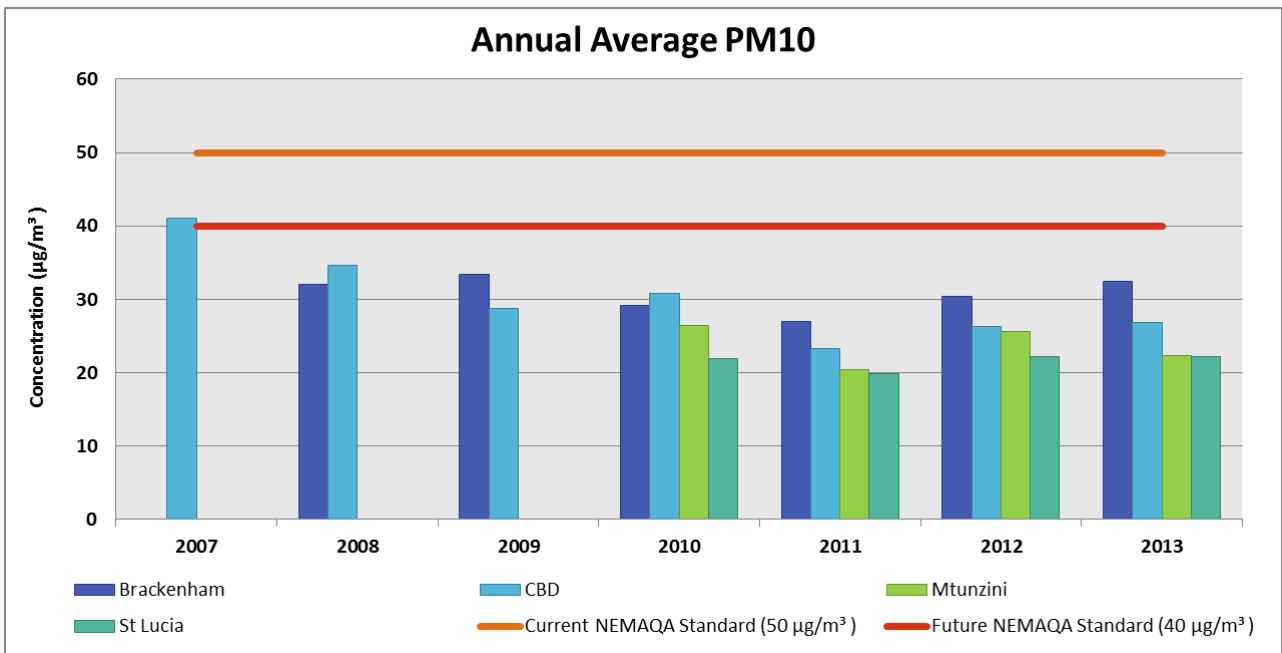
Station		10 Minute Average	Hourly Average	Daily Average (Standard 75µg/m <sup>3</sup> )	Monthly Average (Standard 40µg/m <sup>3</sup> )
Brackenhams	% of guideline	-	-	84%	68%
	µg/m <sup>3</sup> TEOM	263	192	63	27
	Date & Time	2013/04/22 09:10	2013/02/28 15:00	2013/05/09	2013/05
CBD	% of guideline	-	-	112%	68%
	µg/m <sup>3</sup> TEOM	1860	825	84	27
	Date & Time	2013/08/21 23:10	2013/08/21 23:00	2013/08/21	2013/08
Mtunzini	% of guideline	-	-	175%	55%
	µg/m <sup>3</sup> TEOM	494	454	131	22
	Date & Time	2013/08/29 16:10	2013/08/29 16:00	2013/08/29	2013/08
St Lucia	% of guideline	-	-	139%	53%
	µg/m <sup>3</sup> TEOM	989	962	104	21
	Date & Time	2013/09/03 22:00	2013/09/03 22:00	2013/09/03	2013/09



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

Annual average concentrations dating back to 2007 are illustrated in Figure 13. An over-all decreasing trend is noticeable over the seven year period; however 2013 annual average concentrations are higher at Brackenhams and CBD than those recorded in 2012.

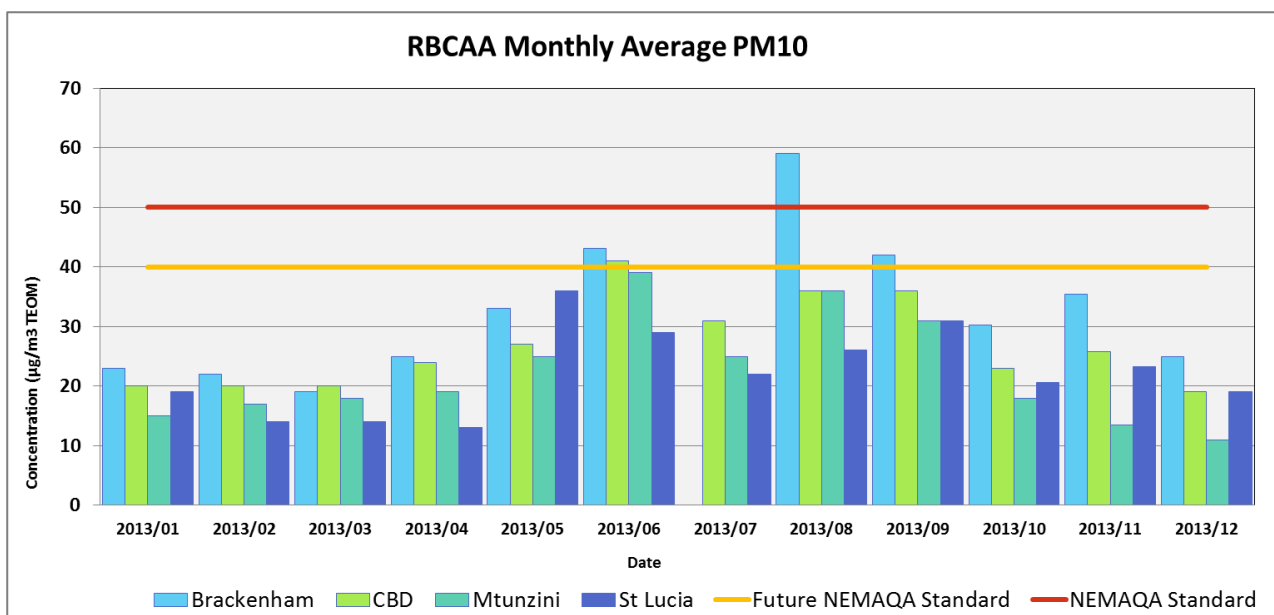
Figure 13: Annual average PM10 concentrations.



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

The seasonal trends in PM<sub>10</sub> concentrations for 2013 are provided in Figure 14.

Figure 14: Seasonal trends in PM<sub>10</sub> (monthly average concentrations)

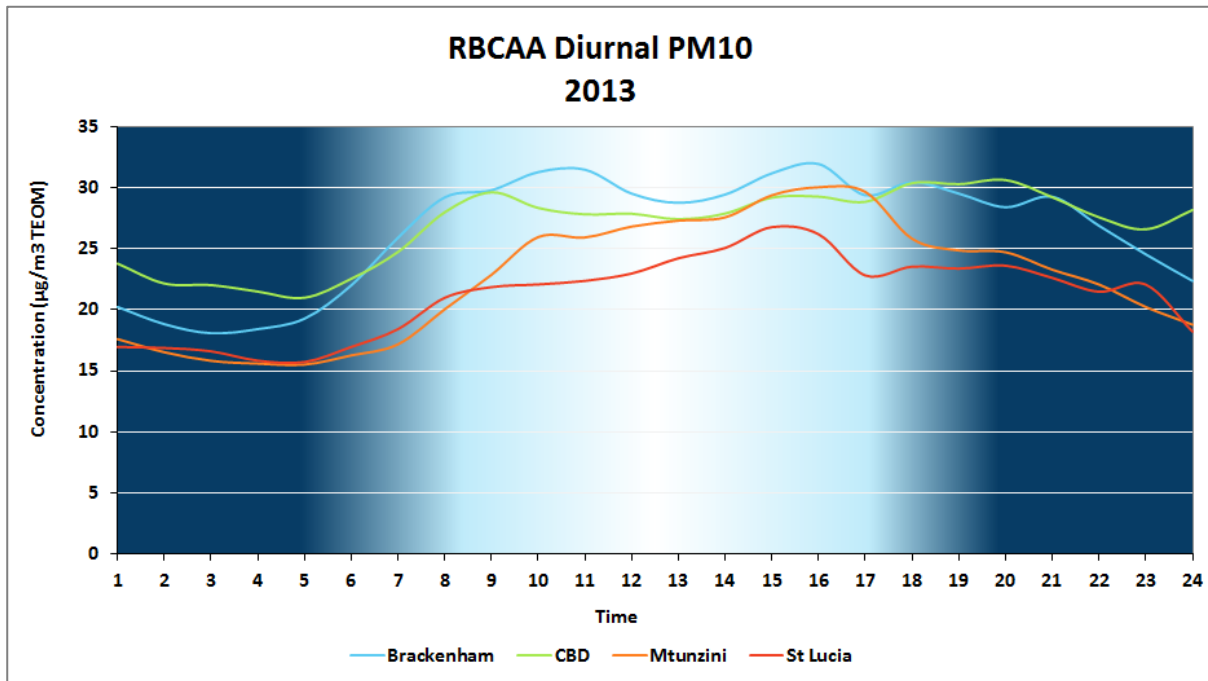




### 4.5 PM<sub>10</sub> Diurnal Trend

Diurnal PM<sub>10</sub> concentrations are shown below (Figure 15).

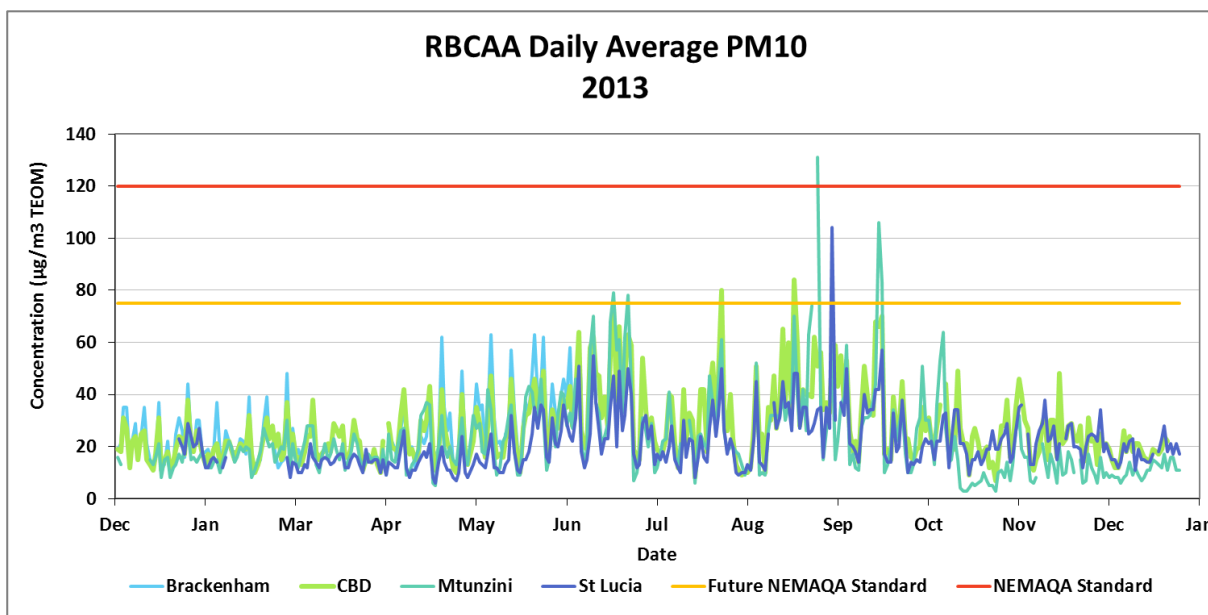
Figure 15: PM<sub>10</sub> diurnal trend



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

The daily average PM<sub>10</sub> concentrations are shown below (Figure 16).

Figure 16: 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 Hawk Dispersion Model. The Hawk 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 Hawk 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 3).

**Table 3: SO<sub>2</sub> ambient air quality standards**

Organisation	Variable	10-min average	Hourly average	Daily average	Annual average
NEMAQA <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.



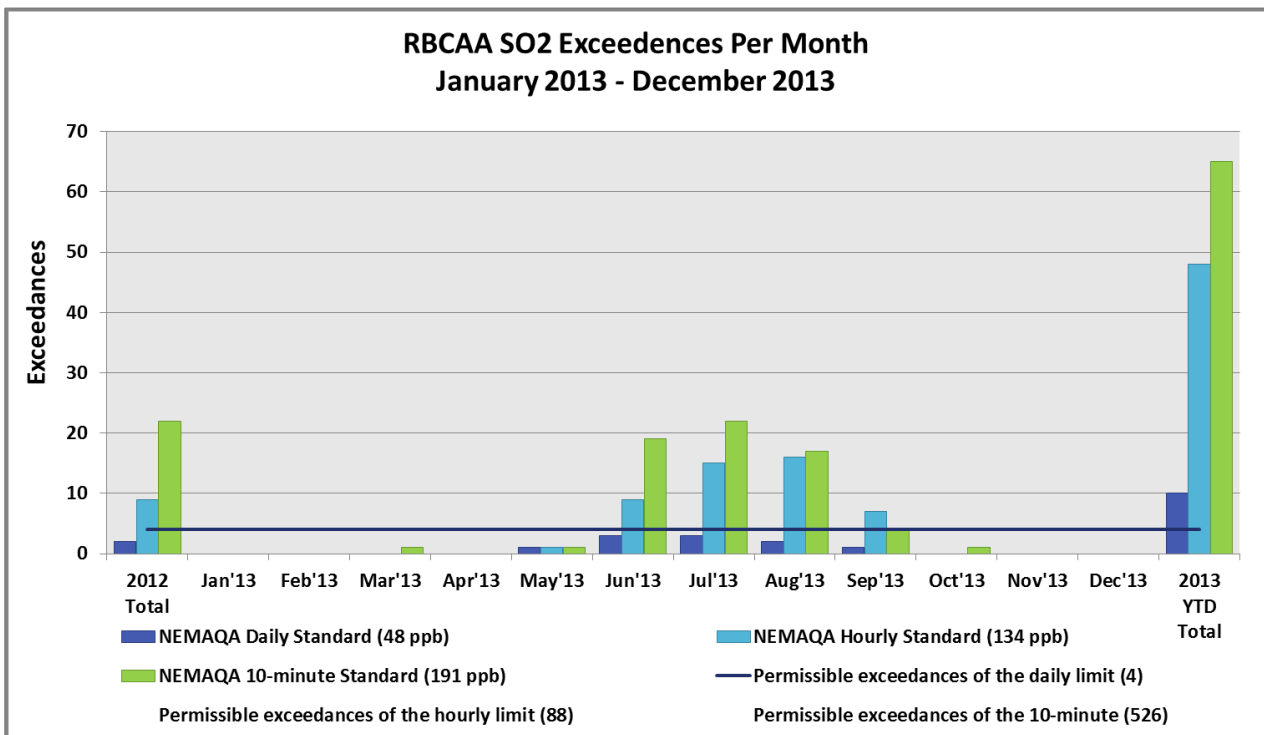
## 5.2 SO<sub>2</sub> Compliance with Ambient Air Quality Standards

Ten (10) exceedances of the NEMAQA daily average standard (48ppb), forty eight (48) exceedances of the NEMAQA hourly average standard (134ppb) and sixty six (66) exceedances of the NEMAQA 10 minute average standard (191ppb) were recorded during 2013 (Figure 17). All exceedances were recorded at the Scorpio Station, with the exception of one (1) which was recorded at Harbour West.

During 2013 the permissible number of exceedances for the daily standard (4) measured at Scorpio were exceeded, the station therefore does not comply with this standard.

Please see APPENDIX C for the detailed exceedance log.

Figure 17: SO<sub>2</sub> exceedances recorded in 2013



Maximum and monthly average concentrations for SO<sub>2</sub> are provided in Table 4.

Table 4: SO<sub>2</sub> maximum and monthly average concentrations in 2013

Station		10 Minute Average Standard (191 ppb)	Hourly Average Standard (134 ppb)	Daily Average Standard (48 ppb)	Monthly Average Guideline (19 ppb)
Arboretum	% of guideline	47%	51%	30%	13%
	(ppb)	89	68	14	3
	Date & time	2013/06/16 02:00	2013/06/16 02:00	2013/06/16	2013/06
Brackenhams	% of guideline	33%	30%	16%	6%
	(ppb)	63	41	8	1
	Date & time	2013/06/16 02:00	2013/06/16 02:00	2013/06/16	2013/06
CBD	% of guideline	44%	50%	51%	19%
	(ppb)	84	67	25	4
	Date & time	2013/05/05 00:00	2013/05/05 00:00	2013/04/19	2013/05



Station		10 Minute Average Standard (191 ppb)	Hourly Average Standard (134 ppb)	Daily Average Standard (48 ppb)	Monthly Average Guideline (19 ppb)
Harbour West	% of guideline	140%	77%	67%	49%
	(ppb)	268	103	32	9
	Date & time	2013/05/08 00:10	2013/09/08 07:00	2013/08/21	2013/05
Scorpio	% of guideline	4469%	2828%	463%	63%
	(ppb)	8535	3790	222	12
	Date & time	2013/06/22 18:10	2013/06/22 18:00	2013/06/22	2013/06
Felixton	% of guideline	66%	43%	24%	14%
	(ppb)	126	57	12	3
	Date & time	2013/04/25 15:30	2013/03/04 21:00	2013/06/25	2013/04

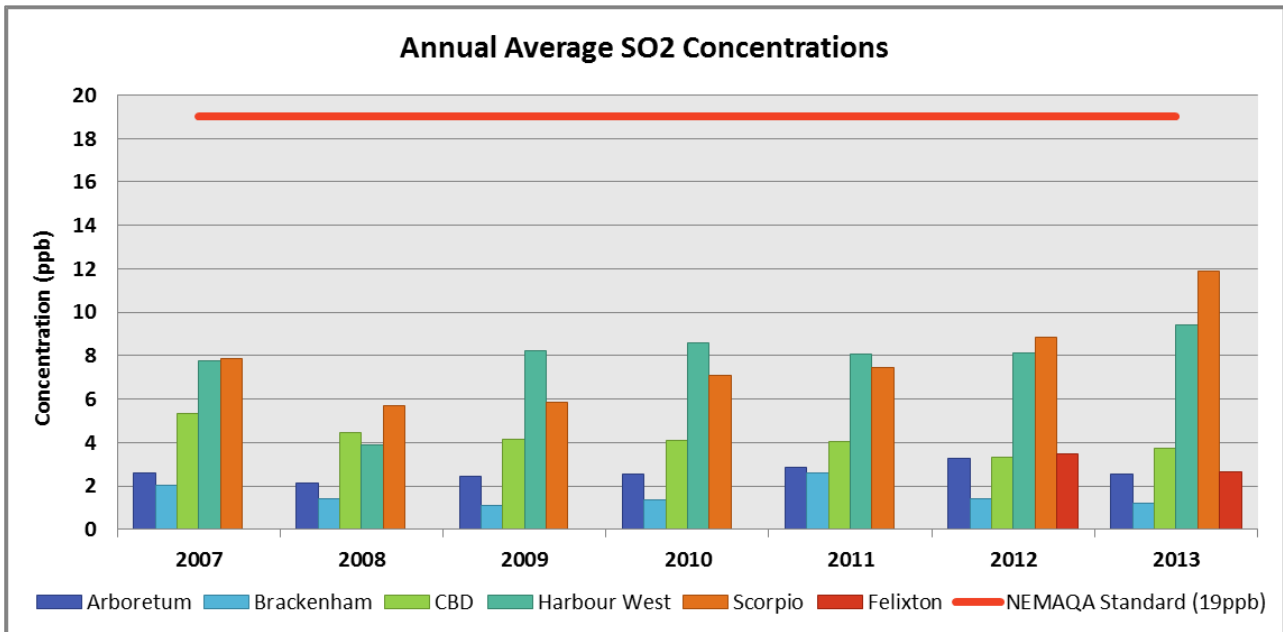
Notes:

- The national annual average standard of 19ppb is the basis for comparison for monthly averaging, as there is no monthly average SO<sub>2</sub> standard. This results in the comparison of modelled and guideline SO<sub>2</sub> concentrations being more conservative.
- 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 18. A marked increase in average annual SO<sub>2</sub> concentrations is evident at Scorpio over the seven year period. Harbour West displays a similar trend although to a lesser extent. The NEMAQA Annual average standard (19ppb) was not exceeded during 2013.

Figure 18: Inter-annual average SO<sub>2</sub> concentrations.

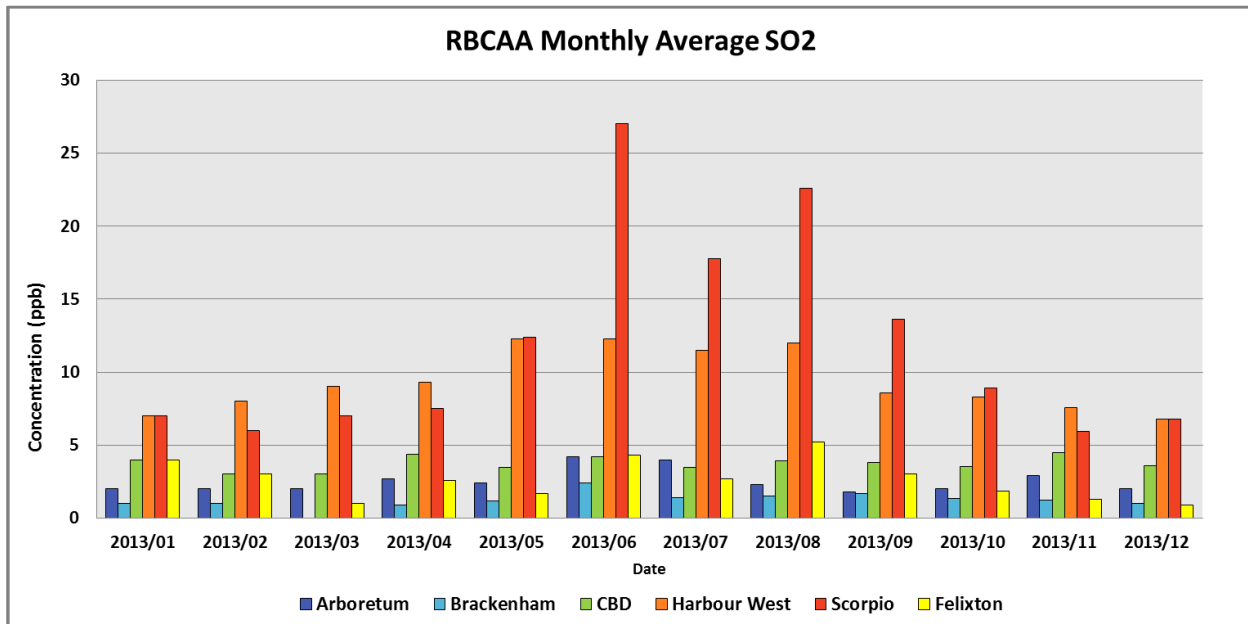




### 5.4 SO<sub>2</sub> Seasonal Trend

The seasonal trends in SO<sub>2</sub> concentrations for 2013 are provided in Figure 19.

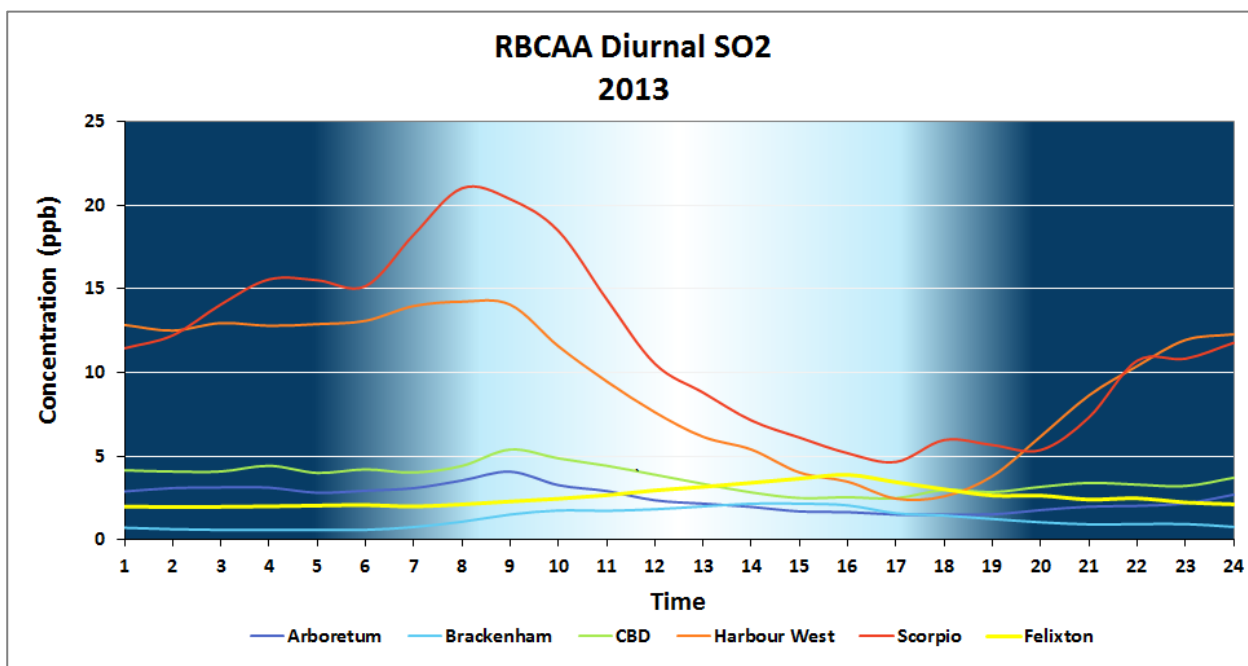
Figure 19: Seasonal trends in SO<sub>2</sub> (monthly average concentrations)



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

Diurnal SO<sub>2</sub> concentrations are shown below (Figure 20).

Figure 20: SO<sub>2</sub> diurnal trend



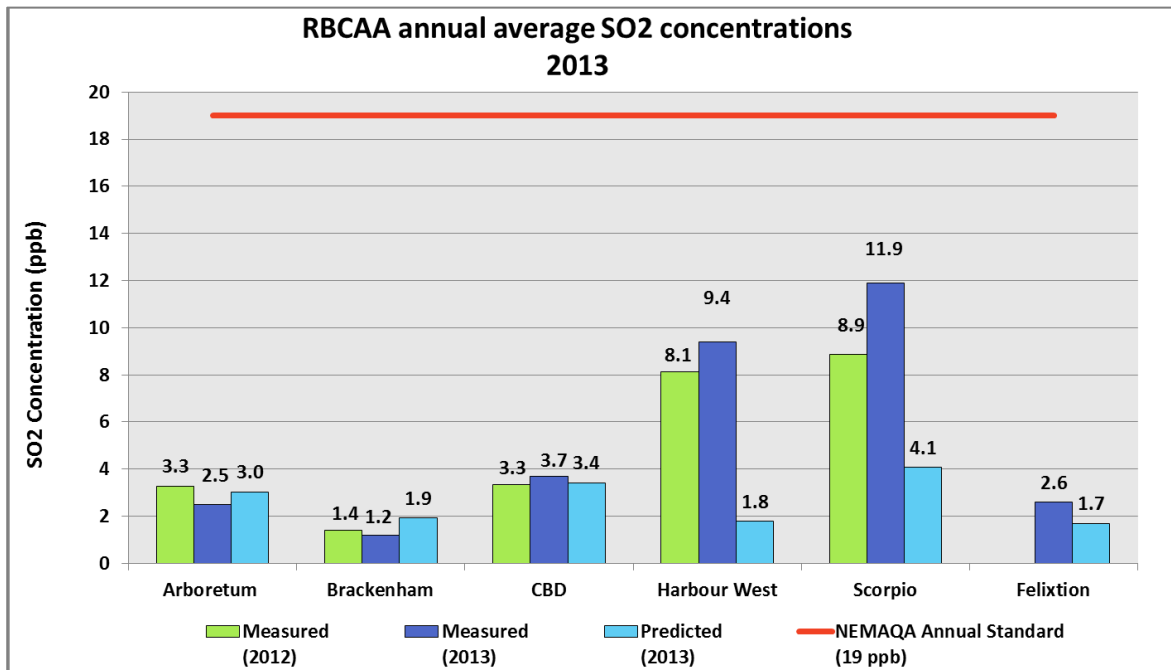


## 5.6 SO<sub>2</sub> Annual Average Information

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

All daily average predicted values were within accepted dispersion modelling norms (-50% to 200%) with the exception of Harbour West and Scorpio which were under-predicted. Compared to the 2013 measurements, the predicted values at all stations were similar (within 2 ppb or 10%) with the exception of Harbour West and Scorpio which were lower (Figure 27).

Figure 21: Annual average SO<sub>2</sub> concentration and prediction



Note: Under predictions may indicate higher than normal emissions for the time period concerned.

### 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 22);
- Richards Bay (Figure 29);
- Felixton (Figure 30); and
- RBM (Figure 31).

The model did not predict maximum annual average SO<sub>2</sub> concentrations greater than the NEMAQA 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 Foskor, Hillside Aluminium and Mondi Richards Bay.



Figure 22: Maximum predicted annual average SO<sub>2</sub> concentration (regional map)

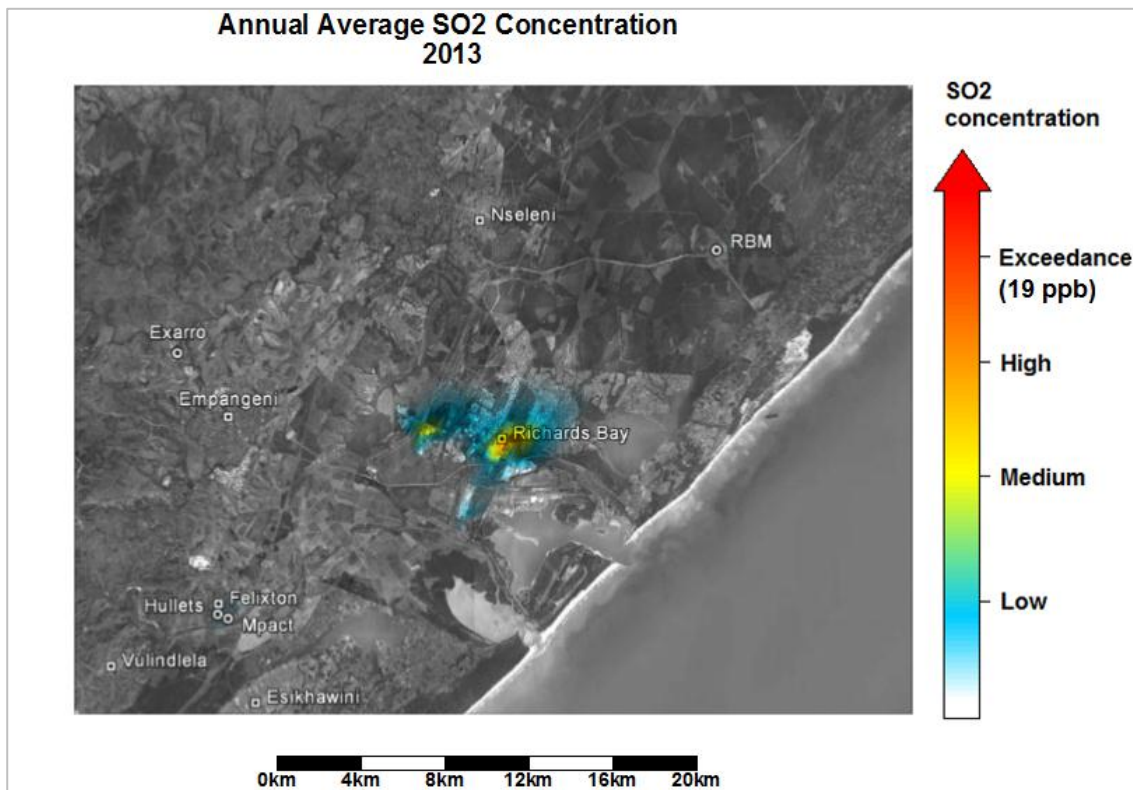


Figure 23: Maximum predicted annual average SO<sub>2</sub> concentration (Richards Bay map)

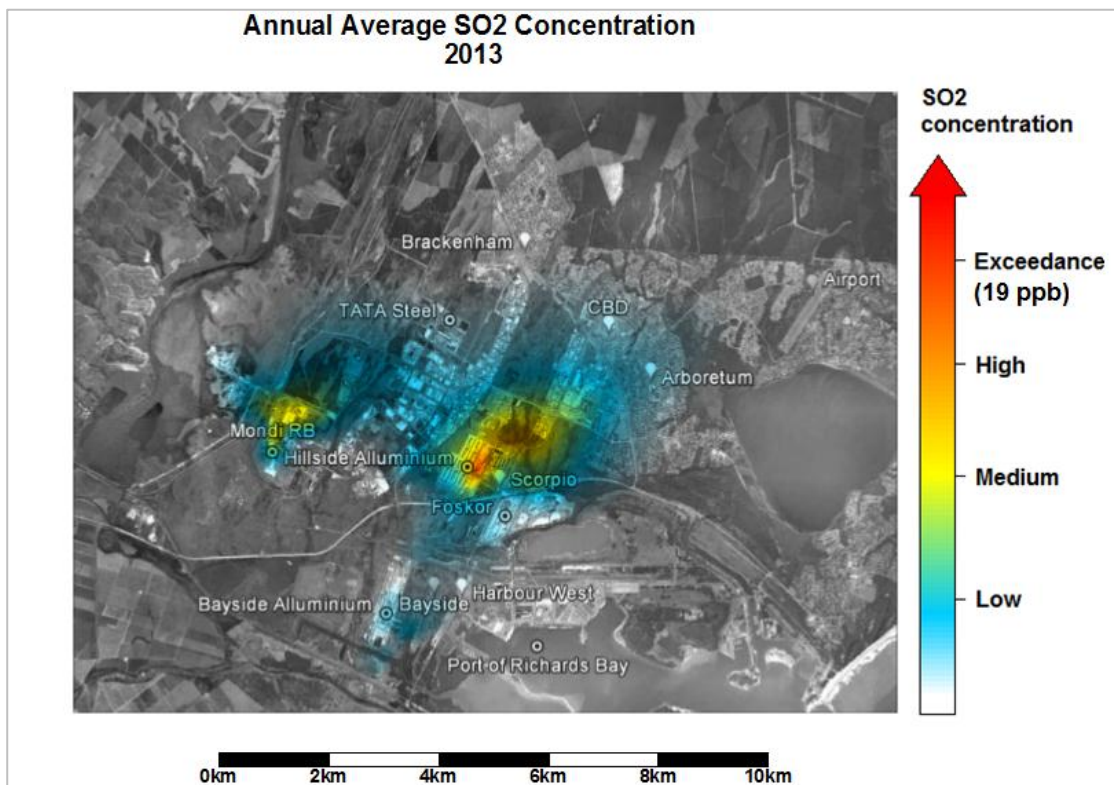


Figure 24: Maximum predicted annual average SO<sub>2</sub> concentration (Felixton map)

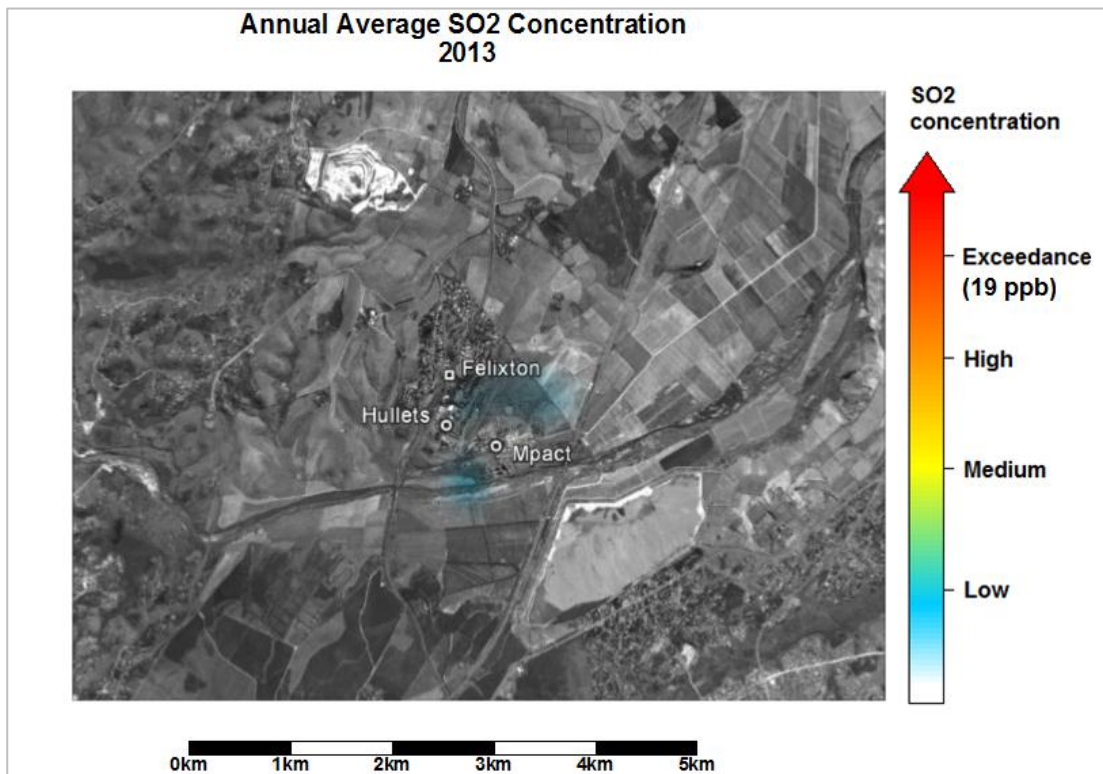
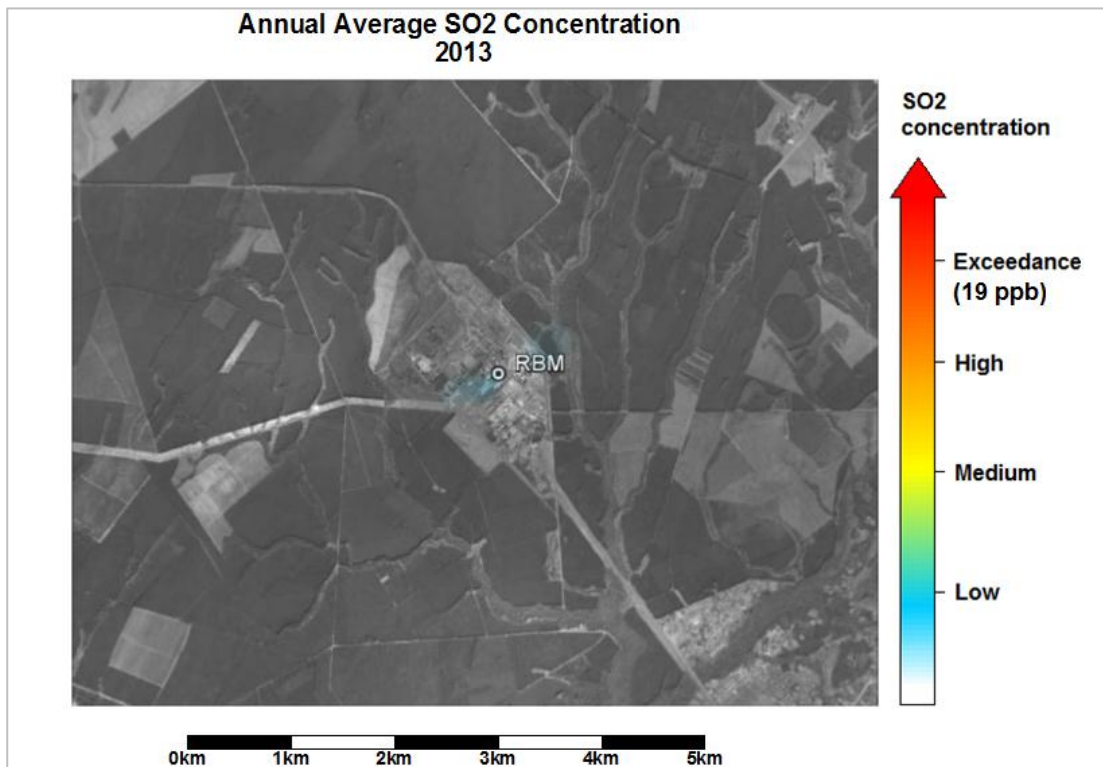


Figure 25: Maximum predicted annual average SO<sub>2</sub> concentration (RBM map)



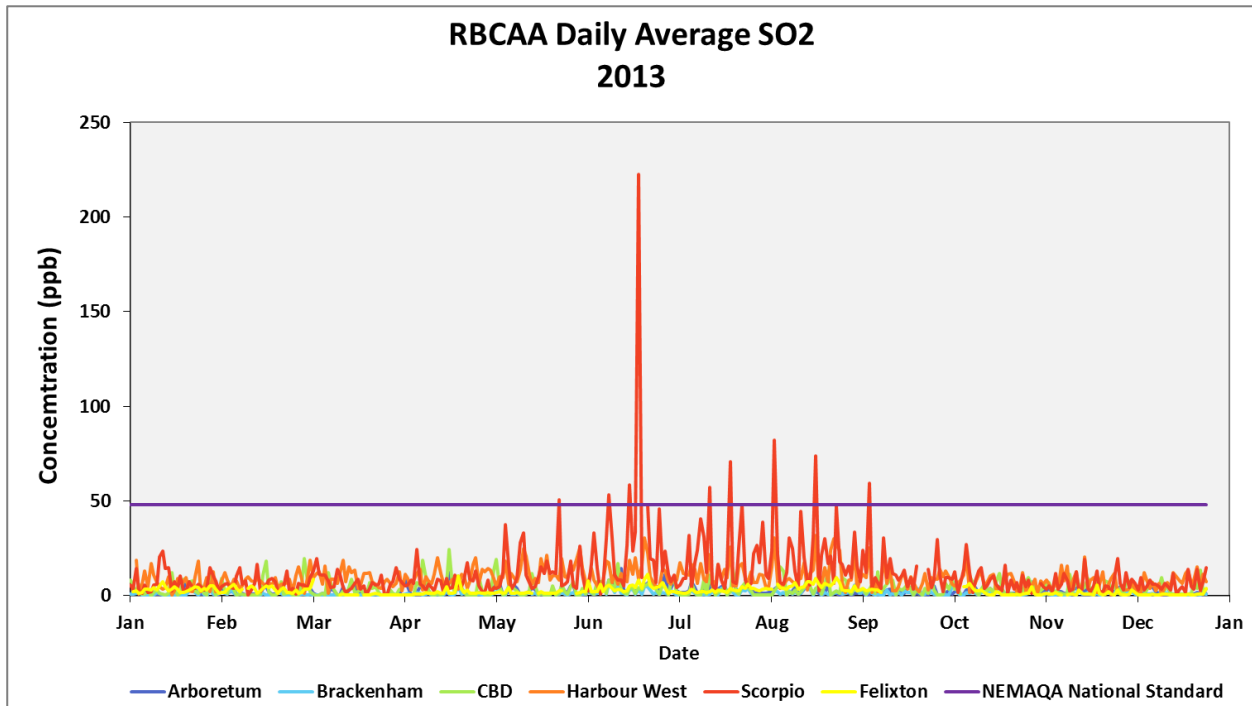


## 5.7 SO<sub>2</sub> Daily Average Information

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

The daily average SO<sub>2</sub> concentrations are shown below (Figure 26). A fire in Foskor's sulphur store on 22 July 2013 resulted in exceedances between 17:30 and 19:30 that day. Subsequent peaks between July and September were apportioned to BHP Billiton (Hillside).

Figure 26: SO<sub>2</sub> daily average concentrations

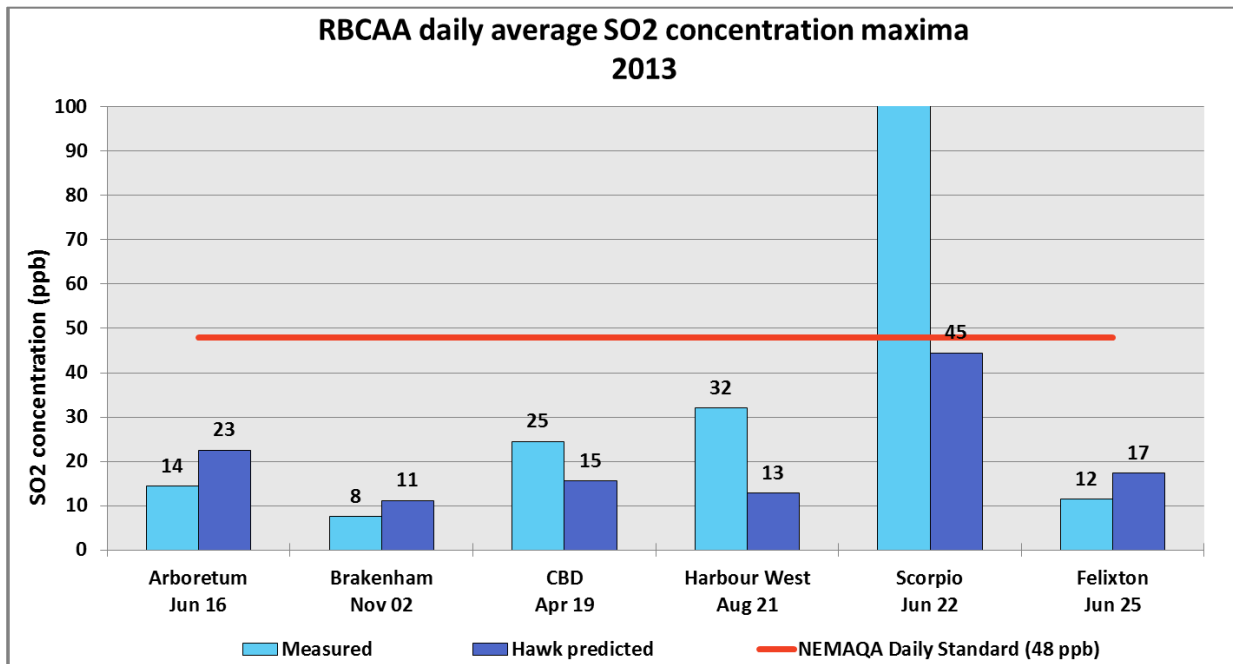




### 5.7.2 SO<sub>2</sub> Daily Average Concentration and Prediction

All daily average predicted values were within accepted dispersion modelling norms (-50% to 200%) with the exception of Harbour West and Scorpio which were under-predicted. Compared to the measurements, the predicted values at Arboretum, Brackenham and Felixton were higher; and CBD, Harbour West and Scorpio lower (Figure 27).

Figure 27: Daily average SO<sub>2</sub> concentration and prediction



Note: Under predictions may indicate higher than normal emissions for the time period concerned.

### 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 16);
- Richards Bay (Figure 29);
- Felixton (Figure 30); and
- RBM (Figure 31).

The model predicted maximum daily average SO<sub>2</sub> concentrations greater than the NEMAQA SO<sub>2</sub> Daily Average Standard (48 ppb) over Alton, Foskor, Hillside Aluminium, Mondi Richards Bay and Port of Richards Bay. The half-guideline includes parts of Arboretum, Arboretum Extension, Bayside Aluminium, CBD and Felixton.



Figure 28: Maximum predicted daily average SO<sub>2</sub> concentration (regional map)

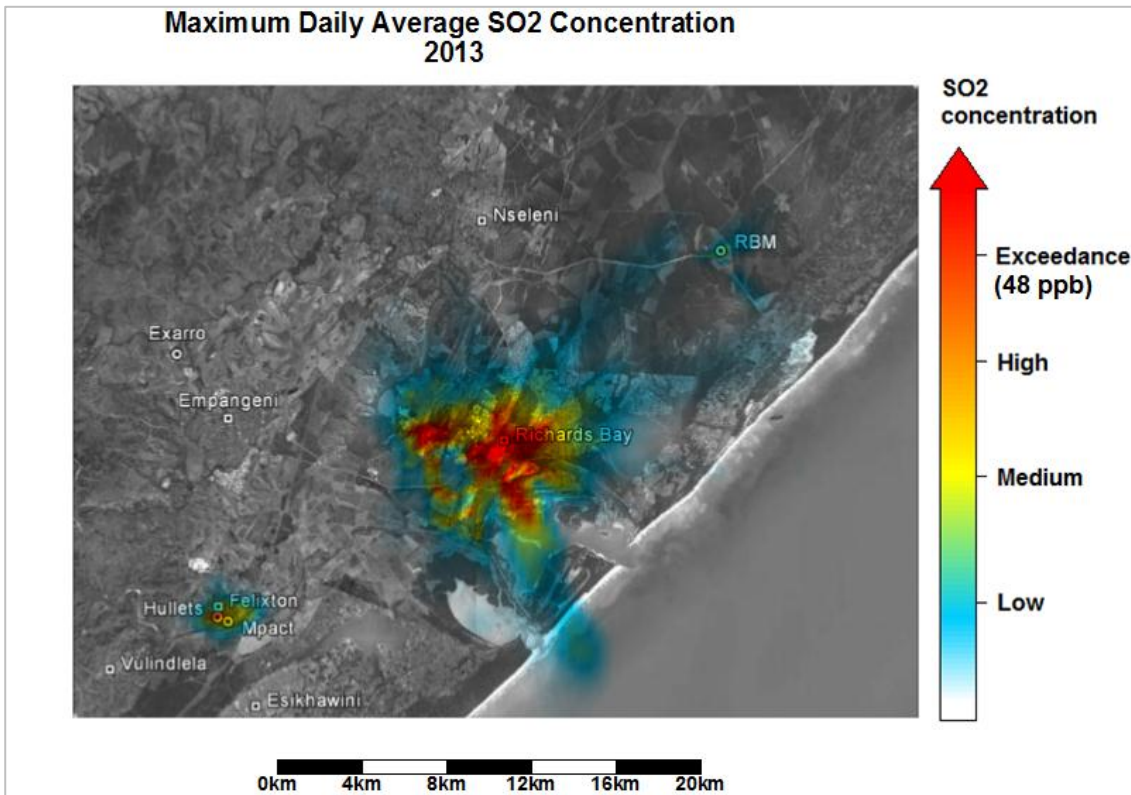


Figure 29: Maximum predicted daily average SO<sub>2</sub> concentration (Richards Bay map)

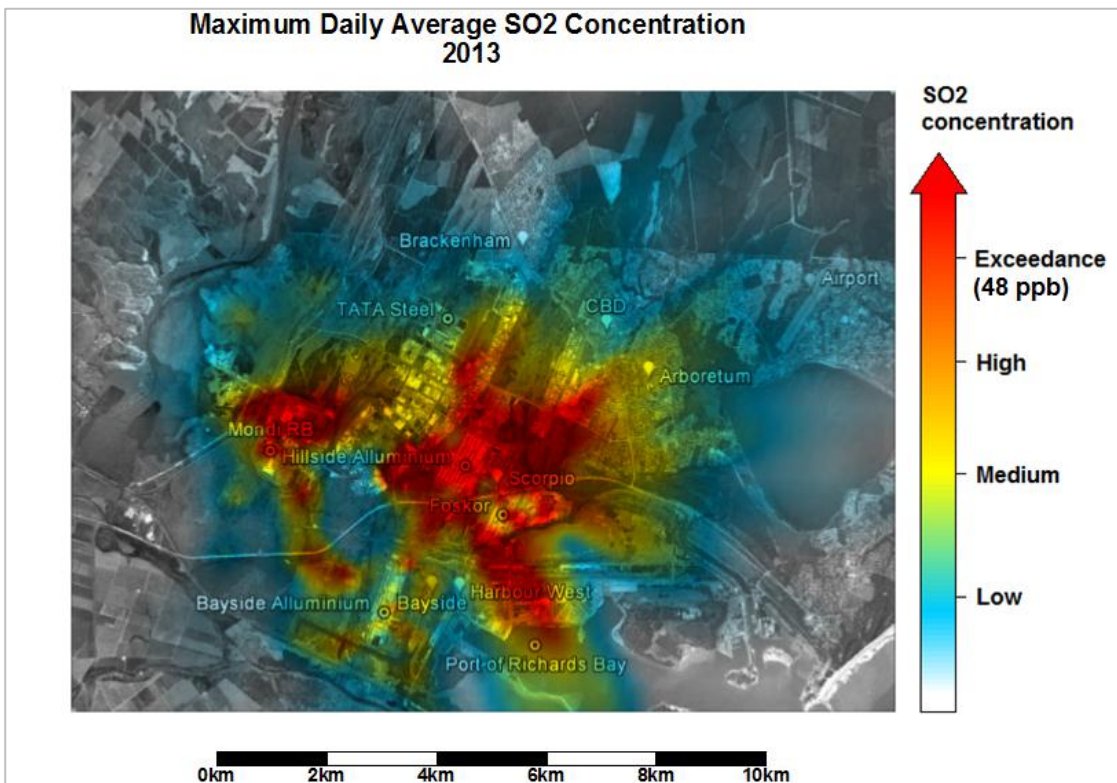




Figure 30: Maximum predicted daily average SO<sub>2</sub> concentration (Felixton map)

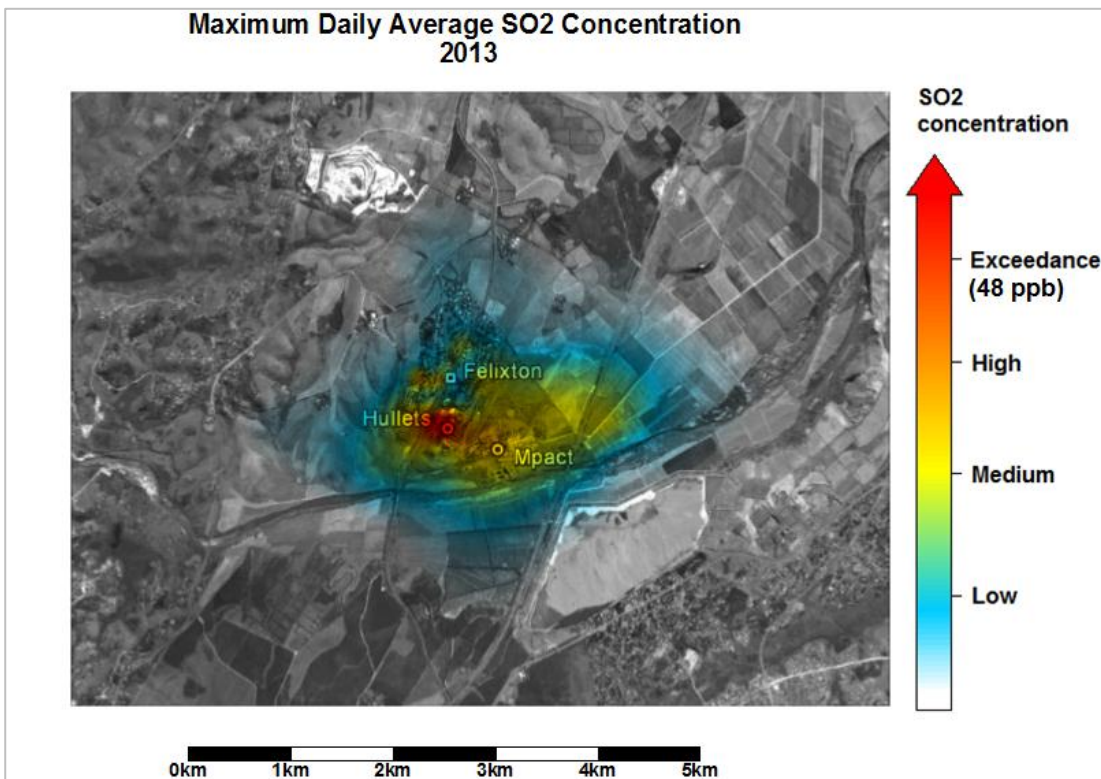
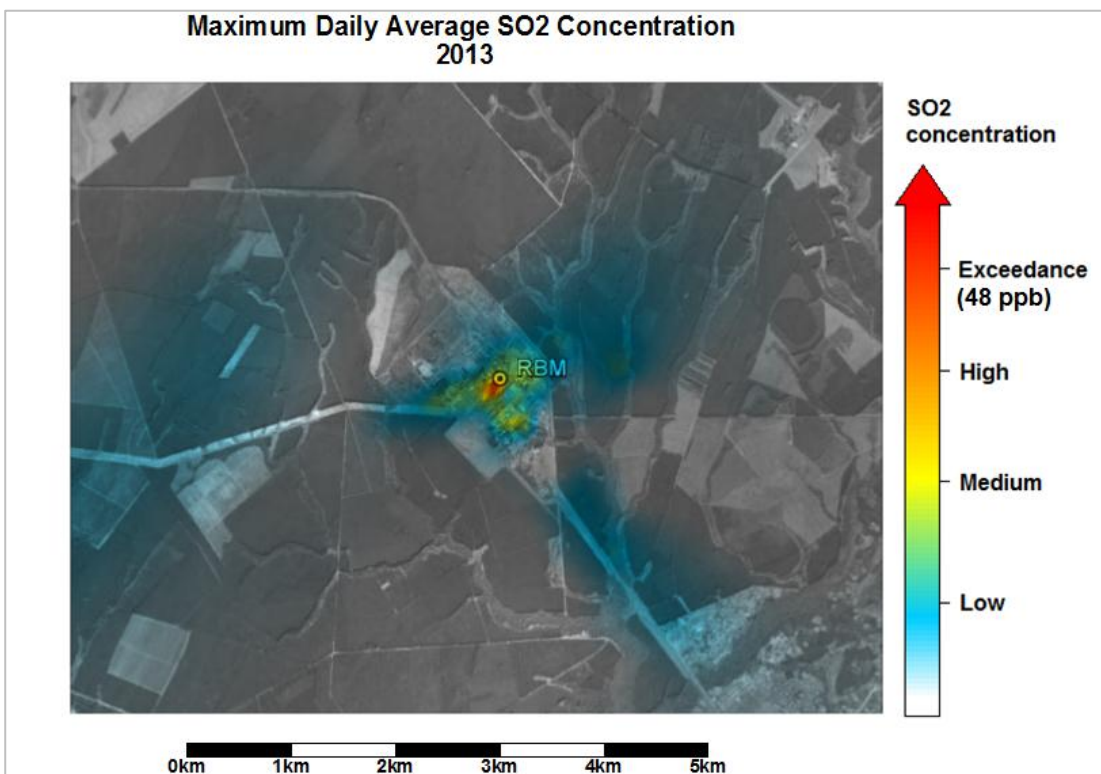


Figure 31: Maximum predicted daily average SO<sub>2</sub> concentration (RBM map)



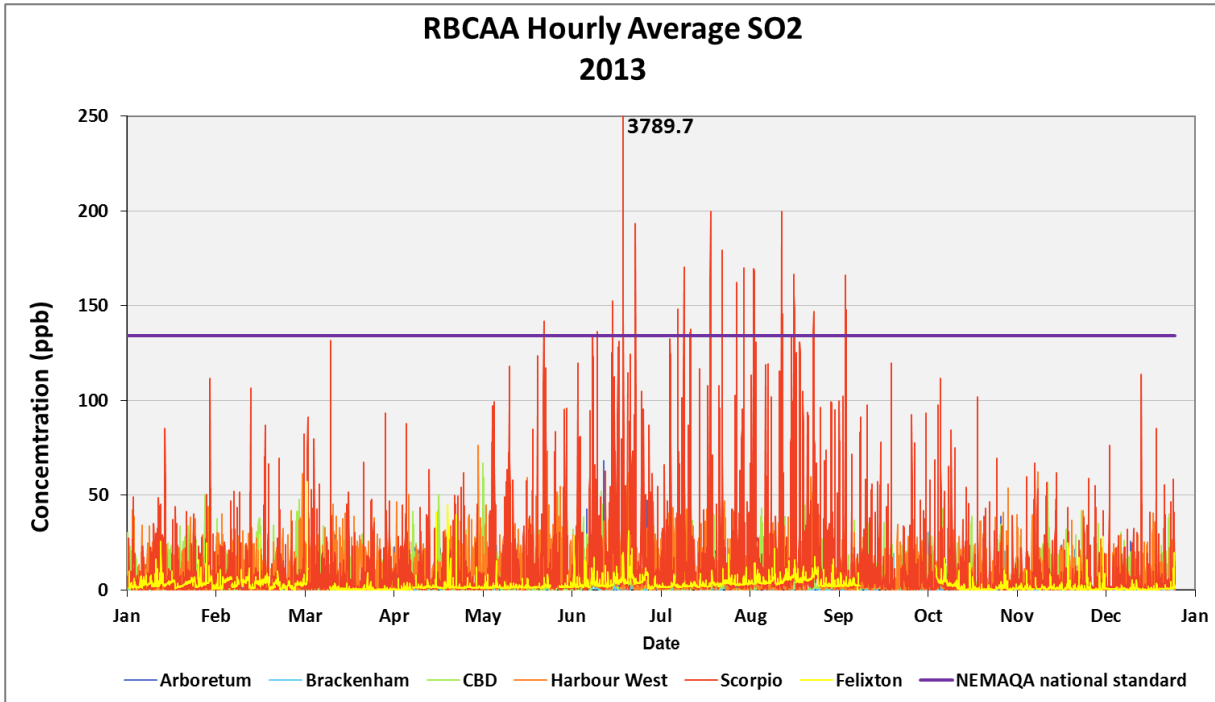


## 5.8 SO<sub>2</sub> Hourly Average Information

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

Hourly average SO<sub>2</sub> concentrations are shown below (Figure 32). A fire in Foskor's sulphur store on 22 July 2013 resulted in exceedances between 17:30 and 19:30 that day. Subsequent exceedances between July and September were apportioned to BHP Billiton (Hillside).

Figure 32: SO<sub>2</sub> hourly average concentrations

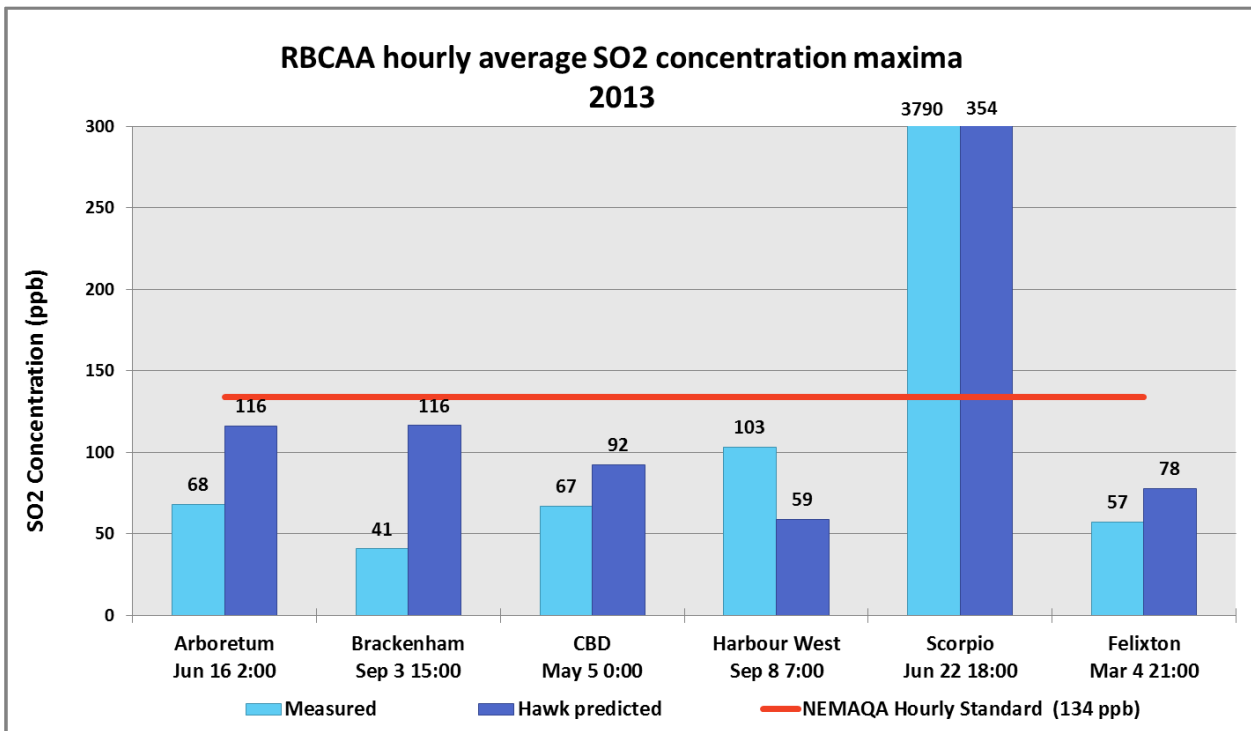




### 5.8.2 SO<sub>2</sub> Hourly Average Concentration and Prediction

All hourly average predicted values were within accepted dispersion modelling norms (-50% to 200%) with the exception of Scorpio which was under-predicted. Compared to the measurements, the predicted values at Harbour West and Scorpio were lower; and Arboretum, Brackenheim, CBD and Felixton higher (Figure 33).

Figure 33: Hourly average SO<sub>2</sub> concentration and prediction



Note: The over-predictions for short term averages (hourly and 10 minute) at Arboretum and Brackenheim are under investigation.

### 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 34);
- Richards Bay (Figure 35);
- Felixton (Figure 36); and
- RBM (Figure 37).

The model predicted maximum hourly average SO<sub>2</sub> concentrations greater than the NEMAQA SO<sub>2</sub> Hourly Average Standard (134 ppb) over Alton, Arboretum, Arboretum Extension, Bayside Aluminium, Felixton, Foskor, Hillside Aluminium, Mondi Richards Bay, Port of Richards Bay and Tata Steel. The half-guideline includes parts of Aquadene, Birdwood, Brackenheim, CBD, Greenhill, Richards Bay Minerals, and Southern Sanctuary.



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

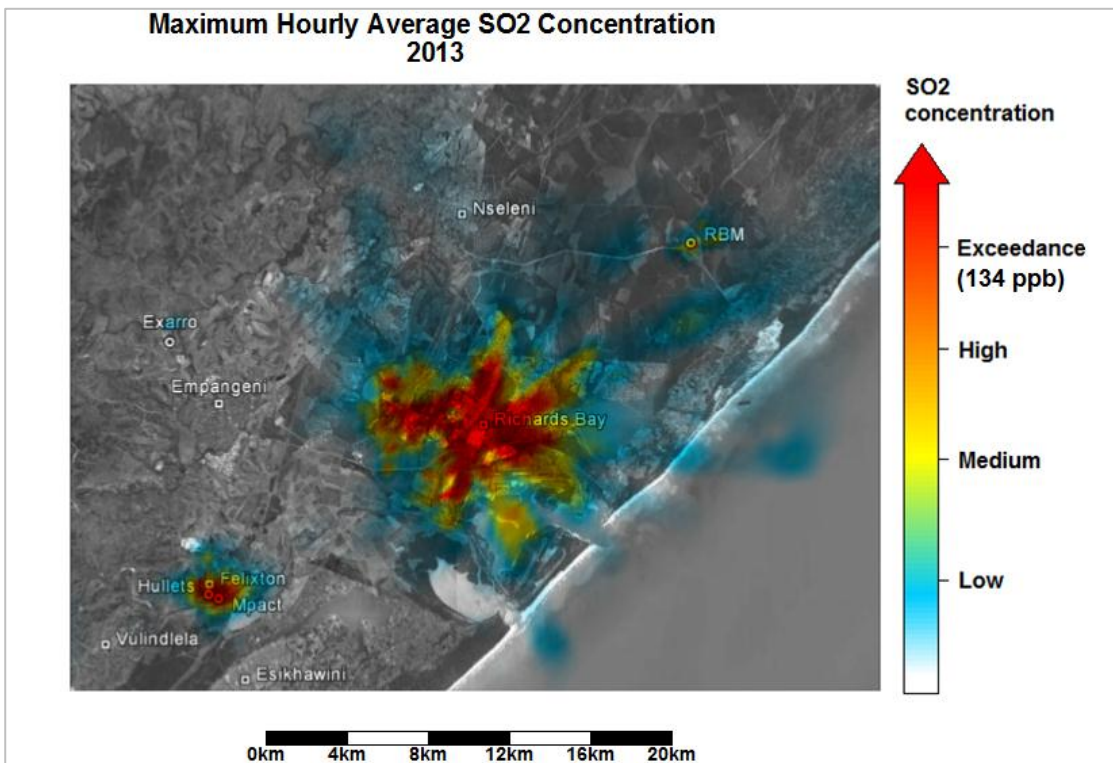


Figure 35: Maximum predicted hourly average SO<sub>2</sub> concentration (Richards Bay map)

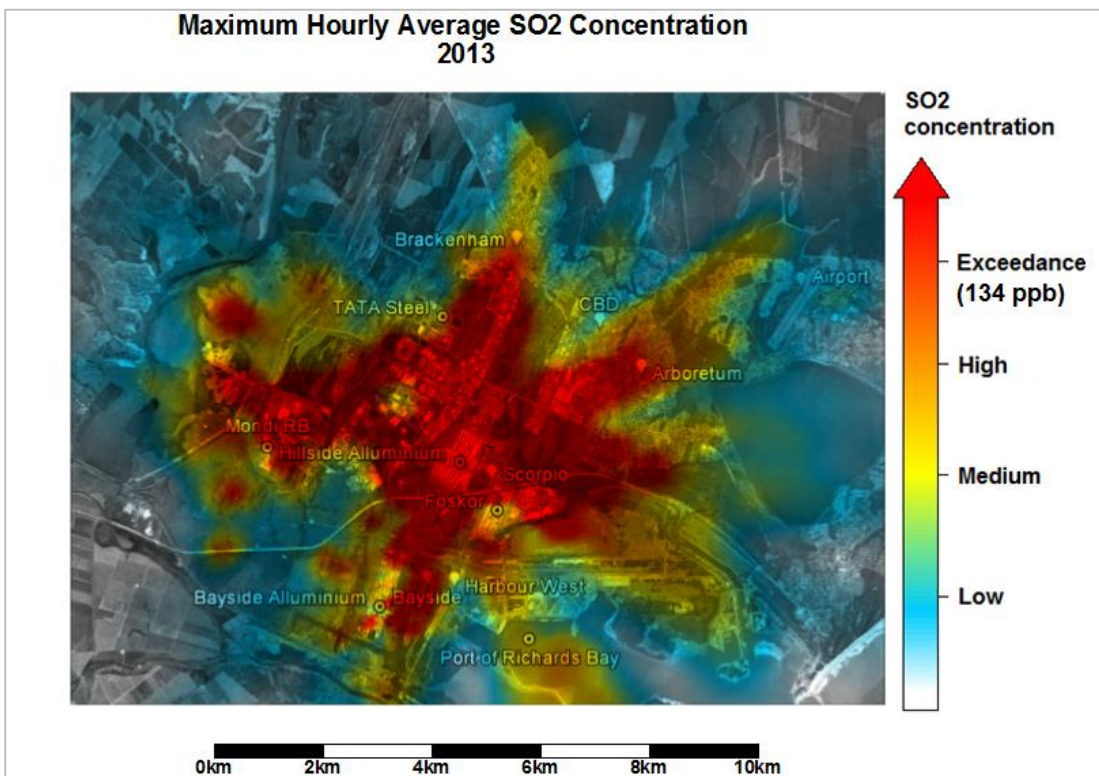




Figure 36: Maximum predicted hourly average SO<sub>2</sub> concentration (Felixton map)

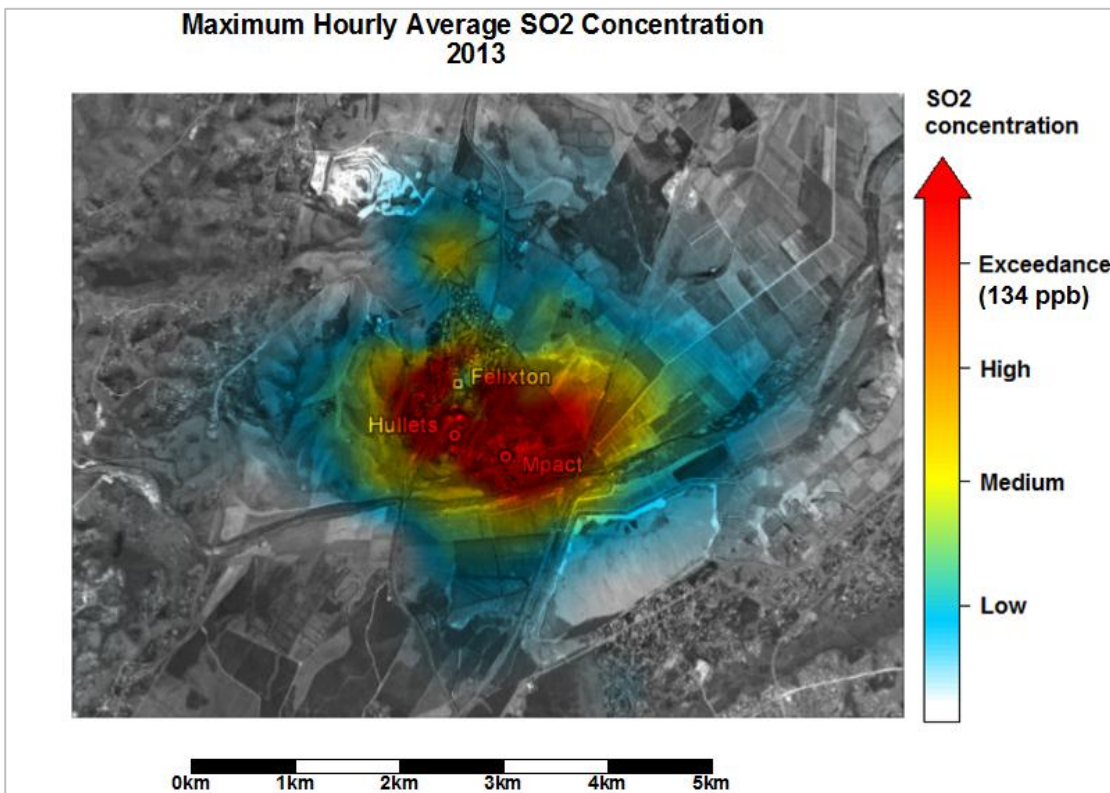
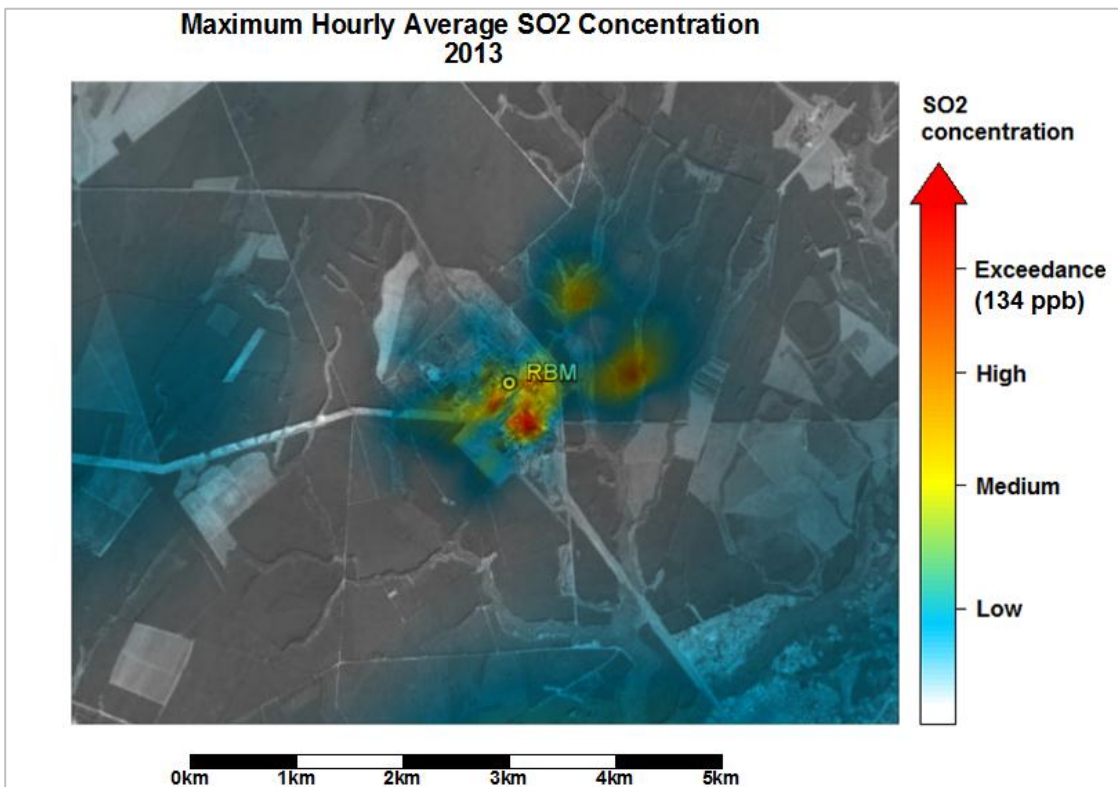


Figure 37: Maximum predicted hourly average SO<sub>2</sub> concentration (RBM map)



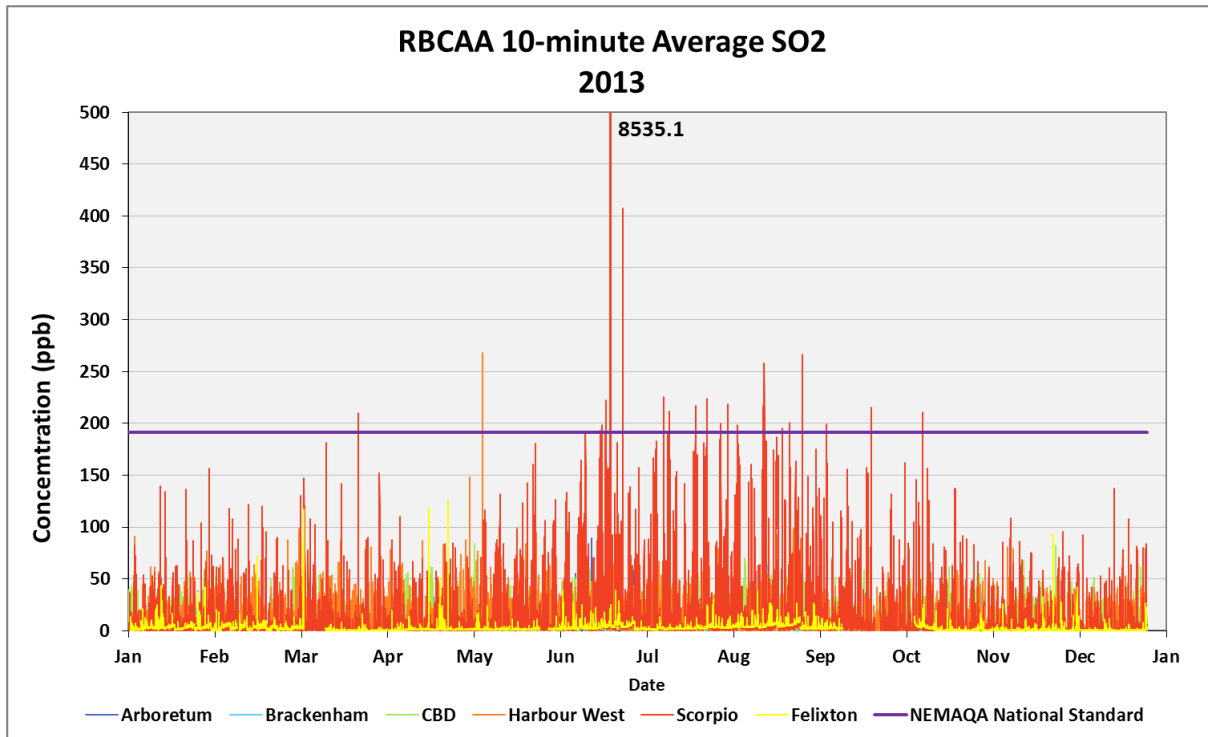


## 5.9 SO<sub>2</sub> 10-minute Average Information

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

The 10-minute average SO<sub>2</sub> concentrations are shown below (Figure 38). A fire in Foskor’s sulphur store on 22 July 2013 resulted in exceedances between 17:30 and 19:30 that day. Subsequent peaks between July and September were apportioned to BHP Billiton (Hillside).

Figure 38: SO<sub>2</sub> 10 minute average concentrations

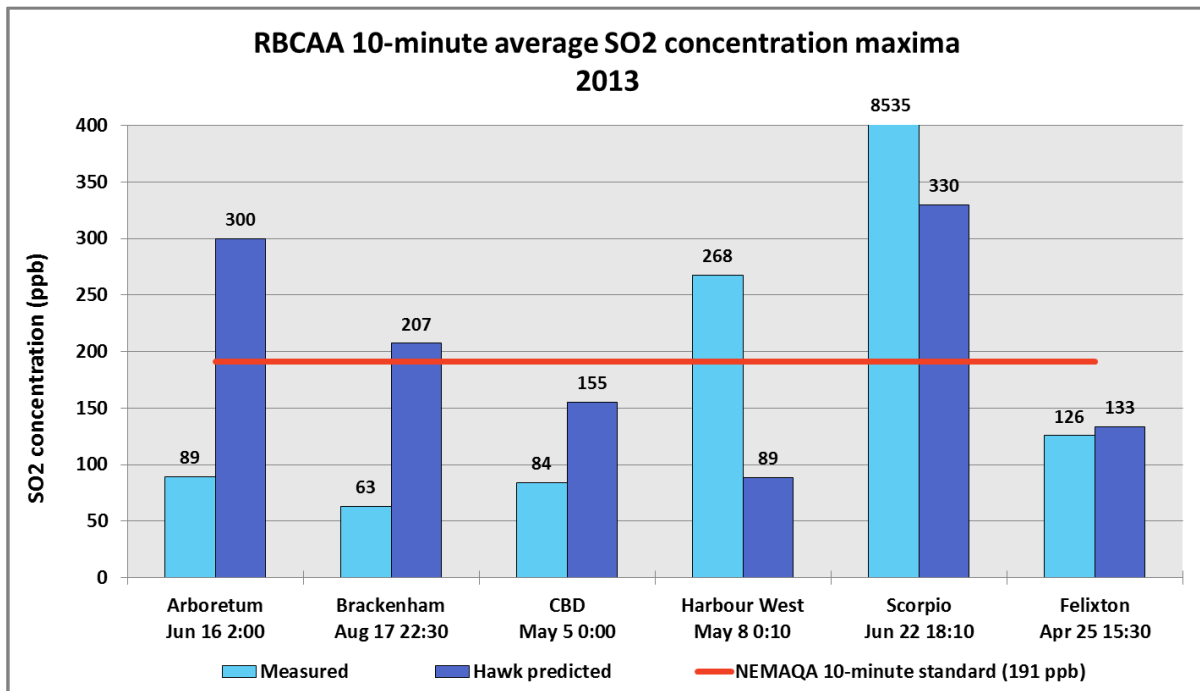




### 5.9.2 SO<sub>2</sub> 10-minute Average Concentration and Prediction

CBD and Felixton 10-minute average predicted values were within accepted dispersion modelling norms (-50% to 200%). Arboretum and Brackenheim values were over predicted while Harbour West and Scorpio were under-predicted. Compared to the measurements, the predicted values at Harbour West and Scorpio were lower; and Arboretum, Brackenheim and CBD higher (Figure 39).

Figure 39: 10-minute average SO<sub>2</sub> concentration and prediction



Note: The over-predictions for short term averages (hourly and 10 minute) at Arboretum and Brackenheim are under investigation.

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

The following plots of the maximum 10-minute average SO<sub>2</sub> concentrations are provided:

- Regional (Figure 40);
- Richards Bay (Figure 41);
- Felixton (Figure 42; and
- RBM (Figure 43).

The model predicted maximum 10-minute average SO<sub>2</sub> concentrations greater than the NEMAQA 10-minute Standard (191 ppb) over Alton, Arboretum, Arboretum Extension, Bayside Aluminium, Birdswood, Brackenheim, CBD, Felixton, Foskor, Hillside Aluminium, Mondi Richards Bay, Port of Richards Bay, Richards Bay Minerals, and Tata Steel. The half-guideline includes parts of Aquadene, Greenhill, Richards Bay Coal Terminal, Southern Sanctuary, Veldenvlei, and Wildenweide.



Figure 40: Maximum predicted 10-minute average SO<sub>2</sub> concentration (regional map)

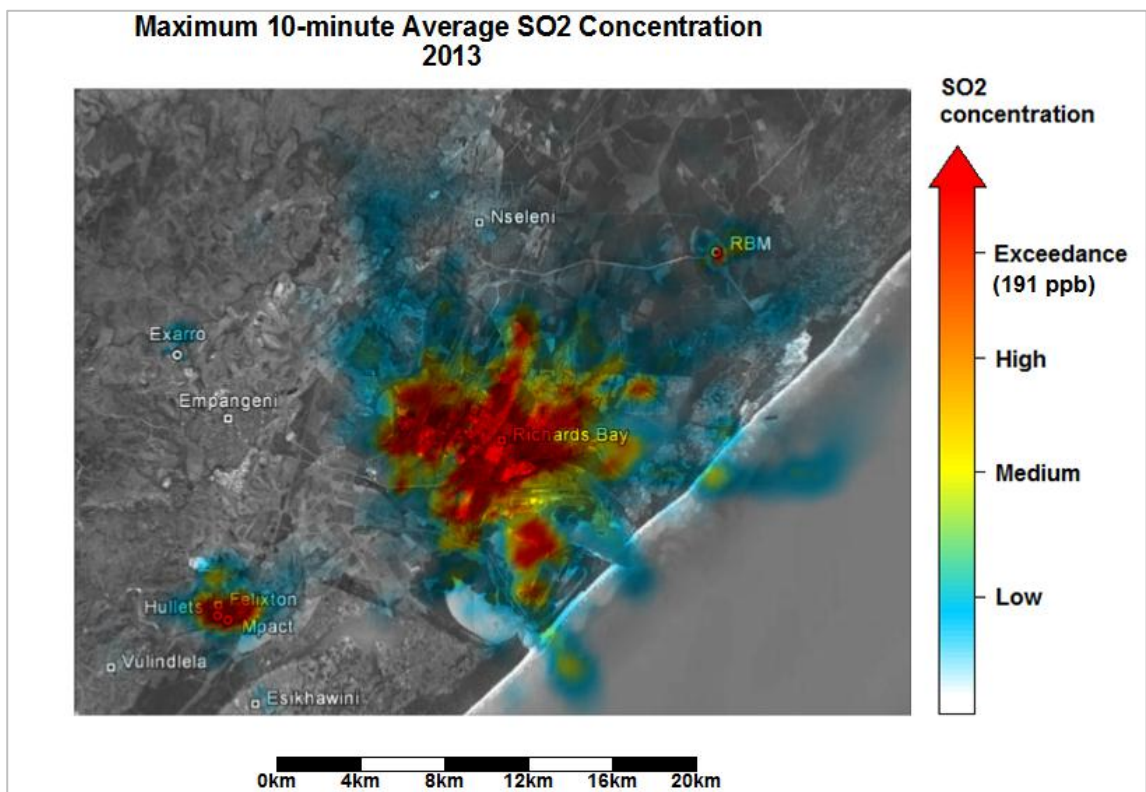


Figure 41: Maximum predicted 10-minute average SO<sub>2</sub> concentration (Richards Bay map)

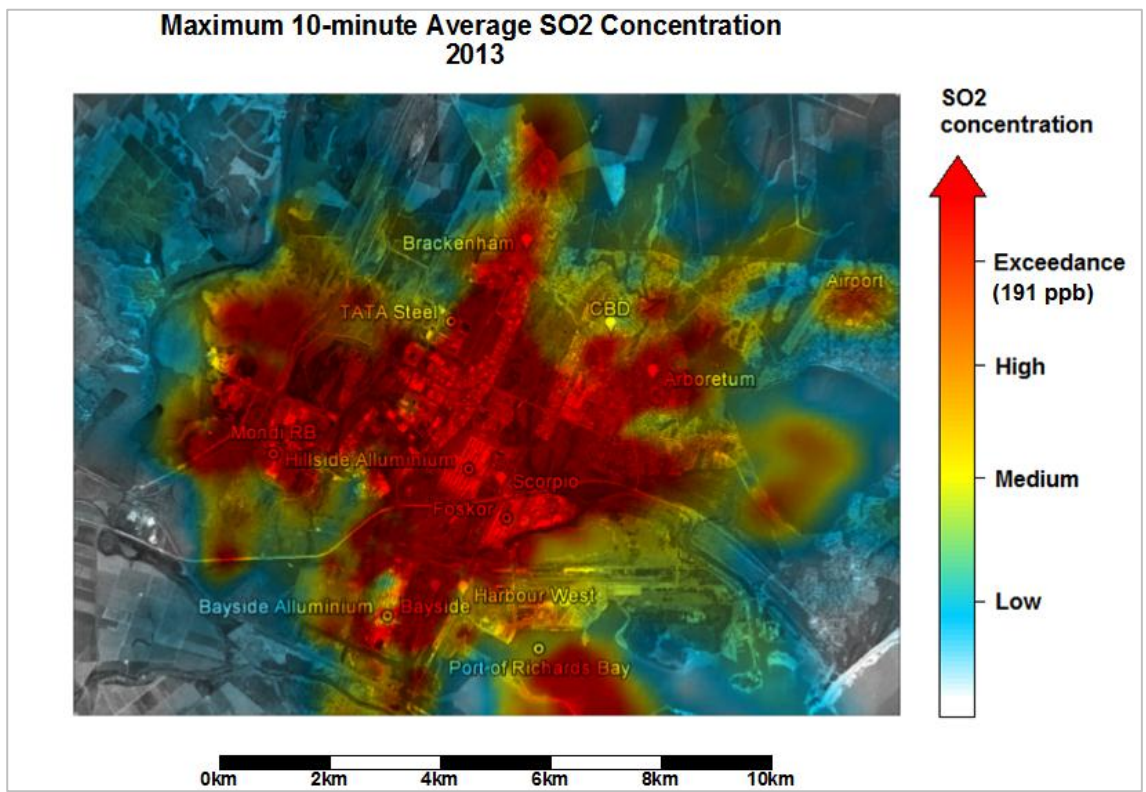




Figure 42: Maximum predicted 10-minute average SO<sub>2</sub> concentration (Felixton map)

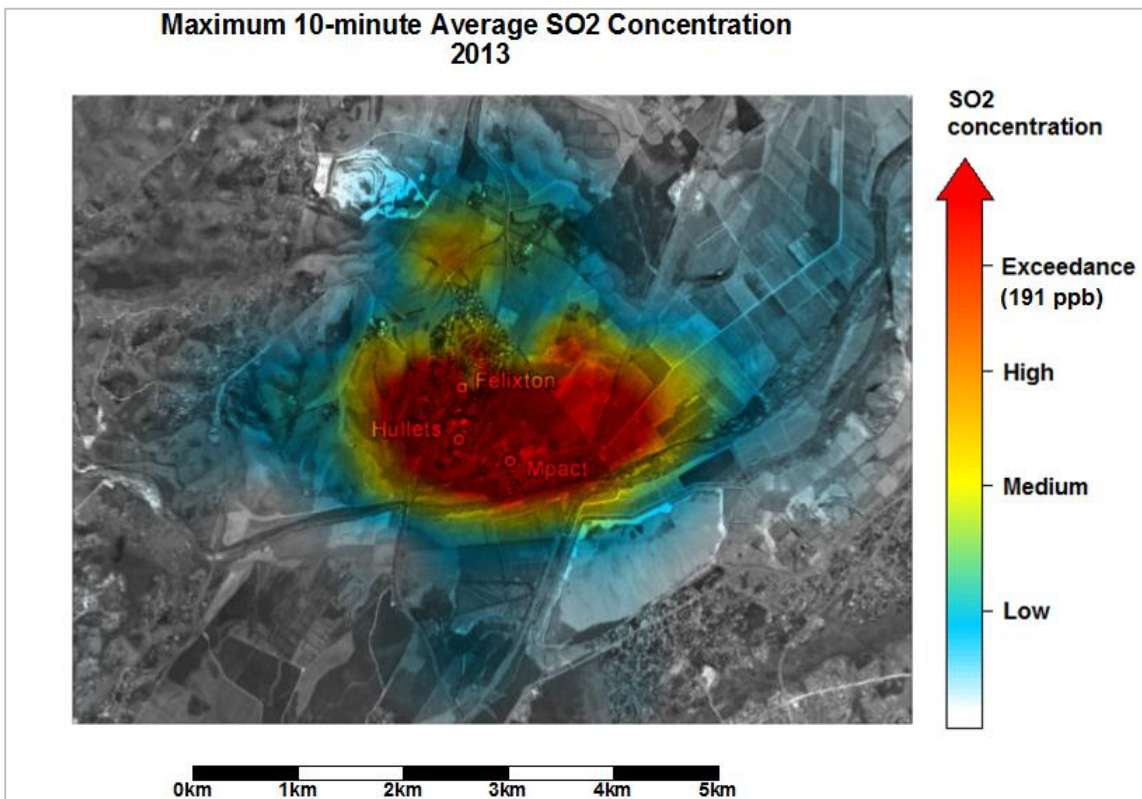
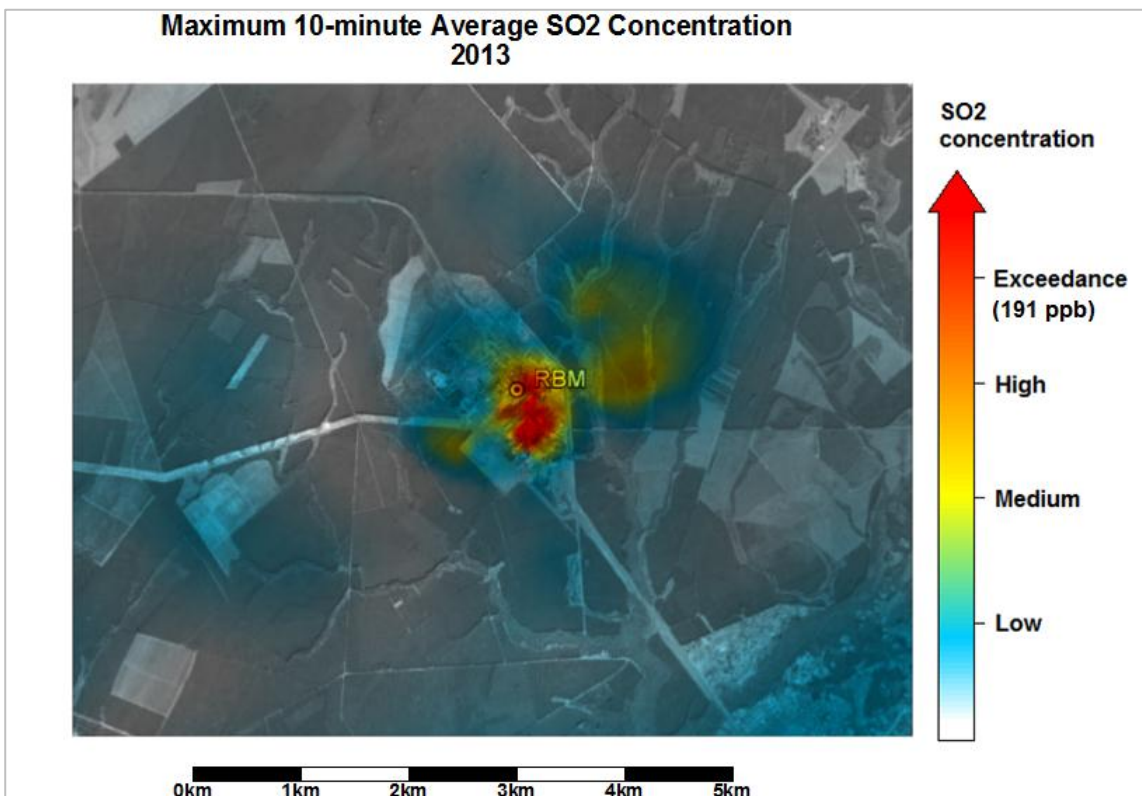


Figure 43: Maximum predicted 10-minute average SO<sub>2</sub> concentration (RBM map)





### 6.0 TOTAL REDUCED SULPHUR MONITORING (TRS)

Total Reduced Sulphur (TRS) is measured by at CBD. Total reduced sulphur compounds, often associated with rotten egg or cooked cabbage odour, refer to a gaseous mixture of compounds consisting mainly of hydrogen sulphide ( $H_2S$ ), 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 Standards

There are no South African standards for TRS.

The World Health Organization (WHO) recommends that in order to avoid substantial complaints about odour annoyance among the exposed population, hydrogen sulphide concentrations should not be allowed to exceed  $7\mu g/m^3$  (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).

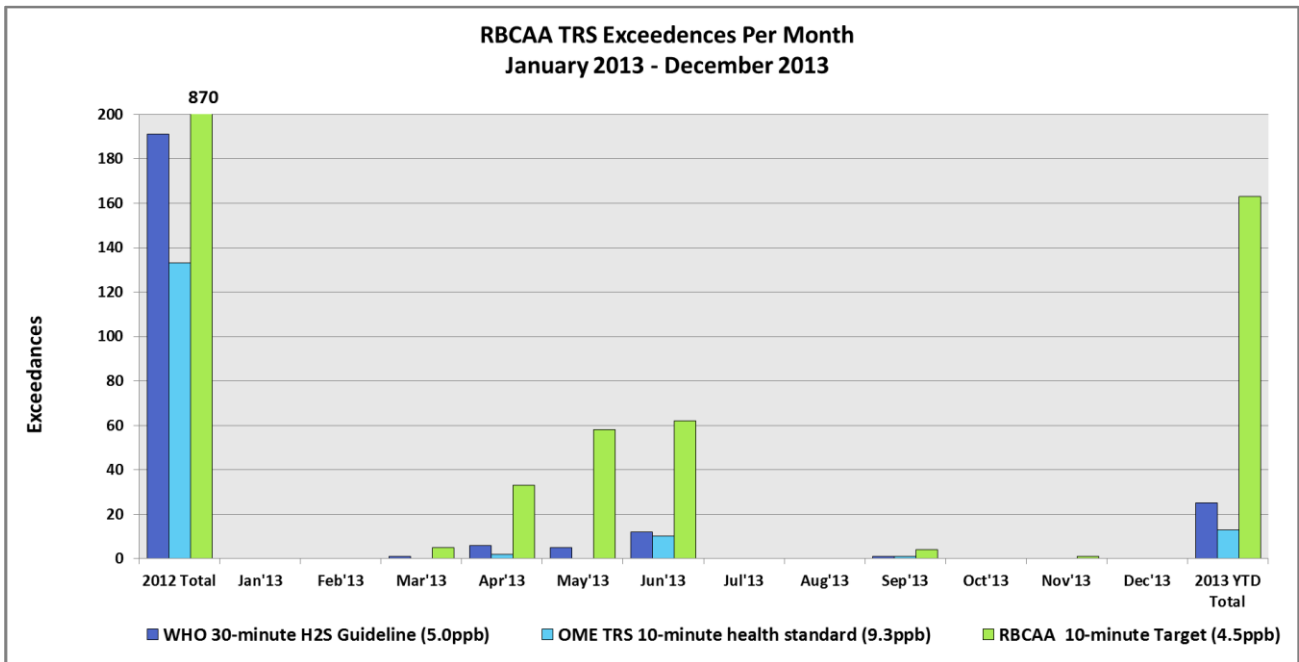
#### 6.2 TRS Compliance with Air Quality Standards and Maximums

Twenty five (25) exceedances of the WHO 30-minute  $H_2S$  Guideline (5.0ppb), thirteen (13) exceedances of the OME TRS 10-minute health standard (9.3ppb) and one hundred and sixty three (163) exceedances of the RBCAA 10-minute Target (4.5ppb) were recorded during 2013 (Figure 44)

*Please see APPENDIX C for the detailed exceedance log.*



Figure 44: TRS exceedances for 2013.



Maximum and monthly average concentrations for TRS are provided in .

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).

Table 5: TRS maximum and monthly concentrations for 2013

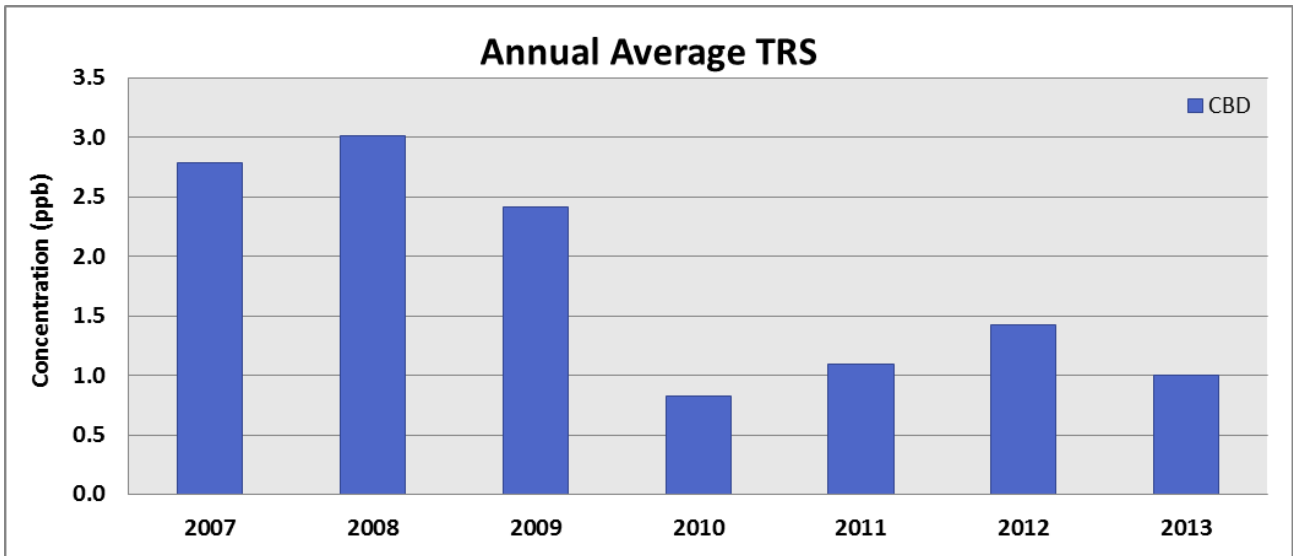
Station		10 Minute Average (Standard 9.3ppb)	30-minute Average (Guideline 5.0ppb)	Daily Average (Standard 10.1ppb)	Monthly Average
CBD	% of guideline	234%	364%	36%	-
	(ppb)	21.8	18.2	3.6	1.0
	Date & time	2013/06/08 00:00	2013/06/08 00:00	2013/06/08	2013/06



### 6.3 TRS Annual Average Trend

Annual average TRS concentrations are illustrated in Figure 45. A marked decrease in annual average TRS concentrations is evident post 2009. Concentrations increased marginally 2012 and dropped subsequently in 2013. This is likely due to the success of Mondi's odour abatement programme.

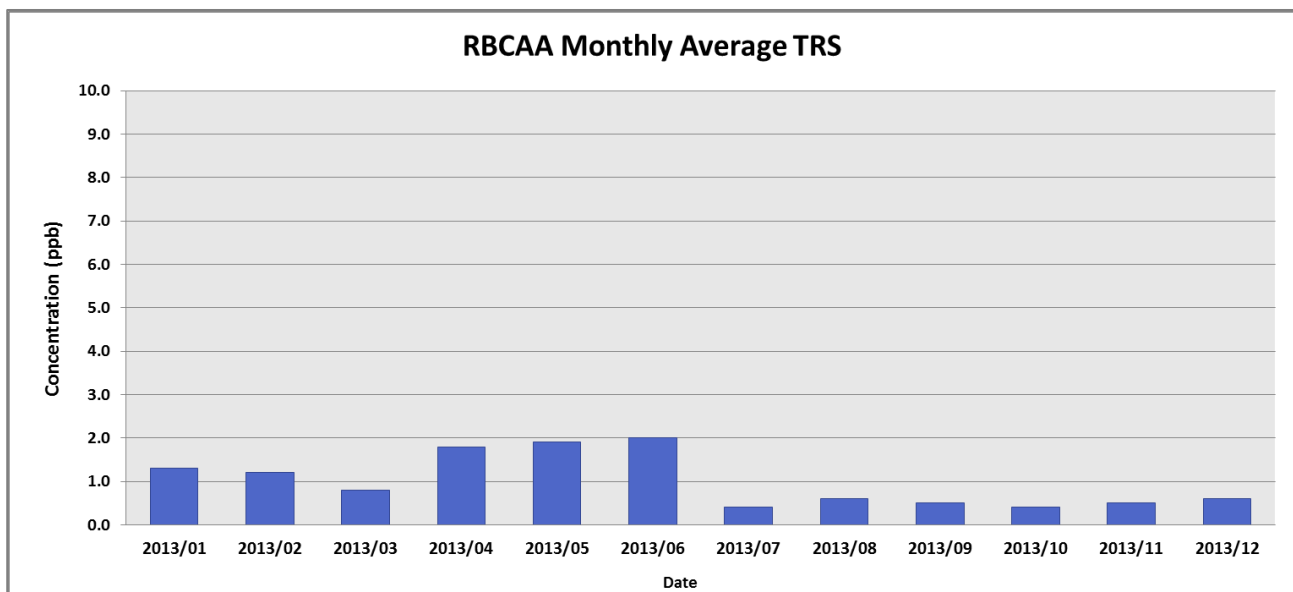
Figure 45: TRS annual average information.



### 6.4 TRS Seasonal Trend

The seasonal trends for TRS concentrations in 2013 are provided in Figure 46. An over-all decreasing trend is noted in 2013, with the exception of marginally elevated levels recorded in April, May and June. Concentrations returned to baseline levels after the analyser was calibrated in June 2013 (please see **Error! Reference source not found.**).

Figure 46: Seasonal trends in TRS (monthly average concentrations)

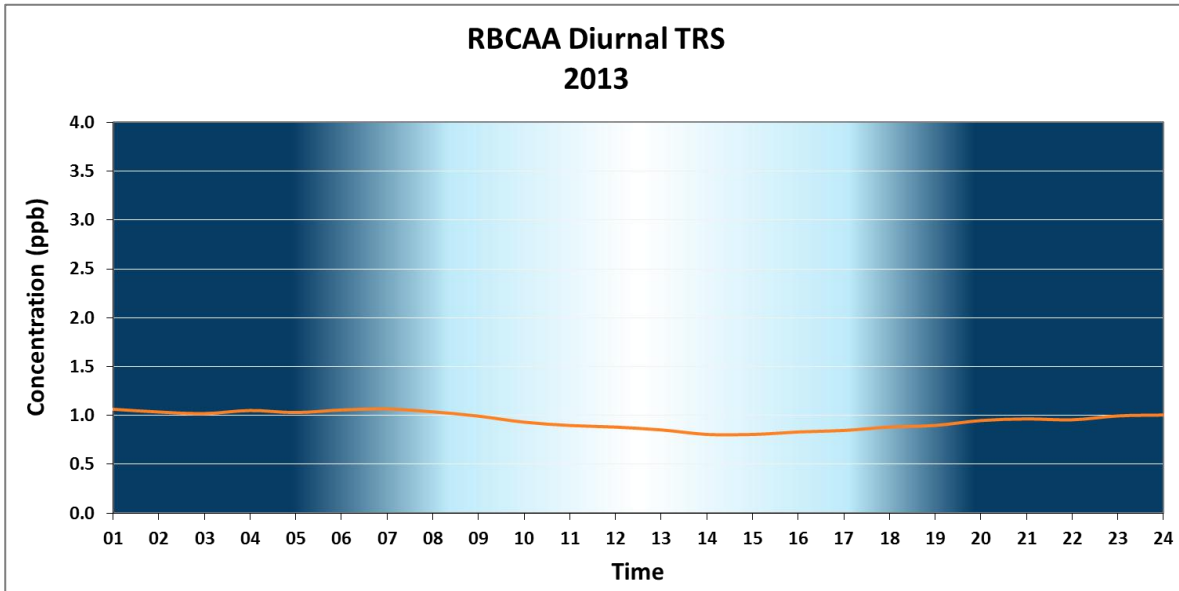




### 6.5 TRS Diurnal Trend

The diurnal TRS concentrations are shown below (Figure 47).

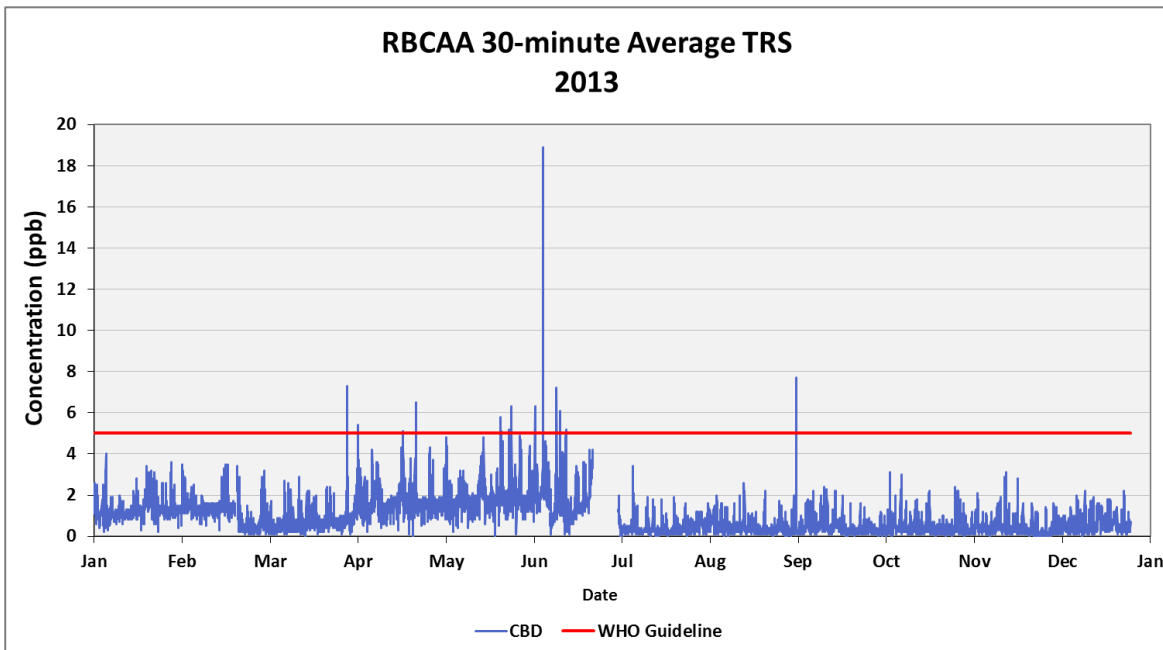
Figure 47: TRS diurnal trend



### 6.6 TRS 30-minute Average Information

The 30-minute average TRS trend at CBD is shown below (Figure 48). The cause of the 18.9ppb peak at midnight on 8 June 2013 remains unknown. No complaints were received in relation to this incident potentially due to the time at which it occurred. Data from 25 June 2013 until 4 July 2013 was invalidated due to a blocked SO<sub>2</sub> scrubber in the TRS converter causing skewed results (see APPENDIX B for further details).

Figure 48: TRS 30-minute average concentration

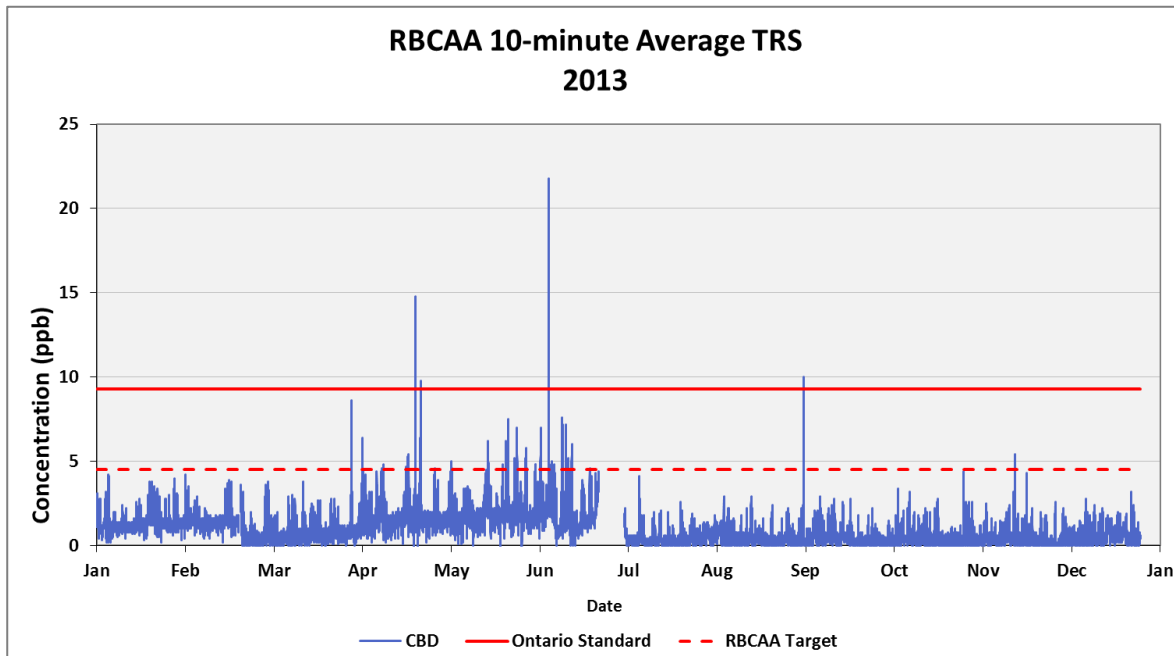




## 6.7 TRS 10-minute Average Information

The 10-minute average TRS trend is shown below (Figure 49).

Figure 49: TRS 10-minute average concentrations



## 7.0 OBJECTIVES FOR 2014

- 1) The implementation of a quality system that meets SANAS requirements;
- 2) The inclusion of real time emissions into the Hawk simulations;
- 3) The implementation of a backup plan for the network;
- 4) The implementation of rainfall monitoring at the CBD station;
- 5) Hydrogen Fluoride and dust fall-out monitoring;
- 6) The relocation of the St Lucia station; and
- 7) The expansion of the RBCAA monitoring network to include Esikhawini.



## 8.0 CLOSURE

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

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

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# **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**

## **Data capture and operations**



## 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 2013 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	Average PM10
Jan 2013	99.8%	99.4%	74.5%	38.9%	97.2%	82.0%
Feb 2013	99.6%	99.5%	99.7%	31.0%	97.7%	85.3%
Mar 2013	24.8%	99.9%	100.0%	99.3%	98.2%	84.4%
Apr 2013	87.8%	98.1%	99.9%	99.9%	97.5%	96.6%
May 2013	99.7%	99.8%	99.9%	99.9%	-	99.8%
Jun 2013	29.1%	99.9%	99.9%	99.9%	-	82.2%
Jul 2013	0.0%	99.7%	96.8%	99.9%	-	74.1%
Aug 2013	8.4%	99.6%	96.5%	97.2%	-	75.4%
Sep 2013	99.4%	99.3%	99.9%	98.5%	-	99.3%
Oct 2013	99.7%	97.3%	99.8%	99.5%	-	99.1%
Nov 2013	99.9%	99.6%	96.6%	95.2%	97.8%	97.8%
Dec 2013	99.0%	94.0%	99.9%	98.5%	99.9%	98.3%
<b>Average</b>	70.6%	98.8%	97.0%	88.1%	98.1%	90.5%

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

Month	Arboretum	Brackenham	CBD	Harbour West	Scorpio	Felixton	Average
Jan 2013	99.8%	99.9%	99.9%	91.6%	99.7%	96.9%	98.0%
Feb 2013	93.0%	99.6%	99.7%	99.8%	99.7%	96.0%	98.0%
Mar 2013	94.0%	99.6%	99.8%	99.7%	99.0%	73.6%	94.3%
Apr 2013	99.9%	99.9%	90.2%	99.9%	99.8%	99.8%	98.3%
May 2013	99.9%	99.9%	99.8%	99.9%	99.8%	88.5%	99.3%
Jun 2013	99.0%	99.6%	99.4%	99.8%	98.6%	98.5%	99.8%
Jul 2013	99.5%	99.9%	99.9%	99.9%	99.9%	99.9%	97.9%
Aug 2013	89.5%	99.8%	99.9%	99.9%	99.9%	98.6%	88.8%
Sep 2013	99.7%	99.9%	99.8%	99.9%	92.9%	40.7%	94.6%
Oct 2013	99.6%	99.7%	97.4%	99.9%	99.8%	71.0%	99.6%
Nov 2013	99.2%	99.9%	99.5%	99.9%	97.6%	98.1%	99.0%
Dec 2013	96.9%	99.2%	99.6%	95.7%	99.9%	99.9%	98.5%
<b>Average</b>	97.5%	99.7%	98.7%	98.8%	98.9%	88.5%	97.0%



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

Month	CBD	Average SO <sub>2</sub>
Jan 2013	99.9%	99.9%
Feb 2013	97.1%	99.7%
Mar 2013	99.8%	99.8%
Apr 2013	97.8%	90.2%
May 2013	99.8%	99.8%
Jun 2013	81.0%	99.4%
Jul 2013	88.2%	99.9%
Aug 2013	99.9%	99.9%
Sep 2013	99.7%	99.8%
Oct 2013	97.1%	97.4%
Nov 2013	99.4%	99.5%
Dec 2013	99.5%	99.6%
<b>Average</b>	<b>96.6%</b>	<b>98.7%</b>

## NETWORK OPERATION

- **11 January 2013:** The MTN APN became functional again after SGS moved computer infrastructure from Durban to Johannesburg and data from all loggers are re-pollled via the MTN 3G routers.
- **19 February 2013:** All SO<sub>2</sub> and TRS analysers were successfully calibrated from 19 February 2013 to 21 February 2013 by C& M Consulting Engineers (SANAS).
- **20 February 2013:** The CBD, Brackenheim and Mtunzini TEOM's flow and mass transducers calibrations were verified on 20 and 21 February 2013 by SGS.
- **19 March 2013:** The St Lucia TEOM's Flow and Mass transducer were calibrated by SGS.
- **18 April 2013** SGS checked the Brackenheim TEOM's flow and mass transducer calibrations.
- **1 May 2013:** Switch over from SGS to Golder Associates took place. PM<sub>10</sub> Data from Felixton E-Sampler was found to be incompatible with RBCAA Network. Therefore no PM<sub>10</sub> data collected at Felixton for the month.
- **24 May 2013:** Received new TRS Converter from C&M Consulting Engineers.(CAPEX Item)
- **7 June 2013:** C&M Consulting Engineer's Technician services replace silica gel baggies and activated charcoal in all SO<sub>2</sub> analysers.
- **10 June 2013:** C&M Consulting Engineers undertook multipoint calibrations on all SO<sub>2</sub> and TRS analysers.
- **11 July 2013:** HARS CC Services all monitoring station's air conditioning units, with the exception of St Lucia.
- **8 August 2013:** Wireless Lan CC removed the radios from the BHP Silo in the Harbour area. The radio that belongs to SGS was returned to the SGS Office.



- **9 October 2013:** C&M Consulting Engineers serviced and calibrated all SO<sub>2</sub> analysers from 9 to 11 October 2013.

### 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 March 2013:** The Arboretum Monitoring stations air conditioner units' compressor ceased functioning which resulted in the temperature controller switching the power to the station off. Data were lost from 15:45 on 23 March 2013 to 07:40 on 25 March 2013. A new air conditioner was installed by HARS cc.
- **2 July 2013:** Multinet 3G Routers were installed at Arboretum and Scorpio monitoring stations.
- **9 August 2013:** The earth leakage at the Arboretum station tripped and the monitoring station was down from 06:10 on 9 August 2013 to 07:25 on 12 August 2013.
- **21 November 2013:** The earth leakage tripped at the Arboretum monitoring station and no data were collected between 09:45 to 13:50 on 21 November 2013.
- **16 December 2013:** Arboretum earth leakage tripped. The power was down from 13:45 to 17 December 2013 10:05.
- **28 December 2013.** General Power failure at CBD, Arboretum, Harbour west and Brackenheim. CBD was down from 14:50 to 16:35.

#### *Brackenheim:*

- **8 March 2013:** The TEOM PM<sub>10</sub> Monitor did not restart after a general power failure occurred from 16:45 to 17:35.
- **13 March 2013:** The TEOM PM<sub>10</sub> Monitor was removed from the Brackenheim monitoring station and sent to ERO Electronic for repairs.
- **4 April 2013:** The repaired TEOM returned ERO Electronics and installed at the Brackenheim monitoring station.
- **10 June 2013:** The Brackenheim TEOM malfunctioned after a severe storm. The temperature controller PC Board was badly corroded which shut down the required air heaters. A water leak on the inlet tube was identified as a major cause of TEOM breaking down.
- **12 June 2013:** The TEOM was removed from the Brackenheim monitoring station and couriered to ERO Electronic for repairs.
- **21 June 2013:** A 3G Telenet router was installed at the Brackenheim monitoring station to replace the Wireless Lan radio system.
- **17 July 2013:** The CBD and Brackenheim TEOM inlets were replaced and sealed with the installation of a SS plate to minimize possible water leaks.
- **29 August 2013:** The repaired TEOM PM<sub>10</sub> analyser was returned on 29 August 2013 and was re-installed at the Brackenheim monitoring station.
- **18 October 2013:** A general power failure occurred at the Brackenheim monitoring station from 04:35 to 06:00.



- **28 December 2013.** General Power failure at CBD, Arboretum, Harbour west and Brackenheim. CBD was down from 14:50 to 16:35.

### **CBD:**

- **2 April 2013:** A temperature controller malfunction caused a power outage at the CBD monitoring station. The faults were repaired and the power returned to the station, however the SO<sub>2</sub> analyser would not restart. The analyser was subsequently taken back to C&M for repairs.
- **5 April 2013:** The new API SO<sub>2</sub> analyser from C&M was received and installed it at the CBD Monitoring station.
- **10 April 2013:** C&M calibrated the newly installed CBD SO<sub>2</sub> analyser and the repaired Felixton SO<sub>2</sub> analyser.
- **15 May 2013:** Inteltronics CC installed the CBD met station equipment on the newly installed lattice mast. (WD, WS Temp and RH)
- **25 June 2013:** The SO<sub>2</sub> scrubber from the new TRS converter was blocked which resulted in a decrease in sample flow and increase in TRS concentrations measured.
- **4 July 2013:** The SO<sub>2</sub> Scrubber in the TRS converter was replaced with the scrubber from the old converter. TRS data were invalidated from 25 June to 15:10 on 4 July 2013.
- **17 July 2013:** The CBD and Brackenheim TEOM inlets were replaced and sealed with the installation of a SS plate to minimize possible water leaks.
- **10 October 2013:** A general power failure occurred at the CBD monitoring station from 10 October 2013 18:45 to 11 October 2013 09:45.
- **28 December 2013:** General Power failure at CBD, Arboretum, Harbour west and Brackenheim. CBD from 14:50 to 16:35.

### **Harbour West:**

- **1 January 2013:** The earth leakage at the Harbour West monitoring station tripped and the power was down from 00:00 on 1 January 2013 to 10:20 on 2 January 2013. This was caused by a severe thunderstorm the evening of 31 December 2012.
- **22 May 2013:** A Telenet 3G router was installed at Harbour West monitoring station for data transfer, after numerous radio communication difficulties.
- **2 December 2013:** The station was down from 17:55 to 16:35 on 3 December 2013 as a result of an earth leakage trip.
- **5 December 2013:** Harbour West Power failure occurred from 10:30 to 16:10.
- **28 December 2013.** General Power failure at CBD, Arboretum, Harbour west and Brackenheim. CBD was down from 14:50 to 16:35.

### **Scorpio:**

- **18 March 2013:** The Scorpio monitoring station lost data from 14:35 to 19:25 after difficulties with creating a new SQL data file.
- **2 July 2013:** Multenet 3G Routers were installed at Arboretum and Scorpio monitoring stations.
- **25 September 2013:** The air conditioner unit at Scorpio monitoring station malfunctioned. The temperature controller switched shut the station power down at 10:10.



- **27 September 2013:** HARS CC installed a new air conditioner unit at the Scorpio monitoring station.
- **3 November 2013:** The newly installed air conditioner unit at the Scorpio monitoring does not start up after a power failure which resulted in loss of data for a period from 15:30 on 3 November 2013 to 07:35 on 4 November 2013.
- **5 November 2013:** A new Temperature controller was installed in the A/C unit at the Scorpio monitoring station.

### *Felixton:*

- **1 January 2013:** A general power failure occurred at the Felixton monitoring station from 00:00 to 18:20 on 1 January 2013. This was caused by a severe thunderstorm the evening of 31 December 2012.
- **5 March 2013:** The SO<sub>2</sub> analyser at the Felixton Monitoring station gave an error message: "DARK CAL WARNING". The analyser was removed and sent to C&M for repairs. The analyser was repaired under guarantee.
- **12 March 2013:** The Felixton SO<sub>2</sub> analyser returned and reinstalled.
- **20 March 2013:** The Felixton monitoring stations power tripped due to a malfunction in the CR1000 logger power supply. Data were lost from 02:45 to 14:35. A new power supply was installed.
- **10 April 2013** C&M calibrated the newly installed CBD SO<sub>2</sub> analyser and the repaired Felixton SO<sub>2</sub> analyser.
- **28 May 2013:** The power supply cable at the Felixton monitoring station was damaged and only repaired on 31 May 2013. No data were collected for a period from 10:25 on 28 May 2013 to 10:35 on 31 May 2013.
- **6 August 2013:** A general power failure occurred at the Felixton monitoring station from 23:30 on 6 August 2013 to 09:00 on 7 August 2013.
- **2 September 2013:** The existing Palisade fencing at the Felixton monitoring station was removed and installed at the new location.
- **3 September 2013:** The Felixton Mobile monitoring station was moved to its new location on the Felixton College premises. The monitoring station was down from 12:40 to 13:50
- **9 October 2013:** A new power supply cable was installed to supply the Felixton mobile monitoring site with a more stable power supply. The SO<sub>2</sub> analyser was reinstalled and restarted at 12:40.
- **24 October 2013:** The circuit breaker at the Felixton College continuously tripped the monitoring station power. The station was down from 13:55 to 17:00.
- **28 October 2013:** Brad's Electrical installed a new 3 phase circuit breaker at the Felixton College to rectify the power supply problems.
- **12 November 2013:** A general power failure occurred at the Felixton and Mtunzini monitoring sites. No data were collected at these stations from 20:00 on 12 November to 11:15 on 13 November 2013.

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

- **3 January 2013:** Malfunctions in the power supply, air conditioning unit and temperature controller resulted in a power outage at the Mtunzini monitoring station. No PM<sub>10</sub> data was captured from 15:50 on 3 January 2013 to 13:35 on 11 January 2013.

The power outage was not detected earlier as the APN network was down due to the SGS DBN server network relocation.



- **18 January 2013:** The power supply for the CR 1000 logger at the St Lucia monitoring station was replaced. No data were logged from 20 December 2012 till 15:15 on 18 January 2013. The fault was not detected earlier as the APN network was down.
- **13 February 2013:** The TEOM PM<sub>10</sub> analyser at the St Lucia monitoring station was removed and sent to the agents for repairs.
- **27 February 2013:** The TEOM from the St Lucia monitoring station was returned and reinstalled at the St Lucia monitoring station.
- **12 July 2013:** HARS CC installed a new air conditioner at the Mtunzini mobile monitoring station.
- **15 July 2013:** The operating system on the Mtunzini TEOM was reinstalled after a power failure. No PM<sub>10</sub> data were recorded from 12:50 on 14 July 2013 to 11:15 on 15 July 2013.
- **23 July 2013:** HARS CC serviced the St Lucia monitoring station air conditioner.
- **6 August 2013:** A general power failure occurred at the Mtunzini monitoring station from 22:10 on 6 August 2013 to 09:00 on 7 August 2013. When the power returned the temperature controller was damaged and the temperature protection unit was bypassed.
- **12 August 2013:** A general power failure occurred at the St Lucia monitoring station at 18:30 on 12 August 2013. When the power returned the temperature controller was damaged. No data were recorded until 14:15 on 13 August 2013 after the temperature controller unit was bypassed.
- **12 September 2013:** A HARS electrician installed a new temperature controller unit at the Mtunzini monitoring station.
- **13 September 2013:** The SO<sub>2</sub> analyser displayed a variety of error messages and stopped functioning. The analyser was down from 06:10 to 11:40 and then again from 13:05 onwards. The supply power from the Felixton College Canteen varied between 150 V to 240 V. The analyser was removed and sent to C&M Consulting Engineers to be checked.
- **13 October 2013:** A general power failure occurred at the St Lucia monitoring station from 11:35 to 13:50.
- **12 November 2013.** A general power failure occurred at the Felixton and Mtunzini monitoring sites and no data were collected from 20:00 on 12 November to 11:15 on 13 November 2013.
- **23 December 2013:** St Lucia dust monitoring station UPS went down. The station was down from 09:20 to 11:50 until UPS bypassed.

### Meteorological stations

- **7 February 2013:** All meteorological stations were calibrated during the week by Inteltronic's Technicians. (SANAS)
- **18 April 2013:** After a meeting with Personnel from RBM it was decided that maintenance and servicing of the RBM Smelter meteorological station revert back to RBM. Difficulties in accessing the station were the main reason for this decision. The Campbell Scientific CR 1000 logger and the Multenet 3G router however, remains the property of the RBCAA.
- **15 May 2013:** A new mast with meteorological instruments (WS, WD, Ambient Temperature and Relative Humidity) was commissioned and calibrated at the CBD monitoring station by Inteltronics CC.
- **2 October 2013:** All meteorological stations were calibrated during the week by Inteltronic's Technicians. (SANAS).



# APPENDIX C

## Exceedance log



**Table A: PM<sub>10</sub> Exceedances**

Guideline	Station	Date	Value (µg/m <sup>3</sup> )
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	CBD	27/07/2013	80.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	CBD	21/08/2013	84.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	Mtunzini	20/06/2013	79.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	Mtunzini	25/06/2013	78.0
Current NEMAQA Daily Standard (120µg/m <sup>3</sup> )	Mtunzini	29/08/2013	131.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	St Lucia	03/09/2013	104.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	Mtunzini	19/09/2013	106.0
Future NEMAQA Daily Standard (75µg/m <sup>3</sup> )	Mtunzini	20/09/2013	83.0

**Table B: SO<sub>2</sub> Exceedances**

Guideline	Station	Date and Time	Value (ppb)	Apportionment
NEMAQA 10 min standard (191 ppb)	Harbour West	08/05/2013 00:10	267.8	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	24/03/2013 11:20	209.8	Unresolved
NEMAQA 10 min standard (191 ppb)	Scorpio	19/06/2013 03:10	192.9	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	19/06/2013 18:50	198.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	19/06/2013 19:00	191.1	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	21/06/2013 01:20	222.4	Unresolved
NEMAQA 10 min standard (191 ppb)	Scorpio	21/06/2013 01:30	213.7	Unresolved
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 17:40	787.6	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 17:50	2643.2	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:00	5798.4	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:10	8535.1	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:20	4891.2	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:30	1851.6	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:40	1127.8	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 18:50	534.2	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 19:00	424.7	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	22/06/2013 19:10	423.2	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/06/2013 02:30	407.3	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/06/2013 02:40	380.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/06/2013 02:50	256.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/06/2013 03:10	300.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	11/07/2013 21:20	225.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	11/07/2013 21:40	191.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	13/07/2013 22:50	211.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 04:50	193.8	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 05:20	210.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 05:30	198.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 05:40	208.4	BHP Billiton (Hillside) 100%



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Guideline	Station	Date and Time	Value (ppb)	Apportionment
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 05:50	208.3	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 06:00	212.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 06:10	209.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 06:20	192.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 06:40	198.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 06:50	194.7	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 07:00	196.9	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 07:10	203.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 07:20	217.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 07:30	194.5	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 07:40	203.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/07/2013 08:00	201.8	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/07/2013 06:20	223.6	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/07/2013 06:30	198.9	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	27/07/2013 07:30	204.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	01/08/2013 07:20	191.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	01/08/2013 07:40	200.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	03/08/2013 21:00	193.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	03/08/2013 21:20	200.6	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	03/08/2013 22:00	218.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	07/08/2013 07:30	193.6	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	07/08/2013 08:00	198.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	07/08/2013 08:10	191.0	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 12:50	217.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 14:30	208.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 20:50	214.5	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 21:00	215.5	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 21:10	192.9	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 21:20	258.2	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	16/08/2013 21:30	201.7	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	23/08/2013 08:20	195.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	25/08/2013 21:20	200.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	30/08/2013 10:50	266.1	Foskor 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	08/09/2013 01:50	199.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	08/09/2013 02:00	198.5	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	08/09/2013 02:10	191.4	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	24/09/2013 04:40	215.6	BHP Billiton (Hillside) 100%
NEMAQA 10 min standard (191 ppb)	Scorpio	12/10/2013 13:20	210.7	Foskor 100%
NEMAQA Daily standard (48 ppb)	Scorpio	26/05/2013	50.5	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	12/06/2013	53.5	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	19/06/2013	58.7	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	22/06/2013	222.4	Foskor 100%



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Guideline	Station	Date and Time	Value (ppb)	Apportionment
NEMAQA Daily standard (48 ppb)	Scorpio	16/07/2013	57.4	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	23/07/2013	70.9	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	27/07/2013	48.2	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	07/08/2013	82.0	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	21/08/2013	73.8	BHP Billiton (Hillside) 100%
NEMAQA Daily standard (48 ppb)	Scorpio	08/09/2013	59.5	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	26/05/2013 03:00	141.9	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	12/06/2013 05:00	134.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	13/06/2013 20:00	136.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	19/06/2013 03:00	152.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	19/06/2013 04:00	138.4	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	22/06/2013 17:00	594.2	Foskor 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	22/06/2013 18:00	3789.7	Foskor 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	22/06/2013 19:00	219.3	Foskor 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	22/06/2013 21:00	140.5	Foskor 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	27/06/2013 02:00	193.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	11/07/2013 21:00	148.0	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	13/07/2013 23:00	170.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	14/07/2013 00:00	135.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	16/07/2013 02:00	135.0	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	16/07/2013 03:00	135.9	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	16/07/2013 07:00	137.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	23/07/2013 04:00	165.4	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	23/07/2013 05:00	198.2	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	23/07/2013 06:00	199.2	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	23/07/2013 07:00	199.7	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	23/07/2013 08:00	161.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	27/07/2013 04:00	149.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	27/07/2013 05:00	158.5	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	27/07/2013 06:00	173.7	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	27/07/2013 07:00	179.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	01/08/2013 07:00	162.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	03/08/2013 21:00	169.7	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 03:00	143.8	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 04:00	145.0	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 05:00	169.0	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 06:00	162.9	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 07:00	169.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	07/08/2013 08:00	168.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	16/08/2013 21:00	199.8	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	17/08/2013 09:00	145.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	21/08/2013 03:00	146.9	BHP Billiton (Hillside) 100%



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Guideline	Station	Date and Time	Value (ppb)	Apportionment
NEMAQA Hourly standard (134 ppb)	Scorpio	21/08/2013 07:00	166.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	21/08/2013 08:00	155.3	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	21/08/2013 09:00	146.9	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	28/08/2013 02:00	136.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	28/08/2013 03:00	147.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 02:00	166.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 03:00	138.7	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 04:00	134.4	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 06:00	141.1	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 07:00	140.6	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 08:00	147.7	BHP Billiton (Hillside) 100%
NEMAQA Hourly standard (134 ppb)	Scorpio	08/09/2013 09:00	139.2	BHP Billiton (Hillside) 100%

**Table C: TRS exceedances**

Guideline	Station	Date and Time	Value (ppb)
WHO 30-minute H2S Guideline (5.0ppb)	CBD	31/03/2013 00:30	7.3
WHO 30-minute H2S Guideline (5.0ppb)	CBD	03/04/2013 22:30	5.4
WHO 30-minute H2S Guideline (5.0ppb)	CBD	03/04/2013 23:00	5.4
WHO 30-minute H2S Guideline (5.0ppb)	CBD	03/04/2013 23:30	5.0
WHO 30-minute H2S Guideline (5.0ppb)	CBD	19/04/2013 15:00	5.1
WHO 30-minute H2S Guideline (5.0ppb)	CBD	24/04/2013 06:30	6.5
WHO 30-minute H2S Guideline (5.0ppb)	CBD	24/04/2013 07:00	5.7
WHO 30-minute H2S Guideline (5.0ppb)	CBD	24/05/2013 03:30	5.8
WHO 30-minute H2S Guideline (5.0ppb)	CBD	24/05/2013 06:30	5.1
WHO 30-minute H2S Guideline (5.0ppb)	CBD	27/05/2013 00:30	5.2
WHO 30-minute H2S Guideline (5.0ppb)	CBD	27/05/2013 23:00	6.3
WHO 30-minute H2S Guideline (5.0ppb)	CBD	27/05/2013 23:30	5.5
WHO 30-minute H2S Guideline (5.0ppb)	CBD	05/06/2013 05:30	6.3
WHO 30-minute H2S Guideline (5.0ppb)	CBD	07/06/2013 23:30	6.1
WHO 30-minute H2S Guideline (5.0ppb)	CBD	08/06/2013 00:00	18.9
WHO 30-minute H2S Guideline (5.0ppb)	CBD	08/06/2013 00:30	17.6
WHO 30-minute H2S Guideline (5.0ppb)	CBD	08/06/2013 01:00	13.4
WHO 30-minute H2S Guideline (5.0ppb)	CBD	08/06/2013 01:30	5.8
WHO 30-minute H2S Guideline (5.0ppb)	CBD	12/06/2013 20:30	7.2
WHO 30-minute H2S Guideline (5.0ppb)	CBD	14/06/2013 00:00	6.1
WHO 30-minute H2S Guideline (5.0ppb)	CBD	14/06/2013 00:30	6.1
WHO 30-minute H2S Guideline (5.0ppb)	CBD	14/06/2013 01:00	5.0
WHO 30-minute H2S Guideline (5.0ppb)	CBD	14/06/2013 01:30	5.6
WHO 30-minute H2S Guideline (5.0ppb)	CBD	16/06/2013 03:30	5.2
WHO 30-minute H2S Guideline (5.0ppb)	CBD	05/09/2013 08:00	7.7



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Guideline	Station	Date and Time	Value (ppb)
OME TRS 10-minute health standard (9.3ppb)	CBD	22/04/2013 10:20	14.8
OME TRS 10-minute health standard (9.3ppb)	CBD	24/04/2013 06:50	9.8
OME TRS 10-minute health standard (9.3ppb)	CBD	07/06/2013 23:50	10.0
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:00	21.8
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:10	18.3
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:20	16.6
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:30	17.0
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:40	18.0
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 00:50	17.9
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 01:00	15.6
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 01:10	12.2
OME TRS 10-minute health standard (9.3ppb)	CBD	08/06/2013 01:20	12.4
OME TRS 10-minute health standard (9.3ppb)	CBD	05/09/2013 08:00	10.0
RBCAA 10-minute Target (4.5ppb)	CBD	31/03/2013 00:20	7.0
RBCAA 10-minute Target (4.5ppb)	CBD	31/03/2013 00:30	8.6
RBCAA 10-minute Target (4.5ppb)	CBD	31/03/2013 00:40	7.2
RBCAA 10-minute Target (4.5ppb)	CBD	31/03/2013 00:50	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	31/03/2013 01:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 22:20	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 22:30	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 22:40	6.4
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 22:50	4.9
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:00	4.9
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:10	5.8
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:20	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:30	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:40	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	03/04/2013 23:50	5.8
RBCAA 10-minute Target (4.5ppb)	CBD	04/04/2013 00:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	10/04/2013 16:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	11/04/2013 04:30	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 05:20	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 14:20	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 15:00	5.1
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 15:10	5.3
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 15:20	4.9
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 20:50	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 21:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 22:20	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	19/04/2013 22:30	5.4



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Guideline	Station	Date and Time	Value (ppb)
RBCAA 10-minute Target (4.5ppb)	CBD	20/04/2013 03:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	22/04/2013 10:20	14.8
RBCAA 10-minute Target (4.5ppb)	CBD	22/04/2013 10:30	5.6
RBCAA 10-minute Target (4.5ppb)	CBD	23/04/2013 23:10	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 01:30	6.4
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 06:40	7.0
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 06:50	9.8
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 07:00	8.0
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 07:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	24/04/2013 07:20	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	29/04/2013 03:40	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	04/05/2013 23:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	04/05/2013 23:40	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	04/05/2013 23:50	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 00:00	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 00:10	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 00:20	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 00:30	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 03:30	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 04:20	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	05/05/2013 04:50	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	17/05/2013 09:20	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	17/05/2013 22:20	6.2
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 03:50	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 04:00	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 04:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 04:20	4.9
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 05:00	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	18/05/2013 05:10	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	22/05/2013 22:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 03:20	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 03:30	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 03:40	6.2
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 03:50	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 04:00	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 06:40	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 06:50	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 19:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	24/05/2013 20:30	7.5
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 00:30	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 00:40	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 00:50	5.2



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Guideline	Station	Date and Time	Value (ppb)
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 01:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 06:30	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 06:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 06:50	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 20:20	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:00	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:10	7.0
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:20	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:30	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:40	5.7
RBCAA 10-minute Target (4.5ppb)	CBD	27/05/2013 23:50	5.7
RBCAA 10-minute Target (4.5ppb)	CBD	28/05/2013 00:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	28/05/2013 00:50	5.1
RBCAA 10-minute Target (4.5ppb)	CBD	28/05/2013 01:00	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	28/05/2013 01:10	4.9
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 20:20	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 20:30	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 20:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 20:50	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 21:30	5.1
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 21:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	30/05/2013 22:00	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	31/05/2013 01:00	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	31/05/2013 01:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	31/05/2013 05:30	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	31/05/2013 05:40	5.8
RBCAA 10-minute Target (4.5ppb)	CBD	31/05/2013 08:50	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	03/06/2013 08:10	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 05:20	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 05:30	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 05:40	7.0
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 05:50	6.5
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 06:00	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 06:40	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 06:50	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	05/06/2013 07:00	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	07/06/2013 23:40	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	07/06/2013 23:50	10.0
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:00	21.8
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:10	18.3
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:20	16.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:30	17.0



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Guideline	Station	Date and Time	Value (ppb)
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:40	18.0
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 00:50	17.9
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 01:00	15.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 01:10	12.2
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 01:20	12.4
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 01:30	8.2
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 01:40	5.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 17:50	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 18:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 21:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 21:20	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 21:30	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 21:40	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 23:20	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 23:30	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	08/06/2013 23:40	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	09/06/2013 05:40	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	09/06/2013 06:20	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	10/06/2013 01:10	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 19:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 20:20	5.8
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 20:30	7.6
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 20:40	6.8
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 20:50	7.2
RBCAA 10-minute Target (4.5ppb)	CBD	12/06/2013 21:00	4.5
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:00	6.4
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:10	7.2
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:20	4.7
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:30	7.0
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:40	5.6
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 00:50	5.6
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:00	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:10	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:20	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:30	4.8
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:40	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 01:50	6.2
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 04:00	5.0
RBCAA 10-minute Target (4.5ppb)	CBD	14/06/2013 23:20	5.2
RBCAA 10-minute Target (4.5ppb)	CBD	15/06/2013 00:00	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	15/06/2013 00:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	16/06/2013 03:10	5.0



## RBCAA 2013 ANNUAL REPORT

Guideline	Station	Date and Time	Value (ppb)
RBCAA 10-minute Target (4.5ppb)	CBD	16/06/2013 03:20	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	16/06/2013 03:30	6.0
RBCAA 10-minute Target (4.5ppb)	CBD	16/06/2013 03:40	5.4
RBCAA 10-minute Target (4.5ppb)	CBD	16/06/2013 04:10	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	22/06/2013 09:50	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	05/09/2013 07:50	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	05/09/2013 08:00	10.0
RBCAA 10-minute Target (4.5ppb)	CBD	05/09/2013 08:10	8.4
RBCAA 10-minute Target (4.5ppb)	CBD	05/09/2013 08:20	4.6
RBCAA 10-minute Target (4.5ppb)	CBD	18/11/2013 04:50	5.4



# **APPENDIX D**

## **Dispersion simulation inputs**



## DISPERSION SIMULATION INPUTS

### Source Emission Data

Group	SO <sub>2</sub> Emission Rate (g/s)	SO <sub>2</sub> Emission Rate (tpa)
Bayside Aluminium	66.650	2101.9
Foskor	76.134	2401.0
Hillside Aluminium	334.893	10561.2
Tongaat Hulett's	9.990	315.0
Mondi Felixton	25.875	816.0
Mondi Richards Bay	137.529	4337.1
RBM	17.180	541.8
TATA Steel	0.019	0.6
TRONOX	7.968	251.3



# **APPENDIX E**

## **Document Limitations**



## **DOCUMENT LIMITATIONS**

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



# **APPENDIX F**

## **2013 Complaints Log**



## RBCAA 2013 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	2/1/13 8:05	Heideheuvel – Veldenvlei	Lingering Mondi “guava” Odour.	<b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified instability in Recovery Boiler 2 as the source of odour emissions. Peak and Average Concentrations of Emissions and Met Conditions. Compliance with Permits: There was a contravention with Mondi’s existing APPA Registration certificate. The authorities have been informed of such: Root Cause of Incident and Corrective Action Mondi is currently working on addressing the problem within the shortest possible time period. Feedback will be provided to the RBCAA as soon as possible.	Resolved - Mondi Richards Bay
2	R Camminga (0357860076)	2/1/13 9:55	Vicinity of Bayside	Excessive “yellowish” emissions emanating from the southern-most stack at Bayside	<b>BHP Billiton:</b> Shaloshini Naidoo responded:The abnormal emissions is attributed to a downstream blockage in the flue walls. This restriction to flow caused the exhaust manifold to not reach the required temperatures to burn up the volatile matter before it is released from the bake furnace stack. With the current flue wall rebuild project, a sequential replacement of flue walls has begun. This flue wall replacement project will be run over the next 2 years and will gradually improve the process in the bake furnace and ultimately result in a cleaner bake furnace stack. To help mitigate the emissions, we have also increased the frequency at which we service and clean our exhaust manifolds to ensure optimal performance.	Resolved - BHP Billiton (Bayside)
3	Siraj (083 412 8388)	5/1/13 8:19	Richards Bay CBD	Bad Mondi Odour.	<b>Mondi RB:</b> Nadia van der Merwe responded :Source and Nature of Emissions. High TRS emissions from Recovery Boiler 2 stack. Peak and Average Concentrations of Emissions and Met Conditions. Please note that the table below could not be populated due to the RBCAA server being down. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action. The root cause of the incident is high TRS emissions from Recovery Boiler 2. Boiler firing was reduced and the source of the problem was investigated by consulting a specialist overseas team. All TRS emissions are now back in spec.	Resolved - Mondi Richards Bay
4	D Savides (072 392 0511)	6/1/13 13:05	John Ross Highway	Excessive white smoke emanating from Hillside	<b>BHP Billiton:</b> Shaloshini Naidoo responded: There are a number of huge metal slabs remaining from the process recovery. These huge pieces of metal are lanced (cut) into smaller manageable chunks that are recycled into the Casthouse process. Lancing of metal slabs were conducted during 5 and 6 January 2012 therefore white smoke could be seen emanating from Hillside.	Resolved - BHP Billiton (Hillside)
5	Anonymous	10/1/13 7:45	Port & Small Craft Harbour	“We experienced a very pungent smell in the port and small craft harbour this morning.” Described as “Cat Urine” smell.	<b>TNPA:</b> Vumani Ndlovu responded: Upon a visit to Small Craft harbour no bad odour was detectable in the air however the guys interviewed outlined that the bad smell came from the municipal skips yesterday. These skips are emptied into a Municipal waste truck Mondays and Thursdays of every week. <b>Mondi RB:</b> Nadia van der Merwe responded : Due to the wind direction recorded at the time of the complaint, Mondi Richards Bay was not responsible for the odour detected at the Small Craft Harbour this morning. Furthermore, none of our off site monitoring stations recorded any significant TRS and all our emissions were within exceedance limits.	Resolved - Port of Richards Bay (TPT and TNPA)



## RBCAA 2013 ANNUAL REPORT

No.	Complainant	Date and time	Location	Description	Results	Resolution
1	S Camminga (0357860076)	1/2/13 5:00	Heideheuvel – Veldenvlei	Mondi odour causing headache.	<p><b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified fugitive emissions as the source. Peak and Average Concentrations of Emissions and Met Conditions: Compliance with Permits There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action We experienced a mill shut down during the night as a result of a breakdown in our Digester Plant. It is believed that this may have caused fugitive emissions. The root cause of the emissions are being investigated.</p>	Resolved - Mondi Richards Bay
2	R Camminga (0357860076)	1/2/13 5:00	Heideheuvel – Veldenvlei	Mondi odour causing headache.	<p><b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified fugitive emissions as the source. Peak and Average Concentrations of Emissions and Met Conditions: Compliance with Permits There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action We experienced a mill shut down during the night as a result of a breakdown in our Digester Plant. It is believed that this may have caused fugitive emissions. The root cause of the emissions are being investigated.</p>	Resolved - Mondi Richards Bay
3	S Camminga (0357860076)	3/2/13 11:00	CBD and N2	EXCESSIVE emissions emanating from Mondi, being carried as far as the eye could see.	<p><b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Emissions were attributed to Bower Boiler stack upon start up after a mill breakdown. As previously reported to the RBCAA and Authorities, Power Boiler 1 precipitator has prematurely burnt out and the second field cannot cope with the additional load of precipitator ash. After discussions with uThungulu District Municipality and Provincial Department of Environmental Affairs, Mondi is making every attempt to comply with a limit of 170mg/Nm3 until such time as the precipitator can be repaired/replaced. Root Cause of Incident and Corrective Action Power Boiler 1 precipitator has prematurely burnt out and the second field cannot cope with the additional load of precipitator ash.</p>	Resolved - Mondi Richards Bay
4	S Camminga (0357860076)	3/2/13 11:05	N2	Abnormal emissions emanating from the southern-most stack at Bayside.	<p><b>BHP Billiton:</b> Shaloshini Naidoo responded: Under normal conditions, the exhaust manifolds share the same half of the bake furnace for just one fire cycle. Due to a long fire delay the exhaust manifolds on fire 1 and 2 were on the same side of the furnace for longer than usual. This resulted in both exhaust manifolds experiencing low draft. The low draft caused temperatures to fall behind the set-point temperatures and resulted in the release of un-burnt pitch volatiles out the bake furnace stack. To get the fires back into sequence, the fire cycles on the individual fires were adjusted to gradually get them back into the correct spacing.</p>	Resolved - BHP Billiton (Bayside)
5	S Camminga (0357860076)	4/2/13 10:30	Richards Bay CBD	Foskor odour causing burning sensation of the eyes & nose. Foskor was informed at the time.	<p><b>Foskor:</b> Carel du Plessis responded: Source and Nature of Emissions: Even though no upset conditions were reported the odour mostly likely would have been emanating from our sulphur melters. Peak Concentrations of Emissions Peak fenceline SO2 concentration reading was 50.12ppb during this period. Whilst peak SO2</p>	Resolved - Foskor



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>stack reading was on C-plant 275ppm during this period.            All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal.            Compliance with Permit's            There was no contravention in existing permits.            Root Cause of Incident and Corrective Action            Sulphur melter emissions might have contributed to the odour. The low cloud cover would have contributed to possible odour conditions.</p>	
6	R Camminga (0357860076)	5/2/13 9:05	Richards Bay CBD. Boardwalk undercover parking (Hub entrance)	Bad Foskor odour causing burning of the eyes.	<p><b>Foskor:</b> Carel du Plessis responded: Source and Nature of Emissions: Even though no upset conditions were reported the odour mostly likely would have been emanating from our sulphur melters. Peak Concentrations of Emissions            Whilst peak SO2 stack reading was on C-plant 272ppm during this period whilst both A &amp; B plant were operating at reduced rates.            All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal.            Compliance with Permit's            There was no contravention in existing permits.            Root Cause of Incident and Corrective Action            Sulphur melter emissions might have contributed to the odour. Low cloud cover and wind conditions at the time would possibly contributed to the odour.</p>	Resolved - Foskor
7	Anonymous	21/2/2013 0:30	Arboretum Extension	Acrid Burning Odour	<p><b>Foskor:</b> Mannana Ntoampe responded: Acid burning odour is possibly a result of sulfur melters from the sulfuric acid plant. Peak Concentrations of Emissions            Maximum SO2 emissions of 280ppm were recorded for B plant, however, this was still within limits.            All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal.            Compliance with Permit's            There was no contravention in existing permits.            Root Cause of Incident and Corrective Action            Sulfur melter emissions might have contributed to the odour.</p>	Resolved - Foskor
8	Anonymous	21/2/2013 5:00	Arboretum Extension	Acrid Burning Odour	<p><b>Foskor:</b> Mannana Ntoampe responded: Based on wind direction, Foskor does not believe the emissions which resulted in the complaint above originated from Foskor. An hour prior the complaint, the wind direction was towards South East (Hillside) as confirmed by Arboretum weather station data . However the wind direction changed towards Arboretum at 05H00 when the complaint was logged, nonetheless, Arboretum could have not been impacted at the time as it would have taken at least another 20 minutes before the wind reached Arboretum. Peak Concentrations of Emissions            The highest SO2 emissions of 495ppm were recorded during this period, however it should be noted that the emissions were still within limits. All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal.            Compliance with Permit's: There was no contravention in existing permits. Root Cause of</p>	Unresolved



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					<b>Incident and Corrective Action: Emissions from other sources other than Foskor</b>	
9	Liz Savides	22/2/2013 3:00	Arboretum Extension	Acrid odour causing burning of the eyes.	<p><b>Foskor:</b> Mannana Ntoampe responded: Acid odour possibly comes from the sulfuric acid plant. Peak Concentrations of Emissions Whilst peak SO<sub>2</sub> stack reading was on B-plant 272ppm during this period whilst both A &amp; C plant were operating at reduced rates. All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal.</p> <p>Compliance with Permit's There was no contravention in existing permits. Root Cause of Incident and Corrective Action Sulfur melter SO<sub>2</sub> emissions might have contributed to the odour.</p>	Resolved - Foskor
11	Gerhard Bekker	22/2/2013 2:00	Arboretum	My daughter ,age 3, could not breathe last night at 2:00. We live in Arboretum. Our friends live in Meerensee and their 5 month old boy also could not breathe at about 1:30. This is getting seriously out of hand?	<p><b>Mondi RB:</b> Candice Webb responded : Based on wind direction, Mondi does not believe the emissions which resulted in the complaint below originated from Mondi.: <b>Foskor:</b> Mannana Ntoampe responded: An hour before the complaint was logged, the wind direction was blowing from the airport towards Arboretum, which could have possibly impacted Arboretum at 02h00 when the complaint was logged. At 01h30 however, the wind was in Arboretum as confirmed by Arboretum weather station data and could not have impacted Meerensee. It is therefore unlikely that Foskor impacted Meerensee at 01h30. Peak and Average Concentrations of Emissions and Met Conditions Peak Concentrations of Emissions Maximum SO<sub>2</sub> emissions of 446ppm were recorded for B plant, however, this was still within limits. All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal. Compliance with Permit's There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Sulphur melter emissions might have contributed to the problem in Arboretum</p>	Resolved - Foskor
11	D Savides	22/2/2013 7:00	Vicinity of Civic Center	Black Plume emanating from Mondi extending towards Richards Bay	<p><b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Emissions were attributed to Power Boiler stack. Peak and Average Ambient Concentrations of Emissions and Met Conditions. Root Cause of Incident and Corrective Action: Peak Concentrations of Emissions Maximum SO<sub>2</sub> emissions of 446ppm were recorded for B plant, however, this was still within limits. All other plant conditions for the Phosphoric Acid plant and Granulation plants respectively were normal. Compliance with Permit's There was no contravention in existing permits. Root Cause of Incident and Corrective Action. Sulphur melter emissions might have contributed to the problem in Arboretum : The Power Boiler ash conveyor tripped which in turn tripped the boiler precipitator fields. Mondi is currently investigating preventative measures.</p>	Resolved - Mondi Richards Bay
12	S Camminga (0357860076)	22/2/2013 15:30	John Ross Highway	Foskor Granulation Stack emission very bad .	<p><b>Foskor:</b> Mannana Ntoampe responded: At the time of the complaint, the plant was offline with the scrubber system still running. The process personnel were cleaning the feed system</p>	Resolved - Foskor



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					and granulator in preparation to change over from one product (Mono-Ammonium Phosphate) to another (MAP sulphur zinc). This resulted in a more visible stack emission and not the raw material composition as previously stated.	
1	S Camminga (0357860076)	14/3/2013 15:00	John Ross Highway	Excessive emissions emanating from southern most stack at Bayside.	<b>BHP Billiton: Tessa Stoltz</b> responded: We have investigated the complaint dated 14 March at 15h00 relating to excessive emissions from Bayside ESP, and found that at the time, the opacities were below the threshold indicating that clear waste gas was exiting the ESP stack. There were no visible emissions evident. As always we are committed to identifying the root causes, and addressing the issues. In this case we were unable to ascertain the root cause. Is there any chance that the emissions that you observed, be from another source?	BHP Bayside
2	S Camminga (0357860076)	15/3/2013 05:30	Heideheuwel – Veldenvlei	PUNGENT Mondi "guava" odour causing nausea.	<b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified an overflow of secondary condensate to drain which resulted in odour from the effluent plant. Peak and Average 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 overflow was caused when Stripper "C" was shut down in order to get sufficient isolation to address a jammed liquor transfer valve. This was a necessary precaution from a safety point of view. The responsible Business Unit has been tasked with identifying any preventative actions which could have been taken. These will be presented and discussed at the next Odour Abatement Task Team Meeting.	Resolved - Mondi Richards Bay
3	R Camminga (0357860076)	15/3/2013 05:30	Heideheuwel – Veldenvlei	PUNGENT Mondi "guava" odour causing nausea.		Resolved - Mondi Richards Bay
4	K Camminga (0357860076)	15/3/2013 05:30	Heideheuwel – Veldenvlei	PUNGENT Mondi "guava" odour causing nausea.		Resolved - Mondi Richards Bay
5	Emmanuel (082 578 1560)	23/3/2013 11:20	Esikhaleni	Significant dust from Tronox operations at Hillendale.	<b>Tronox:</b> Fekile Ngidi responded: According to weather data on the 23 March 2013, winds up to 37km/hr were experienced from the morning till midday. The predominant wind direction during this period was from a north easterly direction meaning that it blew from an open mine pit towards the community. However, there was no activity taking place there at the time. Backfilling has already begun in this area to speed up the rehabilitation process. Tronox has also now initiated a dust committee to address dust issues by means of researching and testing various methods of dust suppression. Telephonically response was given to Mr. Emmanuel on Tuesday (2013/03/26) by Cyril Magwaza where he was informed that investigation was being carried out and he will be informed about the outcome of the investigation. Fekile Ngidi gave Mr. Emmanuel a call today (28/03/2013) and gave him full feedback on his complaint, and he indicated satisfaction with the explanation given.	Resolved - Tronox
1	R Camminga (0357860076)	16/4/2013 16:30	John Ross Highway	Pungent Mondi "guava" odour.	<b>Mondi RB:</b> Candice Webb responded :Source and Nature of Emissions: Mondi has identified and NCG vent as the source of the odour: Peak and Average Concentrations of Emissions and Met Conditions :Compliance with Permits: There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action A non return valve on a CPX pump jammed, resulting in pressurised NCG gases. The gases passed through the Carbon Filter and then vented to atmosphere. The jammed valve was addressed immediately, however an incident has been logged for further investigation.	Resolved - Mondi Richards Bay
2	Anonymous	23/4/2013 08:00	Port of Richards Bay	Excessive black dust being generated at berth 703. Unable to reach TPT telephonically.	<b>Transnet Port Terminals:</b> Siraj Paruk responded. Chloride was being loaded at berth 703 at the time of the compliant. In an attempt to address the issue identified, please be advised that	Resolved - Port of



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No.	Complainant	Date and time	Location	Description	Results	Resolution
				TNPA telephonically informed.	TPT has appointed WSP Environmental to thoroughly assess the generation of dust during the loading of vessels at the bulk loading section of Richards Bay terminal and identify suitable and effective solutions to suppress dust during loading of vessels. The appointed service provider is required to establish the major factors contributing to the generation of dust and provide comprehensive information on effective solutions for suppressing dust both for water sensitive commodities as well as those which are not water sensitive. The service will review international best practice when developing solutions.	Richards Bay (TPT and TNPA)
3	S Camminga (0357860076)	23/4/2013 12:24	Lakeside parking area	Foskor odour.	<b>Foskor:</b> Mannana Ntoampe responded: An hour prior the complaint, the wind was blowing towards the airport. At the time the complaint was logged, the wind was blowing towards CBD which could have resulted in the odour reported at Lakeside parking area. Peak Concentrations of Emissions .The highest SO2 emissions of 425ppm were recorded during this period on B-plant, however these emissions were still within limits. It should also be noted that at the time of the complaint, the SO2 emission reading of -0.1 ppb was recorded, indicating that at time the complaint was logged, the SO2 level was almost zero in Arboretum. This was confirmed by Foskor SO2 hand monitor reading of -0.2 at Lakeside parking area that was recorded 15 min after the complaint was logged. No odour could be detected at the time the readings were taken.The Sulphuric C-plant is still on annual shut since the 13th of April whilst Sulphuric A-plant was offline at the time of the complaint as indicated in Table above. The Phosphoric acid New plant is also in annual shut whilst the Phosphoric Acid Old plant and Granulation plants respectively were normal with no upset conditions reported. Compliance with Permits There was no contravention in existing permits. Root Cause of Incident and Corrective Action Based on wind direction alone Foskor would have impacted on the area however no specific source at Foskor could be identified to cause odour.	Resolved - Foskor
4	Lindiwe Buthelezi 035 797 9614	24/4/2013 07:00	Port of Richards Bay	Stinking smell causing headache	<b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions:Mondi has identified the effluent plant as the source of the odour. Peak and Average Concentrations of Emissions and Met Conditions. Compliance with Permits There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action It is expected that secondary condensate which was overflowed to drain as a result of a tank inspection together with low effluent plant pH resulted in odours emissions being released from the effluent plant.	Resolved - Mondi Richards Bay
5	Cyril Bhengu 035 907 9002	24/4/2013 07:22	City of uMhlatuze	Mondi stinking smell		Resolved - Mondi Richards Bay
6	D Savides & Staff 035-7898557	24/4/2013 07:30	Zululand Observer Offices Richards Bay & CBD	PUNGENT Mondi odour.		Resolved - Mondi Richards Bay
7	Nonjabulo Thwala 035 907 5320	24/4/2013 07:51	Richards Bay area	I am very concerned about the air pollution experienced in the Richards Bay area,I am seriously affected as my sinus is very bad and my eyes are watery. This is serious and there are no medications that can help in this case because its the air around me that is polluted.I have very bad symptoms,headache,running nose and continuous sneezing.This is affecting the ability for me to do my work.		Resolved - Mondi Richards Bay



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No.	Complainant	Date and time	Location	Description	Results	Resolution
				Please do something about this matter. This situation is seriously affecting my health and those around me.		
8	S Camminga (0357860076)	24/4/2013 08:45	Heideheuvel-Veldenvlei	Nauseating Mondi odour.	<b>Mondi RB:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified the effluent plant as the source of the odour. Peak and Average Concentrations of Emissions and Met Conditions. Compliance with Permits There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action It is expected that secondary condensate which was overflowed to drain as a result of a tank inspection together with low effluent plant pH resulted in odours emissions being released from the effluent plant.	Resolved - Mondi Richards Bay
9	Calla Esterhuizen	24/4/2013 09:28	City of uMhlathuze	I want to complain about the terrible smell in the municipal car park and even in my office this morning. It has not been so bad for some time but really bad this morning.		Resolved - Mondi Richards Bay
10	Gugu Gazu	26/4/2013 06:50	Near Foskor	South SO2 stack emitting black emissions at about 6:50.	<b>Foskor: Carel du Plessis</b> responded: The Sulphuric C-plant was still in shutdown at the time. The emissions from the stacks is sometimes misleading depending on angle you are looking from and other factors such as cloud cover, reflection of sunlight, etc. However operations based on measured stack emissions was normal on the sulphuric A & B plant as per the below table.	Foskor
1	T Stoltz 083 272 4156	1/5/2013 00:00	Ocean Rest 3, Olienhoutkoppie, Arboretum	VERY BAD sewage odour for the past month. So bad some days that Ms Stoltz can't sit out in her garden.	<b>uMhlathuze Municipality 2/5/2013</b> Gugu Gazy responded : Work is done 1st MAY sewage is an blocked .	Resolved - uMhlathuze Municipality
2	C Page 079 038 5399	6/5/2013 00:00	Honeysuckle Veldenvlei			Resolved - uMhlathuze Municipality
3	E Van Der Spuy	6/5/2013 00:00	Honeysuckle Veldenvlei	Residents complaining of pungent sewage odour caused by overflow of pump station into stream bordering onto their properties. The odour is apparently also detectable on East Central Arterial.	<b>uMhlathuze Municipality 14/5/2013</b> M.V Nhleko responded : I had my guys walking up the line. At this stage there are not sewer overflows that have been detected on the line. Spills due to incidents at the pump station led to the unlocalized pollution towards the backyards of the residents. Its suspected that the cleaning by the residents along the river bed has inclined much of the river flow to the backyards. So a problem identified at this stage is a geographical elevation problem. At this stage im tasking my guys to clear the bush at the other end of the bush and dig a trench that would revert the deposits to the other side of the river bank and dispose at the downstream of the river. I will advise by tomorrow when the guys will do the job. Urgent attention is rendered with regards to this matter.	Resolved - uMhlathuze Municipality
4	S Van Schalkwyk	6/5/2013 00:00	Honeysuckle Veldenvlei			Resolved - uMhlathuze Municipality
5	C Van der Spuy	6/5/2013 00:00	Honeysuckle Veldenvlei			Resolved - uMhlathuze Municipality
6	Derek	6/5/2013 00:00	Honeysuckle Veldenvlei	Residents complaining of pungent sewage odour caused by overflow of pump station into stream bordering onto their properties. The odour is apparently also detectable on East Central Arterial.	<b>uMhlathuze Municipality 14/5/2013</b> M.V Nhleko responded : I had my guys walking up the line. At this stage there are not sewer overflows that have been detected on the line. Spills due to incidents at the pump station led to the unlocalized pollution towards the backyards of the residents. Its suspected that the cleaning by the residents along the river bed has inclined much of the river flow to the backyards. So a problem identified at this stage is a geographical elevation problem. At this stage im tasking my guys to clear the bush at the other end of the bush and dig a trench that would revert the deposits to the other side of the river bank and dispose at the downstream of the river. I will advise by tomorrow when the guys will do the job. Urgent attention is rendered with regards to this matter.	Resolved - uMhlathuze Municipality



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No.	Complainant	Date and time	Location	Description	Results	Resolution
7	Tina	6/5/2013 00:00	Honeysuckle Veldenvlei	Residents complaining of pungent sewage odour caused by overflow of pump station into stream bordering onto their properties. The odour is apparently also detectable on East Central Arterial.	<b>uMhlathuze Municipality 14/5/2013</b> M.V Nhleko responded : I had my guys walking up the line. At this stage there are not sewer overflows that have been detected on the line. Spills due to incidents at the pump station led to the unlocalized pollution towards the backyards of the residents. Its suspected that the cleaning by the residents along the river bed has inclined much of the river flow to the backyards. So a problem identified at this stage is a geographical elevation problem. At this stage im tasking my guys to clear the bush at the other end of the bush and dig a trench that would revert the deposits to the other side of the river bank and dispose at the downstream of the river. I will advise by tomorrow when the guys will do the job. Urgent attention is rendered with regards to this matter.	Resolved - uMhlathuze Municipality
8	D Kelly	6/5/2013 00:00	Honeysuckle Veldenvlei			Resolved - uMhlathuze Municipality
9	T Kelly	6/5/2013 00:00	Honeysuckle Veldenvlei			Resolved - uMhlathuze Municipality
10	L Wood 083 441 3666	6/5/2013 17:30	Richards Bay Yacht Club	Black plume across the skyline which appears to have originated from the Foskor/Hillside area.	<b>Foskor 15/5/2013</b> : Mannana Ntoampe responded: An investigation was conducted and the black plume did not originate from Foskor as seen on the 6th May at 17h30 and source is unknown. Foskor operations were normal and SO2 monitoring results recorded the day the complaint was logged are shown below. Peak Concentrations of Emissions: The highest SO2 emissions of 416ppm were recorded during this period on B-plant, however these emissions were still within limits. All the other plants conditions (Phosphoric and granulation plants) were normal. Compliance with Permit's: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Other sources should be investigated.	Unresolved
11	Marge 082 806 9029	8/5/2013 09:00	Felixton	Heavy smuts fallout	<b>Mpact 10/5/2013</b> Siyabonga Buthelezi responded: During the period of complaint (8th May -09h00) we had a total shut and all our boilers were offline for clean-ups. The Boiler House foreman confirmed that the first boiler start-up was 13H00. Besides our boilers cannot be associated with heavy smuts fall out as they are coal fired boilers not bagasse. Only Dark smoke emissions are possible during start-ups. Based on the above Mpact Felixton was unlikely the source of the complaint "Marge 082 806 9029, Felixton, 8th May, 09h00, heavy smuts fallout".	Sugar cane burning
12	T Stoltz 083 272 4156	8/5/2013 17:00	Ocean Rest 3, Olienhoutkoppie, Arboretum	Sewage odour has returned. The RBCAA yesterday informed the Municipality of the complaint.	<b>uMhlathuze Municipality 27/5/2013</b> Gugu Gazu responded: . A follow-up to this complaint was made. As per Mr Pikkie van Zyl, kindly note that it is well attended to as the new pump will be replaced	Resolved - uMhlathuze Municipality
13	Anonymous	9/5/2013 07:20	N2 between Felixton and Engen Garage	Nauseating sewerage odour. The Municipality is kindly requested to investigate.		Unresolved
14	S Camminga (0357860076)	9/5/2013 14:03	Richards Bay Area	I wish to log a complaint with the Municipality regarding poor air quality in Richards Bay.Since early this morning (Thursday 89th May) there has been a smoke haze accompanied by a strong offensive burning odour. It has got progressively worse	<b>Zululand Fire Protection Association 21/5/2013</b> : Tony Roberts responded: During days that are conducive to good safe burns, such as in this last week in particular, the burning of brush from timber plantations is allowed. However due to the good conditions there are many companies making use of the ideal weather conditions to fit in and complete burns within the	Resolved - Controlled burns



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No.	Complainant	Date and time	Location	Description	Results	Resolution
				and is causing irritation of the eyes, nose, throat and chest. Please can this be investigated.	next three weeks whereafter no-one will be allowed to burn. The official Fire Season gets underway on the 1st June and burning will be allowed up until the second week. The winds have been a low 9kms/hour on a North wind so the smoke will hang over the area for a bit longer than normal. Should this burning not be allowed, it means all companies using this practice will carry a high fuel load into Fire Season which could result in catastrophic events. We often try and use a South wind but all these winds have been at high speed or associated with rain. It has therefore been challenging to compromise in this manner. Please accept the complaints and refer to this email to inform complainants that it will not be too much longer before the burning of brush will be disallowed.	
15	S Camminga (0357860076)	10/5/2013 18:30	Heideheuvel – Veldenvlei	Burning tar-like odour, leaving a taste in the mouth. This type of odour has in the past been identified with process upsets at Hillside.	<p><b>BHP Billiton 16/5/2013:</b> Shaloshini Naidoo responded: The paste plants were operating within spec on both the 10th and 11th of May. Give the calmer wind speeds and status of the paste plants, Hillside operations may not have contributed to the tar-like odour. Please be advised that sections of the John Ross from the East Central Arterial intersection down to the Alton traffic lights have been undergoing tarring.</p> <p><b>RBCAA 4/6/2013</b> Sandy Camminga responded: What Hillside failed to mention in their investigation feed-back to the RBCAA was that FTC1 was in bypass during the evening of the 10th and again on the morning of the 11th. I find it highly unlikely that tar being applied at ground level on the John Ross would be detectable 5.5 kms away. If that were the case then individuals in closer proximity would surely have been severely affected. The wind direction and low wind speeds, together with the FTC bypasses would indicate Hillside as the source. In view of the above Hillside is respectfully requested to re-investigate these complaints.</p> <p><b>BHP Billiton 4/6/2013 :</b> Shaloshini Naidoo responded: We will re-investigate the complaints.</p>	Peat fire
16	K Camminga (0357860076)	10/5/2013 18:30	Heideheuvel – Veldenvlei	Burning tar-like odour, leaving a taste in the mouth. This type of odour has in the past been identified with process upsets at Hillside.	<p><b>BHP Billiton 16/5/2013:</b> Shaloshini Naidoo responded: The paste plants were operating within spec on both the 10th and 11th of May. Give the calmer wind speeds and status of the paste plants, Hillside operations may not have contributed to the tar-like odour. Please be advised that sections of the John Ross from the East Central Arterial intersection down to the Alton traffic lights have been undergoing tarring.</p> <p><b>RBCAA 4/6/2013</b> Sandy Camminga responded: What Hillside failed to mention in their investigation feed-back to the RBCAA was that FTC1 was in bypass during the evening of the 10th and again on the morning of the 11th. I find it highly unlikely that tar being applied at ground level on the John Ross would be detectable 5.5 kms away. If that were the case then individuals in closer proximity would surely have been severely affected. The wind direction and low wind speeds, together with the FTC bypasses would indicate Hillside as the source. In view of the above Hillside is respectfully requested to re-investigate these complaints.</p> <p><b>BHP Billiton 4/6/2013 :</b> Shaloshini Naidoo responded: We will re-investigate the complaints.</p> <p><b>BHP Billiton 6/6/2013 :</b> Shaloshini Naidoo responded: On 10 May, FTC 1 was on bypass from 16h51 to 20h32 due to a faulty limit switch on the bypass damper on the damper box. The prevailing wind direction on that day was a WSW, therefore it is possible that Hillside could have contributed to the</p>	Peat fire



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>odour. On 11 May, FTC 1 went into bypass mode again from 08h10 to 10h09, due to the same reason as above.</p> <p>The prevailing wind direction on that day was a SSE, therefore it can be concluded that Hillside could not have contributed to the odour. On both days, the paste plants were operating within spec.</p>	
17	S Camminga (0357860076)	11/5/2013 12:00	Heideheuvel – Veldenvlei	Very pungent burning tar-like odour, leaving a taste in the mouth. This type of odour has in the past been identified with process upsets at Hillside.	<p><b>BHP Billiton 16/5/2013:</b> Shaloshini Naidoo responded: The paste plants were operating within spec on both the 10th and 11th of May. Give the calmer wind speeds and status of the paste plants, Hillside operations may not have contributed to the tar-like odour. Please be advised that sections of the John Ross from the East Central Arterial intersection down to the Alton traffic lights have been undergoing tarring.</p> <p><b>RBCAA 4/6/2013</b> Sandy Camminga responded: What Hillside failed to mention in their investigation feed-back to the RBCAA was that FTC1 was in bypass during the evening of the 10th and again on the morning of the 11th.</p> <p>I find it highly unlikely that tar being applied at ground level on the John Ross would be detectable 5.5 kms away.</p> <p>If that were the case then individuals in closer proximity would surely have been severely affected. The wind direction and low wind speeds, together with the FTC bypasses would indicate Hillside as the source. In view of the above Hillside is respectfully requested to re-investigate these complaints.</p> <p><b>BHP Billiton 4/6/2013 :</b> Shaloshini Naidoo responded: We will re-investigate the complaints. <b>BHP Billiton 6/6/2013 :</b> Shaloshini Naidoo responded: On 10 May, FTC 1 was on bypass from 16h51 to 20h32 due to a faulty limit switch on the bypass damper on the damper box. The prevailing wind direction on that day was a WSW, therefore it is possible that Hillside could have contributed to the odour. On 11 May, FTC 1 went into bypass mode again from 08h10 to 10h09, due to the same reason as above.</p> <p>The prevailing wind direction on that day was a SSE, therefore it can be concluded that Hillside could not have contributed to the odour. On both days, the paste plants were operating within spec.</p>	Peat fire
18	Carol Page 035-786 1846	12/5/2013 13:07	49 Honeysuckle	The RBCAA has received the following complaints from residents regarding an offensive odour emanating from the stream behind Honeysuckle as a result of sewage contamination. The complainants claim that there was definitely more sewage entering the stream on Sunday. They report a rise in water level which has now turned black again, accompanied by a terrible smell.	<p><b>uMhlathuze Municipality 14/5/2013</b> M.V Nhleko responded : I had my guys walking up the line. At this stage there are not sewer overflows that have been detected on the line. Spills due to incidents at the pump station led to the unlocalized pollution towards the backyards of the residents. Its suspected that the cleaning by the residents along the river bed has inclined much of the river flow to the backyards. So a problem identified at this stage is a geographical elevation problem. At this stage im tasking my guys to clear the bush at the other end of the bush and dig a trench that would revert the deposits to the other side of the river bank and dispose at the downstream of the river. I will advise by tomorrow when the guys will do the job. Urgent attention is rendered with regards to this matter.</p>	Resolved - uMhlathuze Municipality
19	Mr van Schalkwyk 0832299258	12/5/2013 13:07	47 Honeysuckle			Resolved - uMhlathuze Municipality
20	Mr Hooper	12/5/2013 13:07	51 Honeysuckle			Resolved - uMhlathuze Municipality
21	S Camminga (0357860076)	17/5/2013 09:15	Heideheuvel – Veldenvlei	Nauseating Mondi odour.	<p><b>Mondi RB 20/5/2013:</b> Candice Webb responded : Source and Nature of Emissions: Mondi has identified upsets plant conditions as the source of odour.</p> <p>Peak and Average Concentrations of Emissions and Met Conditions: Compliance with Permits</p>	Resolved - Mondi Richards Bay



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					There was no contravention with Mondi's permits. Root Cause of Incident and Corrective Action The mill experienced an internal power outage which resulted in venting of NCG gases to atmosphere. All gases passed through carbon filters before venting to atmosphere.	
22	S Camminga (0357860076)	21/5/2013 00:00	Heideheuvel – Veldenvlei	POOR AIR QUALITY: Bush\Forest Fire. We have been subjected to poor air quality in Richards Bay as a result of a bush\forest fire to the north. It really has been horrific with smoke stretching along the skyline as far as the eye could see. We woke up to smoke this morning, and it has continued throughout the day causing extreme discomfort.	<p><b>Zululand Fire Protection Association 21/5/2013</b> : Tony Roberts responded: During days that are conducive to good safe burns, such as in this last week in particular, the burning of brush from timber plantations is allowed. However due to the good conditions there are many companies making use of the ideal weather conditions to fit in and complete burns within the next three weeks whereafter no-one will be allowed to burn. The official Fire Season gets underway on the 1st June and burning will be allowed up until the second week. The winds have been a low 9kms/hour on a North wind so the smoke will hang over the area for a bit longer than normal. Should this burning not be allowed, it means all companies using this practice will carry a high fuel load into Fire Season which could result in catastrophic events. We often try and use a South wind but all these winds have been at high speed or associated with rain. It has therefore been challenging to compromise in this manner. Please accept the complaints and refer to this email to inform complainants that it will not be too much longer before the burning of brush will be disallowed.</p>	Resolved - Controlled burns
23	Mr Esterhuizen 035-789 3571	20/5/2013 00:00 to 21/5/2013 11:45	Mkhulu Crescent – Arboretum	Smoke accompanied by and offensive smell, not just a bush fire smell, also a smell of burning plastic.		Resolved - Controlled burns
24	Mrs Esterhuizen 035-789 3571	20/5/2013 00:00 to 21/5/2013 11:45	Mkhulu Crescent – Arboretum	Smoke accompanied by and offensive smell, not just a bush fire smell, also a smell of burning plastic.		Resolved - Controlled burns
25	S Camminga (0357860076)	23/5/2013 00:00	Heideheuvel – Veldenvlei	We have once again woken up to a smoke haze and pungent bush\forest fire smell which is causing severe irritation of the nose, throat and chest. I reported to you the same thing on the 21st May, to which I have not had a response. We have been subjected to this the better part of this week. Has the Municipality been in contact with ZFPS to establish the source? If these are uncontrolled fires then something needs to be done to extinguish them. If this is as a result of controlled burns then they need to be stopped because this is affecting our health.		Resolved - Controlled burns
26	Pam Scoffield 035-786 0631	23/5/2013 00:00 and for past week.	Disa Dives – Veldenvlei	Smoke and pungent wood burning odour which is very acrid, causing sinus headache.		Resolved - Controlled burns
27	Rob Scoffield 035-786 0631	23/5/2013 00:00 and for past week.	Disa Dives – Veldenvlei		Resolved - Controlled burns	
28	D Savides	21/5/2013 00:00 to 23/5/2013	Cassia Close - Arboretum Ext	Offensive smoke and odour causing nasal congestion and sinus headache.	Resolved - Controlled burns	



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No.	Complainant	Date and time	Location	Description	Results	Resolution
29	L Savides	21/5/2013 00:00 to 23/5/2013	Cassia Close - Arboretum Ext	Offensive smoke and odour causing nasal congestion and sinus headache.	<p><b>Zululand Fire Protection Association 21/5/2013</b> : Tony Roberts responded: During days that are conducive to good safe burns, such as in this last week in particular, the burning of brush from timber plantations is allowed. However due to the good conditions there are many companies making use of the ideal weather conditions to fit in and complete burns within the next three weeks whereafter no-one will be allowed to burn. The official Fire Season gets underway on the 1st June and burning will be allowed up until the second week. The winds have been a low 9kms/hour on a North wind so the smoke will hang over the area for a bit longer than normal. Should this burning not be allowed, it means all companies using this practice will carry a high fuel load into Fire Season which could result in catastrophic events. We often try and use a South wind but all these winds have been at high speed or associated with rain. It has therefore been challenging to compromise in this manner. Please accept the complaints and refer to this email to inform complainants that it will not be too much longer before the burning of brush will be disallowed.</p>	Resolved - Controlled burns
30	Piet Calitz	23/5/2013 and past few days.	Arboretum	Over the past few days severe smoke causing respiratory irritation. Daughter had to use asthma pump.		Resolved - Controlled burns
31	Louise Calitz	23/5/2013 and past few days.	Arboretum	Over the past few days severe smoke causing respiratory irritation. Daughter had to use asthma pump.		Resolved - Controlled burns
32	Manette & Gary Knight	23/5/2013 and past few days.	Arboretum	Over the past few days severe smoke causing respiratory irritation. Daughter had to use asthma pump.		Resolved - Controlled burns
33	Gary Knight	23/5/2013 and past few days.	Arboretum	Over the past few days severe smoke causing respiratory irritation. Daughter had to use asthma pump.		Resolved - Controlled burns
1	Olga 035-786 0343	4/6/2013 07:00	Geranium Place – Veldenvlei	“Smoke and a very bad odour affecting our health”	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality’s Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p><b>RESOLUTION:</b> Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. <b>PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS.</b>In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze</p>	Resolved - Peat Fire
2	S Camminga (0357860076)	4/6/2013 07:00	Heideheuwel – Veldenvlei	Smoke and pungent nauseating burning rubber odour, causing headache an irritation of the nose and throat. The smell is so bad that we have had to close doors and windows. For information I have spoken with Mr Roberts (ZFPA) who have confirmed that there is currently no burning taking place. The “burning rubber” smell which has been the cause of a significant number of complaints over the past few weeks, is obviously not from forest burns. The Municipality needs to take urgent action to identify the source.		Resolved - Peat Fire
3	A Breedt	4/6/2013 07:00	Heideheuwel – Veldenvlei	Smoke and pungent nauseating burning rubber odour, causing headache an irritation of the nose and throat. The smell is so bad that we have had to close doors and windows. For information I have spoken with Mr Roberts (ZFPA) who have confirmed that there is currently no burning taking place. The “burning rubber” smell which has been the cause of a significant number of complaints over the past few weeks, is obviously not from forest burns. The Municipality needs to take urgent action to identify the source.		Resolved - Peat Fire



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No.	Complainant	Date and time	Location	Description	Results	Resolution
4	Olga Queen (035-7860343)	10/6/2013 19:30	27 Geranium Place – Veldenvlei	“Burning rubber” smell. Present almost every evening for the past couple of weeks.	<p>Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past.</p> <p>We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.</p>	Resolved Peat Fire
	Jimmy Queen (035-7860343)	10/6/2013 19:30	27 Geranium Place – Veldenvlei	“Burning rubber” smell. Present almost every evening for the past couple of weeks.	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality’s Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p>RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS.In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past.</p>	Resolved - Peat Fire



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.	
6	Rowan 035-789 1402	10/6/2013 17:30 onwards	5 Bokbaaivygie, Veldenvlei	Really bad burning plastic\rubber smell causing headache	<b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency. <b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell. RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS.In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past. We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.	Resolved - Peat Fire
7	Rowan 035-789 1402	11/6/2013 05:00	5 Bokbaaivygie, Veldenvlei	Really bad burning plastic\rubber smell causing headache	<b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency. <b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell. RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS.In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past. We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.	Resolved - Peat Fire
8	S Camminga (0357860076)	11/6/2013 16:45	Bayside	Excessive emissions emanating from Bayside. Reported to BHP at the time.	<b>BHP Billiton 21/6/2013:</b> Tessa Stoltz responded: For the past 4 weeks, ESP1 has been on shutdown for the 6 monthly maintenance and cleaning program. The high pressure cleaning of the electrodes, collector plates and structure has been complete and the program is currently at the maintenance phase. When complete with ESP 1, the program will resume for the ESP2. These activities are scheduled for completion by mid August and a formal notification will be sent to external stakeholders.	Resolved - BHP Billiton (Bayside)



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					During the maintenance and cleaning program, the waste gas system will not functioning at its optimum.	
9	Rowan 035-789 1402	12/6/2013 18:58	5 Bokbaavivgie, Veldenvlei	This smoke is REALLY GETTING OUT OF HAND!!!!!! Our eyes are actually burning....." Accompanied by a pungent "burning rubber" smell.	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p>RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS. In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past. We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.</p>	Resolved - Peat Fire
10	S Camminga (0357860076)	12/6/2013 19:00	33 Heideheuvel, Veldenvlei	Offensive "burning rubber" smell causing headache.		Resolved - Peat Fire
11	R Camminga (0357860076)	12/6/2013 19:00	33 Heideheuvel, Veldenvlei	Offensive "burning rubber" smell causing headache.		Resolved - Peat Fire
12	K Camminga (0357860076)	12/6/2013 19:00	33 Heideheuvel, Veldenvlei	Offensive "burning rubber" smell causing headache.		Resolved - Peat Fire
13	Michelle 073 265 7546	12/6/2013 19:28	5 Bokbaavivgie, Veldenvlei	For over a month now there has been a disgusting smoke smell every morning & evening wind or no wind in Veldenvlei.	Resolved - Peat Fire	
14	Natasha Rathipal	12/6/2013 20:00	Arboretum Ext (area opposite Boardwalk)	"On Wednesday night, the acid content in the air in Arboretum ext (area opposite Boardwalk) was very strong, it could even be tasted on your tongue when breathing in. I am Highly concerned as i have a small child and am worried about the effect this will have on her." "It was at about 8 in the evening, we came home from the mall, when I got of my car I immediately got a burning sensation in my eyes and when I	<p><b>Foskor 18/6/2013</b> : Mannana Ntoampe responded: An hour prior the complaint, the wind was blowing in the West South West direction towards Arboretum, however, 5 minutes after that, the wind changed direction towards the Harbour until the time the complaint was logged. Based on the wind direction, Foskor could not have been responsible for the burning eye sensation felt in Arboretum at 20h00. Peak Concentrations of Emissions: The highest SO2 emission of 370 ppm was recorded for the B-Plant during this period, however, this was still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were</p>	Unresolved



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No.	Complainant	Date and time	Location	Description	Results	Resolution
				spoke to my hubby I got a sensation on my tongue, there was a fine haze of mist in the Air. It scared me so I went indoors immediately"	normal. Compliance with Permits: There was no contravention in existing permits. Root Cause of Incident and Corrective Action: Based on wind direction, Foskor could not have contributed to the burning eye sensation. Other sources must be investigated.	
15	Anonymous	12/6/2013 20:30	Arboretum Ext (Boardwalk)	"When I was outside the boardwalk yesterday evening at 20:30 the air was extremely bad. There was a blanket of smoke over the area and it actually made me feel extremely faint. Bad odour as well"		Unresolved
16	S Camminga (0357860076)	13/6/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT "burning rubber" smell and smoke causing headache and irritation of the eyes, nose & throat.	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Widenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p>RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS. In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past.</p> <p>We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.</p>	Resolved - Peat Fire
17	R Camminga (0357860076)	13/6/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT "burning rubber" smell and smoke causing headache and irritation of the eyes, nose & throat.		Resolved - Peat Fire
18	K Camminga (0357860076)	13/6/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT "burning rubber" smell and smoke causing headache and irritation of the eyes, nose & throat.		Resolved - Peat Fire
19	S Camminga (0357860076)	13/6/2013 08:55	33 Heideheuvel, Veldenvlei	Severe smoke and PUNGENT "burning rubber" smell causing headache and irritation of the eyes, nose & throat. I have to keep my house closed up and still the stench permeates my home. We have been subjected to this insufferable stench and smoke on and off for the past 4-6 weeks. Something needs to be done about the POOR AIR QUALITY - Our health is being affected!!!		Resolved - Peat Fire
20	Jimmy Queen, 035-786 0343	13/6/2013 19:00	27 Geranium Place, Veldenvlei	Severe smoke and pungent "burning rubber" odour causing coughing. We have experienced this almost every evening and into the night for the past several weeks.		Resolved - Peat Fire
21	Debbie Slater, 083 235 5361	13/6/2013 19:18	Geranium Place – Veldenvlei	"Bad Chemical smell almost daily in Veldenvlei. I have severe asthma and have been hospitalised recently due to collapsed lung".	Resolved – peat fire	
22	Rowan 082 337 4474	13/6/2013 19:18	BokbaaiVygie – Veldenvlei	"Same again tonight, very strong burning rubber smell" causing burning eyes	Resolved - Peat Fire	



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No.	Complainant	Date and time	Location	Description	Results	Resolution
23	S Camminga (0357860076)	13/6/2013 21:30	33 Heideheuvel, Veldenvlei	POOR AIR QUALITY - Severe Smoke and Pungent "Burning Rubber" Odour. My family and I once again find ourselves subjected to severe smoke accompanied by a PUNGENT "Burning Rubber" odour. We were forced to flee indoors because we literally could not breathe. We are all suffering with headaches and nausea as a result. Despite barricading ourselves indoors the odour is so intense that it still permeates our home. It was so bad that I called the fire department at 21h50 to intervene. Needless to say I have received no feedback. We are literally suffocating in our home!!!! Despite numerous complaints, I have yet to receive a response from the Municipality's Air Quality Management Unit.	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p><b>RESOLUTION:</b> Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. <b>PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS.</b>In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past.</p> <p>We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.</p>	Resolved - Peat Fire
24	S Camminga (0357860076)	14/6/2013 11:00	Bayside	Excessive emissions emanating from Bayside. (see attached photo)	<p><b>BHP Billiton 21/6/2013:</b> Tessa Stoltz responded: For the past 4 weeks, ESP1 has been on shutdown for the 6 monthly maintenance and cleaning program. The high pressure cleaning of the electrodes, collector plates and structure has been complete and the program is currently at the maintenance phase. When complete with ESP 1, the program will resume for the ESP2. These activities are scheduled for completion by mid August and a formal notification will be sent to external stakeholders. During the maintenance and cleaning program, the waste gas system will not functioning at its optimum.</p>	Resolved - BHP Billiton (Bayside)



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No.	Complainant	Date and time	Location	Description	Results	Resolution
25	S Camminga (0357860076)	15/6/2013 21:30 onwards.	33 Heideheuvel, Veldenvlei	Smoke & Pungent "burning rubber" smell causing nausea, headache and light headedness. dizziness.	<p><b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency.</p> <p><b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.</p> <p>RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS. In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past.</p> <p>We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.</p>	Resolved - Peat Fire
26	R Camminga (0357860076)	15/6/2013 21:30 onwards.	33 Heideheuvel, Veldenvlei	Smoke & Pungent "burning rubber" smell causing nausea, headache and light headedness. dizziness.		Resolved - Peat Fire
27	K Camminga (0357860076)	15/6/2013 21:30 onwards.	33 Heideheuvel, Veldenvlei	Smoke & Pungent "burning rubber" smell causing nausea, headache and light headedness. dizziness.		Resolved - Peat Fire
28	Kevin (079 343 1371)	16/6/2013 00:10 onwards.	100 Via Verbena – Veldenvlei	Complainant phoned me at 00h10 concerned about the presence of a very strong "burning rubber smell" over the past 2 weeks, and the effect this was having on his family's health.		Resolved - Peat Fire
29	Rowan (082 337 4474)	16/6/2013 18:30 onwards.	5 Bokbaaviegie – Veldenvlei	Very strong "burning rubber" causing coughing and burning of the eyes.		Resolved - Peat Fire
30	Michelle (082 337 4474)	16/6/2013 18:30 onwards.	5 Bokbaaviegie – Veldenvlei	Very strong "burning rubber" causing coughing and burning of the eyes.		Resolved - Peat Fire
31	S Camminga (0357860076)	16/6/2013 20:00	Via Verbena	Smoke and nauseating "burning rubber" smell. (For Information: Smoke present at 33 Heideheuvel, but no odour)		Resolved - Peat Fire
32	R Camminga (0357860076)	16/6/2013 20:00	Via Verbena	Smoke and nauseating "burning rubber" smell. (For Information: Smoke present at 33 Heideheuvel, but no odour)		Resolved - Peat Fire
33	K Camminga (0357860076)	16/6/2013 20:00	Via Verbena	Smoke and nauseating "burning rubber" smell. (For Information: Smoke present at 33 Heideheuvel, but no odour)		Resolved - Peat Fire
34	S Camminga (0357860076)	17/6/2013 07:30	33 Heideheuvel, Veldenvlei	Smoke & pungent "burning rubber" smell which has permeated throughout my house during the course of the night, despite my home being closed up. We are experiencing nausea, and light -headedness which is definitely being caused by what can only be described as a toxic odour. This has been going on for 5 weeks with the full knowledge of the Municipality, and their Air Quality Management Unit, yet they have done absolutley nothing! Our health and quality of life is being severely affected!!!!		Resolved - Peat Fire
35	R Camminga (0357860076)	17/6/2013 07:30	33 Heideheuvel, Veldenvlei	Smoke & pungent "burning rubber" smell which has permeated throughout my house during the course of the night, despite my home being closed up. We are experiencing nausea, and light -headedness which is definitely being caused by what can only be described as a toxic odour. This has been going on for 5 weeks with the full knowledge of the Municipality, and their Air Quality Management Unit, yet they have done absolutley nothing! Our health and quality of life is being severely affected!!!!	Resolved - Peat Fire	



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36	K Camminga (0357860076)	17/6/2013 07:30	33 Heideheuvel, Veldenvlei	Smoke & pungent "burning rubber" smell which has permeated throughout my house during the course of the night, despite my home being closed up. We are experiencing nausea, and light-headedness which is definitely being caused by what can only be described as a toxic odour. This has been going on for 5 weeks with the full knowledge of the Municipality, and their Air Quality Management Unit, yet they have done absolutely nothing! Our health and quality of life is being severely affected!!!!	<b>RBCAA 19/6/2013</b> Sandy Camminga responded: Following receipt of yet another complaint early this morning, and not able to inform your department as I have not been provided me with the requested cell phone number, I decided to get into my car and investigate myself. I believe I have located the source of the smoke and burning rubber odour which has plagued residents of Veldenvlei for the past 5 weeks. Please refer to the attached Google image which shows the area from where I believe the problem originates. The odour was detected at the end of Hippo Hill in Wildenweide with smoke clearly visible through the trees. We trust that the Municipality's Air Quality Management Unit will now act with utmost urgency. <b>uMhlathuze Municipality 20/6/2013</b> Gugu Gazu responded : This correspondence serves to respond to all burning complaints received by this office since the 4th of this month. The investigation team which comprised of Air Quality Management Unit and Fire Section conducted inspection on the Forest behind Weldenweide right through Mzingazi area. The investigation team discovered an underground burning which results into hazy smoke, coal / wood burning, landfill waste smell.	Resolved - Peat Fire
37	S Camminga (0357860076)	18/6/2013 05:30	33 Heideheuvel, Veldenvlei	PUNGENT lingering "burning rubber" smell causing nausea. This has been going on for 5 weeks with no response from the Municipality. We have had enough!!!	RESOLUTION: Mondi Forest Group was contacted to join the team. The area where burning takes place is under Mondi Forest Group. They extinguished the sources of fire through fire engines. Attached is the evidence of investigation. PROCEDURE OF REPORTING AFTER HOURS COMPLAINTS. In case of after hours complaint, a complainant should contact Fire Section who will then contact an official on standby. The numbers to dial are as follows: 035 797 3313 / 035 797 3911 : <b>Zululand Fire Protection Association 21/6/2013</b> : Tony Roberts responded: The Ground Fire is in a Conservation area between Mondi trees and uMhlathuze Municipal ground. It has been burning for quite some time without and knowledge of all and sundry....except for those living close to or down wind from it! Mondi has been hard at work to stop this from spreading but unfortunately this can take time as the extent of this fire cannot be ascertained. Again it is imperative that people living close to these CONS areas refrain from dumping rubbish in the bush area and use the skips as they are supposed to. These offenders are then setting the rubbish alight and hence the ground fire starts. We have had numerous instances of people smoking out bees in these CONS areas and leaving the burning material behind and hence we have another fire. Most fires are easy to detect but Ground fires have given us problems in the past. We need a combined effort from all stakeholders to prevent rubbish being thrown into these CONS areas and thereby prevent these Ground Fires. I will be inspecting the area to day after the Disaster Management meeting.	Resolved -
38	R Camminga (0357860076)	18/6/2013 05:30	33 Heideheuvel, Veldenvlei	PUNGENT lingering "burning rubber" smell causing nausea. This has been going on for 5 weeks with no response from the Municipality. We have had enough!!!		Resolved
39	K Camminga (0357860076)	18/6/2013 05:30	33 Heideheuvel, Veldenvlei	PUNGENT lingering "burning rubber" smell causing nausea. This has been going on for 5 weeks with no response from the Municipality. We have had enough!!!		Resolved - Peat Fire
40	Rowan 082 337 4474	18&19/6/2013 04:00	Bokbaavygie – Veldenvlei	This morning, Smoke & burning rubber odour. "Yesterday morning & this morning (04h00) the smoke starts. Have to close all windows, burns ones throat!! THIS IS GETTING OUT OF HAND!"		Resolved - Peat Fire
41	Rowan 082 337 4474	19/6/2013 18:00	Bokbaavygie – Veldenvlei	Severe smoke and burning rubber odour causing burning of the eyes and back of throat. The complainant is furious that nothing is being done to resolve this.		Resolved - Peat Fire
42	Anonymous	20/6/2013 11:45	Vicinity of Bayside	Abnormal Emissions emanating from Bayside. (photo attached)	<b>BHP Billiton 24/6/2013</b> : Shaloshini Naidoo responded: For the past 4 weeks, ESP1 has been on shutdown for the 6 monthly maintenance and cleaning program. The high pressure cleaning of the electrodes, collector plates and structure has been complete and the program is currently at the maintenance phase. When complete with ESP 1, the program will resume for the ESP2. These activities are scheduled for completion by mid August and a formal notification will be sent to external stakeholders. During the maintenance and cleaning program, the waste gas system will not be functioning at its optimum.	Resolved - BHP Billiton (Bayside)
43	Siraj Paruk	20/6/2013	Richards Bay CBD	"The problem of dense smoke and terrible air quality during	<b>uMhlathuze Municipality 25/6/2013</b> Gugu Gazu responded: There were bush fires that were	Resolved -



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No.	Complainant	Date and time	Location	Description	Results	Resolution
	083 412 8388	00:00		the course of the evenings and early mornings is continuing and it is becoming increasingly unbearable. Yesterday (19th) at 19:00 a cloud of smoke moved over the CBD, visibility dropped and I could barely take a walk outside let alone a jog, as the terrible air quality caused me and others around me to break out in a cough."	reported in a consecutive days (since the 11/06) up to the 19th. Those fires were in areas including Nseleni, Brackenhams, Mandlazini, old Alusaf ZCBF, Wildenweide, Meerensee, Empangeni, Vulindlela, Aquadene, Veldenvlei, Alton and Ngwelezane. Most of these fires reported occurred at night	Fire
44	Siraj Paruk 083 412 8388	20/6/2013 00:00	Nseleni	"I wish to further report that I have also received a complaint from my domestic employee who lives in Nseleni. She stated that road works are taking place in the area over the course of the night and those undertaking the road works are burning something(suspected to be anthracite) to heat the asphalt, and the fumes produced has a bad stench and its making residents sick and the children seem to be affected the most. I believe the Municipality needs to undertake a full investigation into this matter."	<b>uMhlathuze Municipality 25/6/2013</b> Gugu Gazu responded: Response: The company handling antracite material situated at Nseleni was visited and investigated. They admitted that they do give their material (waste) to the community. The community further uses it. What was discovered is that the company does not have a database of the end-users of their waste. This creates a havoc as it could not be traced back and be able to get the culprit. Their waste is also outside the company premises which gives a community free access at night. In response to sweeping, investigation is in progress although we have not yet found anyone burning such material. The community is requested to report to Fire Section after hours so that an official on standby can attend to. <b>RESOLUTION:</b> The company was instructed to abide on the following: 1. To have a database of the end-users as they are responsible for their waste from cradle to grave 2. To ensure that no waste is kept outside Collateral Trading Nseleni Asphalt Plant premises in order to limit access of the community to such waste. <b>RBCAA 27/06.2013</b> Sandy Camminga responded: In response to the Municipality's investigation of the Nseleni complaint, the RBCAA visited the Collateral Trading Asphalt Plant in May, and to the best of our knowledge they do not handle or produce anthracite. During our visit we were informed that the waste that they "stockpile" is in fact asphalt which is cleared out of the system at the end of the day when they shut the plant down. This waste, we were told, is stockpiled outside their premises for the residents of Nseleni to freely collect. It is suspected that the residents of Nseleni are using the asphalt as a fuel source which could have very serious health effects. Our research has revealed that inhalation of asphalt fumes/vapours is extremely toxic, and can cause headaches, dizziness and lung irritation. Long term exposure to high concentrations of asphalt fumes may cause chronic bronchitis and pneumonitis (inflammation of the lungs). <a href="http://www.paramountasphalt.com/msds/PARP-N019%20MSDS%20for%20Roofing%20Asphalt%20Series.pdf">http://www.paramountasphalt.com/msds/PARP-N019%20MSDS%20for%20Roofing%20Asphalt%20Series.pdf</a> In view of the above, it is our opinion that the asphalt waste should not be provided to the Nseleni community due to its toxicity. We urge the Municipality to ensure that Collateral Trading dispose of their waste in a responsible manner so as to protect the health of the Nseleni community.	Unresolved
45	Anonymous	27/6/2013 07:00	Alton	Smoke at Tata Steel. This morning while driving through Alton I noticed a lot of smoke on the northern side of Tata Steel	<b>Tata Steel 8/7/2013:</b> Franz Schmidt responded: Our investigations revealed the following on June 27: • Scrubbers running throughout 27 June. • No furnace outage. • Raw gas stack on furnace 1 opened for 35 seconds (furnace transient overpressure) at 03h47. This could result in a puff of smoke emanating from the raw gas stack – although the scrubber would be drawing off gas from the furnace at the same time. Given the time of day	Resolved - TATA Steel



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>– unlikely that this (fairly normal) event triggered the observation.</p> <ul style="list-style-type: none"> <li>• No veld fires or other events were reported in the vicinity, that may have been erroneously attributed to Tata Steel.</li> </ul> <p>Given the limited information about the nature of the smoke, the likely sources could be the steam/water vapour rising from the (water) cooling of the metal ingots or the water vapour plume from the Drying building (see attached item). Both are particularly visible during the early morning and late evening hours (more so during the cooler winter months) and both are part of normal operation – although not visible during the day.</p>	
1	Anonymous	3/7/2013 07:00	Port of Richards Bay	Excessive black dust emanating from berth 704 in the Port of Richards Bay	<p><b>Transnet Port Terminals 03/07/2013:</b> Siraj Paruk responded: The complaint you reported telephonically this morning regarding dust generation from berth 704 refers. Chloride was being loaded at the berth 704 at the time of the complaint. The loading rate has since been reduced to prevent the generation of excessive dust. TPT Richards Bay recently acquired a new ship loader which will be in the process of being commissioned for use at berth 704. The new loader equipped with the latest dust control technology and is expected to be fully operational in the near future.</p> <p>Please advise if the complainant provided the location when he/she witnessed the dust. Unfortunately visibility was extremely poor this morning due to the fog, and we were unable to see berth 704 from 7 series.</p>	Resolved - Port of Richards Bay (TPT and TNPA)
2	L Savides (0723920511)	9/7/2013 07:30	CBD - Richards Bay	Excessive black smoke emanating from Mondri.	<p><b>Mondri RB 9/7/2013:</b> Nadia Rowling responded: Source and Nature of Emissions: Emissions were attributed to Power Boiler stack. As previously reported to the RBCAA and Authorities, Power Boiler 1 precipitator has prematurely burnt out. As mentioned before, after discussions with uThungulu District Municipality and Provincial Department of Environmental Affairs, Mondri is making every attempt to comply with a limit of 170mg/Nm<sup>3</sup> until Power Boiler 1 precipitator can be replaced. Power Boiler 1 precipitator replacement is scheduled for early 2014. Root Cause of Incident and Corrective Action: Power Boiler 1 precipitator has prematurely burnt out and the second field cannot cope with the additional load of precipitator ash. Power Boiler 1 Precipitator replacement is scheduled for early 2014.</p>	Resolved - Mondri Richards Bay
3	Anonymous	9 and 10/7/2013 0:00	CBD - Richards Bay	<p><b>Abnormal emissions emanating from Hillside.</b> "Severe abnormal emissions from Hillside over the course of yesterday (9th) and today. The plume of thick smoke was visible from many miles away. The plume has been travelling in the direction of the residential area and it severely affecting our health. My family has been experiencing terrible ill effects from the pollution over the past 12 hours, ie, coughing, burning/itchy eyes, burning sensation in the throat and inflammation of the sinuses.</p> <p>The health and wellbeing of the community is being severely compromised by the dreadful air pollution and severe enforcement action must be taken against such industries who can't keep their emission rates within acceptable limits."</p>	<p><b>BHP Billiton 11/7/2013:</b> Shaloshini Naidoo responded: Source and nature of emissions: Emissions were visible for 2 hours after the FTC was switched off, at approximately 07h30 to 09h30. Emissions were visible again on 10 July, during start up at approximately 07h00 to 09h00.</p> <p>No monitoring was done during this time.</p> <p>Peak and Average concentrations: No monitoring was done during this time, as the FTC and online monitor is isolated.</p> <p>Compliance with Permit/s: No monitoring was done during this time, as the FTC and online monitor is isolated.</p> <p>Root Cause identified: On 9 July, Hillside's FTC1 was switched off for 24 hours for planned maintenance, cleaning and repairs; which is necessary in order to limit unplanned bypasses. During the planned maintenance, the Bake Furnace was also switched off. The relevant external stakeholders were informed.</p> <p>Corrective Action: FTC planned maintenance is necessary in order to limit unplanned</p>	Resolved - BHP Billiton (Hillside)



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					bypasses and impact to the environment.	
4	David Davidson 082 887 0221	16/7/2013 16:08	Nseleni Rail	"Cat Wee Smell".	<b>Mondi RB 19/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Compliance with Permit/s There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Due to a failure in the Fibreline, condensate overflowed to the effluent plant due to in-sufficient consumption of condensate by the mill. Corrective action is to review current operating condition and identify alternative means of managing condensate in similar circumstances. This will be done as part of the next Odour Abatement Task Team Meeting. Odour from the Mondi effluent treatment plant was identified as the source of the emissions.	Resolved - Mondi Richards Bay
5	R Camminga (0357860076)	17/7/2013 05:45	33 Heideheuwel, Veldenvlei	Pungent Mondi "guava" odour. We awoke with our home filled with a pungent guava smell, despite all windows being closed. We are all experiencing nausea and headaches. The odour must have occurred much earlier than 05h45 because when I opened the doors there was absolutely no smell outside.	<b>Mondi RB 19/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Odour from the Mondi was identified as the source of the emissions. Compliance with Permit/s: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Prior to the complaint Mondi experienced a failure in the Fibreline, following which a failure of several gaskets on the NCG gas system. In order to repair the gaskets the entire mill had to be bought down, during this time residual condensates in the system overflowed to the effluent plant resulting in odour.	Resolved - Mondi Richards Bay
6	S Camminga (0357860076)	17/7/2013 05:45	33 Heideheuwel, Veldenvlei	Pungent Mondi "guava" odour. We awoke with our home filled with a pungent guava smell, despite all windows being closed. We are all experiencing nausea and headaches. The odour must have occurred much earlier than 05h45 because when I opened the doors there was absolutely no smell outside.	<b>Mondi RB 19/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Odour from the Mondi was identified as the source of the emissions. Compliance with Permit/s: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Prior to the complaint Mondi experienced a failure in the Fibreline, following which a failure of several gaskets on the NCG gas system. In order to repair the gaskets the entire mill had to be bought down, during this time residual condensates in the system overflowed to the effluent plant resulting in odour.	Resolved - Mondi Richards Bay
7	K Camminga (0357860076)	17/7/2013 05:45	33 Heideheuwel, Veldenvlei	Pungent Mondi "guava" odour. We awoke with our home filled with a pungent guava smell, despite all windows being closed. We are all experiencing nausea and headaches. The odour must have occurred much earlier than 05h45 because when I opened the doors there was absolutely no smell outside.	<b>Mondi RB 19/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Odour from the Mondi was identified as the source of the emissions. Compliance with Permit/s: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Prior to the complaint Mondi experienced a failure in the Fibreline, following which a failure of several gaskets on the NCG gas system. In order to repair the gaskets the entire mill had to be bought down, during this time residual condensates in the system overflowed to the effluent plant resulting in odour.	Resolved - Mondi Richards Bay
8	S Camminga (0357860076)	17/7/2013 16:55	John Ross Highway	Excessive emissions emanating from Bayside stack.	<b>BHP Billiton 19/7/2013:</b> Shaloshini Naidoo responded: Source and nature of emissions: Visible emissions from Bayside's ESP stack. Peak and Average concentrations: No monitoring conducted during this time. Compliance with Permit/s: Monitoring conducted on a quarterly basis as per permit requirement, therefore no monitoring was done on this occasion. Root Cause identified: ESP2 is on shutdown for the 6 monthly cleaning maintenance program. The high pressure (HP) cleaning of the electrodes, collector plates and structure is not yet complete and the next phase will be the maintenance phase of the program. All these activities are scheduled to be finished by mid August. Due to the controlled shutdown of ESP2 for HP cleaning and maintenance, the waste gas system is running through ESP1 and	Resolved - BHP Billiton (Bayside)



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					with the by-pass partially opened to maintain under-pressure. Corrective Action: Planned maintenance is necessary in order to limit unplanned bypasses and impact to the environment.	
9	Gugu Gazu	17/7/2013 06:50	CBD - Richards Bay City of uMhlatuze	Unbearable Mondi smell	<b>Mondi RB 19/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Odour from the Mondi was identified as the source of the emissions. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Prior to the complaint Mondi experienced a failure in the Fibreline, following which a failure of several gaskets on the NCG gas system. In order to repair the gaskets the entire mill had to be bought down, during this time residual condensates in the system overflowed to the effluent plant resulting in odour.	Resolved - Mondi Richards Bay
10	Anonymous	20/7/2013 10:22	John Ross Highway	Foskor Granulation Stack emitting visible grey colour. Foskor was contacted at the time.	<b>Foskor 24/7/2013 :</b> Mannana Ntoampe responded: 1. Visible Granulation Stack emitting grey colour Foskor has currently started using weak acid as one of the raw materials for fertilizer production. Weak acid takes longer than the strong acid to dissociate into its ions emitting more steam. During high operation rates, there is a possibility for a more visible stack. On the 20th and 21st of July, the plant was running at optimum rates and this could have resulted in a more visible stack. Even though the stack was visible, the ammonium content was still within limits. The angle of view and the sun reflection could have contributed to the visibility of the grey colour observed. Depending on the angle and position from which the stack is viewed, the clarity of the stack and the colour of the emission differed. Viewing from Foskor Car Park, the emission was cloudy while a more greyish emission was observed from John Ross Highway and from CBD. The root cause for the visible stack could therefore be high flow rates of weak acid into the reactor. The plant is currently on shut for stack and scrubber maintenance. Lower rates will be used as soon as the plant is back in operation. 2. Visible Granulation and sulphuric Stacks: For Granulation Stack, refer to 1. Above. Sulphuric Acid Plant Stack: Two hours before the complaint was logged, it was noticed that a higher acid strength product (0.1% higher) was being produced and this possibly lead to the visible stack at Sulphuric Plant Stack. The acid temperature was also slightly higher. Even though the acid strength was slightly higher than normal, it was still within plant design specifications. As soon as this was discovered, plant conditions such as temperature were changed to bring the product concentration to normal. It takes about 2-4 hours for the acid strength to go back to normal.	Resolved - Foskor
11	Anonymous	21/7/2013 13:58	John Ross Highway	Foskor Granulation and Sulphuric Stacks visible. Foskor was contacted at the time.	<b>Foskor 24/7/2013 :</b> Mannana Ntoampe responded: 1. Visible Granulation Stack emitting grey colour Foskor has currently started using weak acid as one of the raw materials for fertilizer production. Weak acid takes longer than the strong acid to dissociate into its ions emitting more steam. During high operation rates, there is a possibility for a more visible stack. On the 20th and 21st of July, the plant was running at optimum rates and this could have resulted in a more visible stack. Even though the stack was visible, the ammonium content was still within limits. The angle of view and the sun reflection could have contributed to the visibility of the grey colour observed. Depending on the angle and position from which the stack is viewed, the clarity of the stack and the colour of the emission differed. Viewing from Foskor Car Park, the emission was cloudy while a more greyish emission was observed from John	Resolved - Foskor



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					<p>Ross Highway and from CBD. The root cause for the visible stack could therefore be high flow rates of weak acid into the reactor. The plant is currently on shut for stack and scrubber maintenance. Lower rates will be used as soon as the plant is back in operation.</p> <p>2. Visible Granulation and sulphuric Stacks: For Granulation Stack, refer to 1. Above.</p> <p>Sulphuric Acid Plant Stack:</p> <p>Two hours before the complaint was logged, it was noticed that a higher acid strength product (0.1% higher) was being produced and this possibly lead to the visible stack at Sulphuric Plant Stack. The acid temperature was also slightly higher. Even though the acid strength was slightly higher than normal, it was still within plant design specifications. As soon as this was discovered, plant conditions such as temperature were changed to bring the product concentration to normal. It takes about 2-4 hours for the acid strength to go back to normal.</p>	
12	Mrs Pretorius 035 789 2283	23/7/2013 16:00	Cambridge Place Flats, 27 Via Ricardia str, Arboretum.	<p>Yesterday afternoon at around 16:00 a few people from the Cambridge flats were overcome by a plume of gas that lasted a few minutes ( max 10 minutes) that burnt their eyes and made breathing very difficult. The lady explained that they thought somebody used pepper spray in the area and described it as an ammonia type smell. This lasted for a few minutes and later disappeared. The Fire brigade/Emergency services were called out but nothing could be detected.</p>	<p><b>Mondi RB 24/7/2013:</b> Candice Webb responded: Mondri has investigated this complaint and found that wind direction excludes Mondri as a possible source. Compliance with Permits: There was no contravention of existing permit limits for point source emissions prior or during this time. <b>Foskor 24/7/2013 :</b> Mannana Ntoampe responded: As per our telephonic conversation earlier, the Granulation Plant was off yesterday for maintenance. The plant only started running this morning. At the time the complaint was logged, the plant was not operating and Granulation Plant is the only possible source of ammonia on site. <b>RBCAA 24/7/2013</b> Sandy Camminga responded: Based on the wind direction, industry could not have been the source. The attached Google image depicts wind direction between 15h10 and 16h20, as recorded at the RBCAA's Arboretum station. The RBCAA has further been informed that children in the complex witnessed a big cloud over the greenbelt area just before they were overcome by the "gas". We have further been informed that there is a security company that regularly meets in this greenbelt, resulting in speculation that this may have been a demonstration of some kind. I have been contacted by the Zululand Observer, who were independently informed of the incident, and have conveyed the above information to them.</p>	Resolved - Other
13	J. Currie 082 731 3280	28/7/2013 02:00 to 04:00	Nseleni	"Heavy chemical metallic smell"	<p><b>Mondi RB 30/7/2013:</b> Candice Webb responded: Source and Nature of Emissions: Mondri has not been able to identify a source within the mill. Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: Wind direction at the time is not aligned with the wind vector which links Mondri to complaints from Nseleni. A Heavy chemical metallic odour is not typical of the manufacturing process here at Mondri, in addition the mill was in a stable condition at the time. If the problem persists a case study may be necessary to assist in identifying a possible source.</p>	Unresolved
14	D Savides 072 392 0511	29/7/2013 15:35	John Ross Highway	Black smoke emanating from Bayside.	<p><b>BHP Billiton 30/7/2013:</b> Shaloshini Naidoo responded: Source and nature of emissions: Visible emissions from Bayside's ESP stack.</p> <p>Peak and Average concentrations: No monitoring conducted during this time.</p> <p>Compliance with Permit/s: Monitoring conducted on a quarterly basis as per permit requirement, therefore no monitoring was done on this occasion.</p> <p>Root Cause identified: At the time of the complaint, the Bake Furnace and opacity meter were within spec.</p>	Resolved - BHP Billiton (Bayside)



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					ESP2 is still on its shutdown for the 6 monthly cleaning maintenance program. The high pressure (HP) cleaning of the electrodes, collector plates and structure is now complete and the next phase will be the maintenance phase of the program. All these activities are still on track to be finished by mid-August 2013. Due to the controlled shutdown of ESP2 for HP cleaning and maintenance, the waste gas system is running through ESP1 and with the by-pass partially opened to maintain under-pressure. Corrective Action: Planned maintenance is necessary in order to limit unplanned bypasses and impact to the environment.	
1	Anonymous	6/8/2013 07:25	CBD Richards Bay	"This morning there was a horrible odour in the CBD. Smelled like rotten eggs"	<b>Mondi RB 6/8/2013:</b> Candice Webb responded: Mondi has investigated this complaint and found that wind direction excludes Mondi as a possible source. Compliance with Permit/s: There was no contravention of existing permit limits for point source emissions prior or during this time.	Unresolved
2	Anonymous	12/8/2013 14:25	Felixton Village	Thick black smoke" emanating from Tongaat-Hulett. Complainant was forced to close doors and windows. Tongaat-Hulett has been informed.	<b>Tongaath Hulett 20/8/2013:</b> Sagrah Govindasamy responded: 1. Nature of Complaint – Thick black smoke emanating from Tongaat Hulett Sugar – Felixton Mill 2. Source and nature of emissions – The smoke originated from our boiler during start up. During start up more coal than bagasse is burnt. 3. Peak and Average concentrations - During the time of the incident the peak concentration was 110 mg/m3 and the average was 80 mg/m3. 4. Compliance with Permit/s – Our current permit allows us to run for a period of 30 minutes with the opacity greater than 30 %. 5. Root Cause - Normally it take approximately 15 minutes for the boiler start up. The newly appointed operator encountered problems during start up. 6. Corrective Action – The new operator will receive additional on the job training.	Resolved - Tongaath Hulett
3	Anonymous	12/8/2013	Felixton Village	Reported intermittent burning of waste taking place on the Grantham farm outside Felixton Village resulting in noxious odours and smoke. The Municipality will be informed.		Unresolved
4	Anonymous	14/8/2013 07:45	Felixton Village	"Smoke belching out of the sugar mill". Tongaat-Hulett to respond.		Tongaath Hulett
5	Anonymous	14/8/2013 07:45	Felixton Village	Smoke and smuts from sugar cane burning. Municipality will be informed.	<b>uMhlathuze Municipality 14/5/2013 G Gazu</b> responded : In response to the above-mentioned complaint, the complainant was contacted for clarity after the receipt of her contact details. It appeared that the smoke in question lasted approximately 20 minutes. It was therefore impractical to determine its source. As a way forward, this office has requested the list of all sugarcane growers as well as reported sugarcane burning incidences from 12th to the 14th August 2013. We will keep you informed of all the developments regarding this matter	Sugar cane burning
6	Clinton Wissekerke 082 659 9941	17 and 18/8/2013	Carbonode Cell – Alton	Sulphur Spillages & Fumes, 17 & 18 Aug (week-end over which attached photos were taken), "Over the last several months transport of sulphur and other chemicals through Carbonode cell has been taking place. Some days the fumes	<b>Mondi RB 26/8/2013:</b> Candice Webb responded: Mondi has investigated the complaint below. Mondi makes use of molten sulphur which is transported to site via an enclosed tanker. In addition Mondi does not make use of the transport route mentioned below. Consequently it is unlikely that Mondi is responsible.	Resolved - uMhlathuze Municipality



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				from this induce headaches and a general nausea. This is not an isolated situation as this pollution is on-going .”	<b>uMhlathuze Municipality 5/9/2013</b> G Gazu responded : 1. Has this activity been authorized? Yes authorization was issued. 2. Do they have clearance from the Fire Department? Yes Fire Dept clearance was issued 3. Where does the sulphur originate from? It is are imported Imports (for more details the company can be contacted privately due to business ethics sensitivity). 4. Where does the sulphur go to? Exported to Africa (sensitive information) 5. To whom does the sulphur belong? Access Freight 6. What is being stored inside the warehouse? Sulphur 7. Why is the bagged sulphur stored outside? It was bagged for planned exports deal that fell off, unfortunately the sulphur bags broke. 8. What action is the Municipality going to take? The company in question was investigated. A Section 30 was issued for emergency incidence. The company has started cleaning and the cleaning is expected to be completed before the end of September.	
7	Anonymous	30/8/2013 08:05	Felixton Village	“a lot of smoke, and a bad smell coming from the sugar mill”	<b>Tongaat Hulett 10/9/2013:</b> Sagran Govindasamy responded: 1. Nature of Complaint – A lot of smoke, and bad smell coming from the sugar mill. 2. Source and nature of emissions – The smoke originated from our boiler during whilst experiencing a minor problem. The boilers had to be restarted. resulting in more coal than bagasse being burnt. Unfortunately I am unable to comment on the smell. 3. Peak and Average concentrations - During the time of the incident the peak concentration was approximately 115 mg/m3 and the average was 85 mg/m3. 4. Compliance with Permit/s – Our current permit allows us to run for a period of 30 minutes with the opacity greater than 30 % 5. Root Cause - Normally it take approximately 15 minutes for the boiler start up. The newly appointed operator encountered problems during start up. 6. Corrective Action – On the job training on the new operator is underway.	Resolved - Tongaat Hulett
8	Anonymous	30/8/2013 18:15	Brackenfern – Brackenham	Bad odour since about 17h45 causing nausea. According to the complainant this was not a Mondi odour. Complainant had experienced the same odour a couple of days prior and is of the opinion that the odour is emanating from the direction of Tata Steel. The odour was described as being a “compost smell”.	<b>Tata Steel 3/9/2013:</b> Franz Schmidt responded: • Wind direction was consistently from the direction over Alton (North & South), Mondi, Hillside, Tata Steel and cemetery towards Brackenham on Friday between 14h30 and 21h30 (200 degrees to 210 degrees) • Wind speed picked up briskly from 14h00 and remained at 4 – 8 m/s (Beaufort Scale 4 – Wind picking up dust and paper and swaying small branches) between 15h00 and 21h30 • This wind speed should disperse smells from industry over the distance to be much less noticeable. • No similar or extraordinary smell was reported at Tata by employees (although offices close at 13h30 on Fridays – office personnel being our most odour sensitive employees) • Tata employees staying in Brackenham (the same area but 2-3 blocks away), were interviewed and they did not note any smells during the early evening of Friday 30 August. • Furnaces were operating stably with all scrubbers functioning 100%. The Briquetting process (normal operation) ran until 16h00. • The smell of compost is not a smell associated with any of Tata operations. Our lawns and gardens were not fertilized (composted) during this week either. Tata Steel thus not responsible for the odour. Just a few notes: • With the wind speed, I would surmise that a local source might be responsible (our employees have not noticed any periodic sewerage leaks in that area however). • There is apparently a (home-industry) nursery operation in the area, and it being the start of the growth season, composting (top dressing) of lawns may be taking place in residential	Compost odour



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					<p>areas. Our employees have noticed such smell emanating from the property from time-to-time, but are aware of the source – and did not notice any increase in the smell recently. ALSO note that this home-industry was NOT upwind of the complainant at the time of the complaint.</p> <ul style="list-style-type: none"> <li>• Chicken manure used by one of the close neighbours perhaps?</li> </ul>	
9	Gugu Gazu	31/8/2013 15:00	Bayside BHP	Brown Plume from Bayside Stack	<p><b>BHP Billiton 5/9/2013:</b> Shaloshini Naidoo responded: Nature of Complaint: Plume of brown smoke from Bayside stack, 31 August, 15H00. Source and nature of emissions Smoke from the bake furnace ESP stack during normal operations. White smoke visible in the foreground was as a result of a bush fire. Peak and Average concentrations: Continuous monitoring is not conducted at the bake furnace ESP stack. Quarterly sampling is conducted by an external vendor as per permit requirement. Compliance with Permit/s Unable to determine at the time of the complaint. Root Cause identified: The process at the Bake Furnace results in "green anodes" being baked into "baked anodes", with the fires moving every 26 to 28 hours. The fire cycle consists of the preheat zone, forced heating zone and cooling zone. During a fire move, the equipment is moved to different sections to allow for the movement of the fire cycle to the different zones. There are two fires at the furnaces that are 12 hours apart. To move a fire takes about 30 to 45 minutes. After a fire a move, a new cold section which is the preheat zone is introduced into the fire cycle. For 2 to 4 hours after the fire move, there will be visible emissions which will then clear later when the preheat section has been heated sufficiently and is no longer cold. After a fire move the opacity reading is expected to be above 75%, which after 2 to 4 hours then drops to below 75%. This is part of normal operations at the Bake Furnace. Corrective Action: None.</p>	Resolved - BHP Billiton (Bayside)
1	Rowan 082 337 4474	2/9/2013 18:00	5 Bokbaaivygie – Veldenvlei	"Smoke everywhere" causing "burning eyes".		Resolved - Fire
2	Raymond 083 417 1620	3/9/2013 18:11	From Alton into Brackenham	"Compost" odour.	<p><b>Tata Steel 4/9/2013:</b> Franz Schmidt responded: Further to our earlier correspondence, the following: • Employees have spoken to (their) family members who live closer to Bracken Fern, but nothing untoward (odourwise) was reported either on Friday evening or yesterday evening. • After reading this morning's report (only read at 12h30, due to being in meetings for most of the morning). I and 3 colleagues (copied in mail) traversed Alumina Allee, Bronze Bar, Ceramic Curve, Diamantpyp, Elektron Staaf, Emaljedraai, Ferrogang and Helium Hoogte between 12h45 and 13h25. Getting out at selected points to smell the air, for a smell that could be described as "composty". The wind direction had considerably changed by then and was very variable (speed – light gusts and direction variation - over 90 degrees) • We could not smell anything that would be described as such, and no other smells that were significant (out of the ordinary / over powering / nauseating). No Mondi smell either. • There are a number of sites which can potentially emit such a smell (a waste paper baling facility, with bales in the open - Emaljedraai, Sanitech – out door toilets Alumina Allee) – but nothing of the sort was detected there. • Some industries had specific smells (E+J Motors Ceramic curve slight metallic (welding?) and diesel / oil smell, PJ Projects – cr Emaljedraai and Alumina Allee – slight spraypainting /</p>	Resolve



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					gritblasting smell) • We particularly were attentive to standing/rotting water/vegetation or sewer spillage / leaks, but none were found. • What was noticed however is the excessive dumping taking place along Emalje Draai en all of the dead ends (Bronze Bar, Chroomstang) and undeveloped erven. These had no significant or peculiar odour associated effect however. • The only disturbance taking place is major earthworks directly to the south of Tata Steel in Bronze bar over a 6 ha area where topsoil has been removed and stacked at the side of the road. This has an “earthy” smell, but not overpoweringly so, and not one I would associate with compost. I do not know what to make of this ... If Rodney has the same experience, we would appreciate him phoning Ndumiso 072 078 0813 directly – to investigate immediately (during office hours of course). If he prefers to contact someone close to his home address after hours to corroborate the smell, we could arrange for contact details of such a person as well.	
3	Raymond 083 417 1620	3/9/2013 18:50	28 Brakefern – Brackenham	Very bad “compost” odour, “can’t be outside for too long”.	<p><b>Tata Steel 4/9/2013:</b> Franz Schmidt responded: Further to our earlier correspondence, the following: • Employees have spoken to (their) family members who live closer to Bracken Fern, but nothing untoward (odourwise) was reported either on Friday evening or yesterday evening. • After reading this morning’s report (only read at 12h30, due to being in meetings for most of the morning). I and 3 colleagues (copied in mail) traversed Alumina Allee, Bronze Bar, Ceramic Curve, Diamantpyp, Elektron Staaf, Emaljedraai, Ferrogang and Helium Hoogte between 12h45 and 13h25. Getting out at selected points to smell the air, for a smell that could be described as “composty”. The wind direction had considerably changed by then and was very variable (speed – light gusts and direction variation - over 90 degrees)</p> <p>• We could not smell anything that would be described as such, and no other smells that were significant (out of the ordinary / over powering / nauseating). No Mond smell either. • There are a number of sites which can potentially emit such a smell (a waste paper baling facility, with bales in the open - Emaljedraai, Sanitech – out door toilets Alumina Allee) – but nothing of the sort was detected there.</p> <p>• Some industries had specific smells (E+J Motors Ceramic curve slight metallic (welding?) and diesel / oil smell, PJ Projects – or Emaljedraai and Alumina Allee – slight spraypainting / gritblasting smell) • We particularly were attentive to standing/rotting water/vegetation or sewer spillage / leaks, but none were found. • What was noticed however is the excessive dumping taking place along Emalje Draai en all of the dead ends (Bronze Bar, Chroomstang) and undeveloped erven. These had no significant or peculiar odour associated effect however. • The only disturbance taking place is major earthworks directly to the south of Tata Steel in Bronze bar over a 6 ha area where topsoil has been removed and stacked at the side of the road. This has an “earthy” smell, but not overpoweringly so, and not one I would associate with compost. I do not know what to make of this ... If Rodney has the same experience, we would appreciate him phoning Ndumiso 072 078 0813 directly – to investigate immediately (during office hours of course). If he prefers to contact someone close to his home address after hours to corroborate the smell, we could arrange for contact details of such a person as well.</p>	Resolved - Unknown
4	Raymond 083 417 1620	4/9/2013 09:30	Ceramic Curve – Vicinity of E & J	“Compost” odour.	<p><b>Tata Steel 4/9/2013:</b> Franz Schmidt responded: Further to our earlier correspondence, the following: • Employees have spoken to (their) family members who live closer to Bracken</p>	Resolved - Unknown



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No.	Complainant	Date and time	Location	Description	Results	Resolution
			Motors		<p>Fern, but nothing untoward (odourwise) was reported either on Friday evening or yesterday evening. • After reading this morning's report (only read at 12h30, due to being in meetings for most of the morning). I and 3 colleagues (copied in mail) traversed Alumina Allee, Bronze Bar, Ceramic Curve, Diamantyp, Elektron Staaf, Emaljedraai, Ferrogang and Helium Hoogte between 12h45 and 13h25. Getting out at selected points to smell the air, for a smell that could be described as "composty". The wind direction had considerably changed by then and was very variable (speed – light gusts and direction variation - over 90 degrees)</p> <p>• We could not smell anything that would be described as such, and no other smells that were significant (out of the ordinary / over powering / nauseating). No Mondi smell either. • There are a number of sites which can potentially emit such a smell (a waste paper baling facility, with bales in the open - Emaljedraai, Sanitech – out door toilets Alumina Allee) – but nothing of the sort was detected there.</p> <p>• Some industries had specific smells (E+J Motors Ceramic curve slight metallic (welding?) and diesel / oil smell, PJ Projects – or Emaljedraai and Alumina Allee – slight spraypainting / gritblasting smell) • We particularly were attentive to standing/rotting water/vegetation or sewer spillage / leaks, but none were found. • What was noticed however is the excessive dumping taking place along Emalje Draai en all of the dead ends (Bronze Bar, Chromstang) and undeveloped erven. These had no significant or peculiar odour associated effect however. • The only disturbance taking place is major earthworks directly to the south of Tata Steel in Bronze bar over a 6 ha area where topsoil has been removed and stacked at the side of the road. This has an "earthy" smell, but not overpoweringly so, and not one I would associate with compost. I do not know what to make of this ... If Rodney has the same experience, we would appreciate him phoning Ndumiso 072 078 0813 directly – to investigate immediately (during office hours of course). If he prefers to contact someone close to his home address after hours to corroborate the smell, we could arrange for contact details of such a person as well.</p>	
5	R Camminga (0357860076)	6/9/2013 08:35	CBD - vicinity of Formula 1 Hotel	Pungent Mondi "guava" odour.	<b>Mondi RB 6/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: At approximately 07:36 the mill experienced a site wide power trip. This resulted in venting of NCG gases to atmosphere.	Resolved - Mondi Richards Bay
6	S Camminga (0357860076)	6/9/2013 08:40	33 Heideheuwel, Veldenvlei	Nauseating Mondi Guava odour.	<b>Mondi RB 6/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: At approximately 07:36 the mill experienced a site wide power trip. This resulted in venting of NCG gases to atmosphere.	Resolved - Mondi Richards Bay
7	Clinton	6/9/2013 08:40	Alton area	"I would like to report a 'rotten eggs' smell in the Alton area. the concentration of air pollutant is enough to affect throat and nasal passage ( irritation )"	<b>Mondi RB 6/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action: At approximately 07:36 the mill experienced a site wide power trip. This resulted in venting of NCG gases to atmosphere.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and time	Location	Description	Results	Resolution
8	Raymond 083 417 1620	6/9/2013 21:15	Brake Fern – Brackenham	Bad odour.	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions : Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Instability on the NCG pressure system resulted in odour being released from various sources within the mill. Mondi is still investigating the root cause, the outcome of the investigation will be communicated the RBCAA. Mondi has been identified as the source of the odour.	Resolved - Mondi Richards Bay
9	Staff from the Zululand Observer	7/9/2013 12:45	Vicinity of Tronox – Empangeni	Clouds of orange dust billowing from Tronox. (photographs attached)		Resolved - TRONOX
10	David Davidson	8/9/2013 13:35	100m east of Nseleni Railway Station	Odor: Cat Wee	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action At approximately 11:40 the mill experienced a municipal power failure. This resulted in unstable mill conditions including venting of NCG gases to atmosphere.	Resolved - Mondi Richards Bay
11	Raymond 083 417 1620	8/9/2013 20:00	Brake Fern – Brackenham	Bad odour.	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Mill instability due to the municipal power failure earlier in the day resulted in poor quality effluent being sent to the effluent plant and consequently odorous emissions from the effluent plant.	Resolved - Mondi Richards Bay
12	June 082 731 3280	8/9/2013 13:40	Nseleni	Odour	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action At approximately 11:40 the mill experienced a municipal power failure. This resulted in unstable mill conditions including venting of NCG gases to atmosphere.	Resolved - Mondi Richards Bay
13	David Davidson	8/9/2013 20:20	100m east of Nseleni Railway Station	Odor: Cat Wee	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Mill instability due to the municipal power failure earlier in the day resulted in poor quality effluent being sent to the effluent plant and consequently odorous emissions from the effluent plant.	Resolved - Mondi Richards Bay
14	June 082 731 3280	9/9/2013 10:25	Nseleni	"Awful odour"	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for	Resolved - Mondi



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					point source emissions. Root Cause of Incident and Corrective Action: Mondi has identified NCG venting as the cause of the odour. We are still in the process of identifying root cause, the outcome of the investigation will be communicated the RBCAA.	Richards Bay
15	David Davidson	9/9/2013 10:30	100m east of Nseleni Railway Station	Odor: Cat Wee	<b>Mondi RB 9/9/2013:</b> Candice Webb responded: Source and Nature of Emissions: Unstable mill operation. Compliance with Permit's: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Mondi has identified NCG venting as the cause of the odour. We are still in the process of identifying root cause, the outcome of the investigation will be communicated the RBCAA.	Resolved - Mondi Richards Bay
16	Raymond 083 417 1620	9/9/2013 14:00	Brake Fern – Brackenham	Bad odour. . "Same compost smell".		Resolved - Unknown
17	Raymond 083 417 1620	11/9/2013 07:35	Brake Fern – Brackenham	"Compost" odour.		Resolved - Unknown
18	Julie Hodsdon 082 498 4089	14/9/2013 09:20	4 Lark Loop - Birdswood	"Terrible choking smell"		Resolved - uMhlathuze Municipality
19	Julie Hodsdon 082 498 4089	14/9/2013 09:38	4 Lark Loop - Birdswood	"Toxic smell"		Resolved - uMhlathuze Municipality
20	Julie Hodsdon 082 498 4089	15/9/2013 09:23	4 Lark Loop - Birdswood	"Toxic smell"		Resolved - uMhlathuze Municipality
21	Gugu Gazu	15/9/2013 11:30	Alton area	I was driving passed Shell garage and realized visible emissions from Drying and Briquetting plant. I only realized that my camera was in the office and only could use my phone to take a picture. It does not depict exactly what I saw. Please see attached and investigate.	<b>Tata Steel 16/9/2013:</b> Franz Schmidt responded: Please see the complaint from Gugu Gazu regarding emissions from the Drying Building (Dryer No 1). Further information after a telephonic conversation with Gugu: • The emissions were stable over the period observed (11h25 – 11h40 Sunday 16 September) • The emission were of a light brown colour. • No visible emissions from Dryer No 2 (The other stack in the photo). Tata Steel will formally investigate the incident and give feedback to Gugu.	Resolved - TATA Steel
22	Raymond 083 417 1620	16/9/2013 06:11	Brake Fern – Brackenham	"Bad odour, stinks like compost"	<b>Tata Steel 16/9/2013:</b> Franz Schmidt responded: Ndimiso called me at 06h12 – I could only read his message / voicemail at 06h20. Contacted Kantha Naidoo our Health Specialist – who got to Raymond at 06H55. They could not smell anything at that stage. Raymond apparently also detected the same smell late last night. Wind direction and speed similar to those occurring during previous complaints. I passed through Brake Fern, Brackenham at 7h20, but could not pick up any smell, apart from vehicle emissions – area rather busy. Observations included :• Grass cutting of verges on the east central arterial still continuing – grass now rotting. • Dead cat / dog like animal in	Resolved - Unknown



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					road on the other side of the block. • Uncontrolled dumping in the that part of Brackenham (on open plots, of which there are many), some with decomposing vegetation. • Building activity close by – could not see evidence of chemical toilet however. • Transport / trucking business conducted from (at least) two plots / homes in the near vicinity. Tata Steel KZN does not accept any responsibility for this complaint, although we will keep assisting RBCAA in following up.	
23	Mr Calitz 083 502 0656	18/9/2013 18:00	14 Knots Landing – Birdswood	Very bad smoke and odour. Smells like “burning tyres or plastic”, causing coughing, sinus and headaches. The attached image shows prevailing winds between 17h00 & 19h20, based on which the source would appear to be coming from the direction of the Mandlazini Agri -Village. This complaint will be forwarded to uMhlathuze Municipality's Air Quality Management Unit.		Resolved - uMhlathuze Municipality
24	Mrs Calitz 083 502 0656	18/9/2013 18:00	14 Knots Landing – Birdswood	Very bad smoke and odour. Smells like “burning tyres or plastic”, causing coughing, sinus and headaches. The attached image shows prevailing winds between 17h00 & 19h20, based on which the source would appear to be coming from the direction of the Mandlazini Agri -Village. This complaint will be forwarded to uMhlathuze Municipality's Air Quality Management Unit.		Resolved - uMhlathuze Municipality
25	Theuns van Tonder	19/9/2013 00:00	BHP Silo's Harbour area	Alumina is once again leaking from the tower.	<b>BHP Billiton 19/9/2013:</b> Shaloshini Naidoo responded: Nature of Complaint: The alumina is once again leaking from the tower. Source and nature of emissions: Alumina dust from alumina silo at the harbour. Peak and Average concentrations: N/A. Compliance with Permit/s: N/A Root Cause identified: A leak has been identified in one of the inspection hatches joint. The operation at the port was stopped and is being addressed on a breakdown basis. Corrective Action: Operation stopped. Maintenance breakdown loaded to address the issue. Operations will resume once the issue identified has been resolved and will be monitored.	Resolved - BHP Billiton (Logistics)
26	Raymond 083 417 1620	27/9/2013 05:26	Vicinity of Sud-Chemie – Alton	“Bad odour stinks like compost by Sud Chem opposite pumps for africa”		Resolved - Unknown
1	Raymond 083 417 1620	4/10/2013 15:15	28 Brakefern – Brackenham	“Bad odour stinks like compost”		Resolved - Unknown
2	Raymond 083 417 1620	4/10/2013 18:20	28 Brakefern – Brackenham	“Bad odour stinks like compost”		Resolved - Unknown
3	Raymond 083 417 1620	6/10/2013 06:50	28 Brakefern – Brackenham	“Bad odour stinks like compost”		Resolved - Unknown
4	Raymond 083 417 1620	6/10/2013 13:30	28 Brakefern – Brackenham	“Bad odour stinks like compost”		Resolved - Unknown



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No.	Complainant	Date and time	Location	Description	Results	Resolution
5	Raymond 083 417 1620	6/10/2013 19:45	28 Brakefern – Brackenham	"Bad odour stinks like compost"		Resolved - Unknown
6	Raymond 083 417 1620	7/10/2013 05:25	Vicinity of Bay Galvanizers – Alumina Allee, Alton	"Bad odour stinks like compost"		Resolved - Unknown
7	Raymond 083 417 1620	11/10/2013 17:50	Alton – past Mhlathuze Water opposite G4S security building	"Compost" odour.	<p><b>Tata Steel 17/10/2013:</b> Franz Schmidt responded: Tata Steel has investigated the recent complaint and cannot accept responsibility for the compost smell picked up by Raymond. As indicated previously there are significant construction and earth moving works in the same area (between Tata Steel and Mhlathuze Water). Tata Steel does not accept responsibility. Further information regarding ongoing investigation: • On these two occasions Tata Steel was not contacted directly by the complainant. • In following up on the complaint (Ndumiso on Monday) confirmed that: o Raymond smelled the odour while driving past Mhlathuze water and G4S (he drove past with windows closed and did not get out of the car). o This is not the first time that he has smelled the odour in that particular area. • The earth moving works (between Mhlathuze Water and Tata Steel) started some 2-3 months ago (around the same time that Raymond was sensitized to the smell). Raymond, however, does not equate the "compost" odour with "tilled earth" odour.</p> <p>• Mondri has issued Raymond (a Mondri employee) with sampling bags to determine (by means of Gas Chromatography) whether TRS forms a component of the smell. o Upon enquiry Candice Webb responded on Monday 14 October: The report shows that the sample was taken on 04-10-2013 at 28 Brake Fern Road where Raymond lives. It also shows that no peaks for Total Reduced Sulphur (TRS) were detected. This does not mean that there was no odour, just that the odour compounds were not made up of hydrogen sulphide, methyl-mercaptan, dimethyl-mercaptan and dimethyl-disulphide that are produced during the Kraft process. o Raymond has been issued with further sampling bags(?), but has not forwarded anything further to Mondri.</p> <p>• Although several instances of sewage odour have been reported by our "noses" in Brackenham since the complaints of Raymond arose, none have been correlated to Raymond complaints, and Raymond has also consistently insisted that the odour is distinctly a "compost" odour and not a "sewage" odour. • Others have failed to smell or identify the smell what he described as "compost" odour. • We are following up in terms of analysing his complaint data and prevailing meteorology at the time to pre-empt a complaint (and if possible be onsite at the time of complaint).</p>	Resolved - Unknown
8	Raymond 083 417 1620	12/10/2013 05:20	Alton - Vicinity of E&J Motors opposite cemetery	"Compost" odour.		Resolved
9	Anonymous	14/10/2013 08:50	Vicinity of Bayside	Clouds of black dust emanating from activities within the Port.	<p><b>TPT 15/10/2013:</b> Nozipho Sangweni responded: hereby acknowledge receipt of your email complaint and confirm that the internal investigation processes have been initiated to identify root causes, corrective and preventative measures. We will provide more information on the matter once the investigation is finalised.</p>	Resolved - Port of Richards Bay (TPT and TNPA)
10	S Camminga	16/10/2013	CBD- Boardwalk	Foskor odour causing burning sensation of the eyes and	<p><b>Foskor 17/10/2013:</b> Mannana Ntoampe responded: An hour before the complaint was</p>	Resolved -



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No.	Complainant	Date and time	Location	Description	Results	Resolution
	(0357860076)	12:55	Parkin Area	nose.The complaint was reported to Foskor at the time.	logged the wind was blowing in the South South East direction towards Hillside. The same pattern continued until the time of the complaint. Based on wind direction, Foskor could have contributed to that odour. 15 minutes after the complaint was logged, SO2 readings were taken around Pick n Pay parking area and obtained readings were 0.01-0.02 ppb around the area. Peak Concentrations of Emissions The highest SO2 emission of 338 ppm recorded for C plant. This was still within specified limits. Compliance with Permit's There was no contravention in existing permits. Root Cause of Incident and Corrective Action The investigation is under way. The root cause and corrective actions will be communicated after the investigation.	Foskor
11	Raymond 083 417 1620	18/10/2013 12:55	Brake Fern – Brackenham	"Experiencing same compost odour for past half an hour, not continuous, in small puffs"		Resolved - Unknown
12	Cllr Radebe 076 0113 760 On behalf of the residents of Nseleni	18/10/2013	Nseleni	Residents of Nseleni complaining about the air pollution (emissions and odour) emanating from the Collateral Trading Asphalt Plant in Nseleni.		Resolved - Collateral Trading
13	S Camminga (0357860076)	31/10/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT Mondi "guava" odour causing extreme nausea and forcing us to close doors and windows. Shift co-ordinator at Mondi has been informed.	<b>Mondi RB 31/10/2013:</b> Candice Webb responded: Source and Nature of Emissions: Compliance with Permit's There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action	Resolved - Mondi Richards Bay
14	R Camminga (0357860076)	31/10/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT Mondi "guava" odour causing extreme nausea and forcing us to close doors and windows. Shift co-ordinator at Mondi has been informed.	Mill instability resulted in poor quality condensate overflow to effluent plant, where the odour was released. It is difficult to control odour during mill instability however Mondi is in the process of identifying alternative control measures. Recovery Boiler 1 came down with a tube leak, which meant the rest of the mill had to come down including the digester. Mondi has been identified as the source of the odour.	Resolved - Mondi Richards Bay
15	K Camminga (0357860076)	31/10/2013 05:00	33 Heideheuvel, Veldenvlei	PUNGENT Mondi "guava" odour causing extreme nausea and forcing us to close doors and windows. Shift co-ordinator at Mondi has been informed.		Resolved - Mondi Richards Bay
16	Deb Slater 083 2355 361	31/10/2013 06:15	Veldenvlei	"Acrid smell"	<b>Mondi RB 31/10/2013:</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 Mill instability resulted in poor quality condensate overflow to effluent plant, where the odour was released. It is difficult to control odour during mill instability however Mondi is in the process of identifying alternative control measures. Recovery Boiler 1 came down with a tube leak, which meant the rest of the mill had to come down including the digester.	Resolved - Mondi Richards Bay
17	June 082 731 3280	31/10/2013 06:25	Nseleni	"Gaseous smell"	<b>Mondi RB 31/10/2013:</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.	Resolved - Mondi Richards Bay



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					Root Cause of Incident and Corrective Action Mill instability resulted in poor quality condensate overflow to effluent plant, where the odour was released. It is difficult to control odour during mill instability however Mondi is in the process of identifying alternative control measures. Recovery Boiler 1 came down with a tube leak, which meant the rest of the mill had to come down including the digester.	
1	Residents and Workers of Braeburn Farm - 083 231 4497	13 & 14/11/2013 18:00	Empangeni	Severe Smoke and burning plastic smell emanating from a fire on the landfill site, and is affecting their health The complainants have also complained about the enormous number of flies that they experience on a daily basis. It is also understood that the Wimpy food outlet is also plagued by flies. This complaint will be forwarded to the local and regional Municipalities.		Resolved - uMhlathuze Municipality
2	Anonymous	18/11/2013 04:30	Tassleberry Arboretum - close to the boardwalk	Bad sulphur odour causing coughing and burning of the nose.	<b>Foskor 18/11/2013:</b> Mannana Ntoampe responded: One hour before the complaint was logged, the with was blowing towards the airport in the South West direction. This pattern continued until the complaint was logged. Based on wind direction, Foskor could have impacted Arboretum at the time. Peak Concentrations of Emissions The highest SO2 emissions of 254 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. Root Cause of Incident and Corrective Action: Based on wind direction, Foskor could have impacted the area however no specific source at Foskor could be identified.	Resolved - Foskor
3	R Camminga (0357860076)	18/11/2013 05:00	33 Heideheuvel, Veldenvlei	Pungent nauseating Mondi odour.	<b>Mondi RB 20/11/2013:</b> Candice Webb responded: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Condensate overflowed to the effluent plant due to insufficient consumption of condensate by the mill. Corrective action is to review current operating condition and identify alternative means of managing condensate in similar circumstances. This will be done as part of the next Odour Abatement Task Team Meeting. Odour from the Mondi effluent treatment plant was identified as the source of the emissions.	Resolved - Mondi Richards Bay
4	K Camminga (0357860076)	18/11/2013 05:00	33 Heideheuvel, Veldenvlei	Pungent nauseating Mondi odour.	<b>Mondi RB 20/11/2013:</b> Candice Webb responded: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action Condensate overflowed to the effluent plant due to insufficient consumption of condensate by the mill. Corrective action is to review current operating condition and identify alternative means of managing condensate in similar circumstances. This will be done as part of the next Odour Abatement Task Team Meeting. Odour from the Mondi effluent treatment plant was identified as the source of the emissions.	Resolved - Mondi Richards Bay
5	S Camminga (0357860076)	18/11/2013 05:00	33 Heideheuvel, Veldenvlei	Pungent nauseating Mondi odour.	<b>Mondi RB 20/11/2013:</b> Candice Webb responded: Compliance with Permits: There was no contravention in existing permits for point source emissions. Root Cause of Incident and Corrective Action	Resolved - Mondi Richards Bay



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					Condensate overflowed to the effluent plant due to insufficient consumption of condensate by the mill. Corrective action is to review current operating condition and identify alternative means of managing condensate in similar circumstances. This will be done as part of the next Odour Abatement Task Team Meeting. Odour from the Mondi effluent treatment plant was identified as the source of the emissions.	
6	S Camminga (0357860076)	18/11/2013 13:50	Alton	Excessive dust emanating from Tata Steel's briquetting plant.	<p><b>Tata Steel 17/10/2013:</b> Ndumiso Ngongoma responded: Source and Nature of Emissions: Excessive dust emanating from Tata Steel's Dryer 2.</p> <p>Compliance with Permit/s: There was no contravention of existing permit.</p> <p>Root Cause of Incident : • A bag filter failed in one of the compartments of the bag house in Dryer 2.</p> <ul style="list-style-type: none"> <li>• The filter jammed the rotary valve of the dust collection chute.</li> <li>• To remove the bag, the chute had to be opened and thus a cloud of dust was released.</li> </ul> <p>Corrective Action: • All bag filters were changed out in 2 out of 3 compartments on 16 November 2013 and the 3rd was blanked out due to shortage of filters.</p> <ul style="list-style-type: none"> <li>• Once we receive the filters, we will change out the bag filters in the 3rd compartment.</li> </ul>	Resolved - TATA Steel
7	Raymond 0834171620	21/11/2013 07:40	28 Brake Fern- Brackenham	"Burntish compost odour. Odour was very bad last night at 21h00"		Resolved - Unknown
1	Mr & Mrs Botha 035 786 0427	3/12/2013 00:00	3 Heideheuvel Veldenvlei	Noise throughout the night emanating from the premises of the Engen garage located at the corner of Via Verbena and Weigelia. It is alleged that the source of the noise is the onsite generator which runs 24/7, and delivery tankers when they remove and replace the lids of the underground tanks. This complaint will be forwarded to the Municipality and Ward Councillor.	<p><b>uMhlathuze Municipality 5/9/2013</b> V Zung responded : The investigation of the above mentioned complaint , was undertaken by myself and Janine Roselt on 4 December 2013 at 14:20 pm. The findings of the investigation were as follows : 1. Noise emanating from the generator</p> <p>It was established during the investigation that there was no generator being operated at Engen Service Station premises and the only source of noise experienced was from the compressor. Such compressor only made noise when there was an inflation of car tyres, therefore such noise is intermittent. The compressor was enclosed except the frontal part which was open for ventilation purposes. 2. Noise emanating from removal and replacement of lids</p> <p>The garage staff members were asked demonstrate the removal and replacement of lids activity in order to ascertain the noise levels during such activity. It was established that such activity takes a very short space of time and the noise levels were minimal. 3. Recommendations</p> <p>It was recommended that Mr Nagessur investigate the means of further screening the compressor without hindering ventilation as a way of decreasing the noise. Mr Nagessur undertook to provide feedback on this matter within seven days. (This office will contact him in case such feedback is not provided within a specified time).</p>	Resolved - uMhlathuze Municipality
2	Anonymous	4/12/2013 09:30	Port of Richards Bay	Clouds of black dust emanating from the loading of a vessel at berth 704	<p><b>BHP Billiton 04/12/2013:</b> Shaloshini Naidoo responded: 1. Nature of Complaint: Anonymous, Port of Richards Bay, 4 Dec, 09h30, "Clouds of black dust emanating from the loading of a vessel at berth 704." 2. Source and nature of emissions</p> <p>On 4 December 2013, Aluminium SA raw materials were offloaded from berths 708 (liquid pitch) and 609 (coke, alumina, ATF); therefore did not contribute to the dust. 3. Peak and Average concentrations: N/A. 4. Compliance with Permit/s: None. 5. Root Cause identified:</p>	TPT/TNPA



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No.	Complainant	Date and time	Location	Description	Results	Resolution
					None. 6. Corrective Action: None.	
3	Helen Webb	31/12/2013 13:49	CBD in Richards Bay	We are experiencing a bad odor and chemical odors as well in the CBD in Richards Bay. Can you please advise us what the cause could be.	<p><b>Mondi RB 2/1/2014:</b> Candice Webb 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 ambient TRS at all four monitoring stations show low ambient TRS. Compliance with Permits</p> <p>There was no contravention in existing permits for point source emissions.</p> <p>Root Cause of Incident and Corrective Action: <b>BHP Billiton 14/01/2014:</b> Wendy Botes responded: There were no abnormal activities (FTC bypasses, ESP outage) at the time of the complaint, thus BHP Billiton did not contribute to the odours. <b>Foskor 14/01/2014:</b> Mannana Ntoampe responded: An hour before the complaint, the wind was blowing in the East South East direction towards Alton. The wind continued in the similar pattern until the time the complaint was logged. Based on wind direction, Foskor could have contributed to the odour. Peak Concentrations of Emissions :The highest SO2 emissions of 328 ppm were recorded during on the day for C-plant, however these emissions were still within limits. All other plant conditions for the Phosphoric Acid and Granulation plants were normal.</p> <p>Compliance with Permits: There was no contravention in existing permits.</p> <p>Root Cause of Incident and Corrective Action: No specific source was identified since all plant (Sulphuric, Phosphoric and Granulation) operations were normal with no abnormal emissions or exceedances recorded on the day.</p>	Resolved - Foskor



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