AIMS

Report

Annual Air Quality

Richards Bay 2023

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Note

This report has been finalised with the available information at the time of its compilation.

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1. INTRODUCTION

This 25th annual air quality report provided by the Richards Bay Clean Air Association (RBCAA) offers a comprehensive overview of air quality monitoring data for 2023. It aims to provide a detailed analysis of meteorology, sulphur dioxide (SO_2), total reduced sulphur (TRS), and particulate matter (PM) levels measured by the RBCAAs monitoring network and a broader perspective on the overall air quality performance and long-term patterns in the region. The report gives stakeholders a comprehensive understanding of the air quality situation and serves as a valuable tool for decision-making, policy development, and environmental management. By consistently monitoring and reporting air quality data, the RBCAA promotes transparency, facilitates ongoing environmental assessments, and ensures the well-being of the local community and surrounding environment. The monitoring network comprises ten (10) stations (Figure 1 and Table 1).

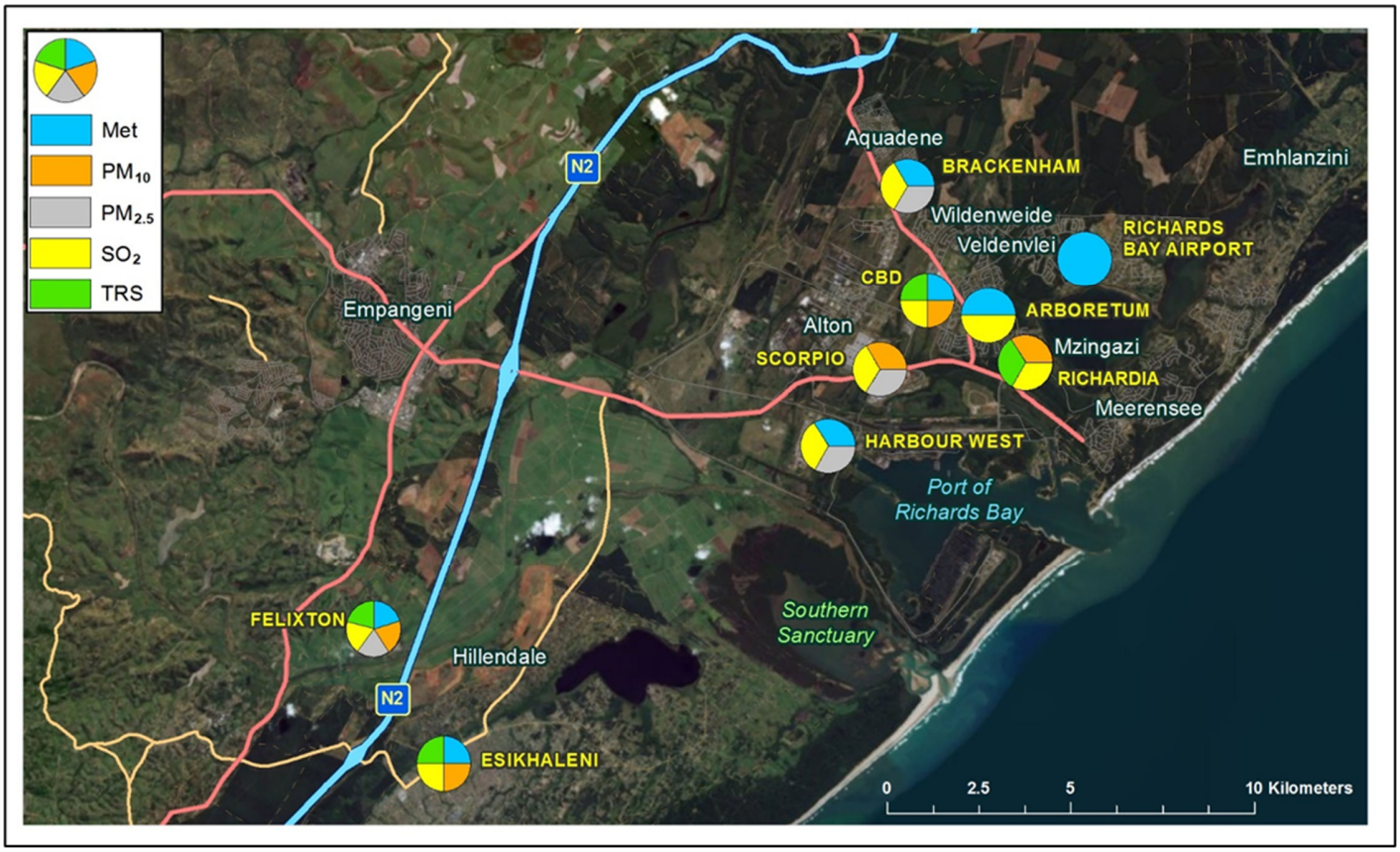


Figure 1: Map - local.

Table 1: Station coordinates.

Station	Latitude	Longitude	Elevation (m)
Airport	-28.738138	32.093333	34
Arboretum	-28.752385	32.062738	30
Brackenham	-28.731301	32.039016	51
CBD	-28.744719	32.054805	32
eSikhaleni	-28.865244	31.911679	13
Felixton	-28.829229	31.893536	51
Felixton Met	-28.836487	31.892513	30
Harbour West	-28.787286	32.027065	6
Richardia	-28.762776	32.066072	20
Scorpio	-28.769692	32.034228	31

1.1. Noteworthy events during 2023

1.1.1. Truck congestion and increase in particulates

This situation has been prevalent for several years, driven by the following factors:

1. The Russian-Ukraine conflict which resulted in increased coal demand.
2. The stockpiling and handling of coal by Transnet Port Terminals (TPT), which was not implemented with effective dust mitigation measures, resulted in significant emissions from port operations.
3. The collapse of Transnet Freight Rail resulted in coal entering the Port via road transport, which has resulted in an influx of trucks and a significant increase in dust emissions.

1.1.2. Dust-fallout Monitoring

The RBCAA implemented dust-fallout monitoring in September 2023 at 6 (six) strategic locations in response to the particulate issue in Richards Bay (Figure 1 and Table 2). The CBD and Harbour West stations have recorded exceedances of the RSA non-residential limit, and Harbour West is currently non-compliant with the RSA standard.

Table 2: RBCAA dust fallout monitoring sites.

Station	Classification	Latitude	Longitude
Arboretum Ext	Residential	28°45'59"S	32° 3'21"E
Bayside	Non-residential	28°46'50"S	32° 0'57"E
Harbour West	Non-residential	28°47'14"S	32° 1'37"E
Brackenham	Residential	28°43'52"S	32° 2'20"E
Kabeljoukade	Residential	28°46'41"S	32°6'16"E
CBD	Residential	28°44'41"S	32°3'17"E

Figure 2: Dust-fallout monitoring network.

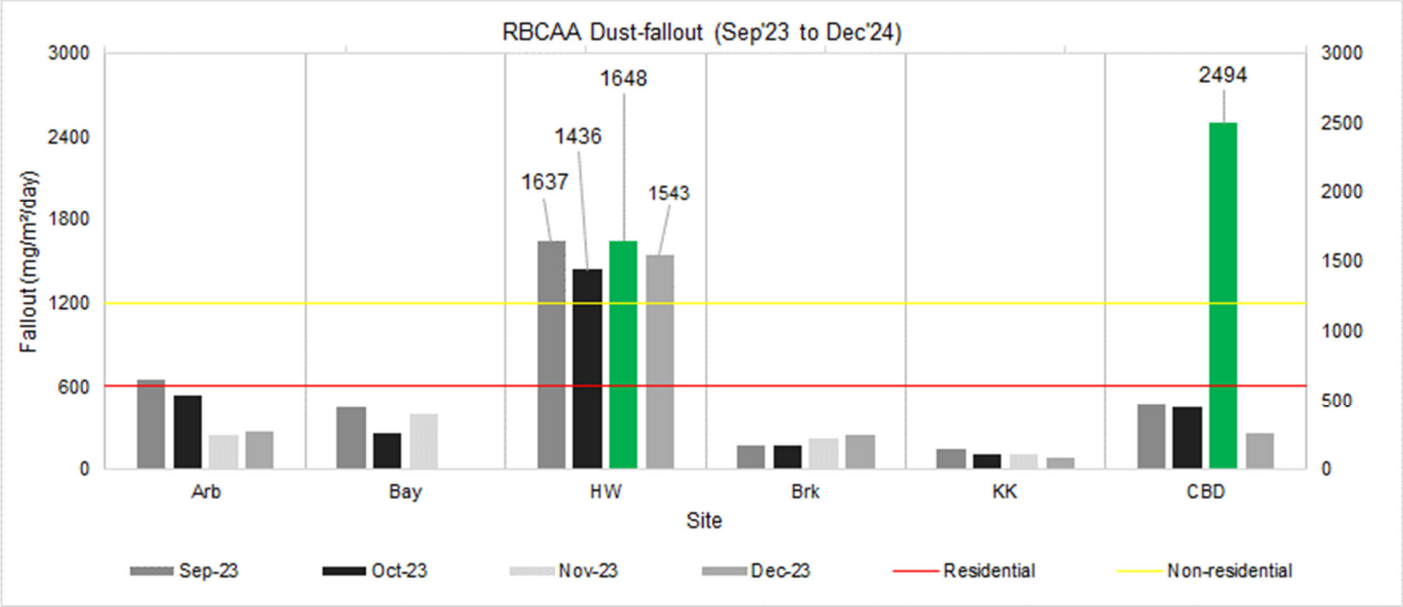


Figure 3: Dust-fallout monitoring results.

The November 2023 samples collected at Harbour West and CBD (green highlight) were sent for compositional analysis; the results for both samples were one-third organics/coal, one-third silicates, and the remaining third metal oxides.

Table 3: Dust-fallout limits.

Restriction areas	Dust-fallout rate (D) (mg/m²/day, 30 days average)	Permitted frequency of exceeding Dust-fallout rate
Residential areas	D < 600	Two within a year, not sequential months
Non-residential areas	D ≤ 1200	Two within a year, not sequential months
Note: The latest version of the method to measure dust-fall ASTM D1739 (Regulation 6, GN R.517 of 25 May 2018).		

1.1.3. NCT Fire

On the 30th of September 2023, at approximately 13h00, a fire broke out at NCT Richards Bay operations. The fire started on an open woodchip pile storage and, with prevailing north-easterly winds and extremely- hot and dry conditions, took hold and spread quickly. Firefighting services from NCT, TWK, other local companies, the port and the municipality all responded quickly, and the fire was largely contained until just before 4 pm when a devastating wind change caused the fire to jump hundreds of meters across stockpiles and forced a small evacuation of NCT's southern chipping line area. The fire spread during the evening despite all firefighting efforts, and by the next morning had, all three large chip piles were ablaze, and the fire consumed all log stocks.

With renewed firefighting efforts from out of town being called in, as well as an aerial assault using fixed-wing planes and helicopters, the fire was fought for another 11 days and finally declared out on 12 October. Firefighting efforts were not only focused on extinguishing the fires but also stopping the spread to neighbouring businesses TWK and Foskor. The exact cause of the fire remains unclear even after a substantial forensic investigation by NCT's insurance company.

During this time, the smoke plume from the fire caused discomfort and ash fallout across a wide area in the vicinity and downwind from the NCT facility, depending on the prevailing wind.

In response, the Provincial and Municipality's Disaster Recovery functions convened and chaired a "Joint Operations Committee", which met on a regular basis to manage the incident.

In an unexpected consequence, the substantial amount of water needed to fight the fire created a polluting run off from the area into storm water drains feeding into the adjacent canals. This runoff, in turn, created a fish kill of some proportion, as the runoff created a low-oxygen environment in the canals from the swamp areas right to the Zululand Yacht Club. NCT brought in environmental consultants GroundTruth to contain the runoff damage and assist and guide to put counter measures in place.

GroundTruth further guided NCT in ensuring compliance with the Directive (Ref: 14/2/2/4/1001/2023) issued to them by the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN EDTEA) because of the transgression.

NCT behaved openly and transparently at all times, with a high level of cooperation with all authorities. The Directive was lifted in February 2024, having been deemed complied with.

1.1.4. Quality System

The ISO 9001:2015 certification process, which started in 2019 and was placed on hold during the COVID-19 pandemic (2020-2021), restarted in 2022, and the RBCAA was certified in March 2023. The last i-cert external audit took place in November 2023; there was one minor finding, which has been cleared. The quality system policies are available on the RBCAA website (www.rbcaa.org.za).

1.2. Operational Feedback

1.2.1. Improvements during 2023

- **IT System and Security**:
  - RBCAA's data collection and analysis software, databases, and websites are now hosted in the cloud on a virtual machine.
  - In response to an email spoofing incident, the RBCAA has implemented Mimecast's advanced email security for protection against cyber threats, as well as Sendmarc's DMARC management platform that focuses on securing domains against email impersonation, phishing, and spoofing.
- **Load shedding mitigation:**
  - Inverters were installed at Richardia and Felixton, and the inverter batteries installed at Arboretum were upgraded from lead-acid to lithium-ion
- **Network Expansion:**
  - Felixton Meteorology – October
  - Richardia Station – The Richardia Station was commissioned in August at the Richardia Primary School and measures PM_{10}, SO_2 and TRS. Thanks to Mondi for the TRS converter oven donation.
  - Dust-fallout monitoring network – This was established in September.
- **CAPEX 2023:**
  - Capital expenditure for 2023 included:
    - 1 x SO_2 Analyser
    - 2 x Inverter
    - 2 x Inverter Lithium-Ion Batteries
    - 1 x TEOM Pump
    - 1 x EnviDAS Software
    - 1 x Station PC (replacement)

1.2.2. Data Capture

One of the significant causes of data loss and damage to instrumentation is power outages, including load shedding. In 2023, South Africa experienced a severe power supply crisis, resulting in a staggering 332 days of load shedding; this was a significant increase from 205 days in 2022, indicating a deepening energy crisis within Eskom, the national power utility (Figure 4). Out of these 332 days, a record-breaking 74 days saw Stage 6 load shedding, the most severe level. The increase in load shedding was primarily a result of breakdowns in power generation units, inefficiencies at critical stations, corruption, and criminal elements in Eskom. The government has emphasised efforts to stabilise the energy supply chain and has called for a strategic review of Eskom's management, as well as a shift to renewable energy sources. Although there is hope for improvement, projections indicate that load shedding might persist until 2025.

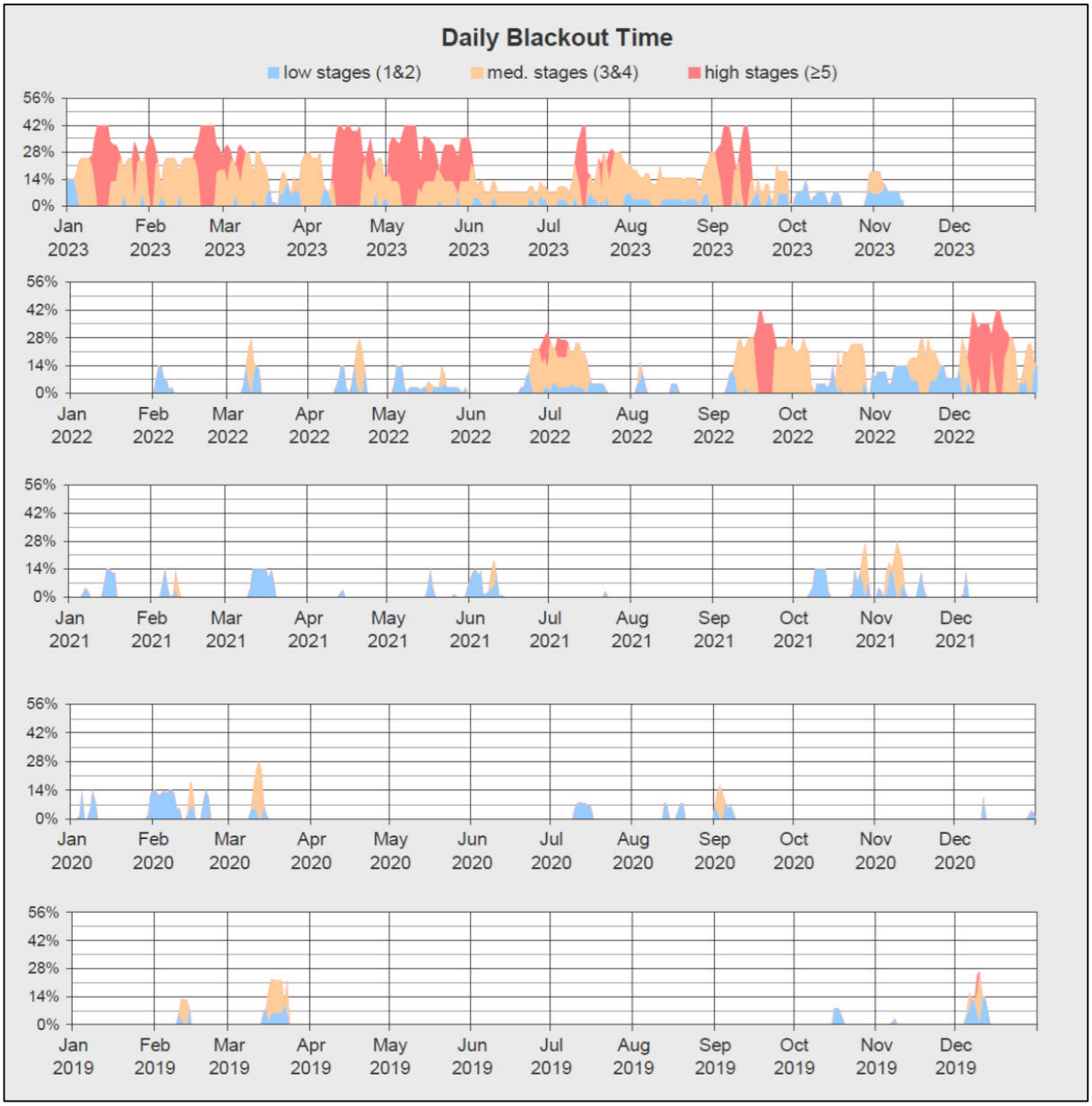


Figure 4: Load shedding stages 2019 – 2023 (Source https://dailyinvestor.com/energy/38177/south-african-energy-disaster-in-blue-yellow-and-red/).

- **Missing Data (General):**
  - **Airport** – load shedding and power outages (6 days with <80% data capture during 2023)
  - **Arboretum** – load shedding and power outages (2 days with <80% data capture during 2023).
  - **Brackenham** – load shedding and power outages (7 days with <80% data capture during 2023).
  - **CBD** – load shedding and power outages (22 days with <80% data capture during 2023).
  - **eSikhaleni** – inverter failures, load shedding and power outages (97 days with <80% data capture during 2023).
  - **Felixton** – load shedding and power outages; the meteorology for this station was commissioned in October (77 days with <80% data capture during 2023).
  - **Harbour West** – load shedding and power outages (11 days with <80% data capture during 2023).
  - **Richardia** – load shedding and power outages; this station was commissioned in August (144 days with <80% data capture during 2023).
  - **Scorpio** – load shedding and power outages (11 days with <80% data capture during 2023).

Table 4: Meteorological data capture.

Station	Station Availability (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
Airport	***93***	***93***	***93***	***93***	***55***	***93***	-
Arboretum	99	97	99	-	-	-	-
Brackenham	***92***	***92***	***92***	-	-	-	-
CBD	96	95	***88***	***88***	-	-	96
eSikhaleni	***85***	***85***	***85***	***85***	-	-	-
Felixton	***90***	***19***	***19***	***19***	***90***	-	-
Harbour West	98	98	98	-	98	-	-
Scorpio	99	-	99	-	99	-	-

Notes:
1. *Red - Not acceptable for statistical purposes (<80%),*
2. *Orange – Does not meet SANAS data capture requirements (<90%),*
3. *Yellow – Below the RBCAA reporting target(<95%)*

- **Missing Data (Meteorology):**
  - **Airport (Pressure)** - load shedding and power outages, instrument failure and replacement (August-December), data invalidation (147 days with <80% data capture during 2023).
  - **CBD (Temperature and Relative Humidity)** - load shedding and power outages, instrument failure and replacement (January, February), data invalidation (47 days with <80% data capture during 2023).

- **Felixton (Wind Speed, Wind Direction, Temperature and Relative Humidity)** – load shedding and outages, data invalidation, meteorology for this station commissioned in October (296 days with <80% data capture during 2023).

Table 5: Pollutant data – percentage data capture.

Station	Station Availability (%)	PM_{10} (%)	$PM_{2.5}$ (%)	SO_2 (%)	TRS (%)
Arboretum	99	-	-	99	-
Brackenham	***92***	-	***90***	***86***	-
CBD	96	96	-	95	***84***
eSikhaleni	***85***	***53***	-	***53***	***51***
Felixton	***90***	***59***	***89***	***53***	***52***
Harbour West	98	-	98	96	-
Richardia	***56***	***47***	-	***56***	***37***
Scorpio	99	***75***	99	99	-

Notes:
1. *Red - Not acceptable for statistical purposes (<80%),*
2. *Orange – Does not meet SANAS data capture requirements (<90%),*
3. *Yellow – Below the RBCAA reporting target(<95%)*

- **Missing Data (PM_{10}):**
  - **CBD** – load shedding and power outages (13 days with <80% data capture during 2023).
  - **eSikhaleni** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation (179 days with <80% data capture during 2023).
  - **Felixton** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation (149 days with <80% data capture during 2023).
  - **Richardia** – load shedding, power outages, station commissioned in August, TEOM failure and replacement (November, December) (190 days with <80% data capture during 2023).
  - **Scorpio** – load shedding, power outages, data invalidation, instrument failure and repair (October - December) (92 days with <80% data capture during 2023).
- **Missing Data ($PM_{2.5}$):**
  - **Brackenham** – load shedding, power outages, data invalidation (12 days with <80% data capture during 2023).
  - **Felixton** – load shedding, power outages, data invalidation (81 days with <80% data capture during 2023).
  - **Harbour West** – load shedding, power outages, data invalidation (10 days with <80% data capture during 2023).
  - **Scorpio** – load shedding, power outages, data invalidation (3 days with <80% data capture during 2023).
- **Missing Data (SO_2):**
  - **Arboretum** – load shedding, power outages, data invalidation (7 days with <80% data capture during 2023).

- **Brackenham** – load shedding, power outages, data invalidation (44 days with <80% data capture during 2023).
- **CBD** – load shedding, power outages, and data validation (17 days with <80% data capture during 2023).
- **eSikhaleni** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation (179 days with <80% data capture during 2023).
- **Felixton** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, instrument failure and replacement, data invalidation (202 days with <80% data capture during 2023).
- **Harbour West** – load shedding, power outages, data invalidation (20 days with <80% data capture during 2023).
- **Richardia** – load shedding, power outages, station commissioned in August, data invalidation (161 days with <80% data capture during 2023).
- **Scorpio** – load shedding, power outages, data invalidation (6 days with <80% data capture during 2023).

Missing Data (TRS):

- **CBD** – load shedding, power outages, data invalidation (61 days with <80% data capture during 2023).
- **eSikhaleni** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation (187 days with <80% data capture during 2023).
- **Felixton** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation (194 days with <80% data capture during 2023).
- **Richardia** – load shedding, power outages, station commissioned in August, data invalidation (230 days with <80% data capture during 2023).

1.3. Network Age analysis

The RBCAA network's monitoring equipment, as indicated in Table 6 and Table 7, is ageing. To ensure data loss is minimised, the RBCAA has implemented a maintenance and calibration schedule alongside a 5-year replacement plan.

Table 6: Meteorological equipment age analysis.

Analyser	0 to 10 years	11 to 15 years	> 15 years	Total
Pressure	0	0	1	1
Rainfall	0	0	1	1
Relative Humidity	2	2	1	5
Solar Radiation	1	0	0	1
Station Temperature	0	1	4	5
Temperature	0	4	4	8
Wind Speed & Direction	1	4	3	8
Total	**4**	**11**	**14**	**29**

Table 7: Ambient air-monitoring equipment age analysis.

Analyser	0 to 10 years	11 to 15 years	> 15 years	Total
E-sampler	3	2	0	5
TEOM	0	1	3	4
Trace gas	8	1	1	10
Trace Gas + Converter	3	0	0	3
Total	**14**	**4**	**4**	**22**

Table 8: Analyser calibration status.

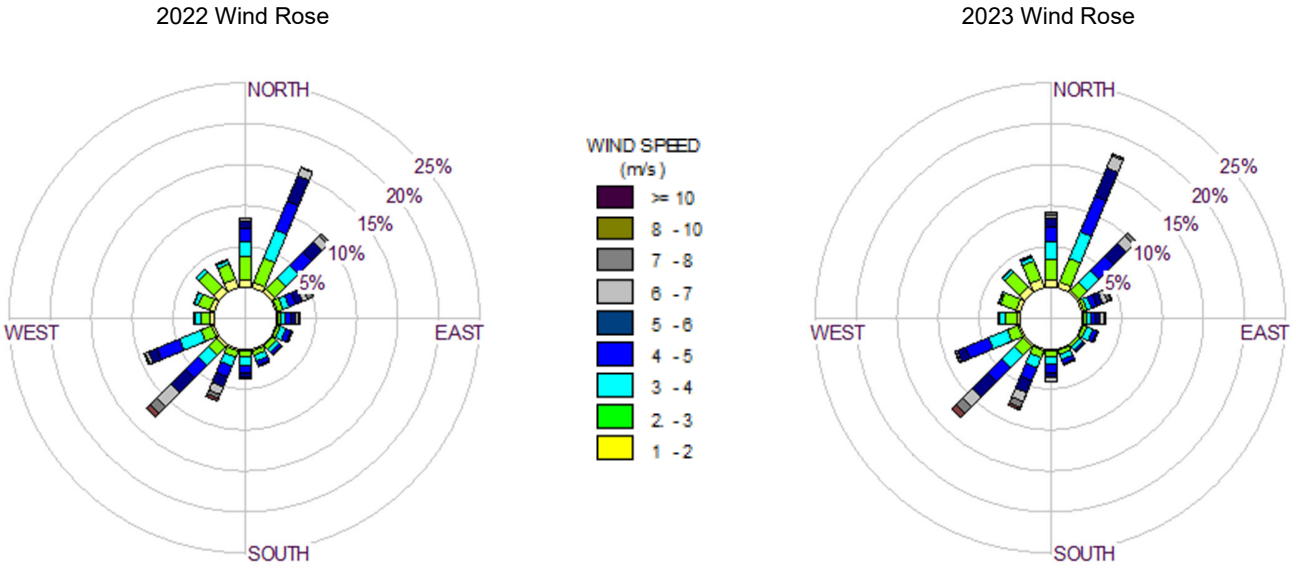
Item		Dates (2023)
Calibrations	Particulates	January, July
	Trace Gas	January, September
	Meteorology	January

2. METEOROLOGY

2.1. Wind Roses

Annual wind roses for 2023 and 2022 at Arboretum are presented in Figure 5. They indicate that the wind blew predominantly along the NE and SW axis. NE wind is generally associated with fair weather, while SW wind is usually associated with the passage of coastal lows, cold fronts, and inclement weather.

Arboretum



Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
2022	3.6 m/s	N-NE	37%	SSW-WSW	31%	0.1%	93.3%
2023	3.6 m/s	N-NE	38%	SSW-WSW	30%	0.0%	95.9%

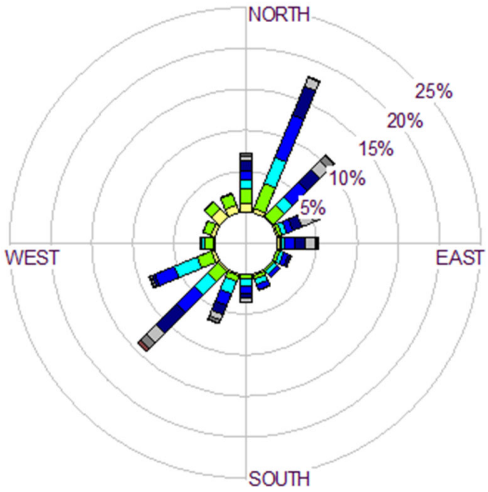
Figure 5: Wind roses - monthly.

Typically, there is an increase in light (1 to 3 m/s) to moderate (3 to 6 m/s) wind from the NNW during periods that include autumn and winter conditions and the seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during periods that include spring and early summer. Strong southerly to SSW wind occurs throughout the year and is typically associated with the arrival of coastal lows and cold fronts. Coastal lows occur more frequently during the summer, hence the slightly higher proportion of these winds (Figure 6).

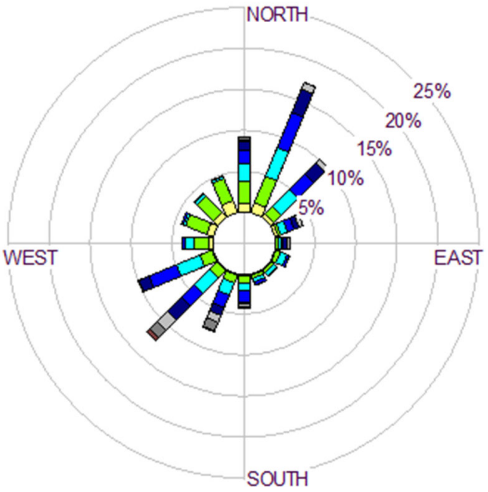
Diurnal wind roses for 2023 are shown in Figure 6. ESE to SSE wind is primarily in sea breezes during the day and early evening, particularly during the warmer spring and summer months. In contrast, WNW to NNW wind is mainly in the form of land breezes at night and early morning, particularly during the colder and more stable autumn and winter months (Figure 7).

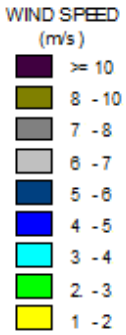
Arboretum – 2023

Summer (Dec, Jan, Feb)

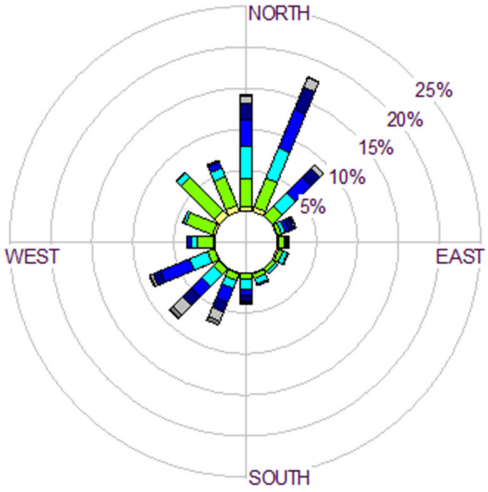


Autumn (Mar, Apr, May)

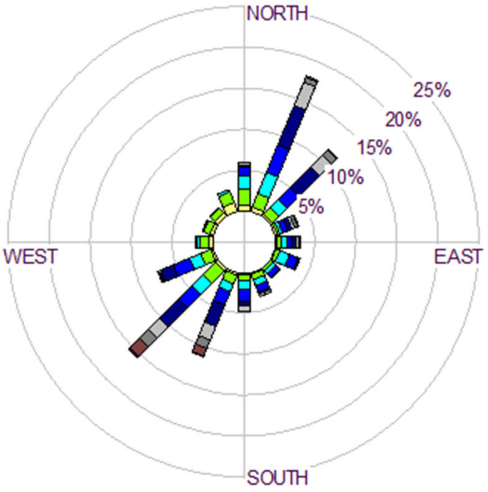




Winter (Jun, Jul, Aug)



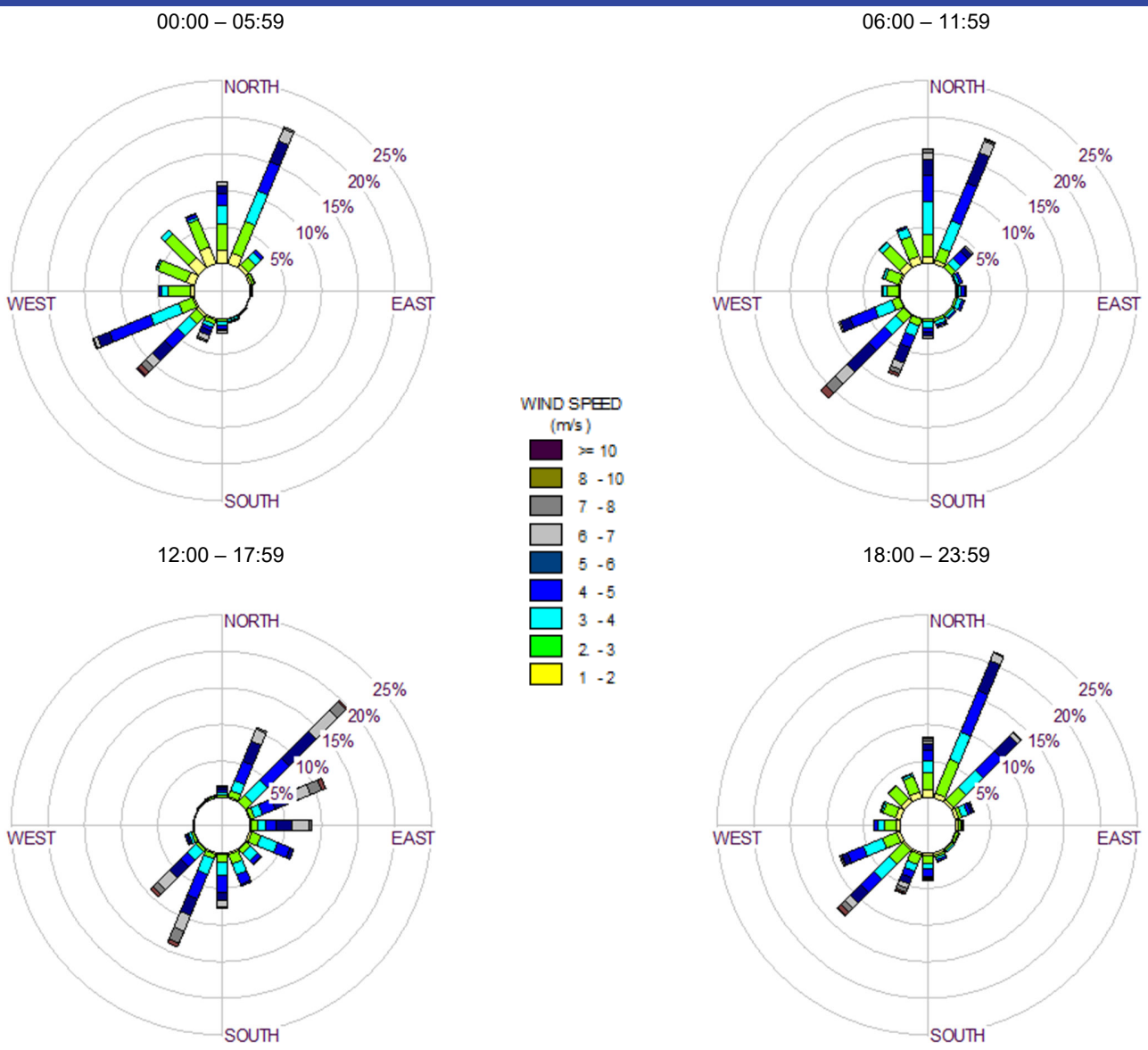
Spring (Sep, Oct, Nov)



Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
Summer (Dec-Feb)	3.8 m/s	N-ENE	45%	SSW-WSW	31%	0.0%	93.7%
Autumn (Mar-May)	3.4 m/s	N-NE	37%	SSW-WSW	31%	0.0%	96.8%
Winter (Jun-Aug)	3.4 m/s	NW-NE	56%	SSW-WSW	25%	0.0%	98.1%
Spring (Sept-Nov)	4.0 m/s	NNE-NE	31%	SSW-WSW	35%	0.0%	95.2%

Figure 6: Wind roses - seasonal.

Arboretum – 2023



Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
00:00-05:59	3.1 m/s	NW-NNE	49%	SW-WSW	28%	0.0%	94.4%
06:00-11:59	3.7 m/s	N-NNE	35%	SSW-WSW	35%	0.0%	96.4%
12:00-17:59	4.4 m/s	NNE-ESE	57%	S-SW	31%	0.0%	98.4%
18:00-23:59	3.3 m/s	N-NE	46%	SSW-WSW	30%	0.0%	94.5%

Figure 7: Wind roses - diurnal.

2.2. Rainfall

Precipitation is measured at four locations (Richards Bay - CBD, Felixton, RBCT and South32). The average rainfall across the network during 2023 was 1600 mm, which is similar (within 10%) to that received in 2022 (1613 mm) and the network average for the previous 5 years (1538 mm) (Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, and Figure 13 see APPENDIX E for tables).

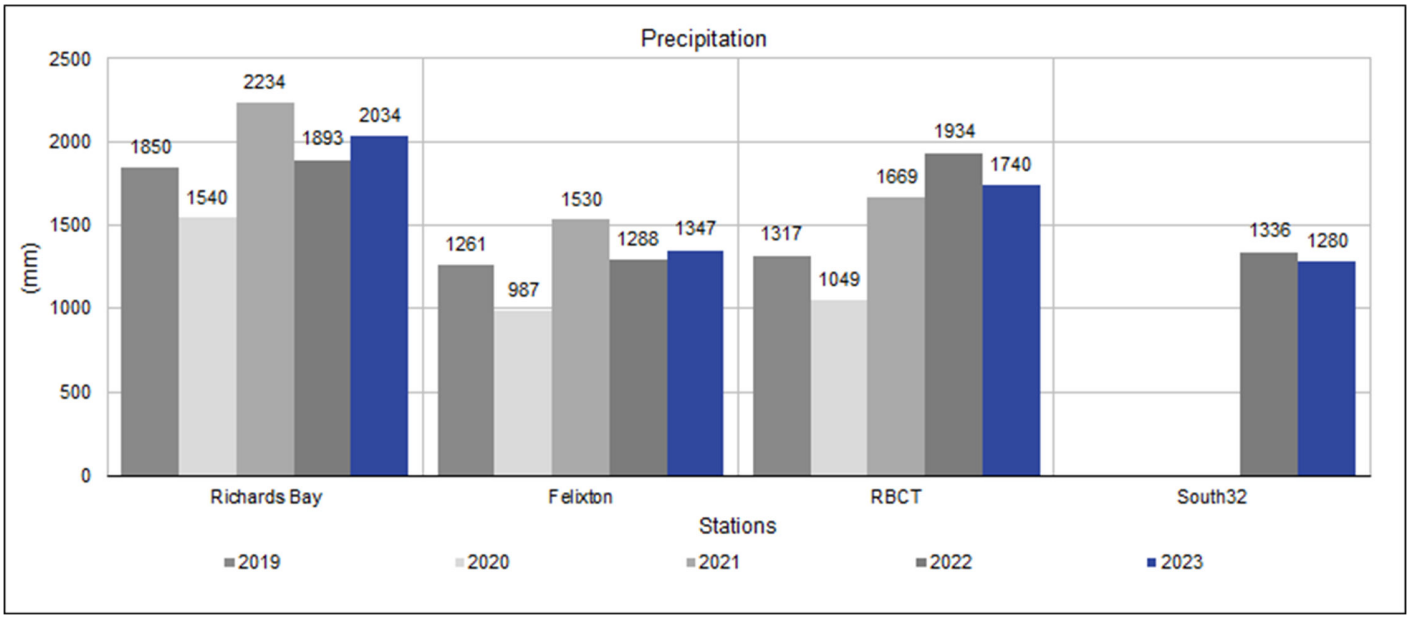


Figure 8: Rainfall 2019 - 2023

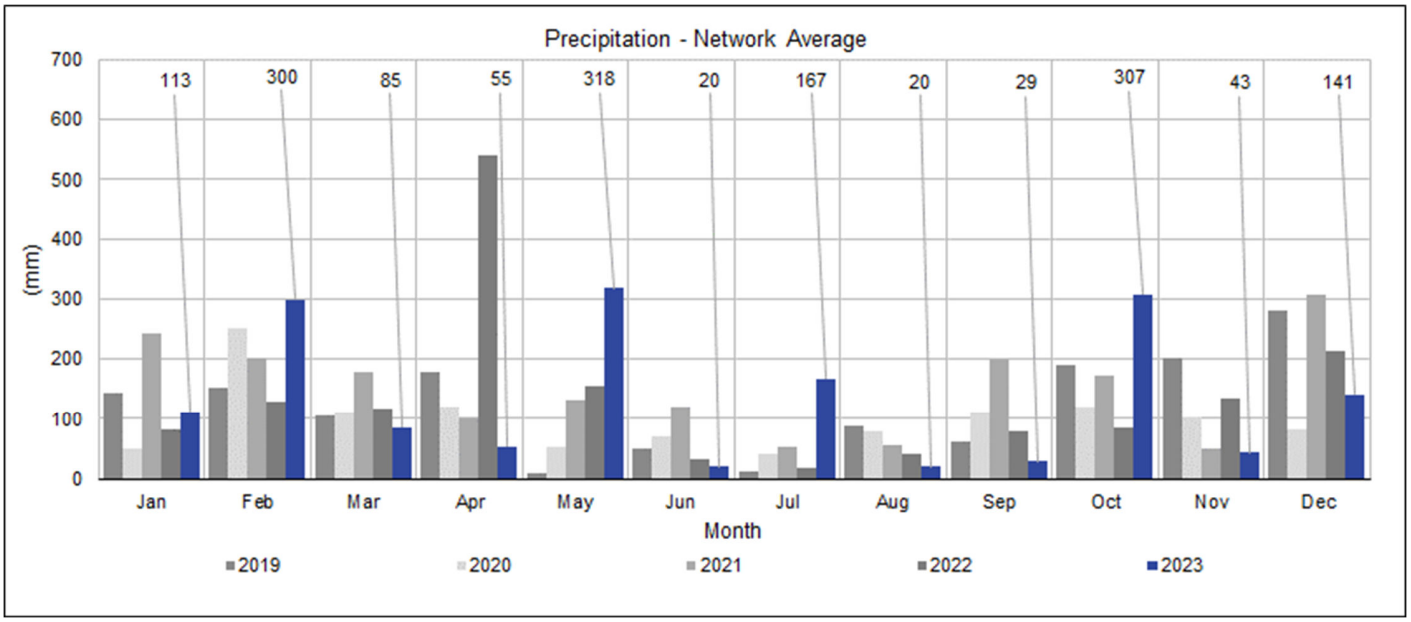


Figure 9: Precipitation - 2019 to 2023

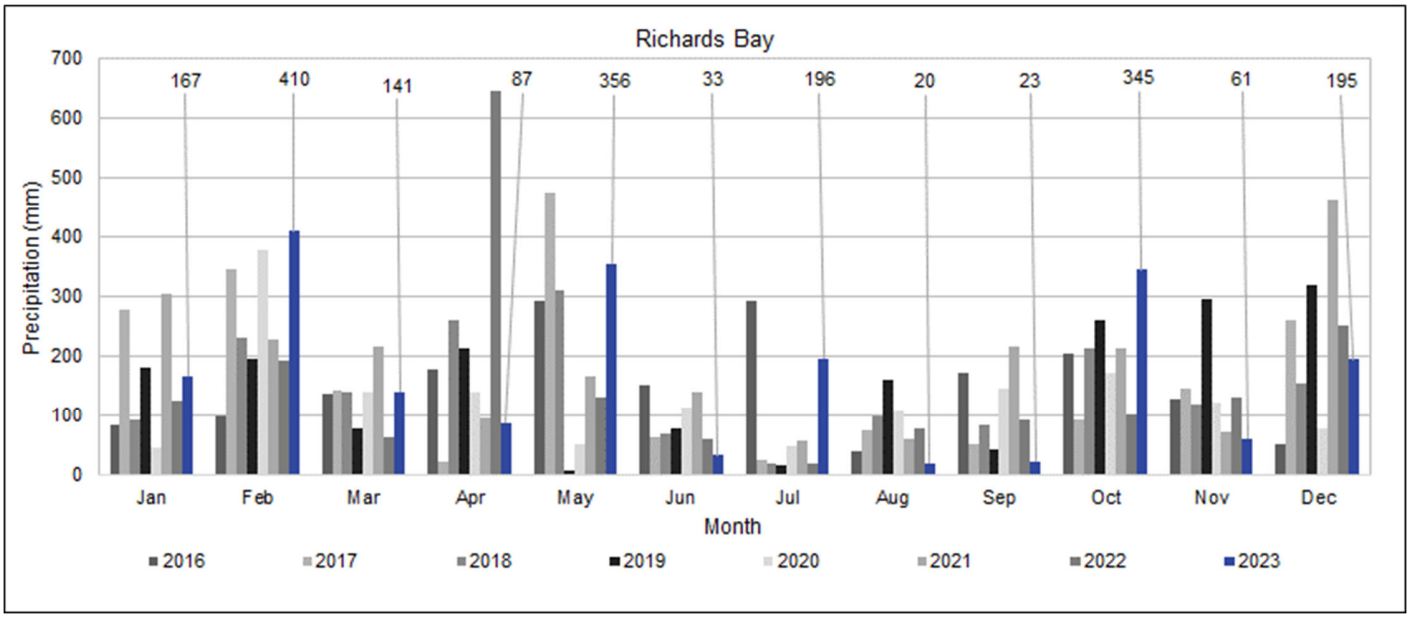


Figure 10: Rainfall –Richards Bay.

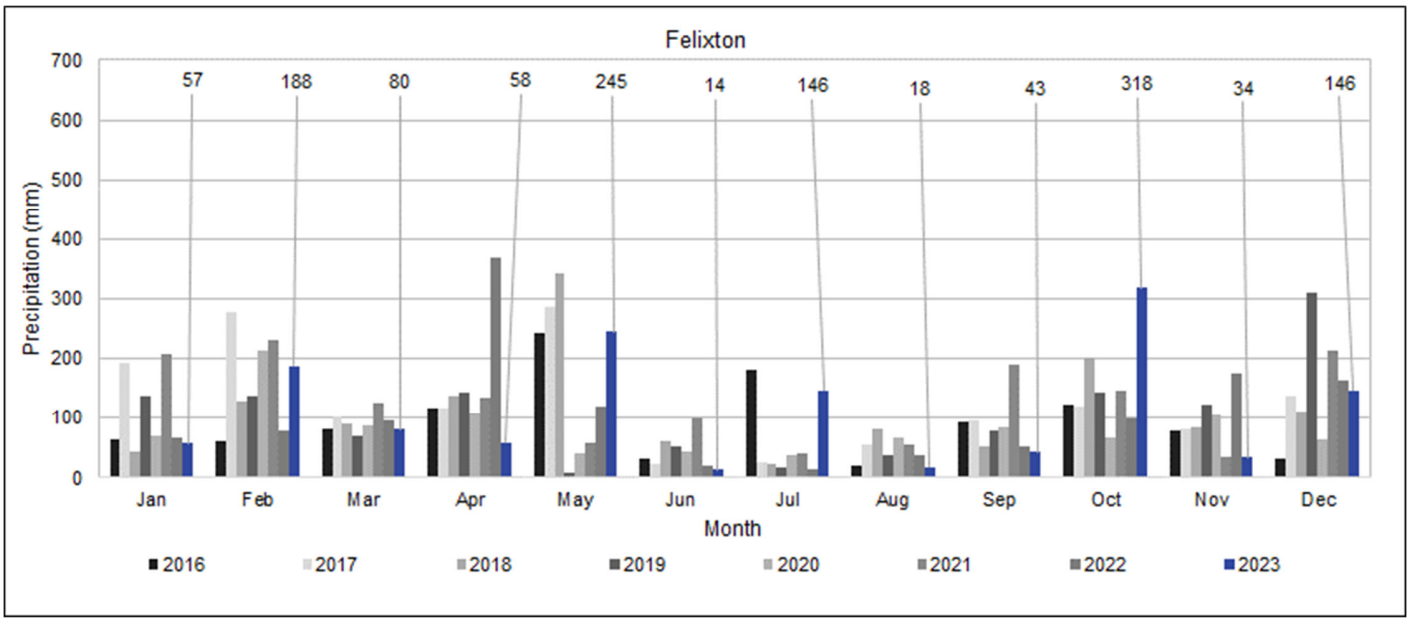


Figure 11: Rainfall – Felixton.

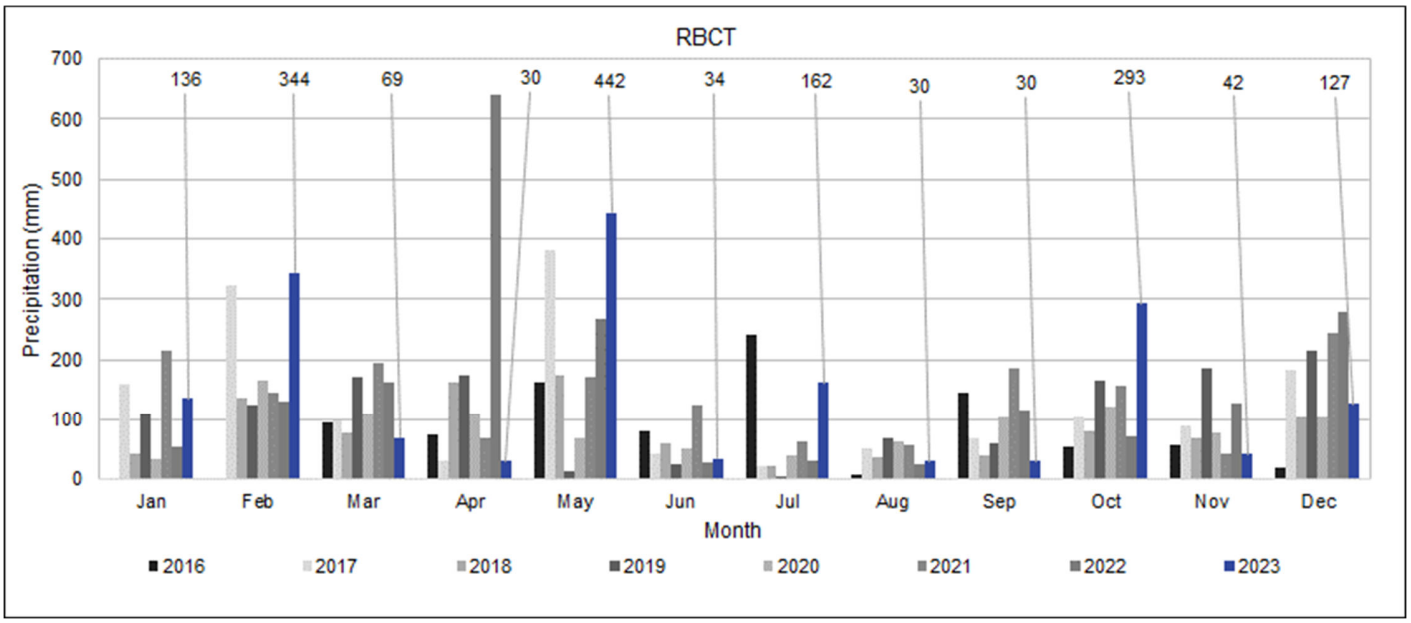


Figure 12: Rainfall – RBCT.

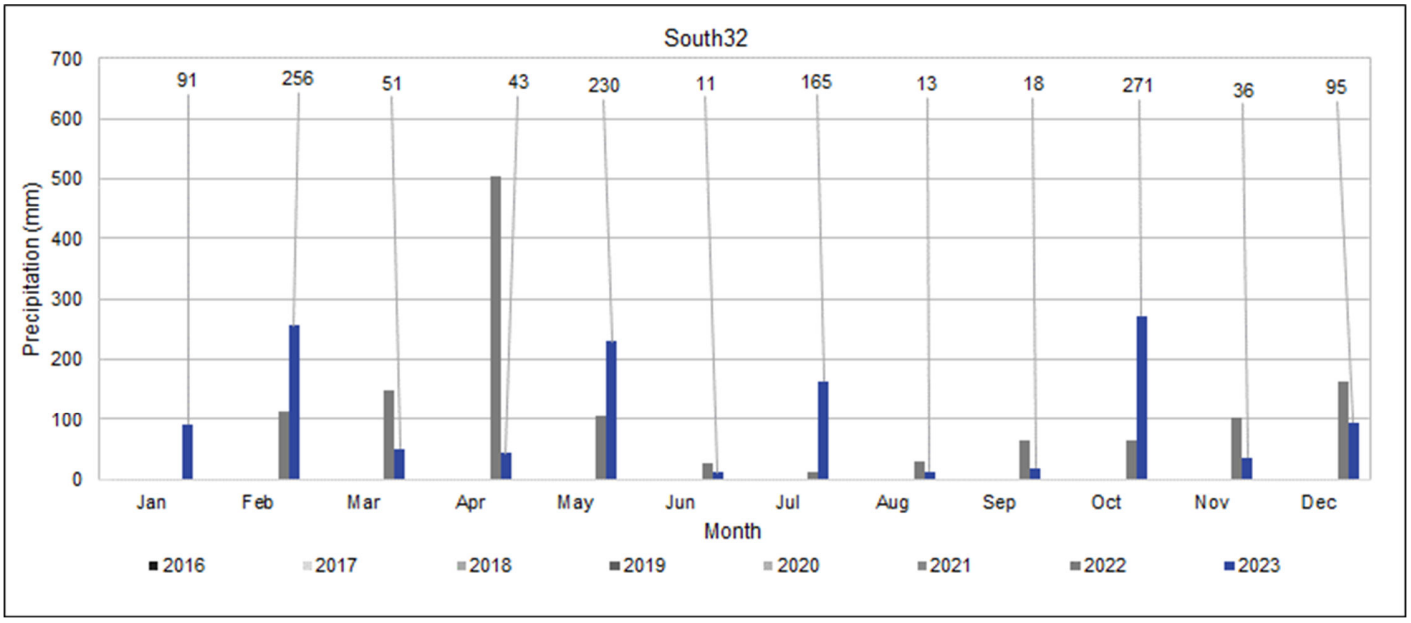


Figure 13: Rainfall – South32.

3. AIR QUALITY COMPLAINTS

Detailed complaint records are maintained, updated, and distributed weekly to the RBCAA's complaints mailing list. The following section summarises and analyses the complaints received. Please see APPENDIX F for the 2023 Complaints Log. The historical count of complaints per year since 2000 is reflected in Figure 13. From 2005 to 2017, there has been a downward trend; this has, however, reversed. The reversal is attributed to specific incidents in 2018, 2020, 2022 and 2023.

- **2018 September** – A process fault at Mondi in September resulted in the production of H_2S, which could not be managed (converted) by flaring (318 complaints).
- **2020 May** - The emergency/backup power to the Mondi non-condensable gas system failed, which resulted in odorous emissions from venting points (159 complaints).
- **2022 February** – This incident was linked to the release of SO_2 and SO_3 gas from Foskor[1], although the industry has not accepted responsibility (370 complaints). September – These complaints are of particulate emissions associated with the increased coal throughput and truck congestion at the Port of Richards Bay and allocated to TPT. (259 complaints – it should be noted that these complaints were not related to a single incident).

3.1. Complaints 2023

One hundred and ninety-eight (198) air quality complaints were received during 2023 compared to the eight hundred and seventy-five (875) complaints logged in 2022. (Figure 14 and Figure 15).

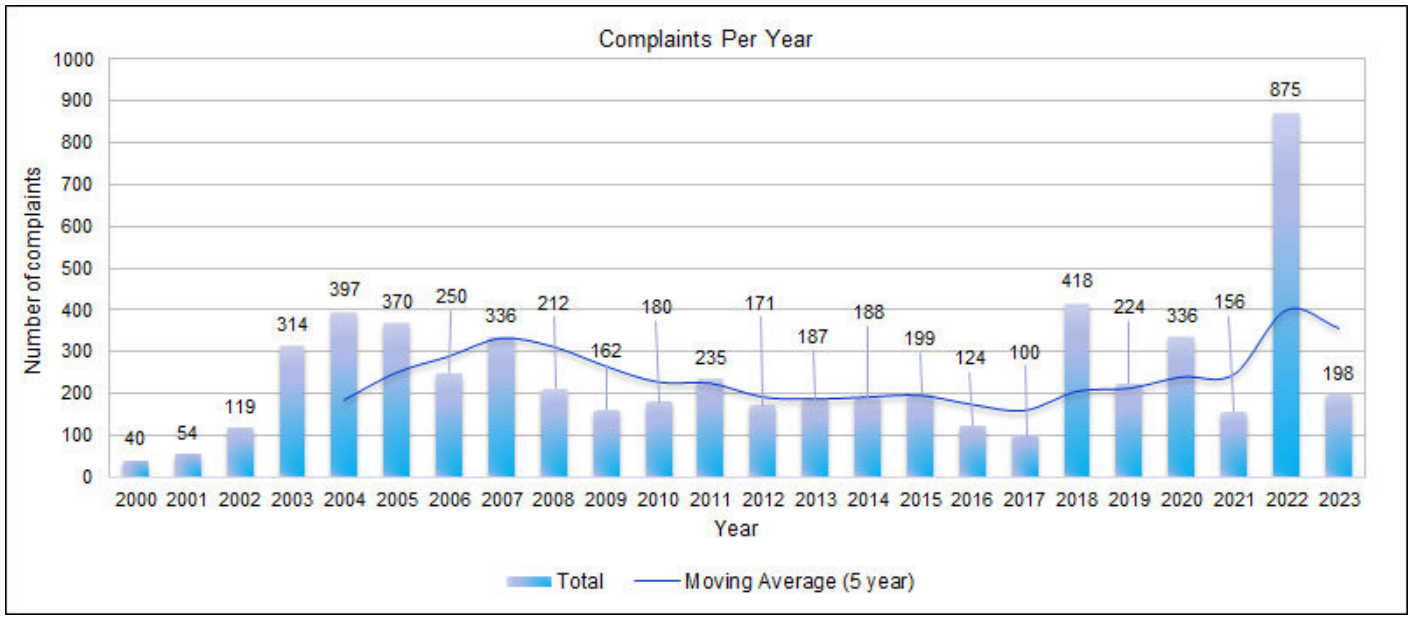


Figure 14: Complaints – annual comparison.

Notable incidents in 2023 (10 or more complaints linked to a single incident) occurred on:

[1] The investigation report into this incident is available on the RBCAA website www.rbcaa.org.za .

- **May 16: Mondi** - Venting of Non-Condensable Gases (37 complaints).
- **May 22: Unknown source** – Not industry-related (17 complaints).
- **July 03: Mondi** - Leak on the Methanol supply line to Recovery Boiler 1 (11 complaints).
- **December 15: - Mondi** - Failed rupture disc (15 complaints).

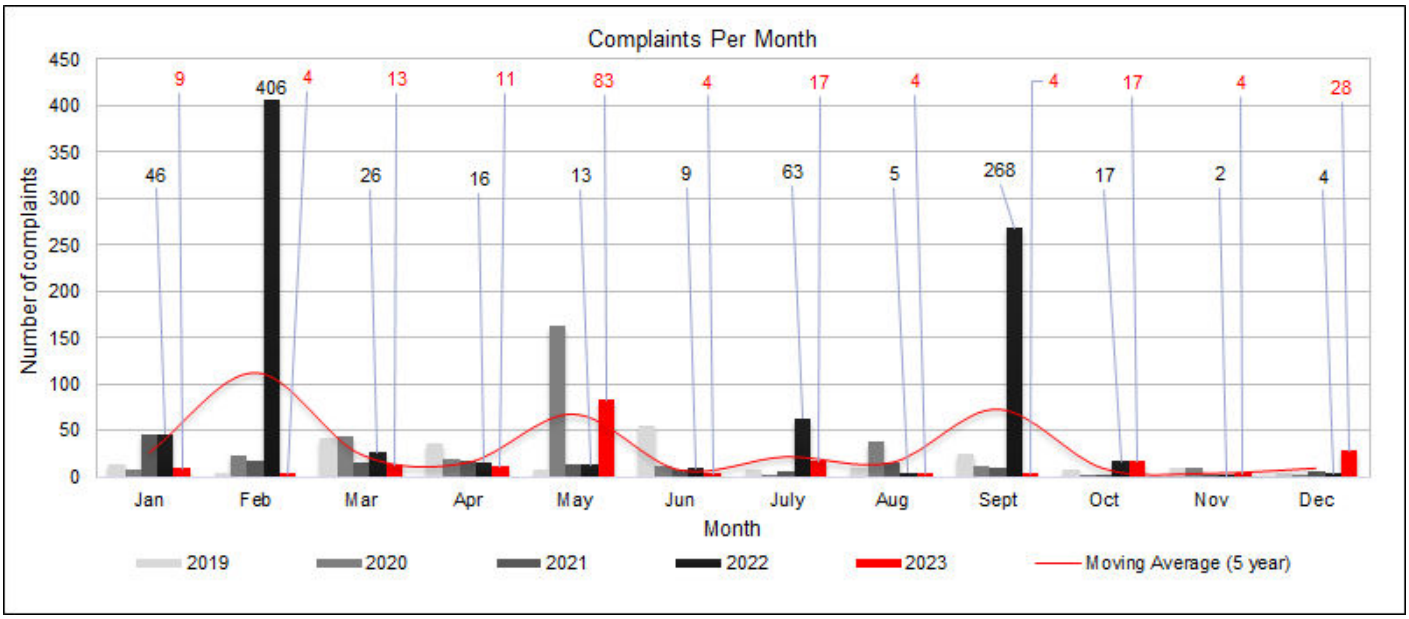


Figure 15: Complaints - historical monthly comparison.

The distribution of complaints in 2023 and 2022 by region, source and type is presented As follows:

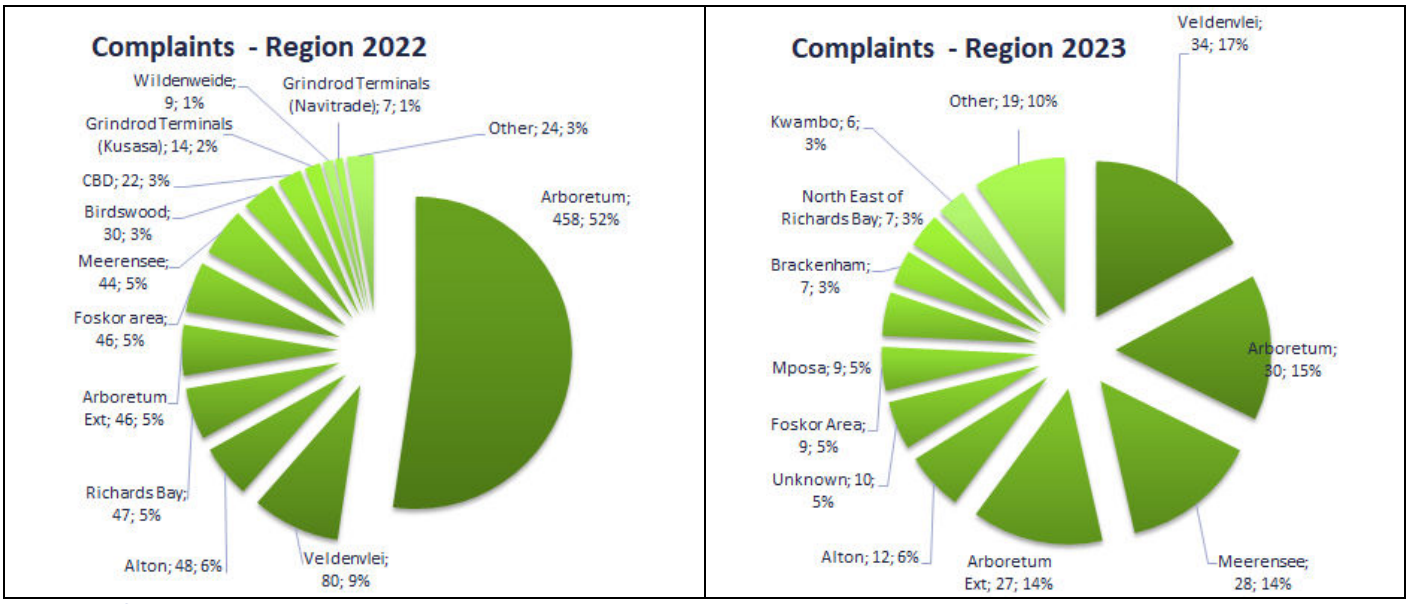


Figure 16: Complaints - region.

- **Region** (Figure 16):
  - 2023: Veldenvlei (17%), Arboretum (15%), Meerensee (14%), Arboretum Ext (14%), Alton (6%), other (34%).
  - 2022: Arboretum (52%), Veldenvlei (9%), Alton (5%), Richards Bay (5%), Arboretum Ext (5%), other (22%).

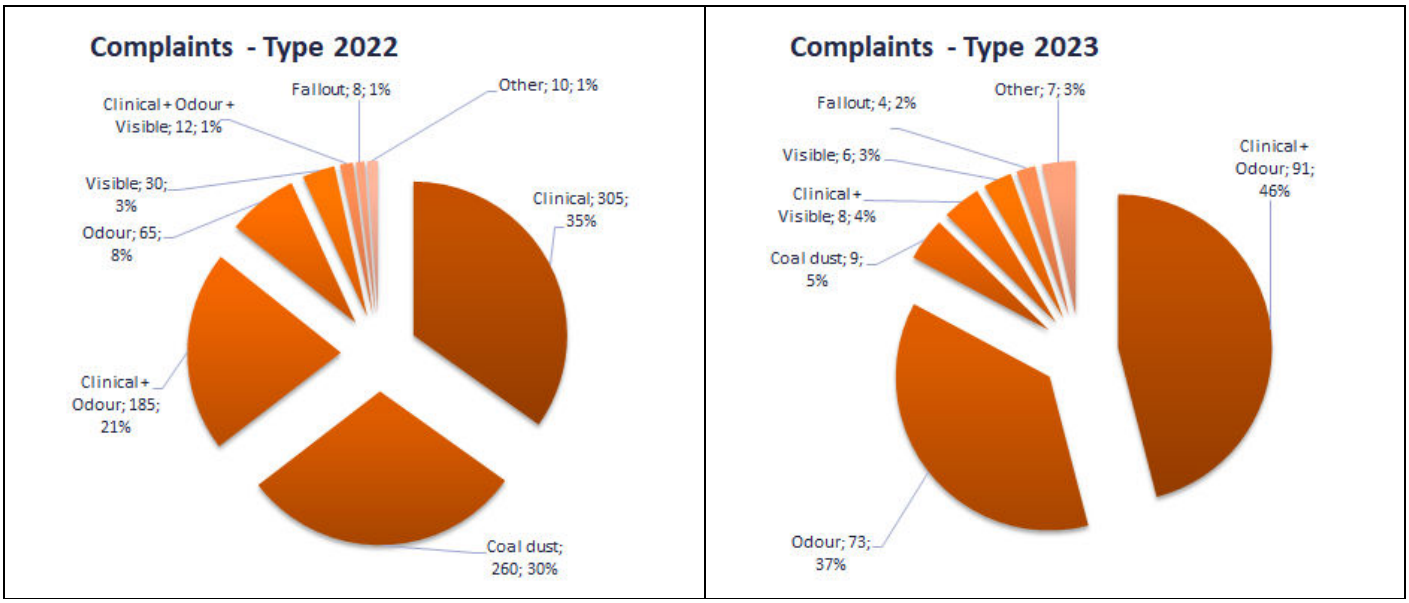


Figure 17: Complaints - type.

- **Type** (Figure 17):
  - 2023: Clinical + Odour (46%), Odour (37%), Coal dust (5%), Clinical + Visible (4%), Visible (3%), other (6%).
  - 2022: Clinical (35%), Coal dust (30%), Clinical + Odour (21%), Odour (7%), Visible (3%), other (3%).

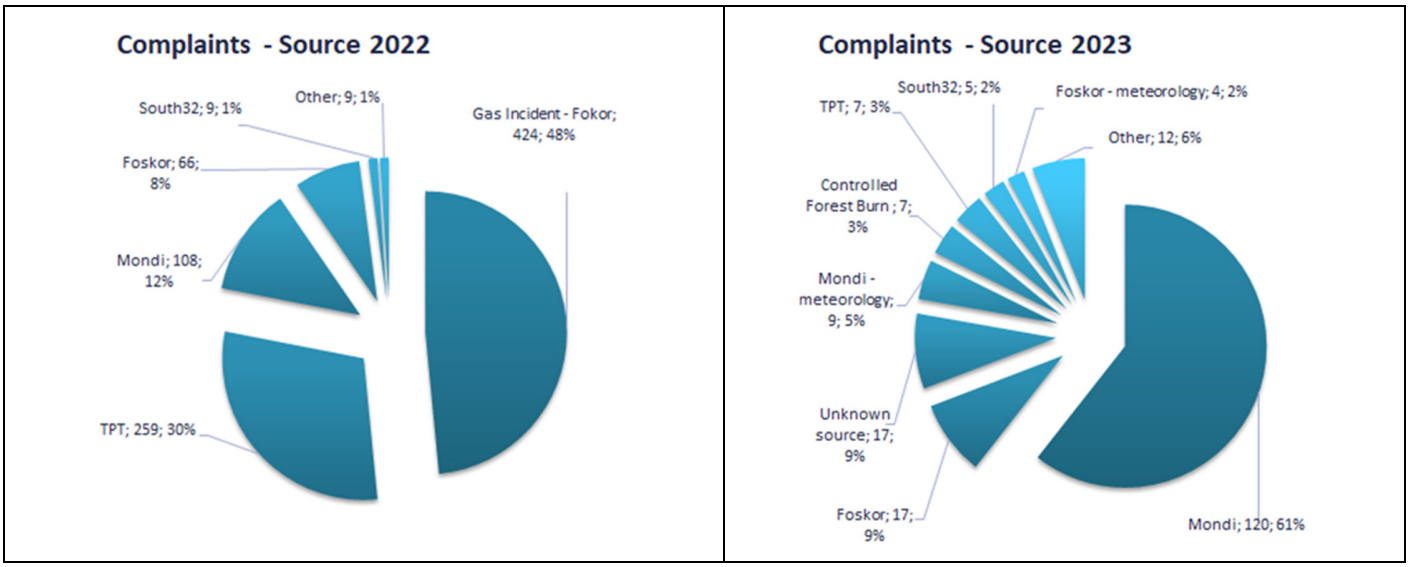


Figure 18: Complaints - source.

- **Allocation** (Figure 18):
  - 2023: Mondi (61%), Foskor (9%), Unknown source (9%), Mondi - meteorology (5%), Controlled Forest Burn (4%), other (14%)
  - 2022: Gas Incident - Foskor (48%), TPT (30%), Mondi (12%), Foskor (8%), South32 (1%), other (1%)

4. AIR QUALITY STANDARDS AND GUIDELINES

An air quality guideline and an air quality standard are two different approaches to assessing and managing air pollution levels. However, they have similar objectives of protecting public health and the environment. The difference between the two is as follows:

Air Quality Guidelines (WHO):

Air Quality Guidelines, such as those established by the World Health Organization (WHO), are developed based on scientific evidence to provide guidance on acceptable levels of air pollutants for protecting public health. They serve as recommendations for countries and communities to establish their own air quality standards and develop policies and measures to improve air quality.

WHO guidelines focus on identifying pollutant concentrations that, when exceeded, might pose health risks to vulnerable populations. They are typically more conservative in nature, aiming to achieve the highest level of health protection. These guidelines consider health effects and scientific research on the impacts of air pollution, and they are periodically reviewed and updated as new evidence emerges.

Air Quality Standards:

Air Quality Standards, on the other hand, are legally binding regulations or limits set by governmental or regulatory bodies to control and manage air pollution within a specific country or region. These standards establish maximum allowable concentrations of pollutants in the air that are deemed acceptable for human health and the environment based on local considerations, scientific research, and the socioeconomic context of the country.

Air Quality Standards are often developed by national or regional environmental agencies in collaboration with scientific experts, government bodies, and stakeholders. They serve as legally enforceable limits that industries and other pollution sources must comply with. Violations of these standards can lead to penalties and enforcement actions.

While both Air Quality Guidelines and Air Quality Standards aim to protect public health and the environment, guidelines are typically non-binding recommendations, whereas standards are legally enforceable regulations. Air Quality Guidelines provide a scientific basis for nations to establish their own Air Quality Standards according to their unique contexts. In contrast, Air Quality Standards are developed to address specific local air pollution challenges and establish compliance requirements.

5. FINE PARTICULATE MONITORING

"Particulate Matter" (PM) refers to solid particles and liquid droplets in the atmosphere. Many anthropogenic and natural sources emit PM directly or other pollutants into the atmosphere to form PM. These solid and liquid particles can vary in size. For example, particles less than 10 micrometres (µm) in diameter are classified as PM_{10} and particles less than 25 micrometres (µm) in diameter as $PM_{2.5}$.

Fine particulates can be inhaled and accumulate deep within the respiratory system. Therefore, exposure to sustained high concentrations may result in the following:

- 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
- In severe cases, a reduction in life expectancy

TEOMs measure PM data continuously at Brackenham, CBD and eSikhaleni stations. PM monitoring at Felixton, Harbour West and Scorpio is performed using E-samplers.

5.1. PM Ambient Air Quality Standards

Ambient air quality standards for particulates are listed below (Table 6).

Table 9: Particulate ambient air quality limits.

Organisation	Limit	PM_{10}		$PM_{2.5}$	
		24-hour Average	Annual Average	24-hour Average	Annual Average
		(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
RSA [a, d]	Standard	75 [b]	40 [c]	40 [b]	20 [c]
WHO [e]	Interim Target 1	150 [c]	70 [c]	75 [c]	35 [c]
	Interim Target 2	100 [c]	50 [c]	50 [c]	25 [c]
	Interim Target 3	75 [c]	30 [c]	37.5 [c]	15 [c]
	Interim Target 4	50 [c]	20 [c]	25 [c]	10 [c]
	Guideline	45 [c]	15 [c]	15 [c]	5 [c]

Notes:

a) *Government Gazette 32816 (December 24 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015* (RSA-NEMAQA, 2009).
b) *Not to be exceeded more than four (4) times in one year.*
c) *Not to be exceeded.*
d) *Government Gazette 35463 (June 29 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015* (RSA-NEMAQA, 2012).
e) *World Health Organisation* (WHO, 2021).

5.2. PM Annual Concentrations

Annual average PM_{10} concentrations dating back to 2004 are illustrated in Table 10 and Figure 19, and $PM_{2.5}$ concentrations since 2021 in Table 11 and Figure 20. The 5-year Mann Kendall Trend[2] for CBD and eSikhaleni is stable; the other stations do not have enough current data for the establishment of a trend. The lower particulate concentrations in 2020 and 2021 could be an effect of the decreased commercial activity during the pandemic lockdown in those years.

Table 10: PM_{10} annual average concentrations (2004 to 2022).

Year	Brackenham	CBD	eNseleni	eSikhaleni	Felixton	Mtunzini	Richardia	Scorpio	St Lucia
2004		25							
2005		30							
2006		25							
2007		42							
2008	32	35							
2009	35	29							
2010	22	19				14			17
2011	27	23				21			20
2012	31	27				25			22
2013	32	27			32	22			22
2014	37	29		36	36	26			22
2015	32	30		33	32	21			
2016	29	25		28	29	25			
2017	32	26		22	32	25			
2018	32	24	25	24	25				
2019	30	25	29	24	26				
2020	26	13	25	23	23				
2021	24	12	26	23					
2022		11		13					
2023		19		16	9		23	33	

Note: Yellow – exceedance of the WHO annual guideline. Red – exceedance of the RSA annual standard.

Table 11: $PM_{2.5}$ annual average concentrations (2021 to 2022)

Year	Brackenham	Felixton	Harbour West	Scorpio
2021	13	19		
2022	12	16		
2023	13	9	13	11

Note: Yellow – exceedance of the WHO annual guideline. Red – exceedance of the RSA annual standard.

[2] The Mann Kendall Trend Test is sometimes also named as Kendall's tau test or Mann Kendell Test (or M-K test). This test is utilized for the analysis of data that is collected for a sufficient period for representing a continuous increasing or decreasing trends in Y values. This test is non-parametric, and it applies to all types of distributions known and therefore, does not need the data to meet any specified assumptions of normality.

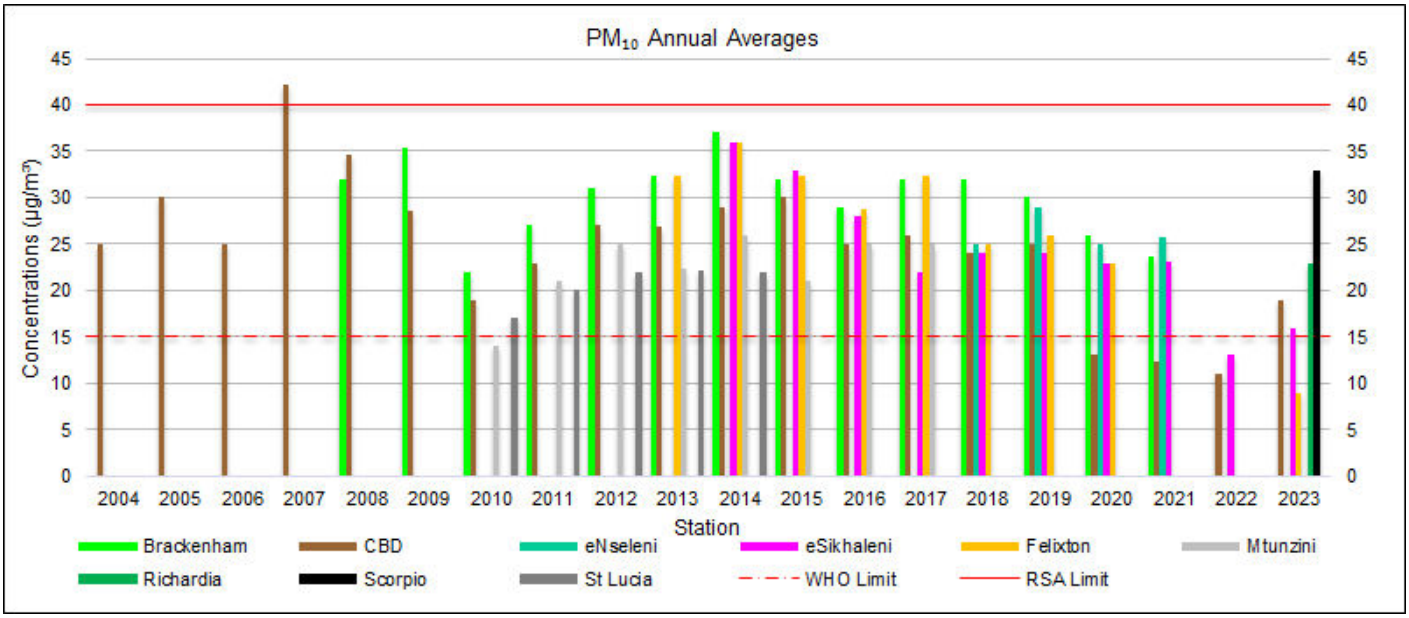


Figure 19: PM_{10} annual average concentrations (2004 to 2023)

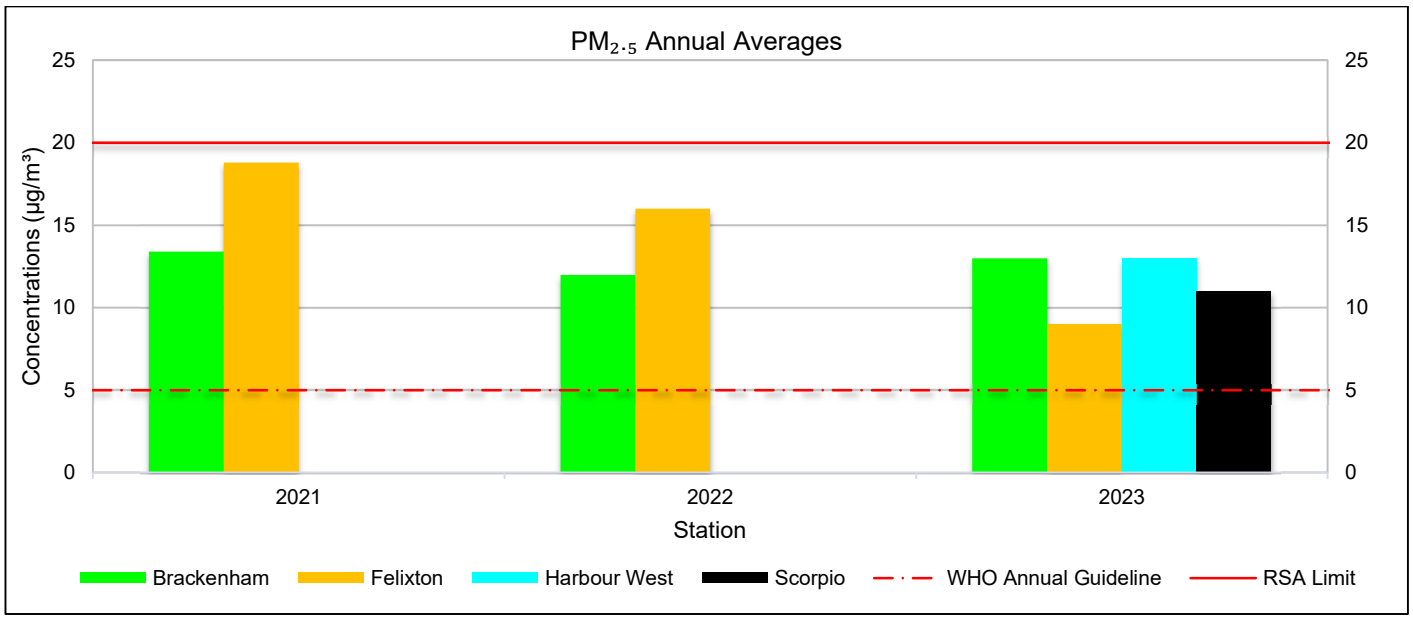


Figure 20: $PM_{2.5}$ annual average concentrations (2021 to 2023)

Compared to 2022, 2023 annual average PM_{10} concentrations at CBD were higher, and at eSikhaleni similar (difference less than 10% of the RSA limit) (Figure 20).

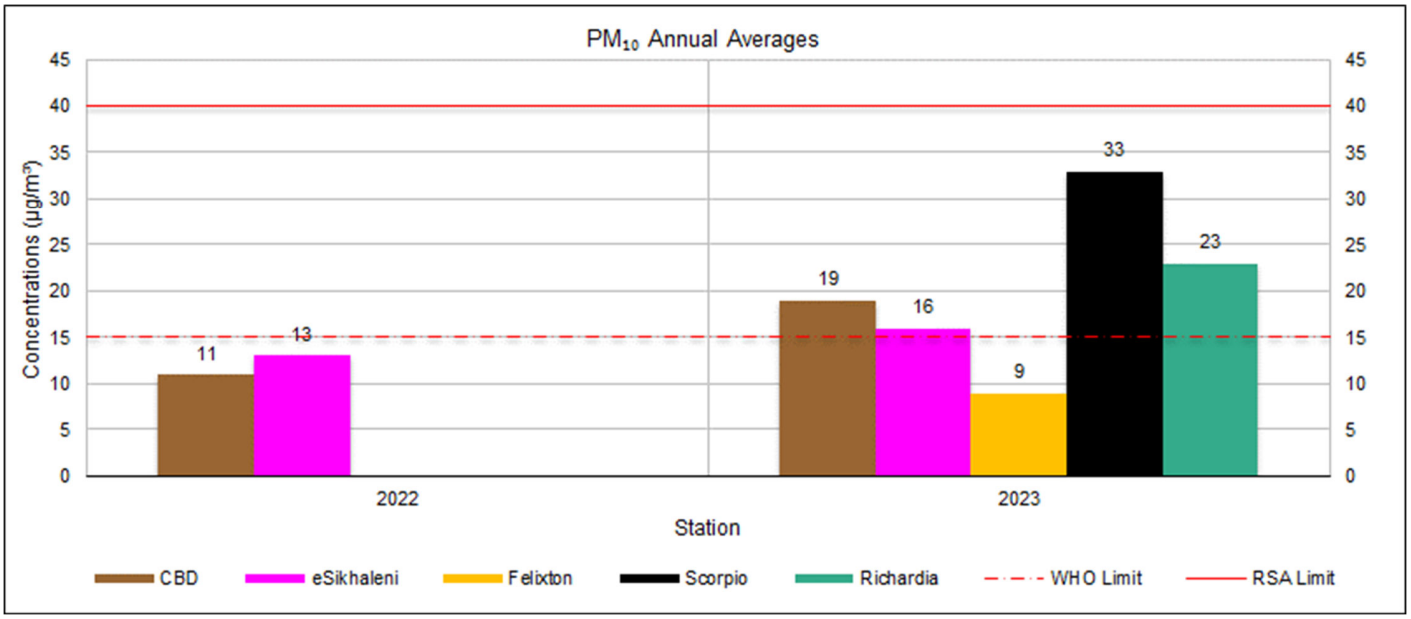


Figure 21: PM_{10} annual average concentration (2022 to 2023).

Compared to 2022, the 2023 annual average $PM_{2.5}$ concentrations at Brackenham were similar (difference less than 10% of the RSA limit) and at Felixton lower (Figure 21).

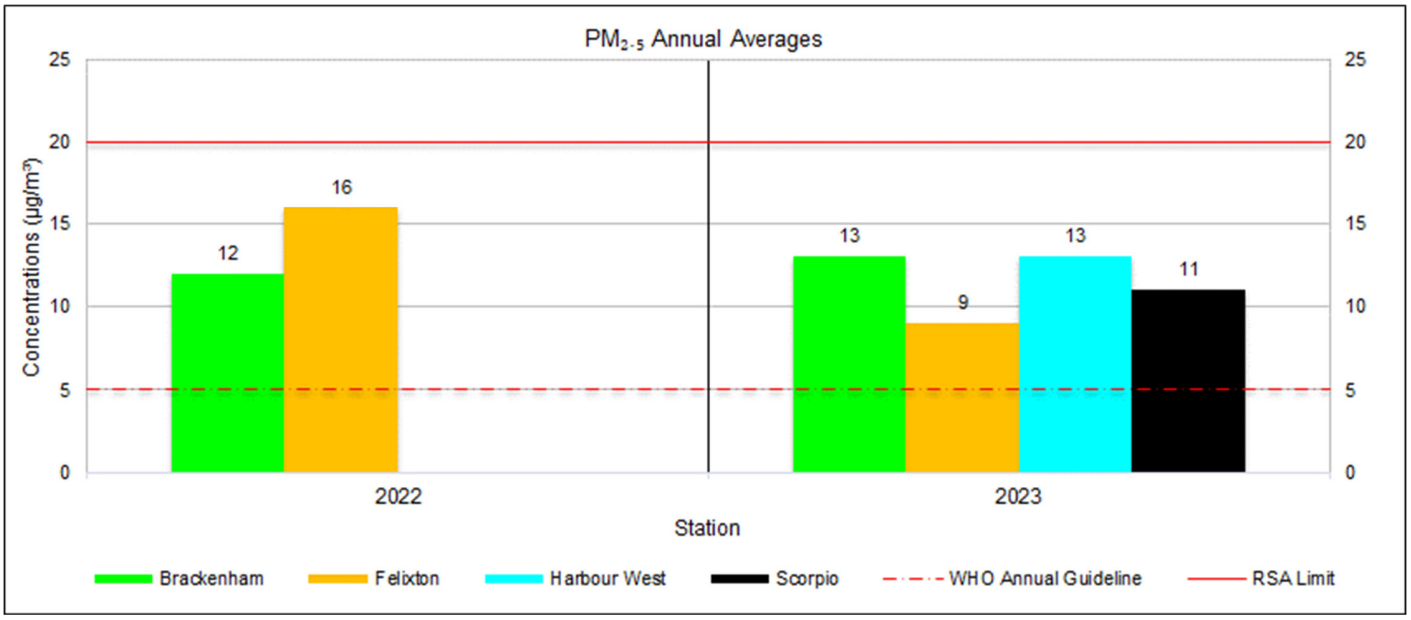


Figure 22: $PM_{2.5}$ annual average concentration (2022 to 2023).

Annual average PM_{10} concentrations did not exceed the RSA Standard; the WHO guideline was exceeded at CBD, eSikhaleni, Richardia and Scorpio (Figure 23).

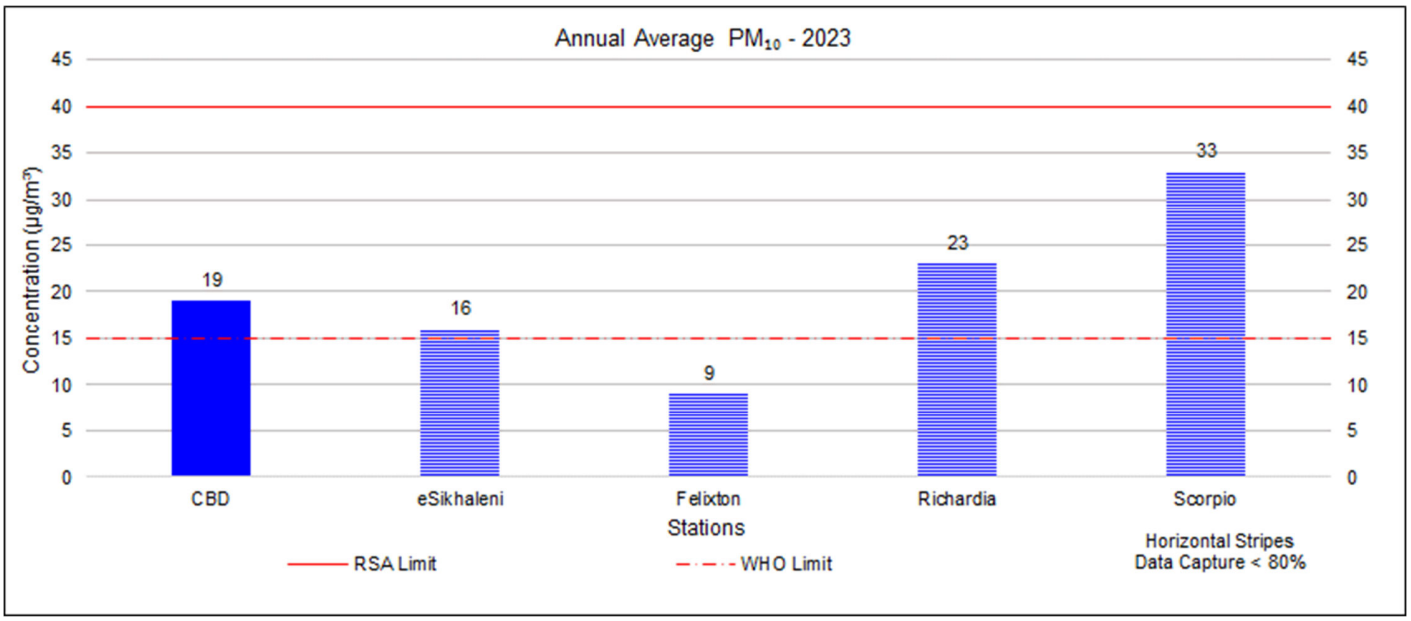


Figure 23: PM_{10} annual average concentration.

Missing Data
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, TEOM failure and replacement.*
Scorpio *– load shedding, power outages, data invalidation, instrument failure and repair (October - December).*

Annual average $PM_{2.5}$ concentrations did not exceed the RSA Standard; the WHO Guideline was exceeded at Brackenham, Felixton, harbour West and Scorpio (Figure 24).

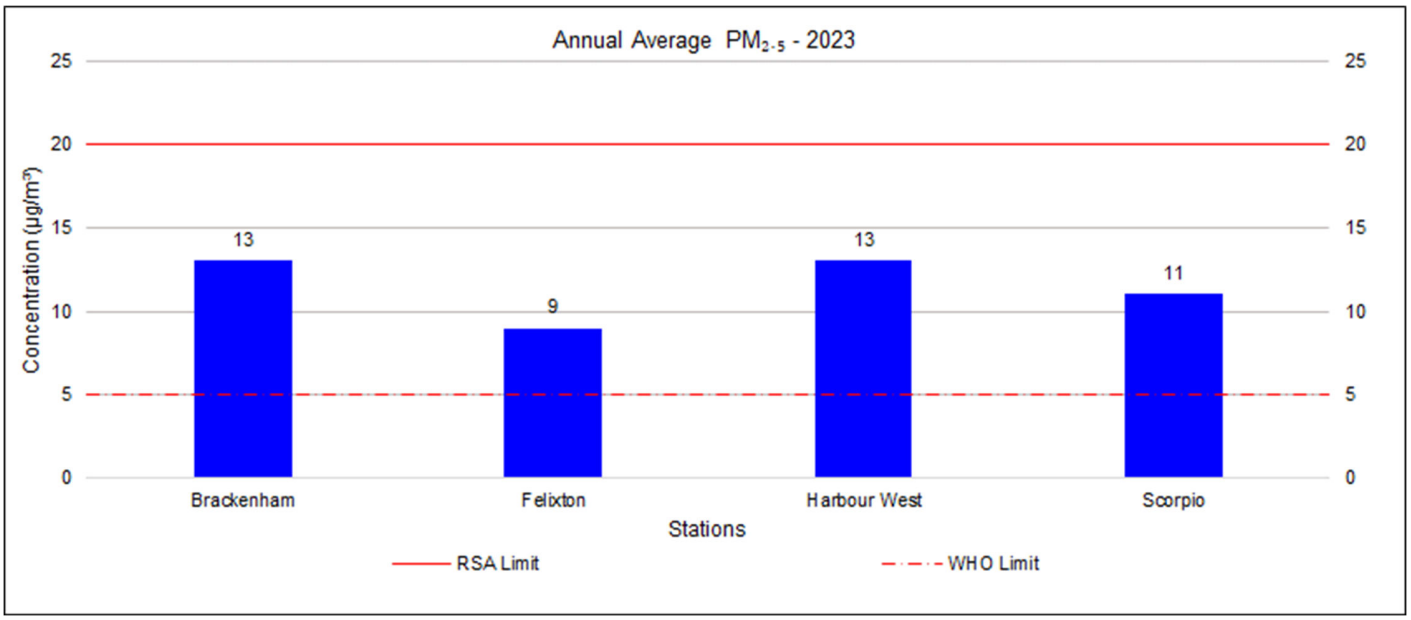


Figure 24: $PM_{2.5}$ annual average concentration.

5.3. PM Monthly Concentrations

Monthly comparisons are provided in Figure 25 and Figure 26.

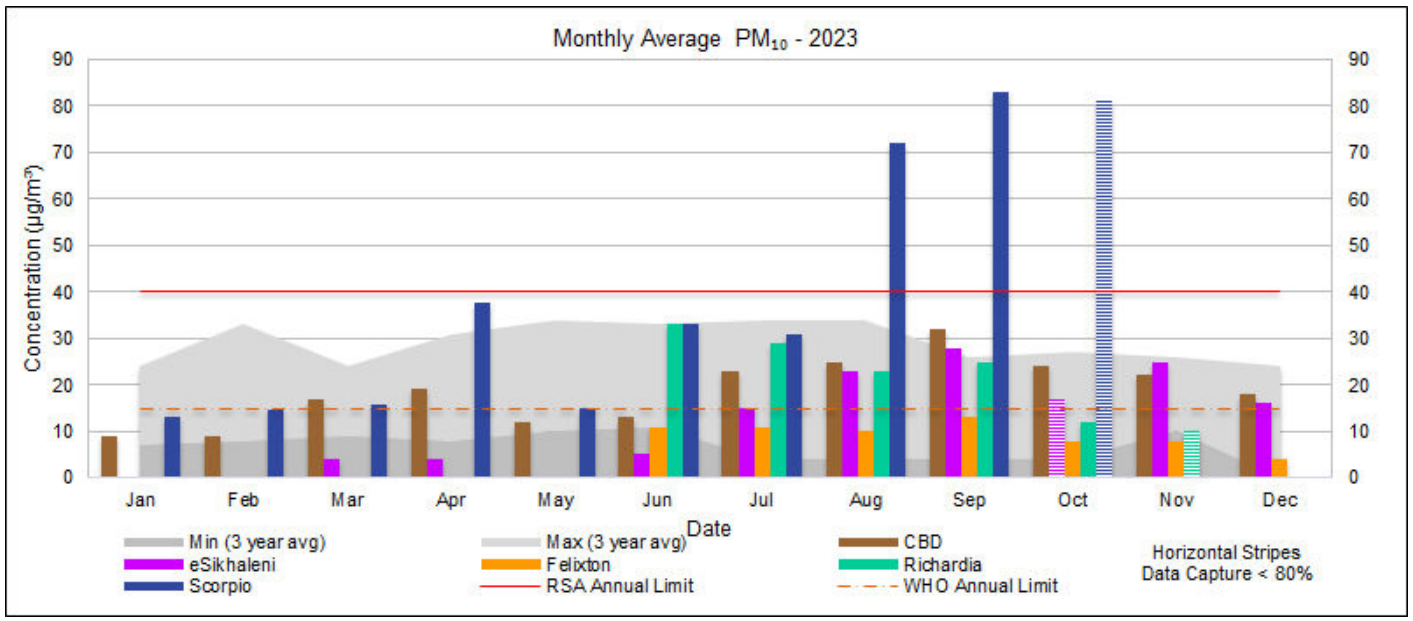


Figure 25: PM_{10} monthly concentrations.
Missing Data
***eSikhaleni** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
***Felixton** – load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
***Richardia** – load shedding, power outages, station commissioned in August, TEOM failure and replacement.*
***Scorpio** – load shedding, power outages, data invalidation, instrument failure and repair (October - December).*

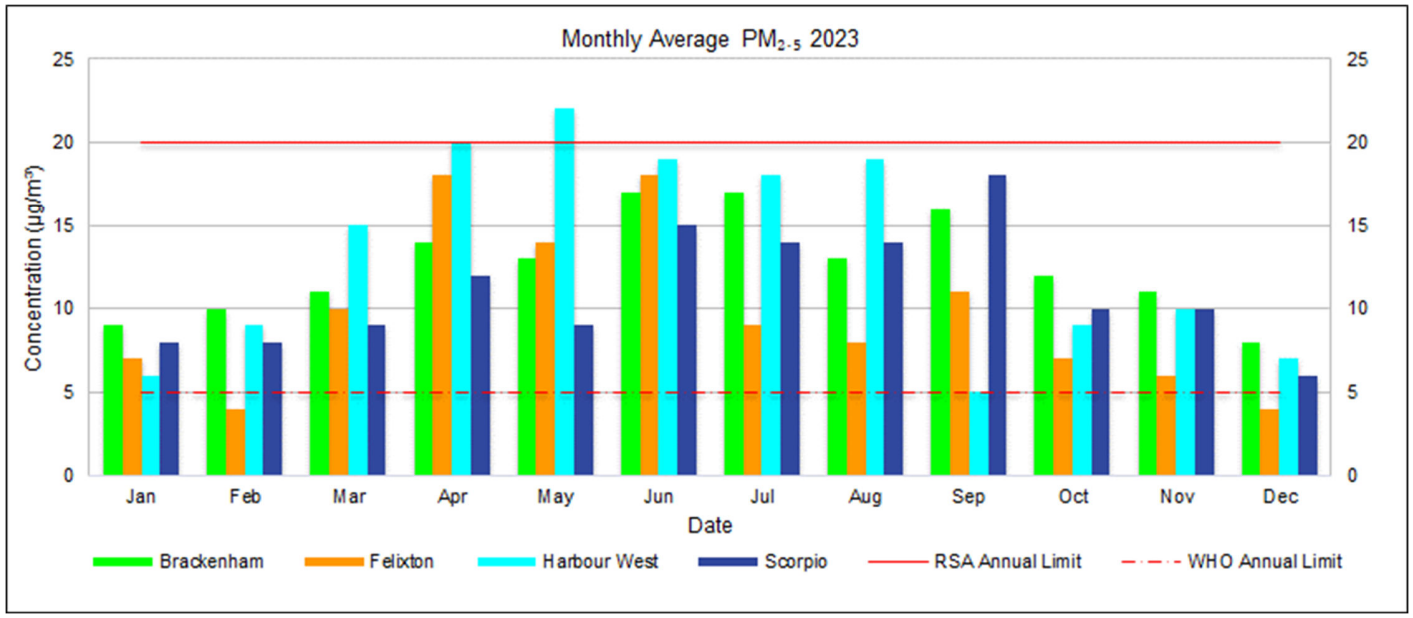


Figure 26: $PM_{2.5}$ monthly concentrations.

5.4. PM Diurnal Concentrations

Diurnal concentrations for PM_{10} and $PM_{2.5}$ are shown below (Figure 27 and Figure 28).

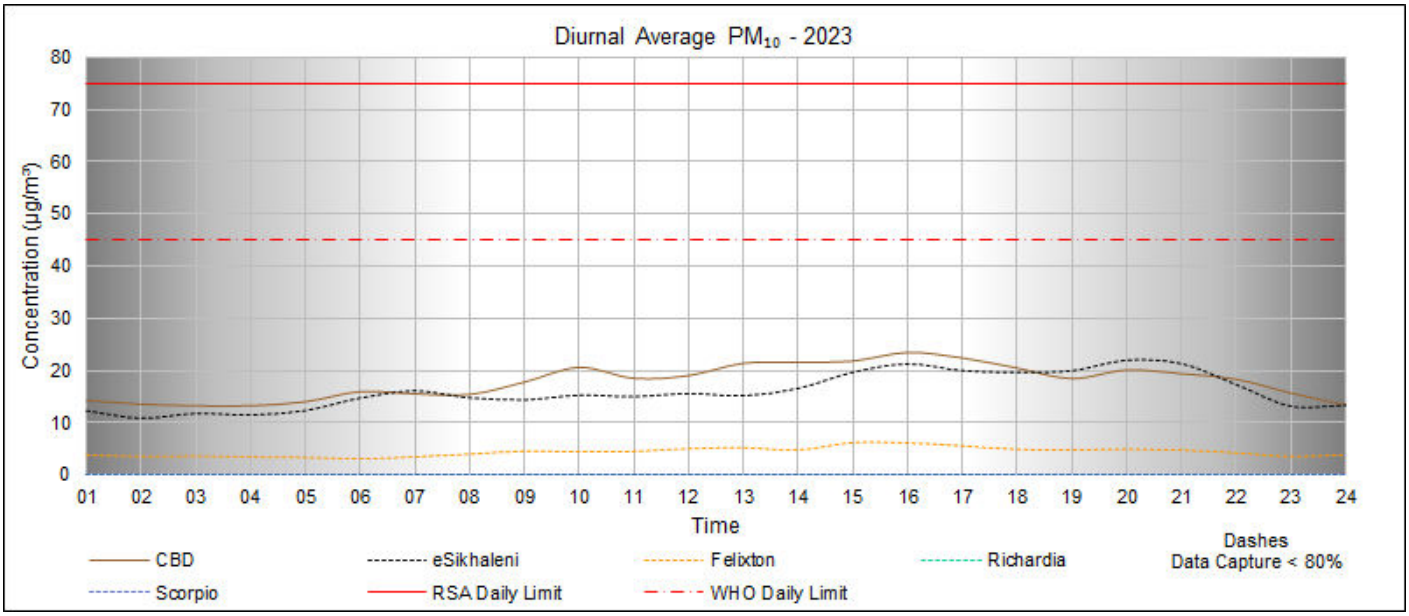


Figure 27: PM_{10} diurnal concentrations.

Missing Data
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, TEOM failure and replacement.*
Scorpio *– load shedding, power outages, data invalidation, instrument failure and repair (October - December).*

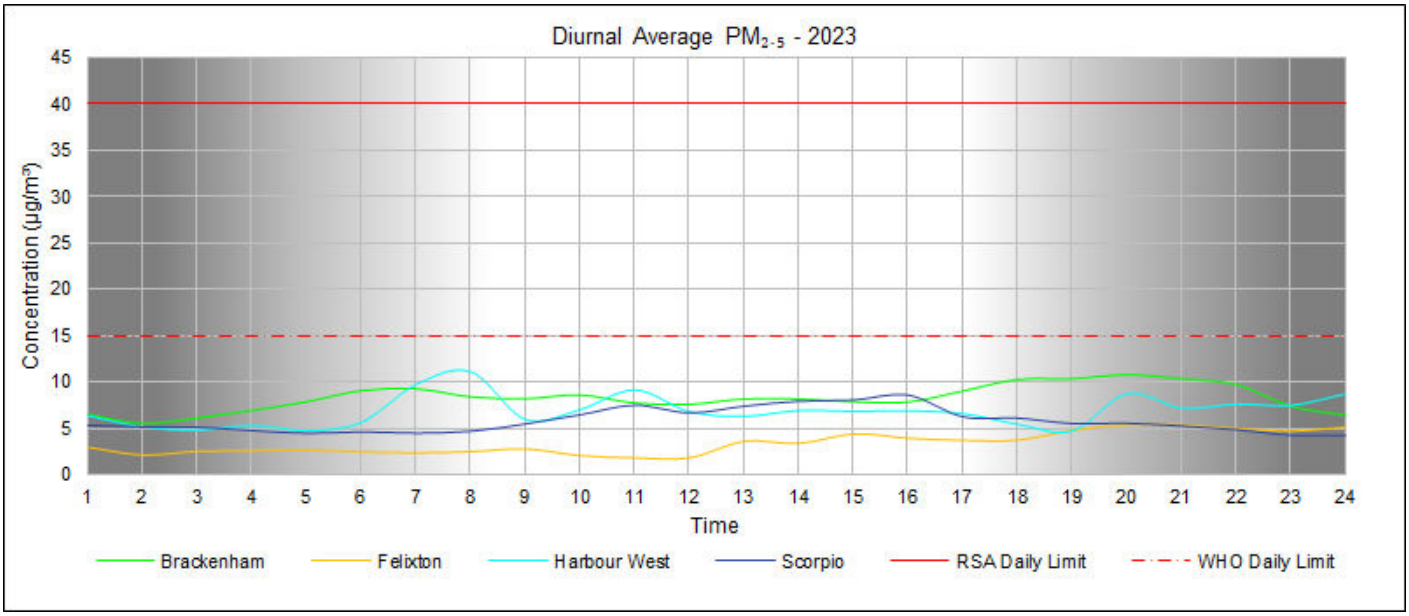


Figure 28: $PM_{2.5}$ diurnal concentrations.

5.5. PM Daily Concentrations

Daily average PM_{10} concentrations are shown in Figure 29; there were:

- Forty (40) measured exceedances of the RSA Limit (75 µg/m³); the RSA Standard, which allows four (4) exceedances of the limit per year, was exceeded at Scorpio (Table 12); and
- Ninety (90) measured exceedances of the WHO Limit (45 µg/m³) (Table 13).

Table 12: PM_{10} daily average exceedance allocations (RSA).

PM_{10} Daily RSA Limit (75 µg/m³)	40
Richardia	**1**
Local Source - fire	1
Scorpio	**39**
Grindrod - coal transport, handling, and stockpiling	1
Grindrod - meteorology	5
Grindrod & TPT - coal transport, handling, and stockpiling	25
Local Source - fire	2
NCT	3
TPT / Grindrod - Coal Dust	2
TWK (Richards Bay Wood Chip Mill) - meteorology	1

Table 13: PM_{10} daily average exceedance allocations (WHO).

PM_{10} Daily WHO Limit (45 µg/m³)	90
CBD	**6**
No response required	6
eSikhaleni	**3**
No response required	3
Richardia	**10**
No response required	10
Scorpio	**71**
No response required	71
Note: WHO exceedances are responded to if they relate to a complaint.	

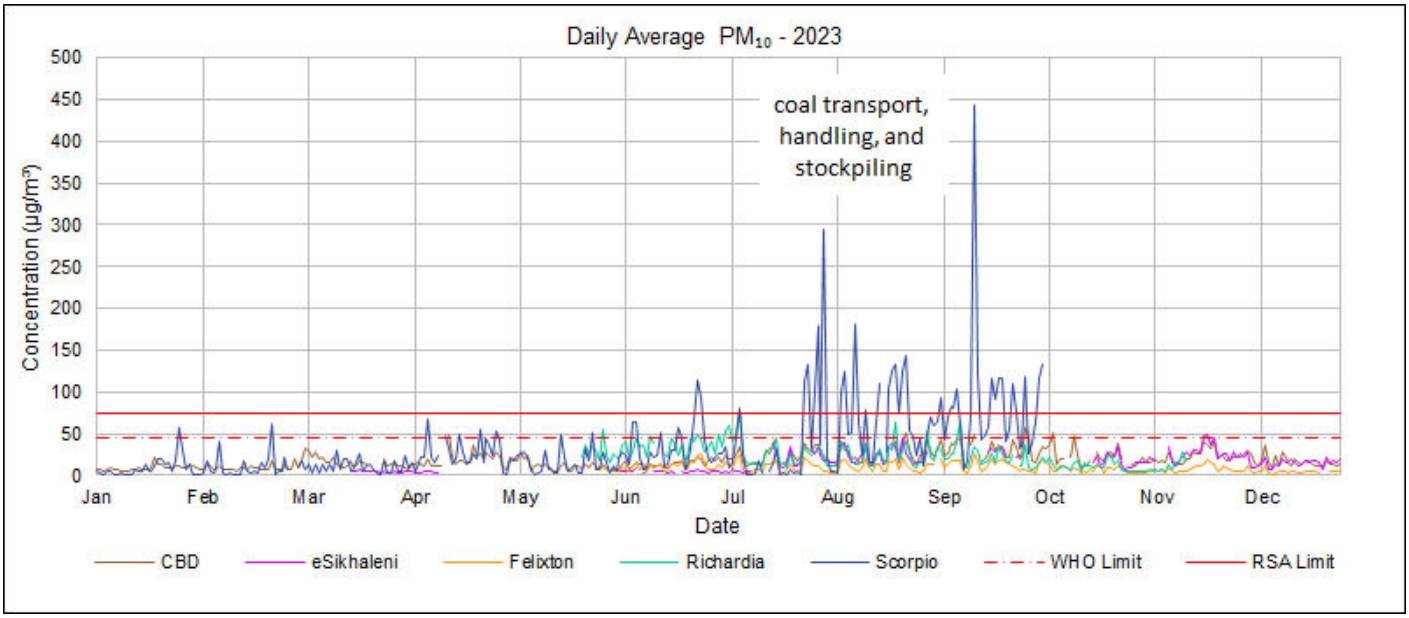


Figure 29: PM_{10} daily average concentrations.

Daily average $PM_{2.5}$ concentrations are shown in Figure 30; there were:

- Twenty (20) measured exceedances of the RSA Limit (40 µg/m³) (Table 14), the RSA Standard, which allows four (4) exceedances per year, was t exceeded at Harbour West
- Three hundred and thirty-four (334) measured exceedances of the WHO Limit (15 µg/m³) (Table 15).

Table 14: $PM_{2.5}$ daily average exceedance allocations (RSA).

$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	20
Brackenham	**1**
NCT	1
Felixton	**1**
THS	1
Harbour West	**17**
Grindrod & TPT - coal transport, handling, and stockpiling	2
NCT	1
No response required	1
TPT	2
TPT - coal dust	6
TPT - coal transport, handling, and stockpiling	4
TPT meteorology	1
Scorpio	**1**
Grindrod & TPT - coal transport, handling, and stockpiling	1

Table 15: $PM_{2.5}$ daily average exceedance allocations (WHO).

$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	334
Brackenham	**91**
No response required	91
Felixton	**58**
No response required	58
Harbour West	**108**
No response required	107
TPT - coal dust	1
Scorpio	**77**
No response required	77

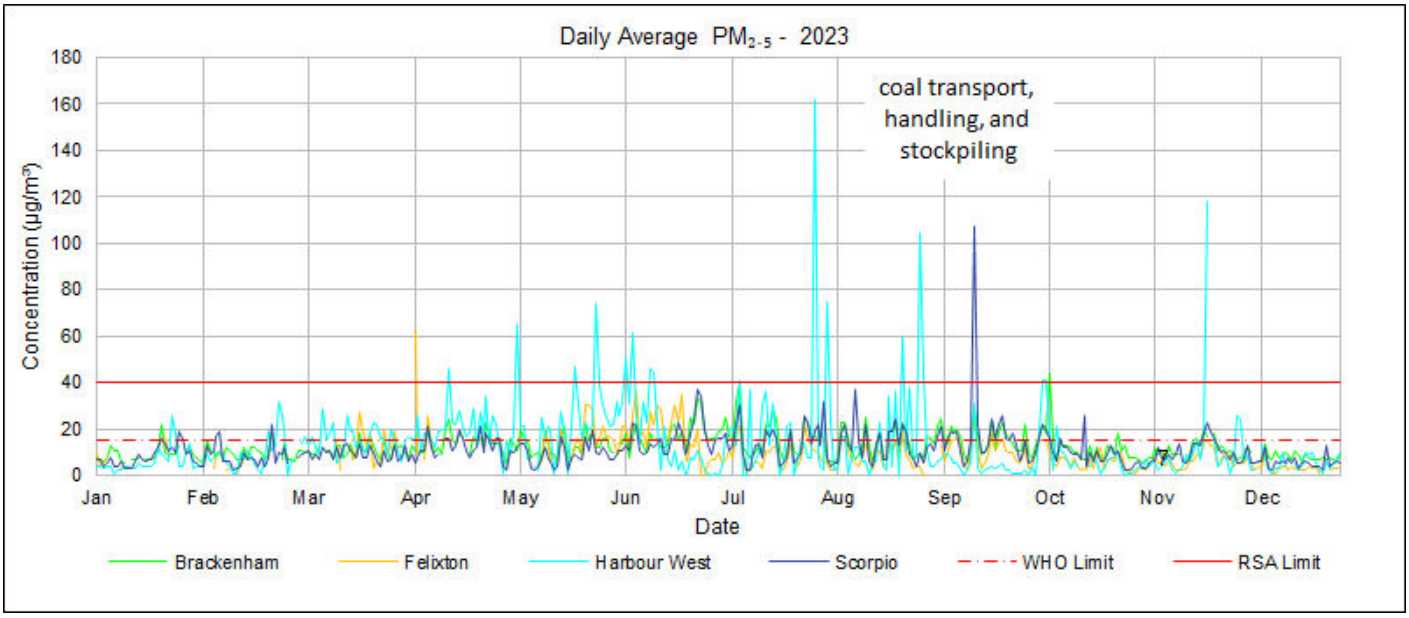


Figure 30: $PM_{2.5}$ daily average concentrations.

Note: Harbour West and Scorpio were commissioned in December 2022.

5.6. PM Exceedances

Annual and monthly comparisons of the number of days on which PM_{10} exceedances occurred are shown in Figure 31 and Figure 32. According to the Relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to PM_{10}.

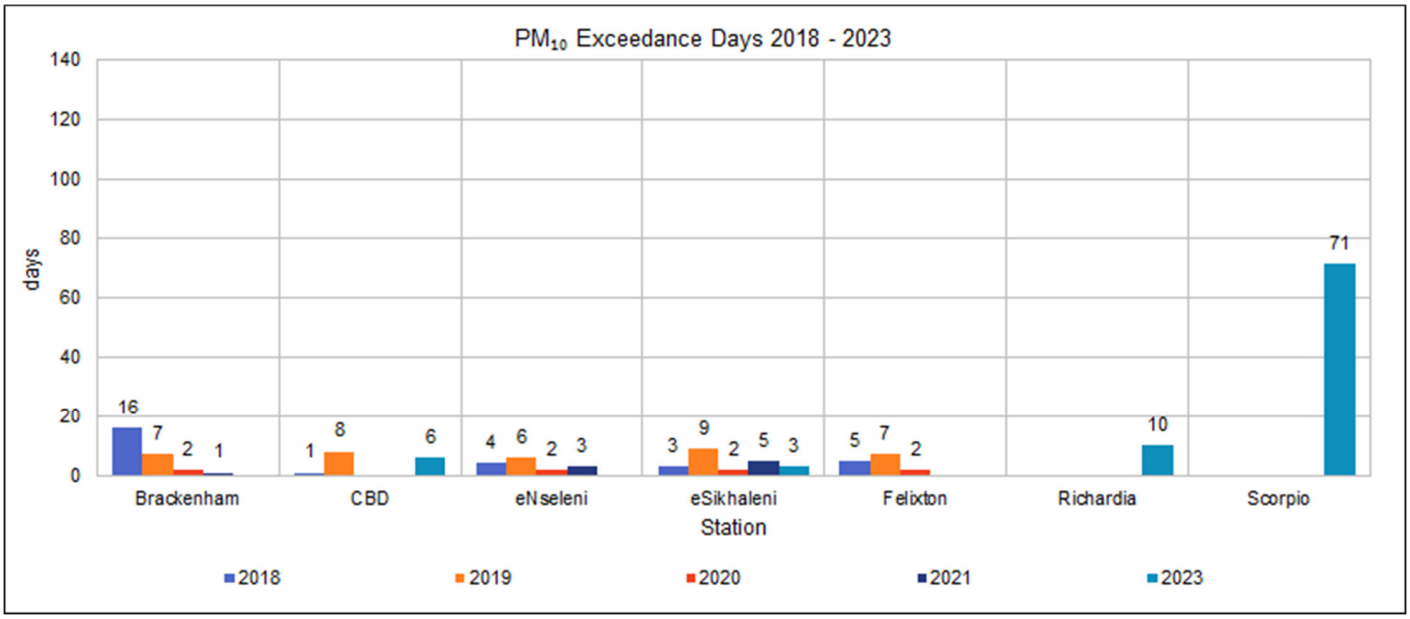


Figure 31: PM_{10} exceedance days (2018 to 2023).

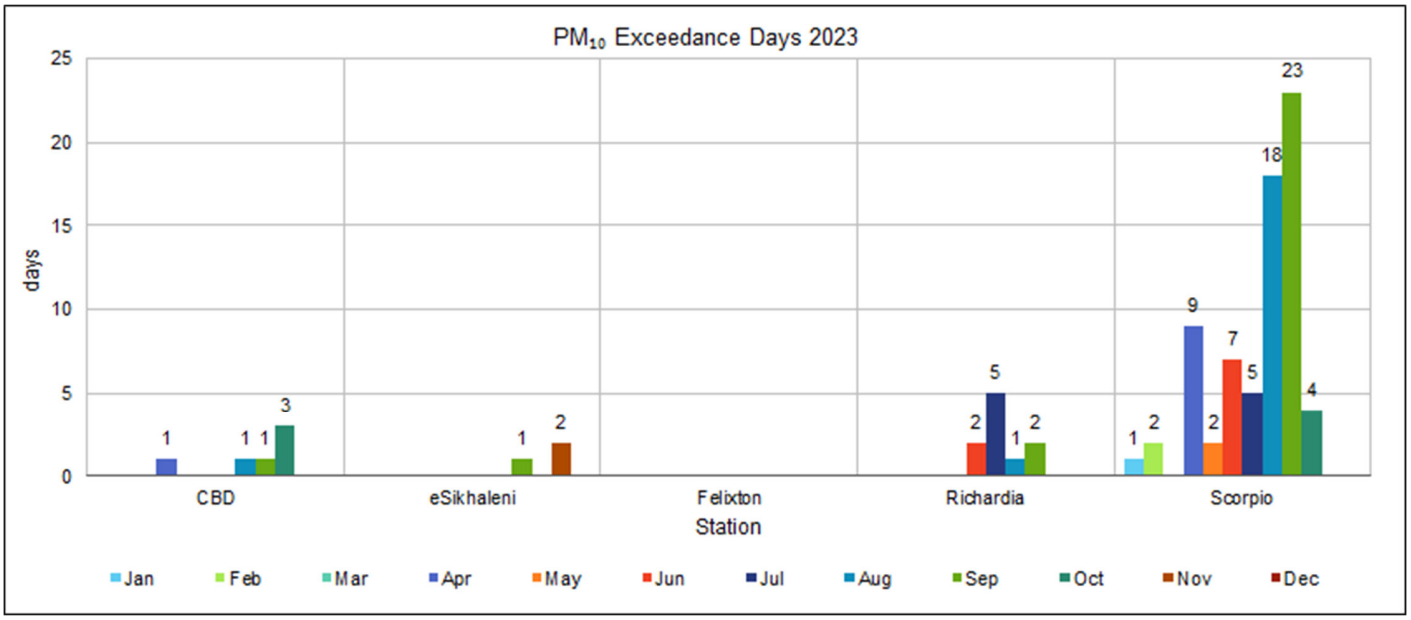


Figure 32: PM_{10} exceedance days per month 2023.

Annual and monthly comparisons of the number of days on which $PM_{2.5}$ exceedances occurred are shown in Figure 31 and Figure 32. According to the Relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to $PM_{2.5}$.

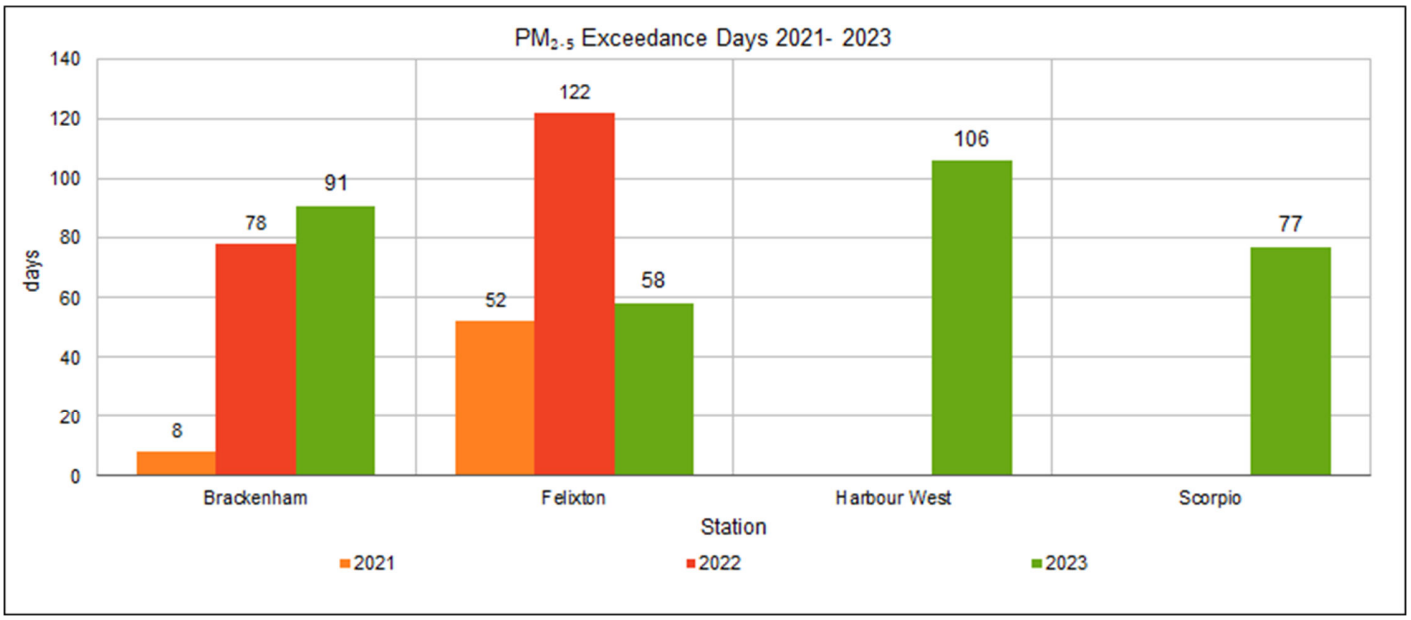


Figure 33: $PM_{2.5}$ exceedance days 2021 - 2023

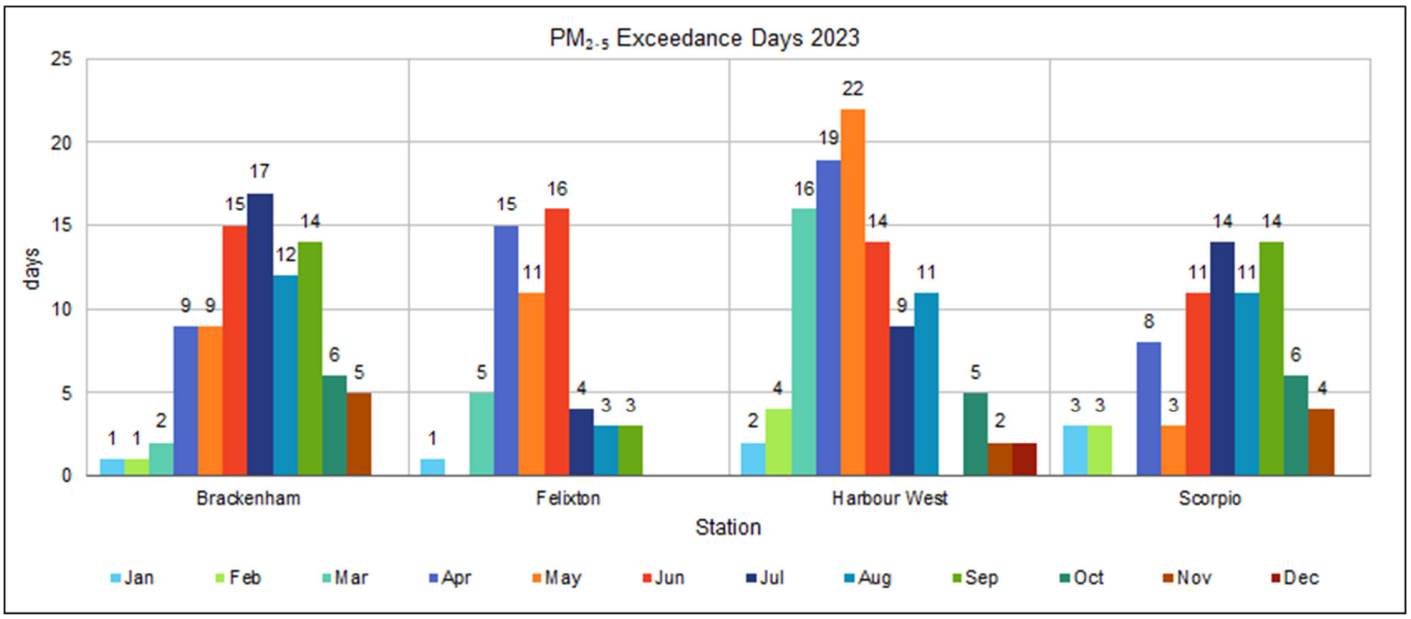


Figure 34: $PM_{2.5}$ exceedance days per month 2023.

Table 16: PM_{10} exceedance summary 2023.

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM_{10} Daily RSA Limit (75 µg/m³)	**1**	**1**		**3**		**2**	**6**	**11**	**13**	**3**			**40**
Richardia							1						**1**
Scorpio	1	1		3		2	5	11	13	3			**39**
PM_{10} Daily WHO Limit (45 µg/m³)	**1**	**2**		**10**	**2**	**9**	**10**	**20**	**27**	**7**	**2**		**90**
CBD				1				1	1	3			**6**
eSikhaleni									1		2		**3**
Richardia						2	5	1	2				**10**
Scorpio	1	2		9	2	7	5	18	23	4			**71**

Note:
- *Yellow indicates an exceedance of the guideline.*
- *Red indicates an exceedance of a standard.*

Table 17: $PM_{2.5}$ exceedance summary 2023.

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
$PM_{2.5}$ Daily RSA Limit (40 µg/m³)				**2**	**3**	**4**	**2**	**4**	**1**	**3**	**1**		**20**
Brackenham										1			**1**
Felixton				1									**1**
Harbour West				1	3	4	2	4		2	1		**17**
Scorpio									1				**1**
$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	**7**	**8**	**23**	**51**	**45**	**56**	**45**	**37**	**32**	**17**	**11**	**2**	**334**
Brackenham	1	1	2	9	9	15	17	12	14	6	5		**91**
Felixton	1		5	15	11	16	4	3	3				**58**
Harbour West	2	4	16	19	22	14	10	11	1	5	2	2	**108**
Scorpio	3	3		8	3	11	14	11	14	6	4		**77**

Note:
- *Yellow indicates an exceedance of the guideline.*
- *Red indicates an exceedance of a standard.*

6. SULPHUR DIOXIDE MONITORING

Sulphur dioxide (SO_2) is one gas 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, and metal smelting (particularly from sulphide-containing ores, e.g., lead, silver, and zinc ores) and vehicle tailpipe emissions. Natural sources of SO_2 emissions include geothermal activity (including hot springs and volcanic activity) and the natural decay of vegetation on land in wetlands and oceans.

SO_2 is linked with several 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 the following:

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

6.1. SO_2 Ambient Air Quality Standards

South African ambient air quality standards for SO_2 are listed below (Table 9).

Table 18: SO_2 ambient air quality limits.

Organisation	Limit	10-min Average	1-hour Average	24-hour Average	Annual Average
RSA [a]	Standard	500 µg/m³ [b]	350 µg/m³ [c]	125 µg/m³ [d]	50 µg/m³ [e]
		191ppb [b]	134 ppb [c]	48 ppb [d]	19 ppb [e]
WHO [f]	Interim Target 1	-	-	125 µg/m³	-
		-	-	48 ppb	-
	Interim Target 2	-	-	50 µg/m³	-
		-	-	19 ppb	-
	Guideline	500 µg/m³	-	40 µg/m³	-
		191ppb	-	15 ppb	-

Notes:

a) SA Government Gazette 32816 (published on December 24 2009) in terms of the National Environmental Management: Air Quality Act 39 of 2004 (RSA-NEMAQA, 2009).
b) Not to be exceeded more than five hundred and twenty-six (526) times in one year.
c) Not to be exceeded more than eighty-eight (88) times in one year.
d) Not to be exceeded more than four (4) times in one year.
e) Not to be exceeded.
f) World Health Organisation (WHO, 2021).

SO_2 exceedances can be associated with emissions because of process upsets (i.e., planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or an event (e.g., fires or emergency shutdown).

6.2. SO_2 Annual Concentrations

Annual average concentrations dating back to 1997 are illustrated in Table 19 and Figure 35. The 5-year Mann Kendall Trend for Arboretum, Brackenham and Scorpio is stable for eSikhaleni and Felixton, decreasing; CBD and Harbour West have no trend, and the other stations do not have enough current data for the establishment of a trend.

Table 19: SO_2 annual average concentration (1997 to 2023)

Year	Arboretum	Brackenham	CBD	eNseleni	eSikhaleni	Felixton	Harbour West	Richardia	Scorpio
1997	2								
1998	4								
1999	3								
2000	4								
2001	4		5						
2002	4		6						
2003	4	3	5						7
2004	5	4	7						11
2005	4	4	6						11
2006	4	3	6				8		9
2007	3	2	5				8		8
2008	2	1	4				4		6
2009	2	1	4				8		6
2010	3	1	4				9		7
2011	3	3	4				8		8
2012	3	2	3			3	8		9
2013	3	1	4			3	9		12
2014	2	2	5		1	3	8		9
2015	1	3	4		2	3	6		7
2016	1	1	2		1	2	7		7
2017	1	1	4		2	2	7		7
2018	3	1	4	1	2	3	9		9
2019	2	1	4	1	4	3	7		7
2020	1	1	5	1	2	2	8		11
2021	2	2	6		1	2	12		12
2022	2	1	5		1	1	11		9
2023	2	1	5		1	1	7	9	8

Note: Yellow – exceedance of the WHO annual guideline. Red – exceedance of the RSA annual standard.

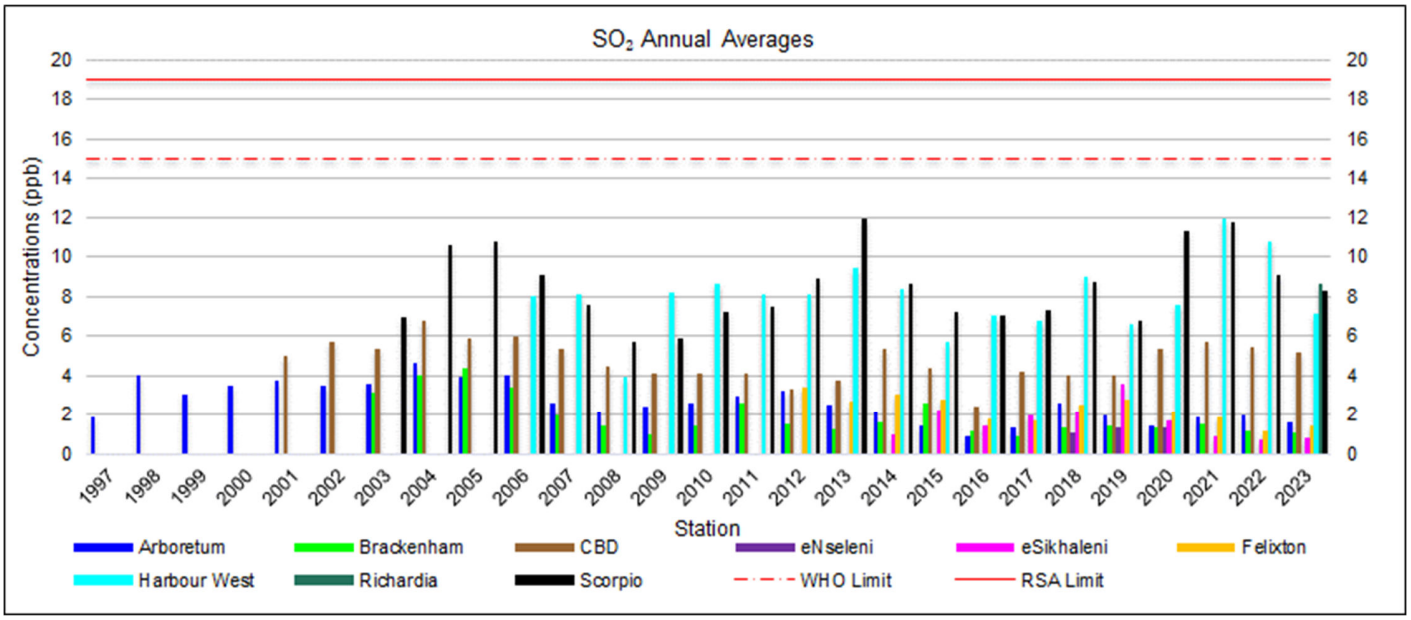


Figure 35: SO_2 annual average concentration (1997 to 2023).

Compared to 2022, 2023 annual average SO_2 concentrations at most stations were similar (difference less than 10% of the RSA limit), concentrations at Harbour West decreased. There isn't a comparison for Richardia (Figure 36).

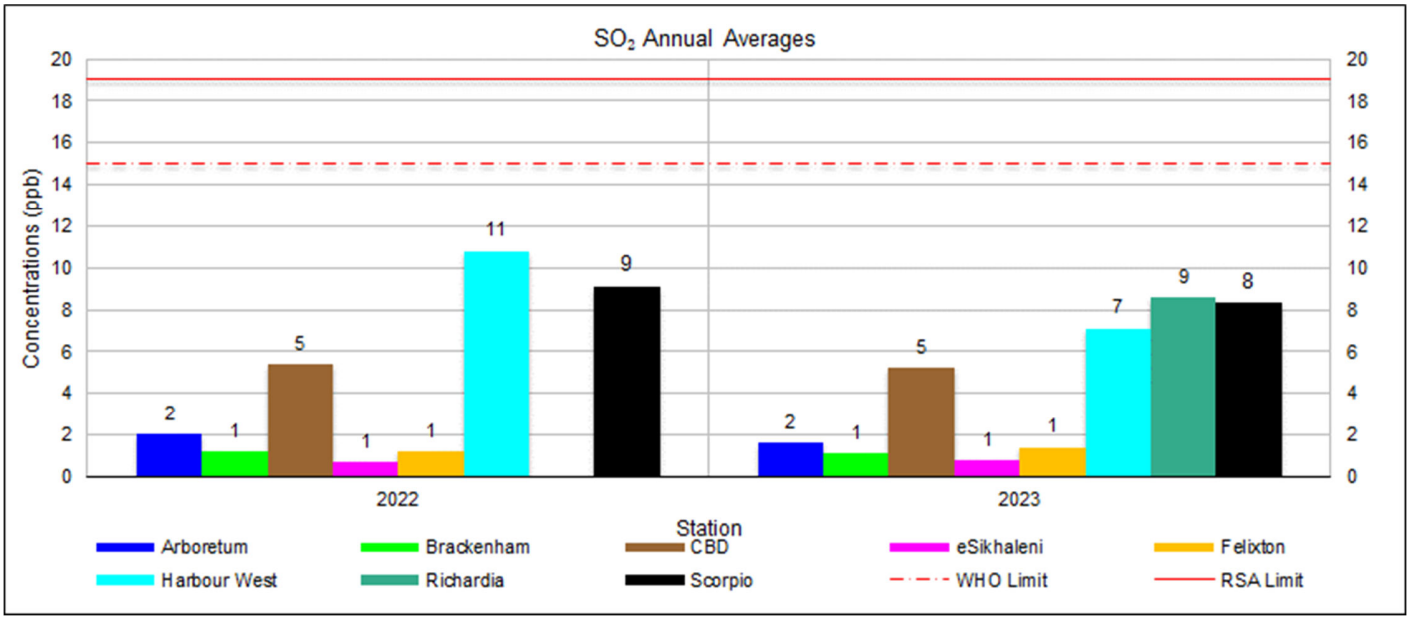


Figure 36: SO_2 annual average concentration (2022 to 2023).

Annual average SO_2 concentrations did not exceed the RSA or the WHO Limits (Figure 37).

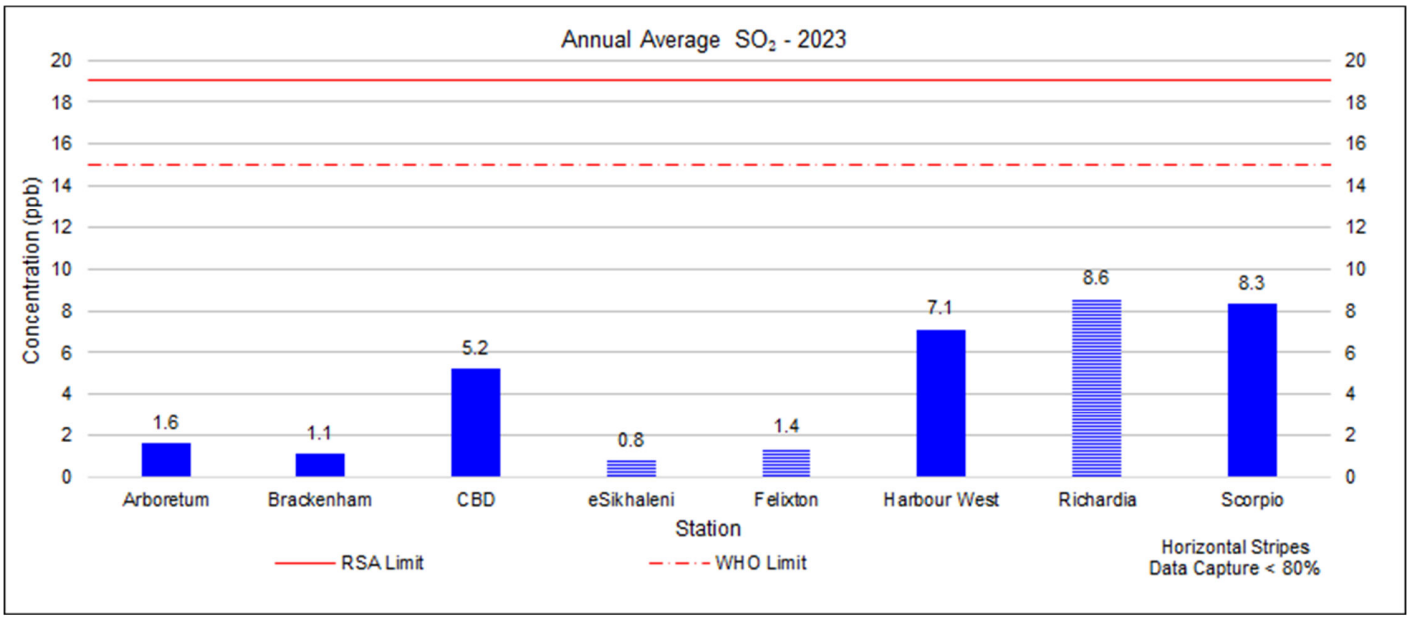


Figure 37: SO_2 annual average concentration.

Missing Data:
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, instrument failure and replacement, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

6.3. SO_2 Monthly Concentrations

Monthly comparisons are provided in Figure 36.

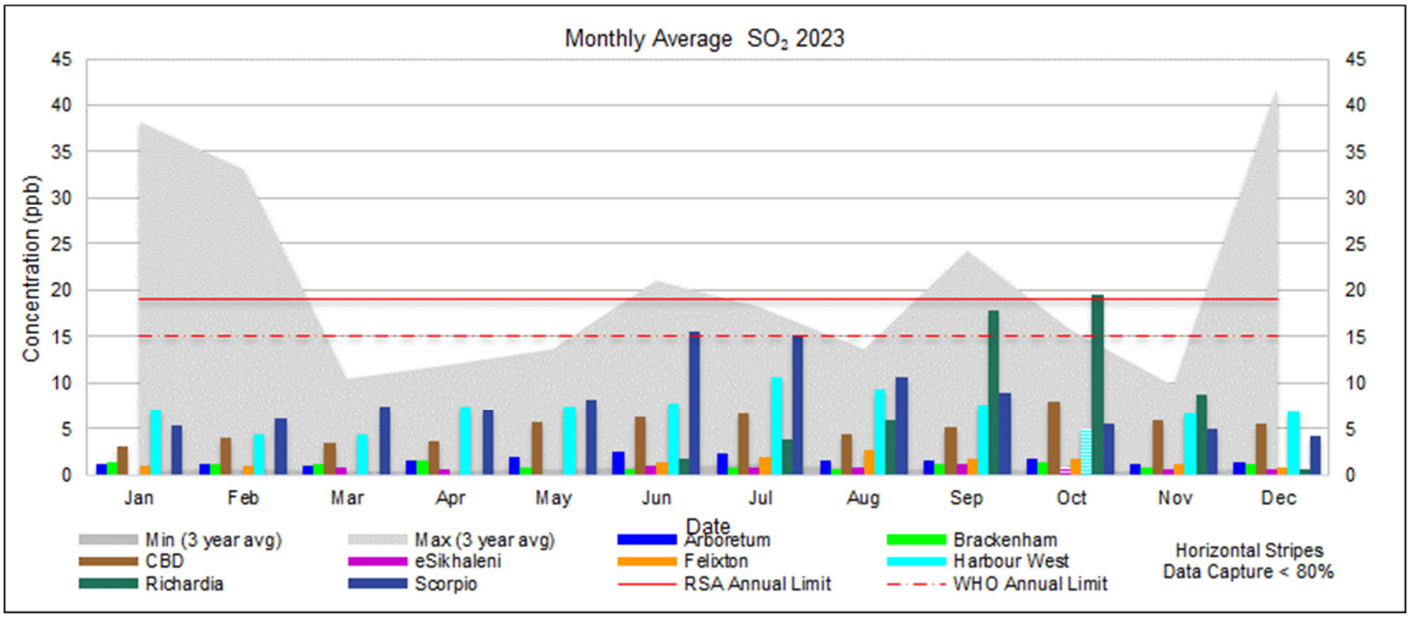


Figure 38: SO_2 monthly concentrations.

Missing Data:
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, instrument failure and replacement, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

6.4. SO_2 Diurnal Concentrations

Diurnal SO_2 concentrations are shown below (Figure 39).

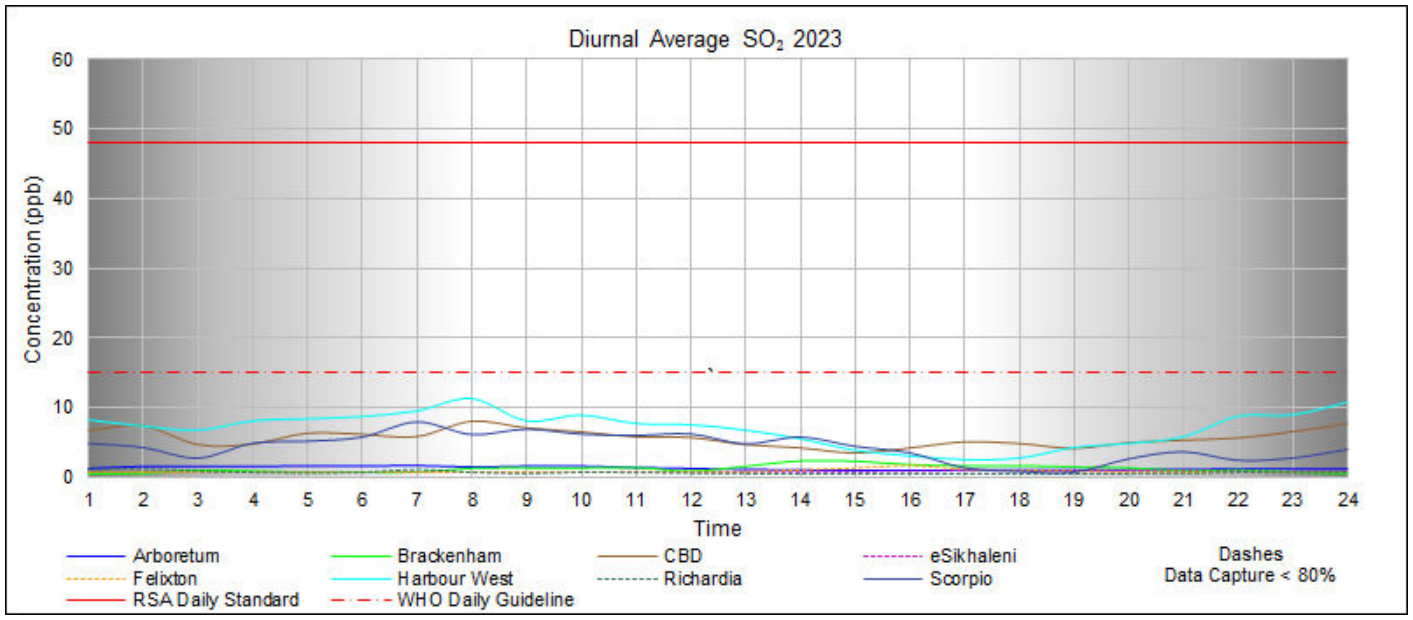


Figure 39: SO_2 diurnal concentrations.

Missing Data:
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, instrument failure and replacement, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

6.5. SO_2 Daily Average Concentrations

Daily average SO_2 concentrations are shown in Figure 40; there were:

- Two (2) measured exceedances of the RSA Limit (48 ppb), the RSA Standard, which allows four (4) exceedances of the limit per year, was therefore not exceeded (Table 20); and,
- One hundred and fifty-nine (159) measured exceedances of the WHO Limit (15 ppb) (Table 21).

Table 20: SO_2 daily average exceedances (RSA).

SO_2 Daily RSA Limit (48 ppb)	2
Scorpio	**2**
Foskor	2

Table 21: SO_2 daily average exceedances (WHO).

SO_2 Daily WHO Limit (15 ppb)	159
CBD	**9**
No response required	9
Harbour West	**46**
Foskor	1
No response required	45
Richardia	**45**
No response required	45
Scorpio	**59**
No response required	59
Note: WHO exceedances are responded to if they relate to a complaint.	

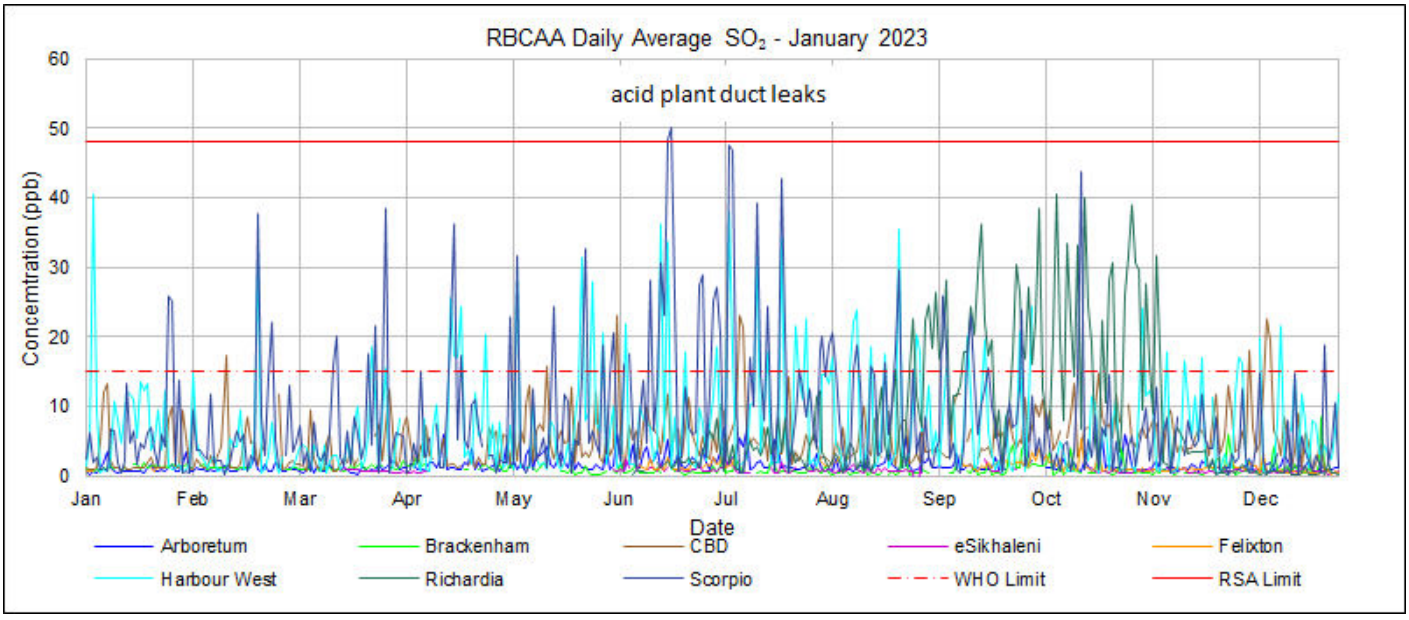


Figure 40: SO_2 daily average concentrations.

6.6. SO_2 Hourly Average Concentrations

Hourly average SO_2 concentrations are shown in Figure 39; fifteen (15) exceedances of the RSA Limit (134 ppb) were measured. The RSA Standard, which allows eighty-eight (88) exceedances of the limit per year, was not exceeded (Table 22).

Table 22: SO_2 1-hour average exceedances (RSA)

SO_2 Hourly RSA Limit (134 ppb)	15
Harbour West	**3**
Foskor	3
Scorpio	**12**
Foskor	4
Foskor - meteorology	2
South32 - meteorology	2
Unknown source	4

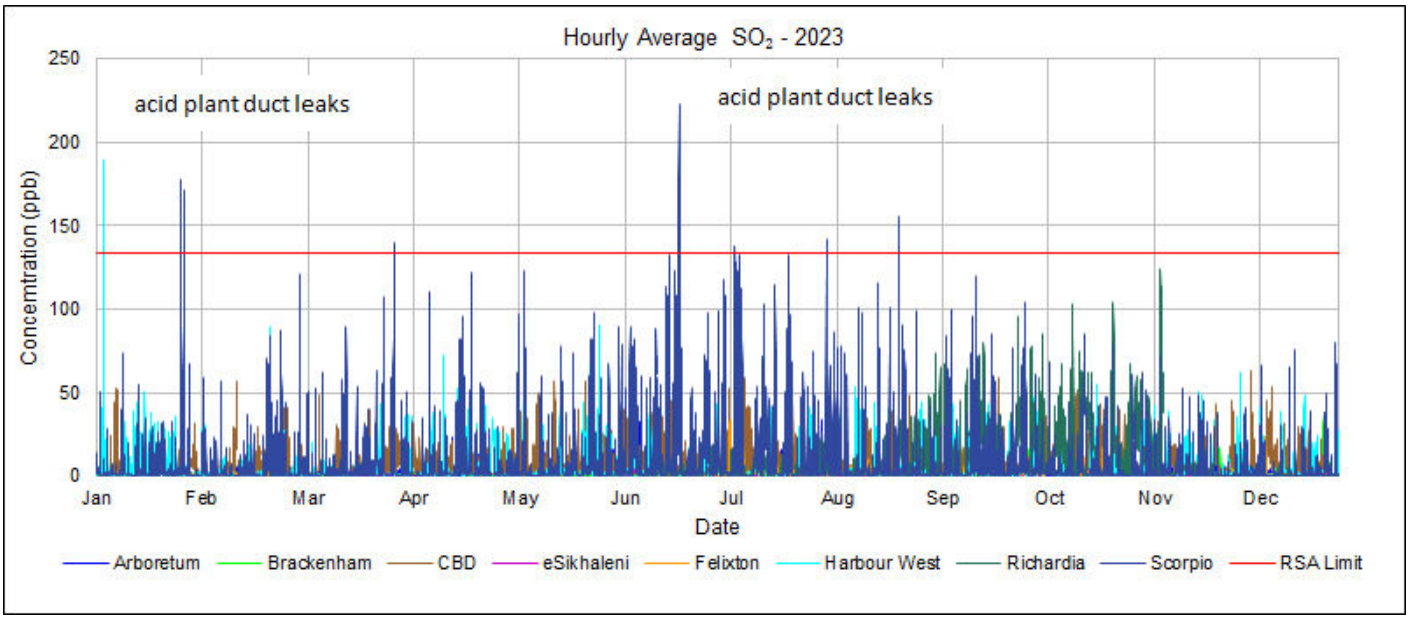


Figure 41: SO_2 hourly average concentrations.

6.7. SO_2 10-minute average Concentrations

10-minute average SO_2 concentrations are shown in Figure 40; there were thirty-four (34) measured exceedances of the RSA and WHO Limit (191 ppb). The RSA Standard, which allows five hundred and twenty-six (526) exceedances of the limit per year, was not exceeded (Table 12).

Table 23: SO_2 10-minute average exceedances (RSA)

SO_2 10-minute RSA & WHO Limit (191 ppb)	34
Harbour West	**8**
Foskor	8
Scorpio	**26**
Foskor	6
Foskor - meteorology	7
South32 - meteorology	4
Unknown source	9

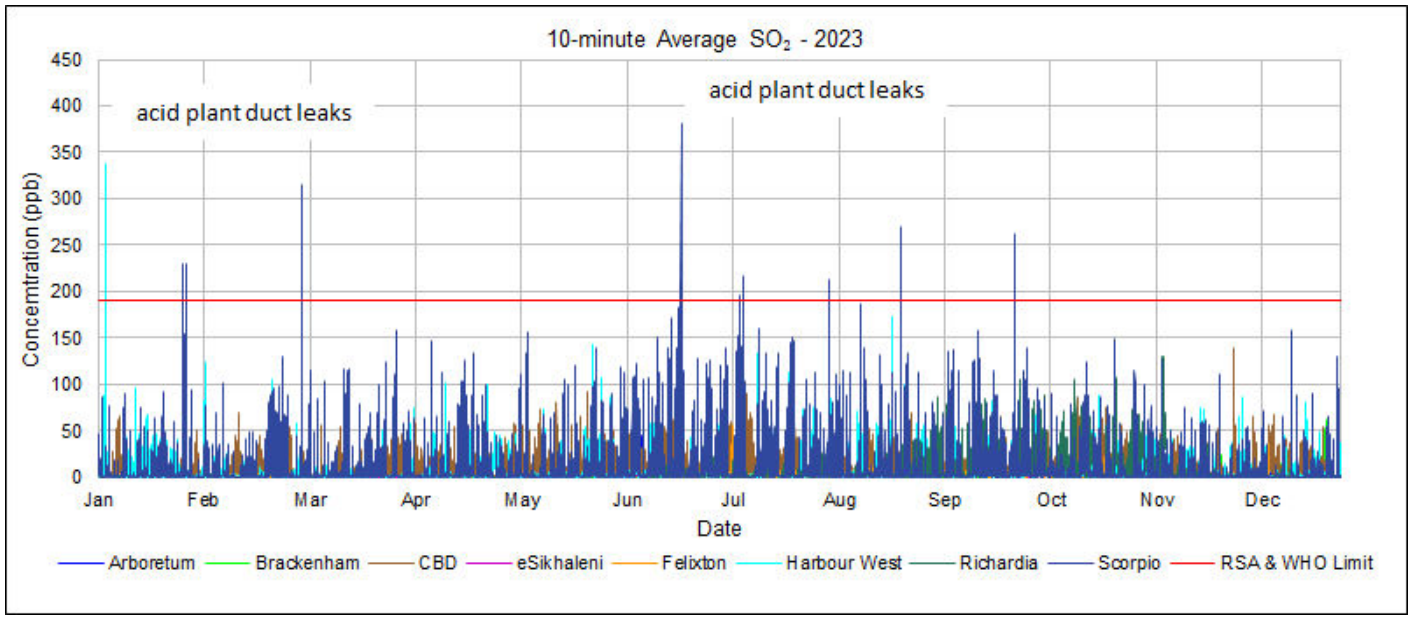


Figure 42: SO_2 10-minute average concentrations.

6.8. SO_2 Exceedances

Annual and monthly comparisons of the number of days on which SO_2 exceedances occurred are shown in Figure 41 and Figure 42. According to the Relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to SO_2.

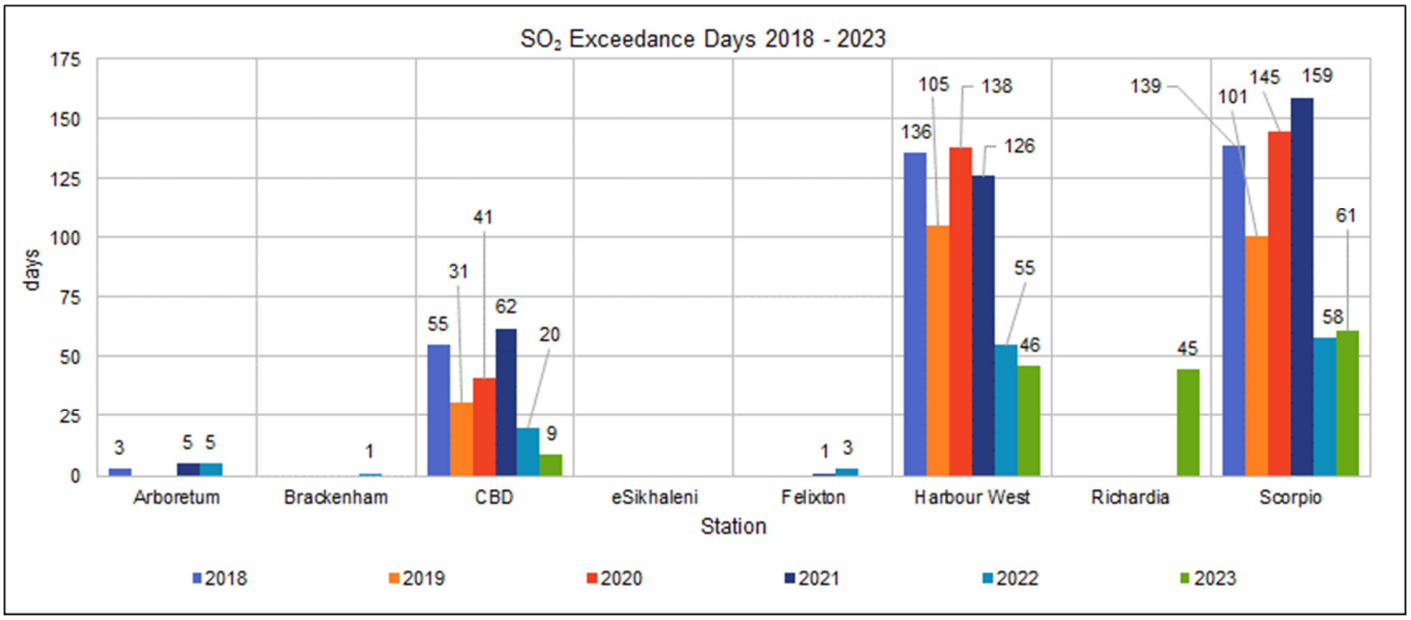


Figure 43: SO_2 exceedance days (2018 to 2023).

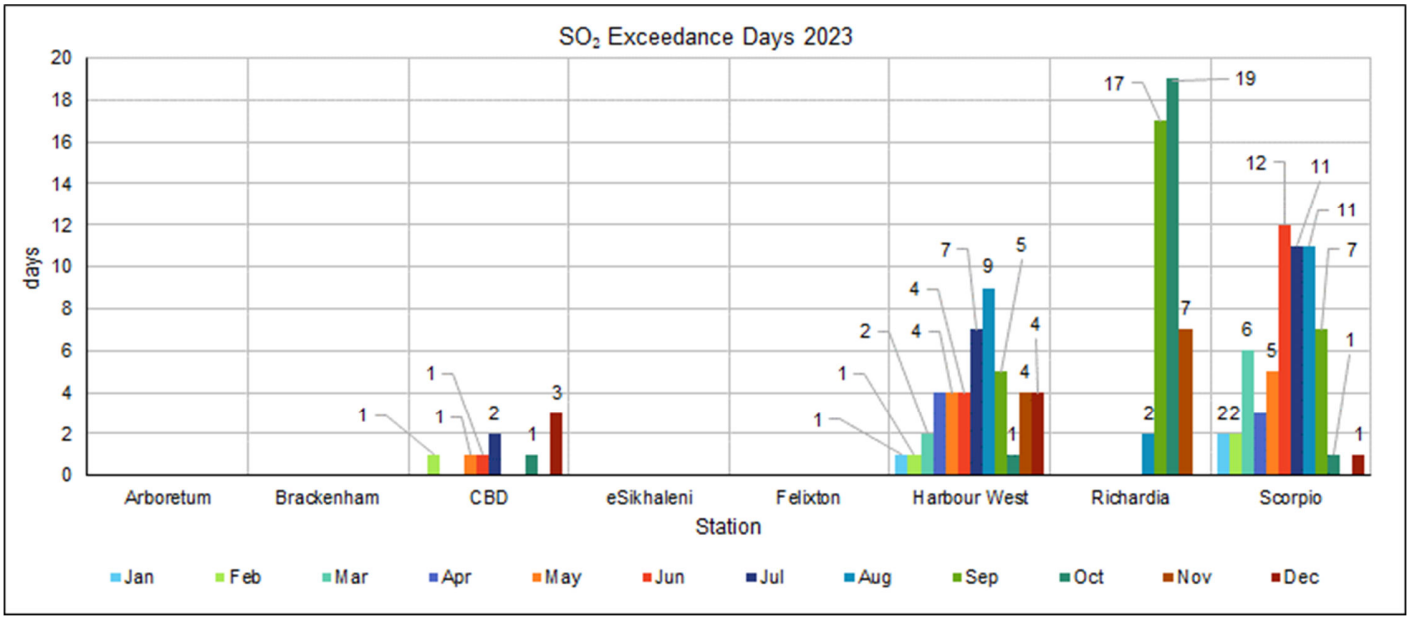


Figure 44: SO_2 exceedance days per month 2023.

Table 24: SO_2 exceedance summary 2023.

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SO_2 Daily RSA Limit (48 ppb)						**2**							**2**
Scorpio						2							**2**
SO_2 Hourly RSA Limit (134 ppb)	**7**		**1**			**3**	**1**	**3**					**15**
Harbour West	3												**3**
Scorpio	4		1			3	1	3					**12**
SO_2 10-minute RSA & WHO Limit (191 ppb)	**17**		**2**			**6**	**2**	**6**	**1**				**34**
Harbour West	8												**8**
Scorpio	9		2			6	2	6	1				**26**
SO_2 Daily WHO Limit (15 ppb)	**3**	**4**	**7**	**7**	**10**	**17**	**20**	**22**	**28**	**22**	**11**	**8**	**159**
CBD		1			1	1	2			1		3	**9**
Harbour West	1	1	2	4	4	4	7	9	5	1	4	4	**46**
Richardia								2	17	19	7		**45**
Scorpio	2	2	5	3	5	12	11	11	6	1		1	**59**

Note:
- *Yellow indicates an exceedance of the guideline.*
- *Red indicates an exceedance of a standard.*

6.9. SO_2 Dispersion Simulations

Dispersion simulation outputs are graphical representations of the dispersion of pollutants in the atmosphere. These outputs often include plots of air quality isopleths, which are contour lines that connect points of equal pollutant concentration. These concepts can be broken down as follows:

Dispersion Simulation:

Dispersion simulation is a modelling technique used to estimate the movement and concentration of pollutants released into the air. It considers various-factors such as meteorological conditions, emission sources, topography, and atmospheric stability. By simulating the dispersion, the modelling software predicts how pollutants disperse and spread over time and space from the emission source.

Air Quality Isopleths:

Isopleths are contour lines on a map or plot that connect points with the same value of a particular variable, in this case, pollutant concentration. Air quality isopleths, therefore, represent lines connecting points of equal pollutant concentration in the simulation. Typically, the concentration values are shown with colour gradients, where areas of higher concentration are shown with darker or more vibrant colours and regions of lower concentration with lighter colours.

These isopleth plots help visualise the spatial distribution of pollutant concentrations, showing areas where the concentration levels are higher or lower relative to the emission source. They provide a valuable tool for assessing how pollutants disperse, identifying areas of potential impact, and evaluating compliance with air quality standards or guidelines.

The shape and pattern of the isopleths can provide insights into the behaviour of pollutants under specific meteorological conditions and topographical features. For example, the isopleths may show higher concentrations in valleys or areas with poor dispersion conditions due to atmospheric stability. They can also indicate the direction of pollutant transport and help identify potentially affected regions.

Overall, dispersion simulation outputs, particularly plots of air quality isopleths, are valuable tools for understanding and visualising the dispersion of pollutants in the atmosphere, aiding in the assessment of potential exposure and impacts on air quality in specific areas surrounding emission sources.

6.9.1. SO_2 Impact Predictions

SO_2 impacts are based on national standards and international guidelines; dispersion simulation outputs have been colour-coded according to the Air Quality Indices (AQIs) shown in Table 25 and Table 26 (concentrations increase through blue, green, yellow, and orange, with exceedances indicated in red.). The plots show the maximum predicted impacts for specific time intervals (10-minute average, 1-hour Average, daily average, annual Average) during 2023.

Table 25: Air quality index (percentage of RSA SO_2 limit value).

Air Quality Rating	Percentage of SO_2 limit value	Impact
Good	0% - 25%	There are no known harmful effects on soil, water, vegetation, animals, visibility, or human health.
Fair	26% - 50%	There is adequate protection against harmful effects on soil, water, vegetation, animals, visibility, or human health.
Poor	51% - 100%	Not all aspects of the environment are adequately protected from adverse effects. Depending on the measurement's frequency, duration, and circumstances, some long-term control action may be required.
Very Poor	>100%	Further deterioration of air quality and continued high readings could pose a risk to public health in this range.

Table 26: Air quality index (percentage of WHO SO_2 limit value).

Air Quality Rating	Percentage of WHO SO_2 limit value
Good	0% - 25%
Fair	26% - 50%
Poor	51% - 100%
Very Poor	>100%

6.9.2. SO_2 Annual Average Predictions

Annual average concentration predictions can provide a comprehensive understanding of the long-term exposure patterns, potential impacts, and overall trends in the behaviour of modelled substances. This information is crucial for informing decision-making, risk assessment, and the development of effective environmental management strategies.

The annual average predictions in Figure 45 (regional) and Figure 46 (local) are evaluated according to the RSA or regulatory guideline (19 ppb), and Figure 47 (regional) and Figure 48 (local) are assessed according to the WHO or health standard (15 ppb). There isn't much of a difference between the plots because of the similar limits (4 ppb difference). The observable features include hot spots and the influence of the annual wind field wind field.

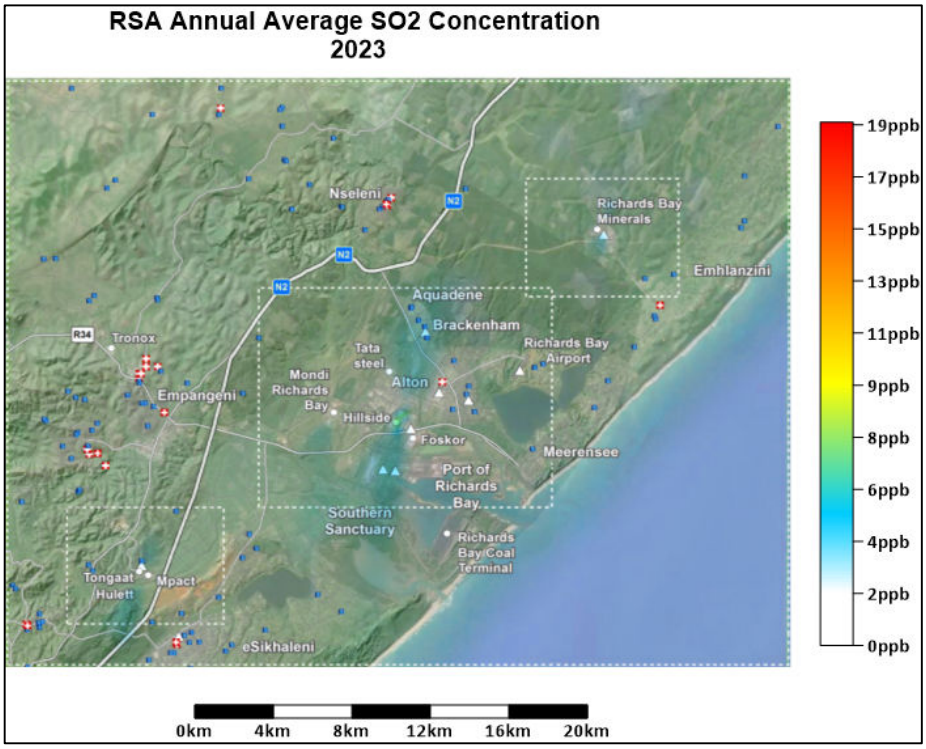


Figure 45: SO_2 annual average prediction (regional map RSA AAQS).

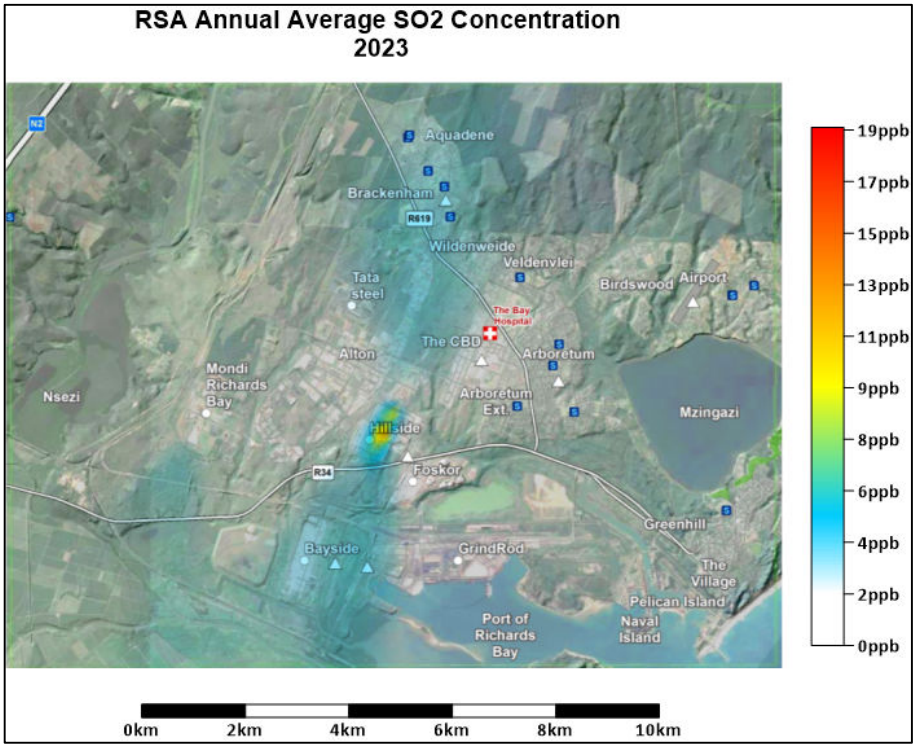


Figure 46: SO_2 annual average prediction (Richards Bay map RSA AAQS).

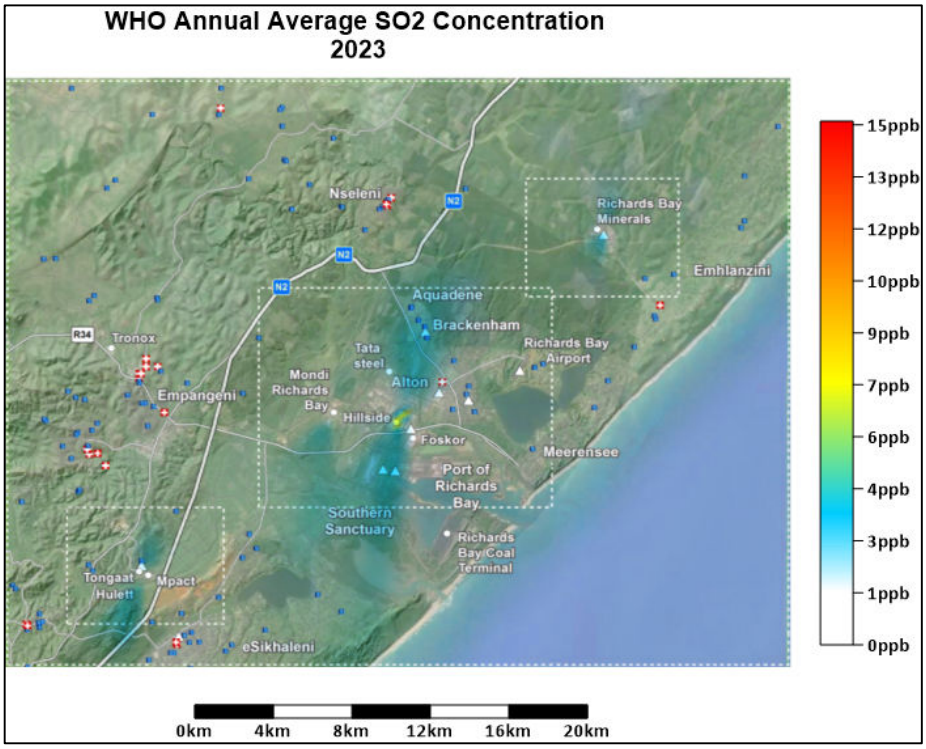


Figure 47: SO_2 annual average prediction (regional map WHO AAQG).

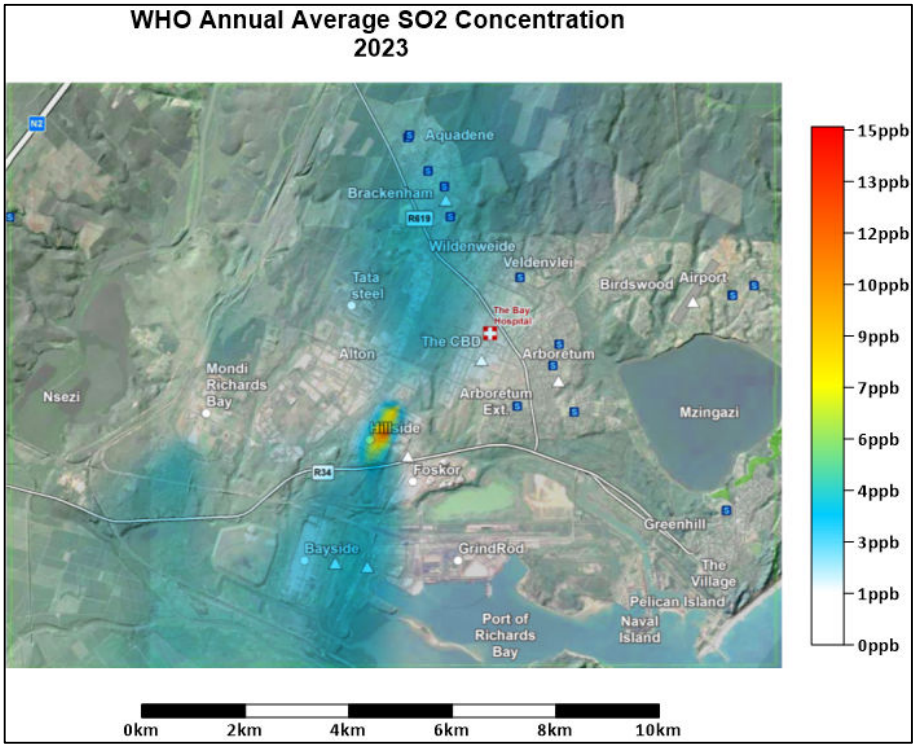


Figure 48: SO_2 annual average prediction (Richards Bay map WHO AAQG).

6.9.1. SO_2 Maximum Daily Average Predictions

Maximum daily average concentration predictions can provide insights into the short-term or peak exposure patterns, identify potential high-risk areas or periods, and assess the need for targeted mitigation or management strategies. This information is crucial for protecting human health, safeguarding the environment, and ensuring compliance with relevant air quality regulations and guidelines.

Figure 49 (regional) and Figure 50 (local) are evaluated according to the RSA or regulatory guideline (48 ppb), and Figure 51 (regional) and Figure 52 (local) are assessed according to the WHO or health standard (daily 15 ppb). There is a much more significant difference between these limits. Observable features include impacts on elevated locations, such as hills, and seasonal and diurnal influences, such as summertime late afternoon sea-to-land breezes and wintertime early morning land-to-sea breezes.

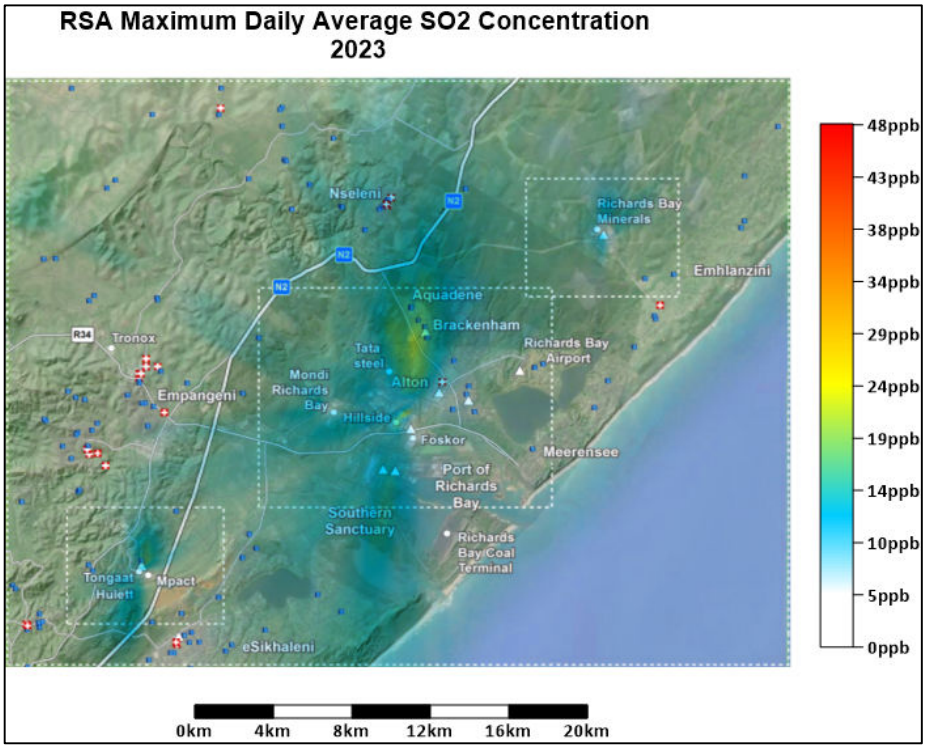


Figure 49: SO_2 maximum daily average prediction (regional map RSA AAQS).

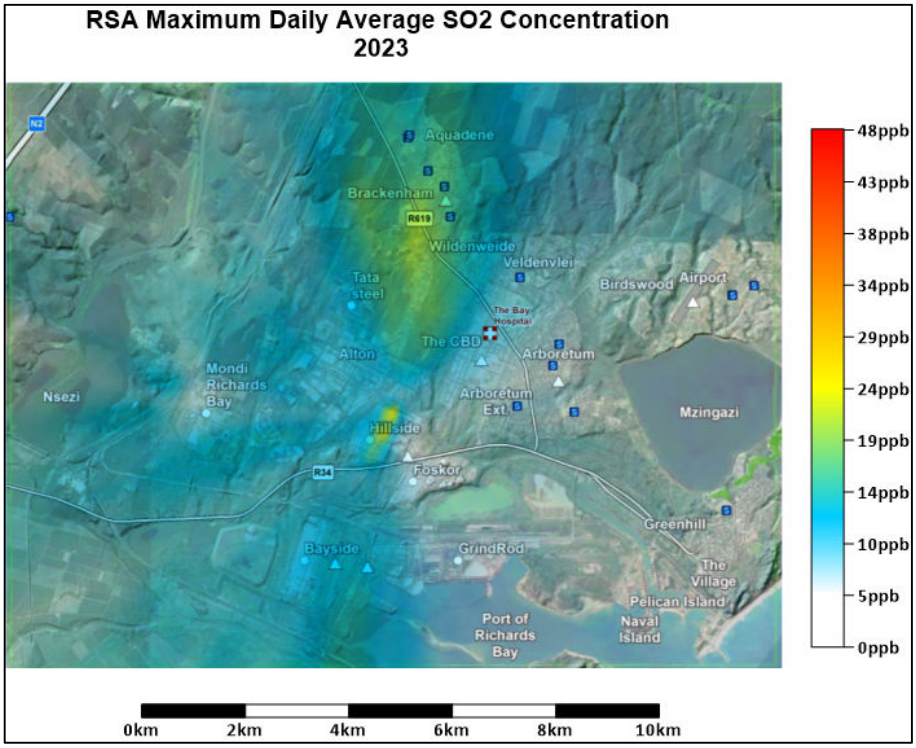


Figure 50: SO_2 maximum daily average prediction (Richards Bay map RSA AAQS).

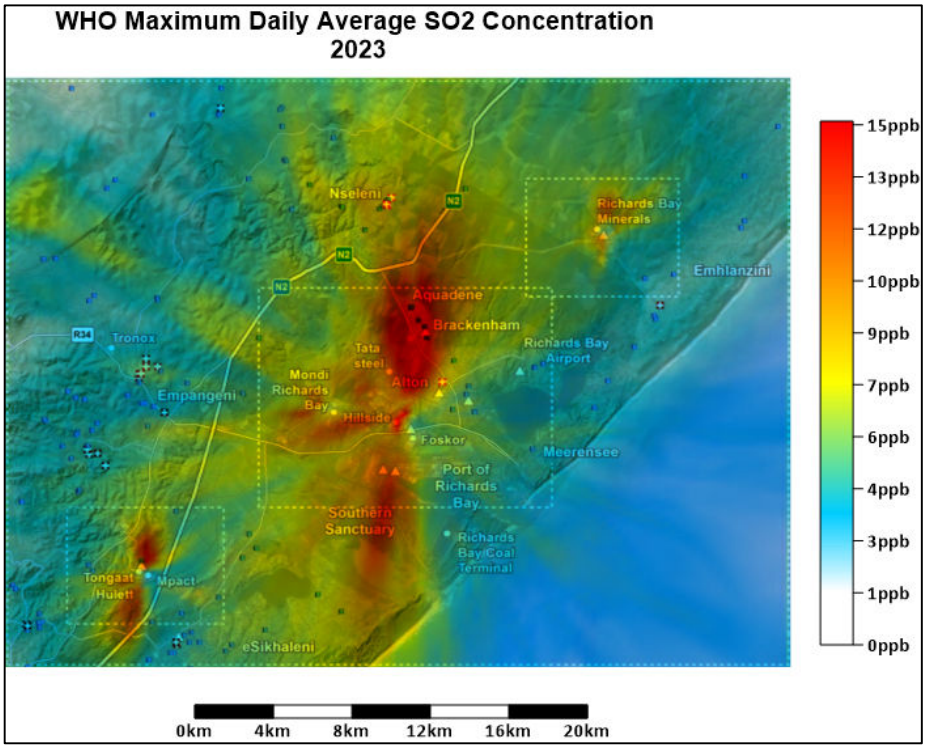


Figure 51: SO_2 maximum daily average prediction (regional map WHO AAQG).

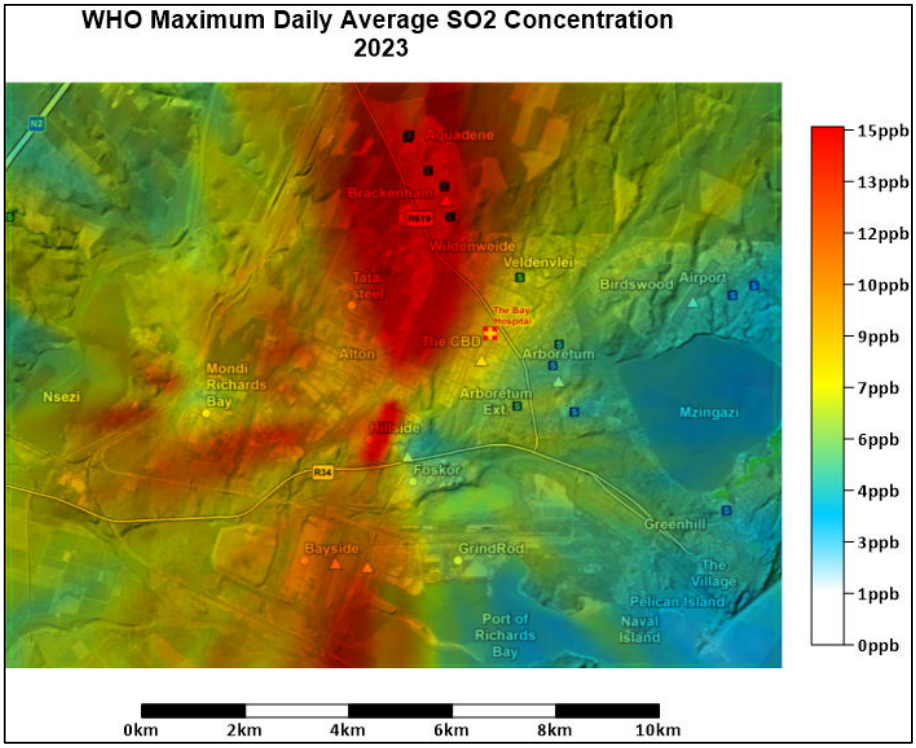


Figure 52: SO_2 maximum daily average prediction (Richards Bay map WHO AAQG).

6.9.1. SO_2 Maximum Hourly Average Predictions

Analysing the maximum hourly average concentration predictions can provide the most detailed and time-sensitive insights into the potential for acute exposures, identify critical high-risk areas or periods, and inform the development of effective emergency response and mitigation strategies. This information is essential for protecting public health, safeguarding the environment, and ensuring compliance with air quality regulations during short-term, high-exposure events.

The following plots of SO_2 concentrations are provided:

- SO_2 Hourly Predicted Maxima (RSA):
  - Regional (Figure 53)
  - Richards Bay (Figure 54)

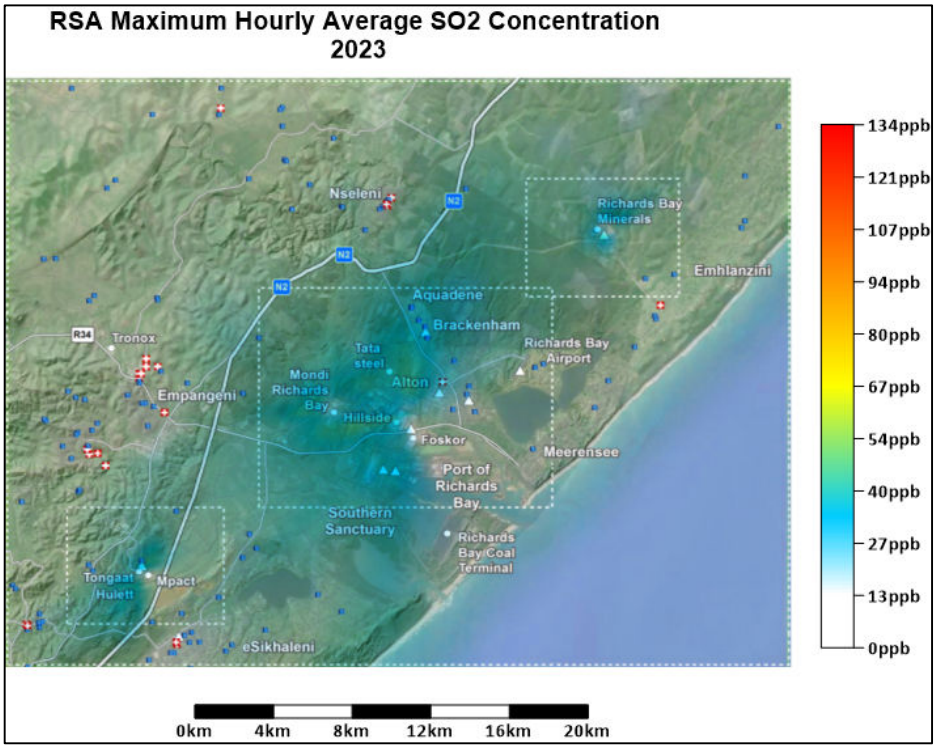


Figure 53: SO_2 maximum hourly average prediction (regional map RSA AAQS).

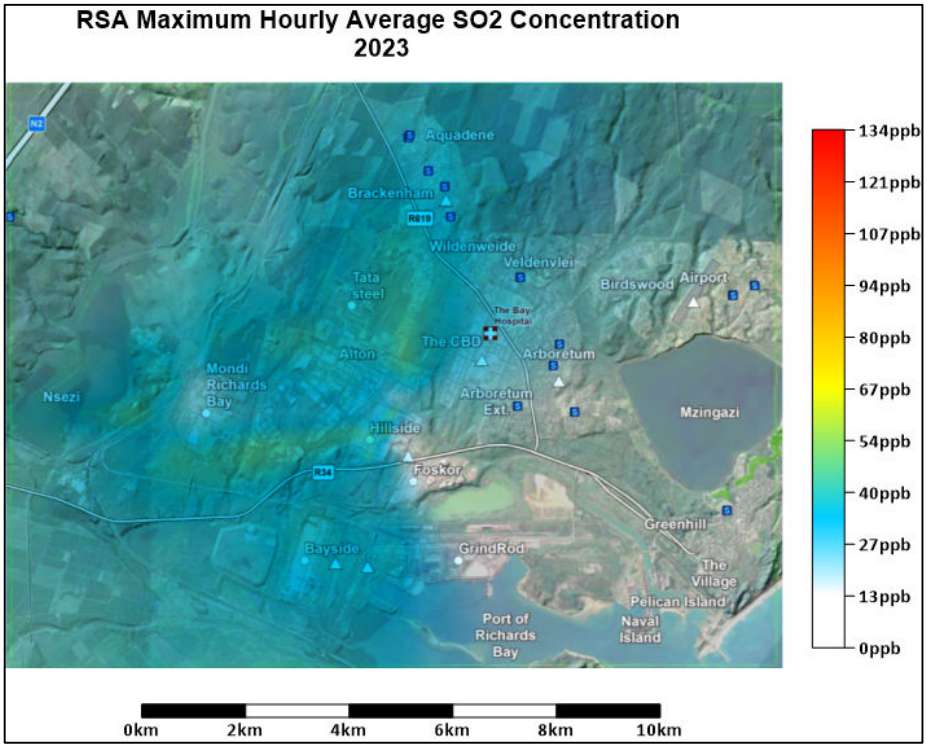


Figure 54: SO_2 maximum hourly average prediction (Richards Bay map RSA AAQS).

6.9.1. SO_2 Maximum 10-minute Average Predictions

Analysing the maximum 10-minute average concentration predictions can provide the most detailed and time-sensitive insights into the potential for extremely short-term acute exposures. This information is essential for protecting public health, safeguarding the environment, and ensuring the implementation of effective emergency response and mitigation strategies during these critical high-exposure events.

The following plots of SO_2 concentrations are provided:

- SO_2 10-minute Predicted Maxima (RSA & WHO):
  - Regional (Figure 55)
  - Richards Bay (Figure 56)

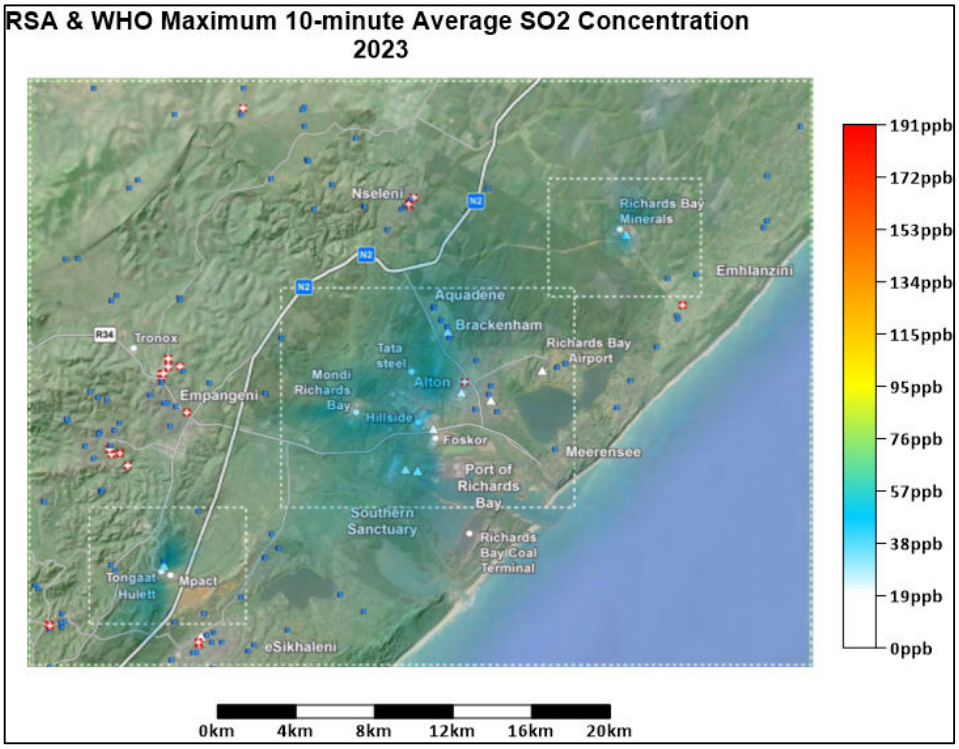


Figure 55: SO_2 maximum 10-minute average prediction (regional map RSA AAQS and WHO AAQG).

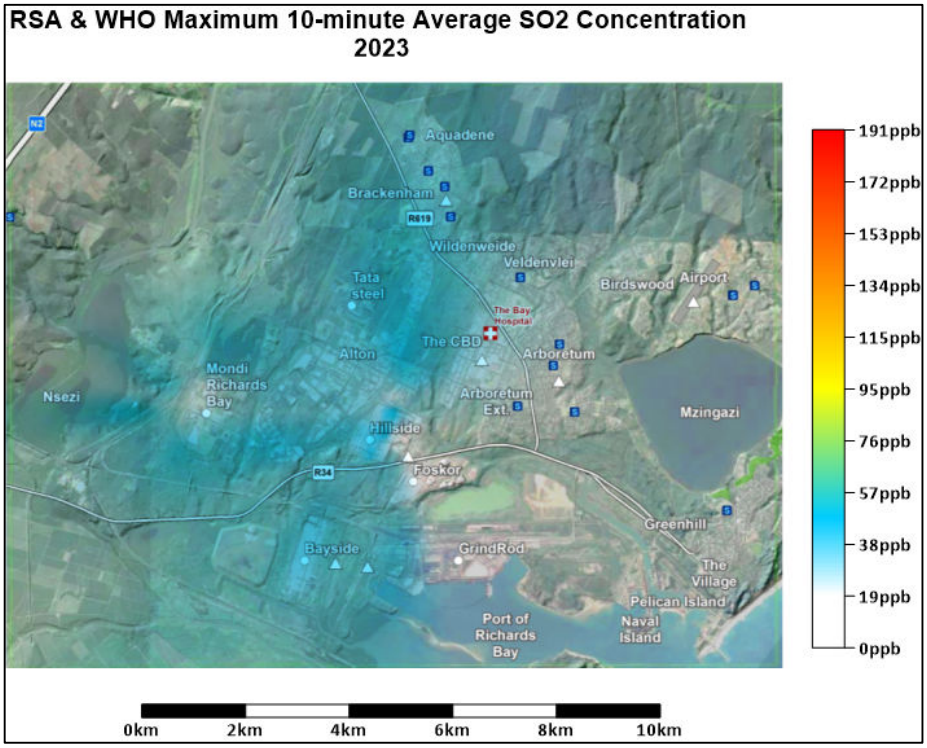


Figure 56: SO_2 maximum 10-minute average prediction (Richards Bay map RSA AAQS and WHO AAQG).

6.9.1. SO_2 Predictions for Various Areas

Maximum predicted impacts for specific locations are provided in Table 27.

Table 27: Summary of maximum predicted SO_2 impacts for various areas.

	Percentage of Standard / Guideline					Frequency of exceeding Standard / Guideline				
Organisation	RSA & WHO	RSA	RSA	RSA	WHO	RSA & WHO	RSA	RSA	RSA	WHO
Interval	10-minute	Hourly	Daily	Annual	Daily	10-minute	Hourly	Daily	Annual	Daily
Limit Value	191	134	48	19	15	526	88	4	0	0
Alton	18%	23%	34%	14%	108%	3	1	0	0	4
Aquadene	9%	12%	11%	5%	35%	0	0	0	0	0
Arboretum	10%	11%	14%	4%	44%	0	0	0	0	0
Arboretum Extension	11%	15%	12%	6%	39%	0	0	0	0	0
Birdswood	18%	24%	35%	16%	112%	1	0	0	0	7
Brackenham	14%	20%	17%	10%	56%	0	0	0	0	0
CBD	7%	9%	9%	3%	28%	0	0	0	0	0
Empangeni	8%	11%	9%	5%	28%	0	0	0	0	0
eSikhaleni	19%	21%	19%	10%	61%	0	0	0	0	0
Felixton	6%	6%	9%	3%	30%	0	0	0	0	0
Greenhill	7%	9%	8%	4%	26%	0	0	0	0	0
Mandlazini Agri-Village	5%	6%	11%	3%	34%	0	0	0	0	0
Meerensee	6%	6%	7%	3%	21%	0	0	0	0	0
Mzingazi Agri-Village	12%	12%	18%	7%	58%	0	0	0	0	0
eNseleni	15%	19%	22%	13%	72%	0	0	0	0	0
Southern Sanctuary	13%	18%	15%	8%	49%	0	0	0	0	0
Veldenvlei	8%	12%	8%	3%	27%	0	0	0	0	0
Vulindlela	17%	23%	27%	14%	86%	4	1	0	0	1
Wildenweide	19%	26%	24%	15%	75%	0	0	0	0	1

6.9.2. SO_2 Model Correlation

The annual average SO_2 concentration measured at each RBCAA station for 2023 and 2022, plus the CALPUFF prediction, is shown in Figure 57. The annual average for the same period as the previous year is also provided. Compared to the previous year, annual average SO_2 concentrations at most stations were similar (within 10% of the RSA annual standard); however, the concentration measured at Harbour West was lower. The annual average prediction for Arboretum, Brackenham, eSikhaleni and Felixton was within accepted dispersion modelling norms (-50% to 200%); CBD, Harbour West, Richardia and Scorpio were under-predicted. Underpredictions are most likely due to local fugitive emissions unaccounted for in the model[3] and the model's tendency to underpredict in the near field. Compared to the measurements, the predicted values for CBD, Harbour West, and Scorpio were lower, and at Arboretum, Brackenham, eSikhaleni, and Felixton were similar (within 10% of the standard).

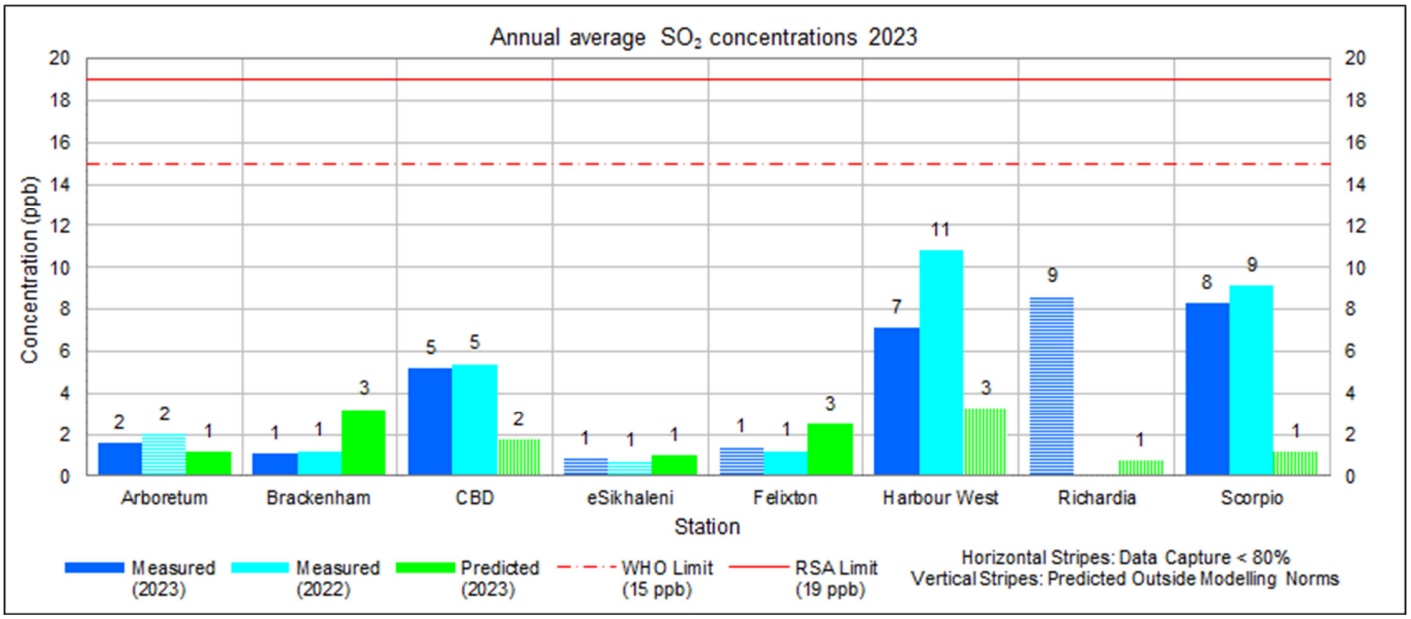


Figure 57: SO_2 annual average concentration and prediction.

Missing Data:
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, instrument failure and replacement, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

[3] Fugitive emissions are emissions of gases or vapours from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities, they are transient in nature and vary in intensity and duration. These types of emissions have not been accounted for in the modelling.

7. TOTAL REDUCED SULPHUR MONITORING

Total reduced sulphur compounds (TRS), 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 generally referred to in TRS discussions. Once released into the atmosphere, oxidation products of TRS compounds, such as sulphuric acid, contribute to the environment's acidity.

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

7.1. TRS Ambient Air Quality Standards

There are no South African standards for TRS; however, the World Health Organization (WHO) and the Ontario Ministry for the Environment (OME) have derived guidelines.

Organisation	Limit	10-min Average	30-minute Average	24-hour Average	Annual Average
WHO	Guideline	-	7 µg/m³ [a]	-	-
		-	5 ppb [a]	-	-
OME	Standard (pulp and paper)	13 µg/m³ [b]	10 µg/m³ [b]	14 µg/m³ [c]	-
		9.3 ppb [b]	7.2 ppb [b]	10.1 ppb [c]	-
OME	Standard (other industries)	13 µg/m³ [b]	10 µg/m³ [b]	7 µg/m³ [b]	-
		9.3 ppb [b]	7.2 ppb [b]	5.0 ppb [b]	-

Notes:
- *a) World Health Organization recommendation to avoid substantial complaints about odour annoyance among the exposed population* (WHO, 2000).
- *b) Based on odour effects* (OME, 1999).
- *c) Based on the odour and health effects* (OME, 1999).
- *d) Based on the adverse effects on the respiratory system (nasal lesions)* (OME, 1999).

The RBCAA has decided to implement the following:

- WHO 30-minute H_2S Guideline; and the
- OME daily and 10-minute standards for the Pulp and Paper sector.

TRS exceedances can be associated with emissions because of process upsets (i.e., planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or an event (e.g., fires or emergency shutdowns).

7.2. TRS Annual Concentrations

Annual average concentrations dating back to 2006 are illustrated in Table 28 and Figure 58. The 5-year Mann Kendall Trend for CBD is increasing. No trend was observed for eSikhaleni, and the other stations do not have enough current data to establish a trend.

Table 28: TRS annual average concentration (2006 to 2021)

Year	CBD	eNseleni	eSikhaleni	Felixton	Richardia
2006	4.3				
2007	3.0				
2008	3.0				
2009	1.1				
2010	0.8				
2011	1.1				
2012	1.5				
2013	1.0				
2014	1.3		1.4		
2015	1.1		1.2		
2016	0.7		1.4		
2017	0.7		1.4		
2018	0.6	0.1	1.4		
2019	0.7	0.2	1.4		
2020	0.8	0.1	1.0		
2021	0.8		1.0	1.5	
2022	1.3		1.1	2.0	
2023	1.4		1.3	1.4	0.5

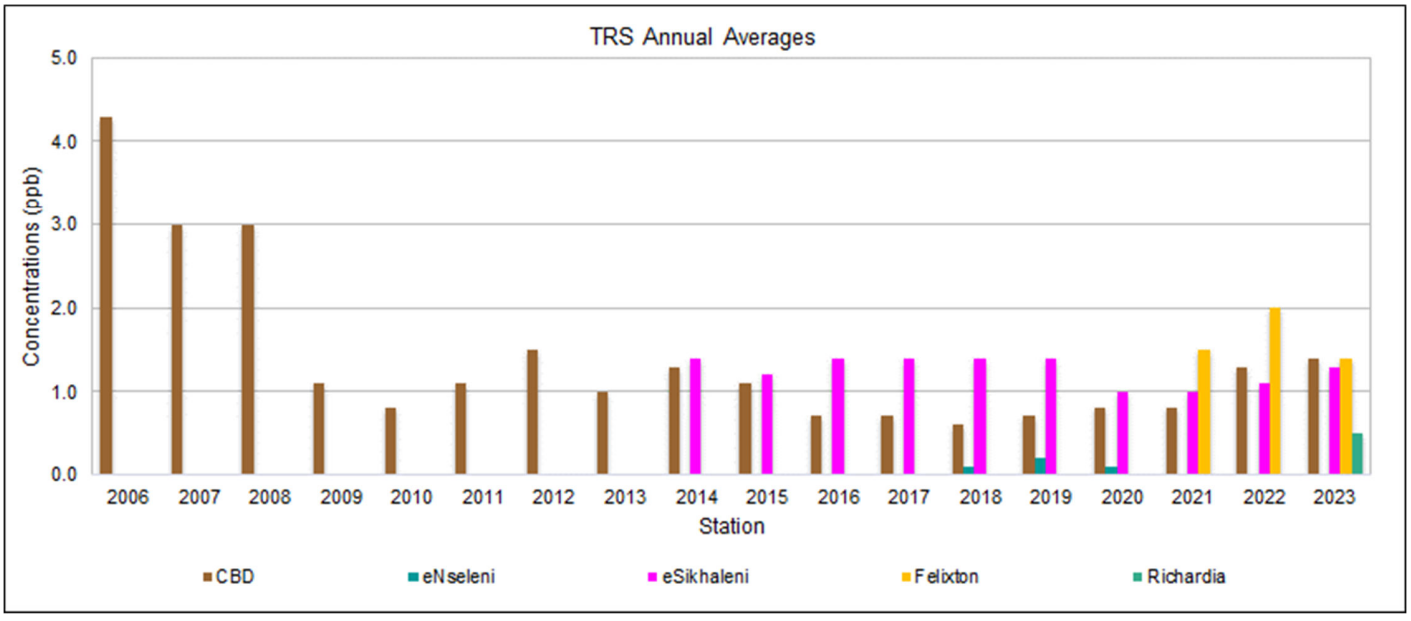


Figure 58: TRS annual average concentration (2006 to 2023).

Comparing 2023 to 2022 annual average TRS concentrations at CBD, eSikhaleni and Felixton were similar (difference less than 10% of the OME daily limit) (Figure 57).

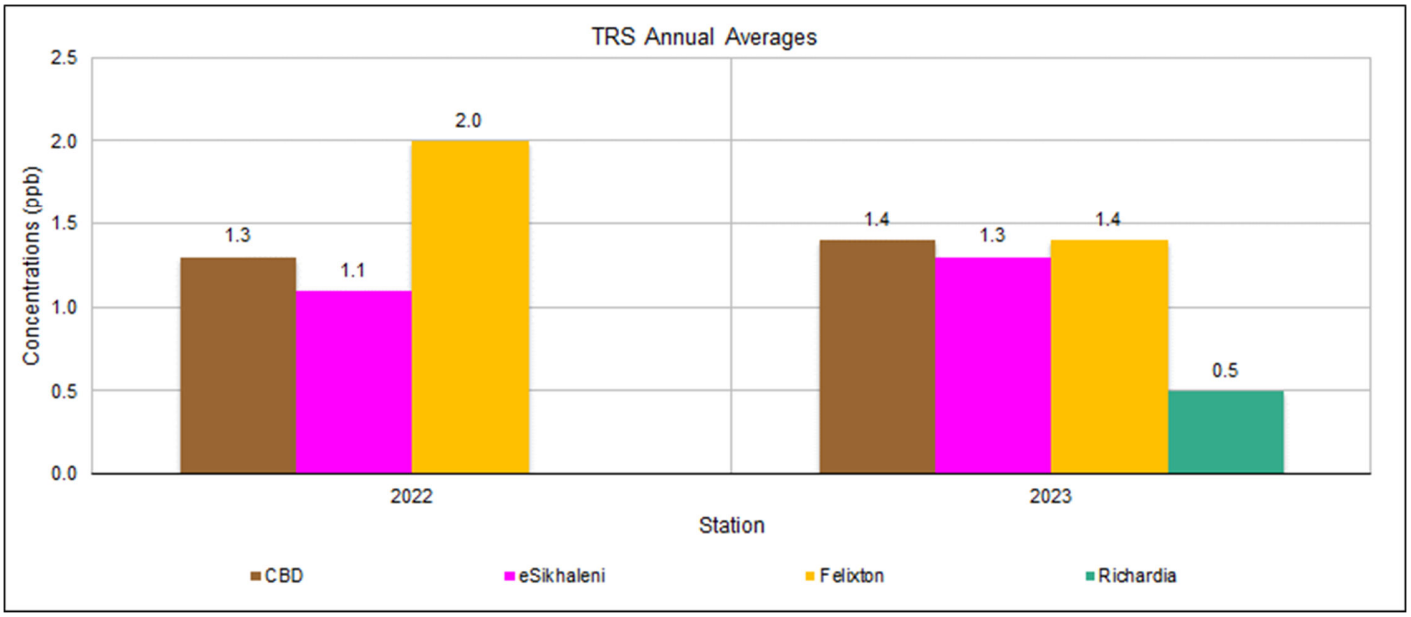


Figure 59: TRS annual average concentration (2022 to 2023).

Annual average TRS concentrations are shown in Figure 60.

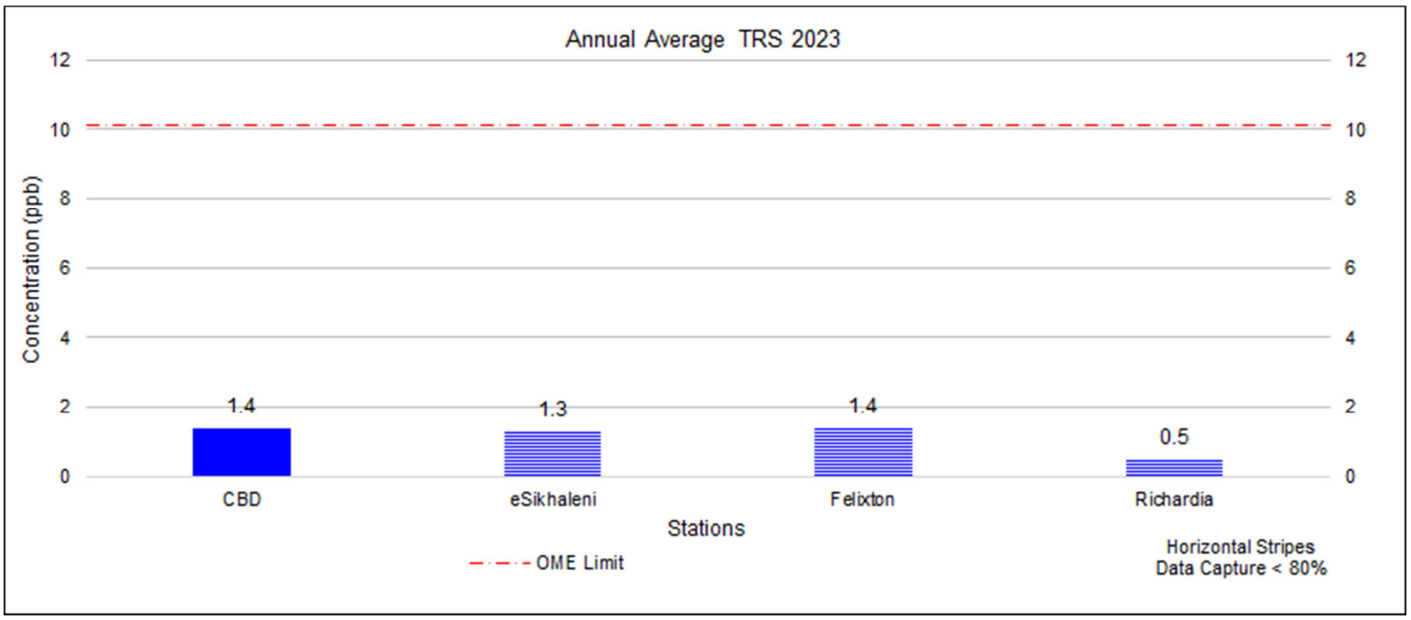


Figure 60: TRS annual average concentration.

Missing Data
CBD *– load shedding, power outages, data invalidation.*
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

7.3. TRS Monthly Concentrations

Monthly average TRS concentrations are shown in Figure 59. Comparisons to previous months are also provided (Figure 59).

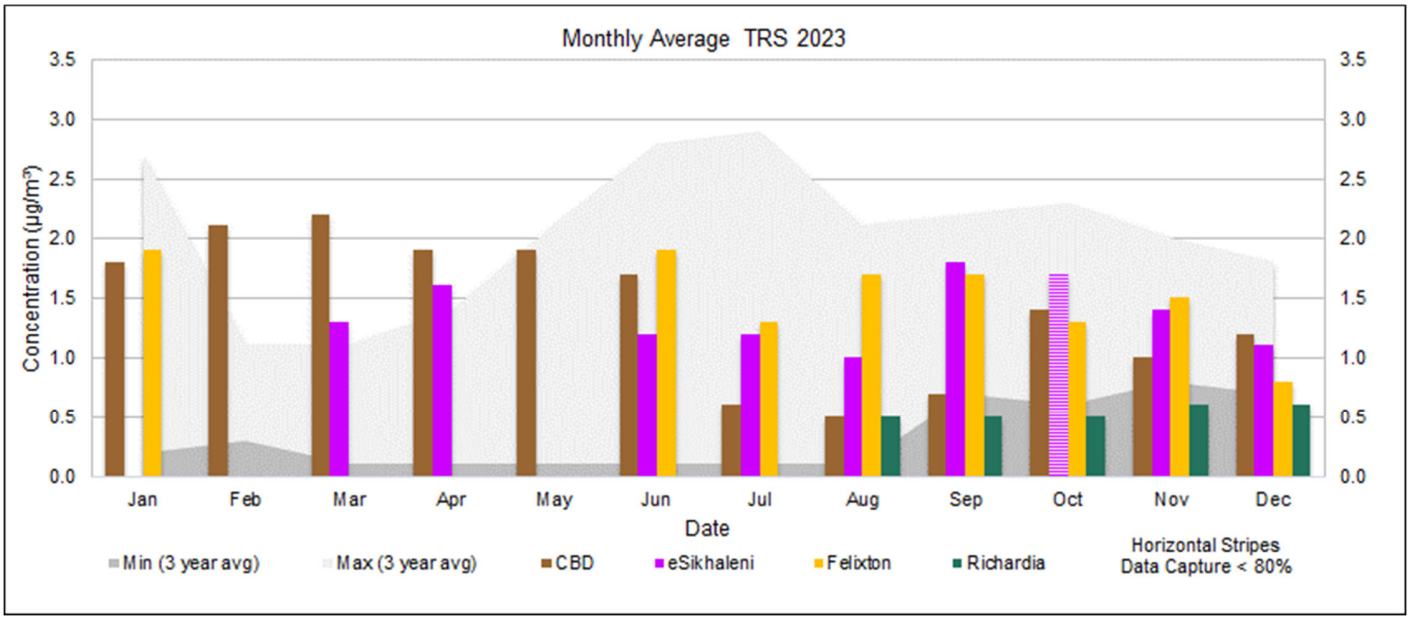


Figure 61: TRS monthly concentrations.

Missing Data
CBD *– load shedding, power outages, data invalidation.*
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

7.4. TRS Diurnal Concentrations

The diurnal TRS concentrations are shown below (Figure 61).

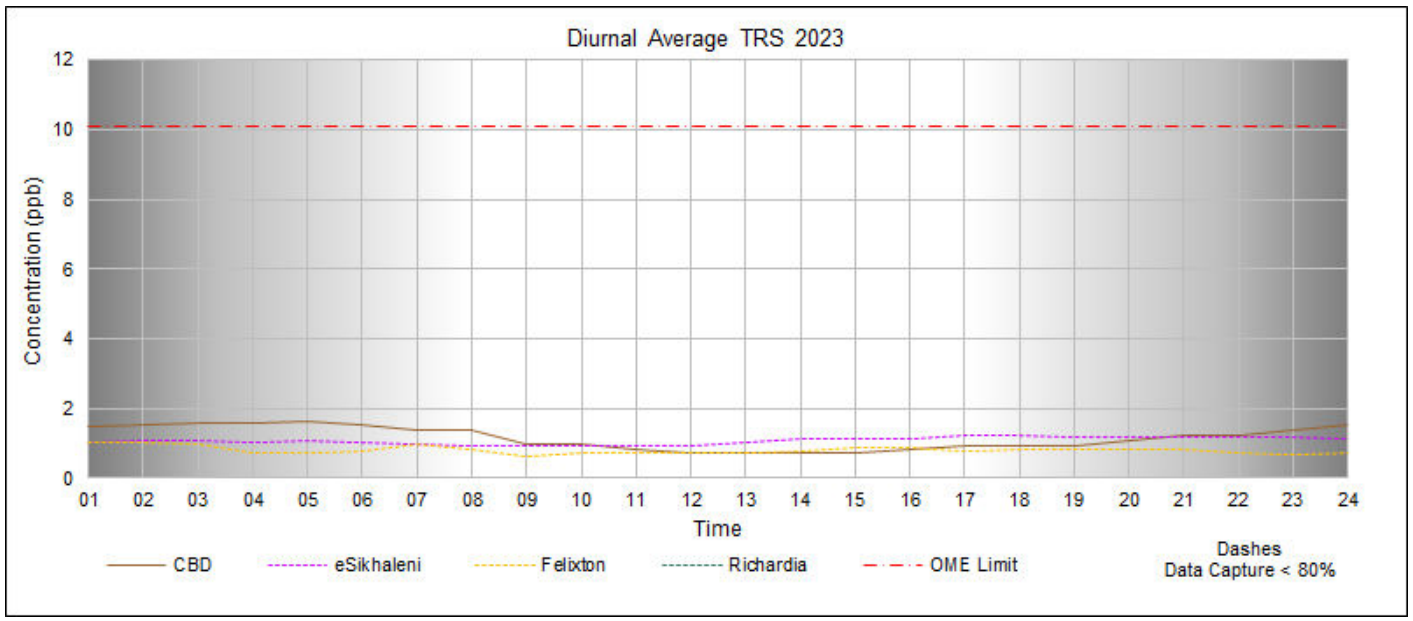


Figure 62: TRS diurnal concentrations.

Missing Data
CBD *– load shedding, power outages, data invalidation.*
eSikhaleni *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, inverter failures, data invalidation.*
Felixton *– load shedding (instrument switched off to prevent damage during high load shedding periods), power outages, data invalidation.*
Richardia *– load shedding, power outages, station commissioned in August, data invalidation.*

7.5. TRS Daily Concentrations

Daily average TRS concentrations are shown below (Figure 63). There was one (1) measured exceedance of the OME Limit (10.1 ppb).

Table 29: TRS 24-hour average exceedances.

TRS 24-hr-OME Limit (10.1 ppb)	1
Felixton	**1**
Mondi	1

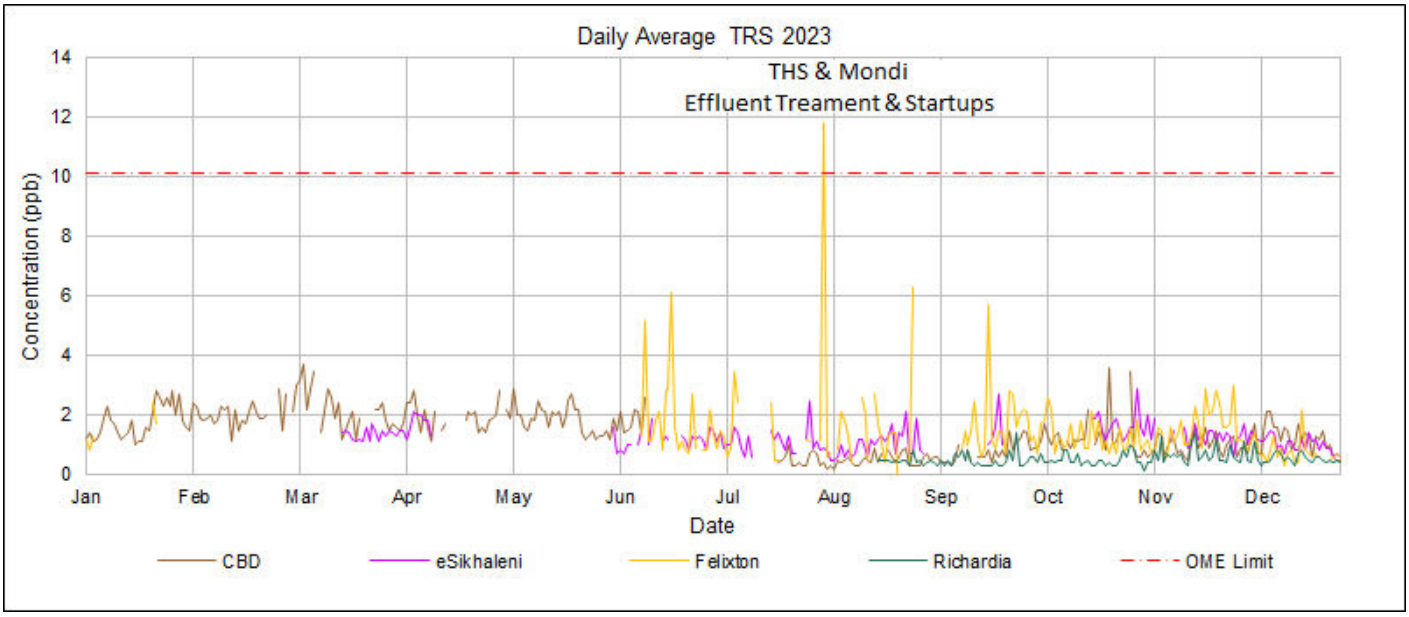


Figure 63: TRS daily average concentration.

7.6. TRS 30-minute Concentrations

The 30-minute average TRS concentrations are shown in Figure 62. There were four hundred and thirty-nine (439) measured exceedances of the WHO Limit (5.0 ppb). Exceedances at CBD were associated with emissions from Mondi, and exceedances at eSikhaleni and Felixton from Mondi, Mpact and Tongaat Hullet.

Table 30: TRS 30-minute average exceedances.

TRS 30-minute WHO H_2S Limit (5.0 ppb)	439
CBD	**151**
Local source - unknown	8
Localised source - unknown	4
Mondi	123
Mondi - meteorology	16
eSikhaleni	**48**
Local source - unknown	9
Mondi	27
Mondi - meteorology	6
THS - meteorology	6
Felixton	**240**
CoU	8
Local source - unknown	16
Mondi	64
Mondi - meteorology	5
Mpact	8
Mpact - meteorology	7
THS	76
THS - meteorology	56

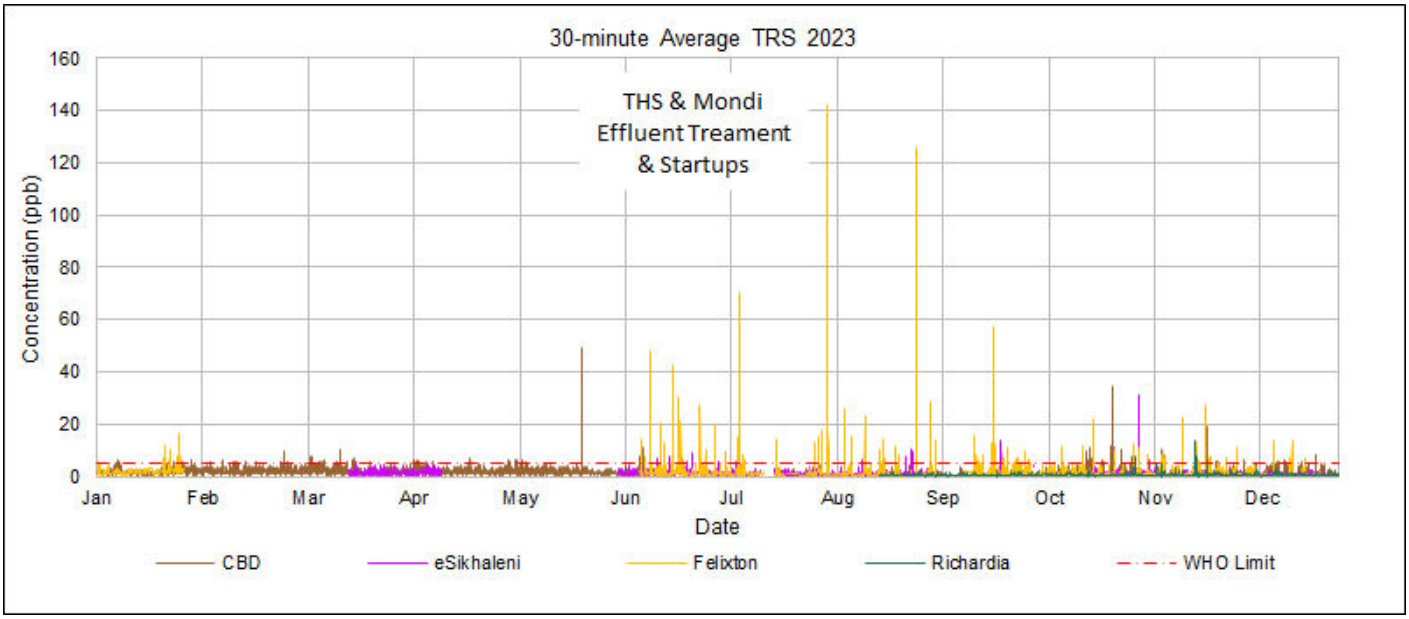


Figure 64: TRS 30-minute average concentration.

7.7. TRS 10-minute Concentrations

The 10-minute average TRS concentrations are shown in Figure 63. There were four hundred and twelve (412) measured exceedances of the OME Limit (9.3 ppb) (Table 31). Exceedances at CBD were associated with emissions from Mondi, and exceedances at eSikhaleni and Felixton from Mondi, Mpact and Tongaat Hullet.

Table 31: TRS 10-minute average exceedances.

TRS 10-minute OME Limit (9.3 ppb)	412
CBD	**64**
Localised source - unknown	4
Mondi	57
Mondi - meteorology	3
eSikhaleni	**40**
Local source - unknown	2
Mondi	29
Mondi - meteorology	4
THS - meteorology	5
Felixton	**308**
CoU	11
Local source - unknown	22
Mondi	112
Mondi - meteorology	4
Mpact	6
Mpact - meteorology	4
THS	100
THS - meteorology	49

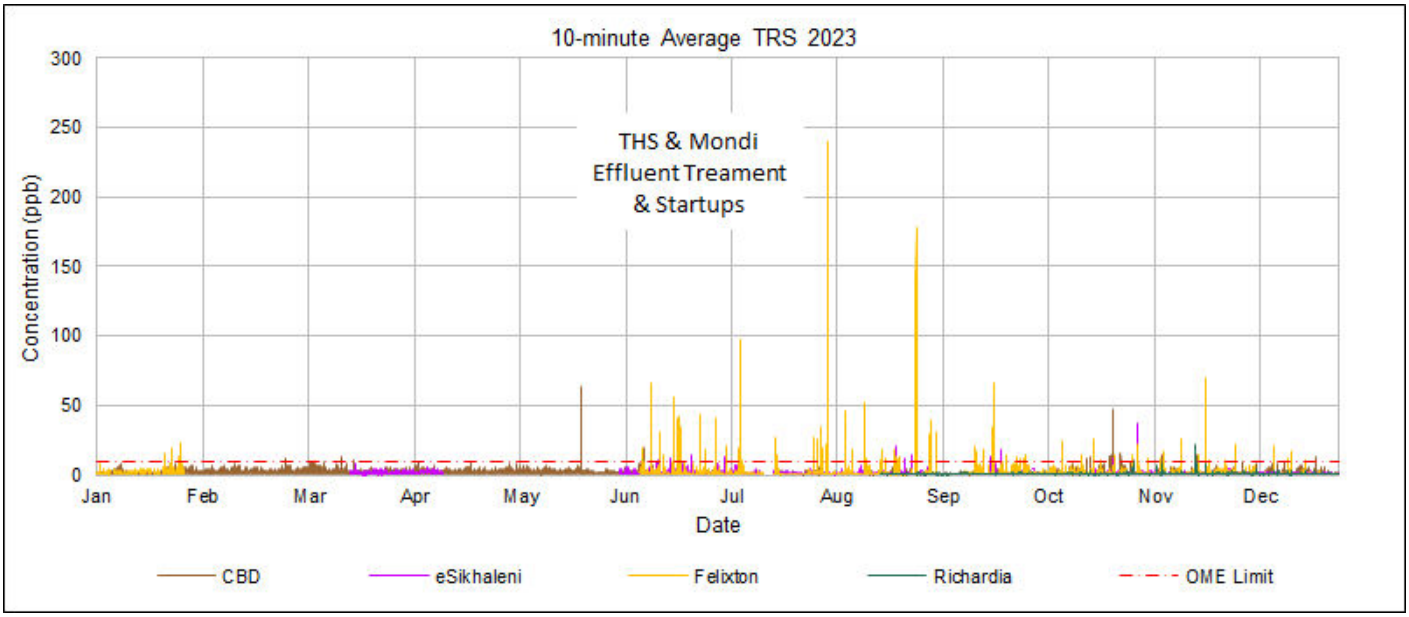


Figure 65: TRS 10-minute average concentrations.

7.8. TRS Exceedances

Annual and monthly (2023) comparisons of the number of days on which exceedances occurred are shown in Figure 66 and Figure 67. According to the Relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality.

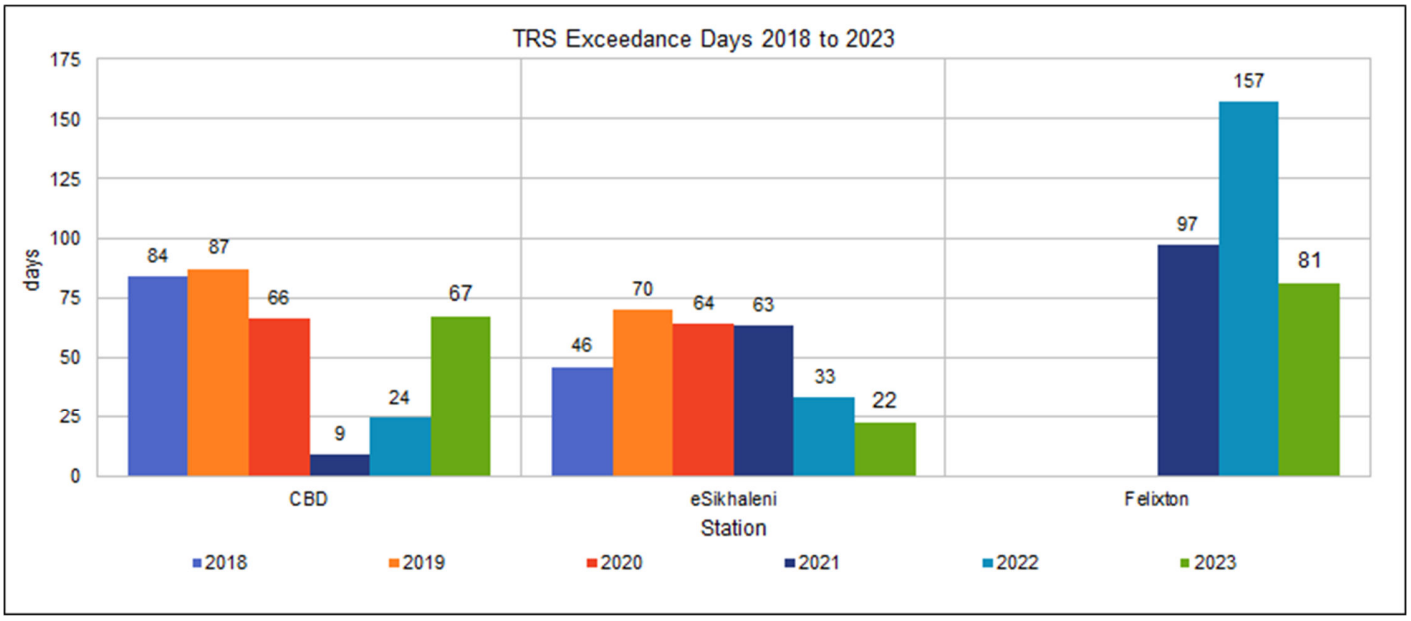


Figure 66: TRS exceedance days from 2018 to 2023.

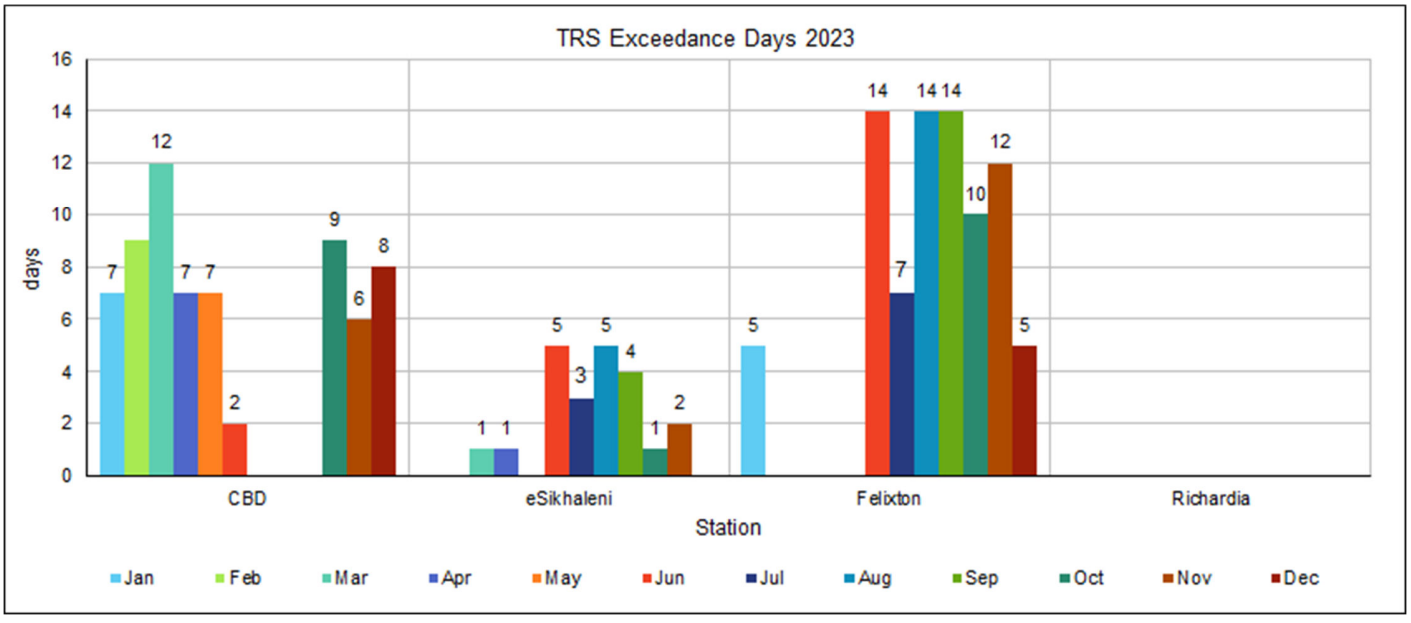


Figure 67: TRS exceedance days 2023.

Table 32: TRS exceedance summary 2023.

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TRS 10-minute OME Limit (9.3 ppb)	**14**	**2**	**8**	**2**	**4**	**98**	**27**	**89**	**48**	**56**	**50**	**14**	**412**
CBD		2	8	2	4	4				32	9	3	**64**
eSikhaleni						8	3	8	5	3	13		**40**
Felixton	14					86	24	81	43	21	28	11	**308**
TRS 24-hr-OME Limit (10.1 ppb)								**1**					**1**
Felixton								1					**1**
TRS 30-minute WHO H_2S Limit (5.0 ppb)	**29**	**16**	**36**	**11**	**12**	**63**	**23**	**61**	**62**	**54**	**48**	**24**	**439**
CBD	13	16	35	10	12	5				35	10	15	**151**
eSikhaleni			1	1		9	5	11	13	2	6		**48**
Felixton	16					49	18	50	49	17	32	9	**240**

Note:
- *Yellow indicates an exceedance of the guideline.*
- *Red indicates an exceedance of a standard.*

8. ANNUAL AIR QUALITY

Where possible, the RBCAA assesses data collected by its network against National Standards, International Guidelines, and Local Targets. The WHO air quality guidelines (AQGs) are intended for worldwide use and have been developed to support actions to achieve air quality that protects public health in different contexts. On the other hand, air quality standards and local targets are set by each country or region to protect the public health of their citizens and, as such, are an essential component of national risk management and environmental policies. National standards and local targets vary according to the approach adopted for balancing health risks, technological feasibility, economic considerations, and various other political and social factors. These factors, in turn, depend on, among other things, the level of development and national capability in air quality management (WHO, 2005).

The determination of air quality with respect to pollutants measured and impacts simulated is based on comparison to and exceedances of short-term (10-minute, 30-minute, 1-hour and 24-hour averages) and long-term (monthly and annual averages) targets, guidelines, and standards.

AIMS concludes that during 2023, based on the following:

- Comparison of short-term average concentrations (acute exposure) to the WHO health standard; ambient air quality was compromised by:
  - PM_{10} at CBD, eSikhaleni, Richardia and Scorpio;
  - $PM_{2.5}$ at Brackenham, Felixton; Harbour West and Scorpio;
  - SO_2 at CBD, Harbour West, Richardia and Scorpio; and,
  - TRS at CBD, eSikhaleni, and, Felixton.
- Comparison of long-term average concentrations (chronic exposure) to the WHO health standard of concern is:
  - PM_{10} at CBD, eSikhaleni, Richardia, and Scorpio;
  - $PM_{2.5}$ at Brackenham, Felixton, Harbour West and Scorpio;

9. ACKNOWLEDGEMENT

Air Impact Measurement Specialists compiled this report for the Richards Bay Clean Air Association; contributors include Alicia Garnica and François Nel.

Lance Coetzee
Director

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APPENDIX A
ABBREVIATIONS AND TERMS

List of Abbreviations and Terms	
Chemical Formulae	
CH_3-S-CH_3	Dimethyl Sulphide
CH_3S-H	Methyl Mercaptan
CH_3-S-S-CH_3	Dimethyl Disulphide
CH_4	Methane
CO	Carbon Monoxide
FPM	Fine Particulate Matter
H_2S	Hydrogen Sulphide
H_2SO_3	Sulphurous Acid
H_2SO_4	Sulphuric Acid
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
O_3	Ozone
PM_{10}	Particulates with an aerodynamic diameter of less than 10 µm
$PM_{2.5}$	Particulates with an aerodynamic diameter of less than 2.5 µm
SO_2	Sulphur Dioxide
SO_3	Sulphur Trioxide
TRS	Total Reduced Sulphur
TSP	Total Suspended Particulates

List of Abbreviations and Terms	
Countries	
EU	European Union
RSA	Republic of South Africa
UK	United Kingdom
US	United States

List of Abbreviations and Terms	
Direction	
N	North
NNE	North-North-East
NE	North-East
ENE	East-North-East
E	East
ESE	East-South-East
SE	South-East
SSE	South-South-East
S	South
SSW	South-South-West
SW	South-West
WSW	West-South-West
W	West
WNW	West-North-West
NW	North-West
NNW	North-North-West

List of Abbreviations and Terms	
Measurement	
°	Degrees
°C	Degrees Celsius
µg	Microgram
µg/m³	Micrograms per cubic meter
BMC	Best Measurement Capabilities
g/s	Grams per second
K	Kelvin
km	Kilometre
km/h	Kilometre per hour
m	Metres
m/s	Metres per second
mg	Milligrams
mg/m^2/day	Milligrams per meter squared per day
mg/m^3	Milligrams per cubic meter
ppb	Parts per billion
ppm	Parts per million
t/day	Tons per day
t/hr	Tons per hour
tpa	Tons per annum

List of Abbreviations and Terms	
Organisations	
AIMS	Air Impact Measurement Specialists
CASCO	Conformity Assessment Committee
DEFF	Department of Environment Forestry and Fisheries
EA-NPI	Environment Australia - National Pollutant Inventory
EC	European Commission
EU-EA	European Union - Environmental Agency
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
ISO	International Standard Organisation
RBCAA	Richards Bay Clean Air Association
SANAS	South African National Accreditation System
SANS	South Africa National Standard
UK-EA	United Kingdom - Environmental Agency
US-EPA	United States - Environmental Protection Agency
WHO	World Health Organisation

List of Abbreviations and Terms	
Terms	
Analyser	An analyser is a mechanical-electrical-optical device used to measure the concentration of trace gas pollutants or particulate concentrations.
Calibration	A calibration is a procedure where sensor responses are compared to known standards. Deviations between the expected and known concentrations are corrected and reported.
Database	A database consists of data structures and attendant software that organise, store, and allow users access to data.
Environment	The organisation's surroundings include air, water, land, natural resources, flora, fauna, humans and their interactions and relations.
Meteorological Station	A station that contains instruments capable of measuring at least wind speed, direction and temperature.
Model	The software implementation of dispersion modelling mathematics to calculate ambient pollution concentrations based on emission figures and meteorological data.
Network	The hardware includes sensors, data loggers, telemetry and computers, and the software includes data handling, storage programmes, models and databases.
Precision Check	The precision check is a procedure where a sensor is challenged with a gas of a known concentration within the operating range of the measurement.
Source	A point, line or area from which pollution would be released
Station	A station is a data capture point used for pollutant measurement, meteorological measurement, or data consolidation.
System	The system represents all network components, including the procedures for marshalling and reporting data.

APPENDIX B
QUALITY ASSURANCE

The SO_2 concentrations reported are determined by the United States Environmental Protection Agency (US EPA) equivalent method, EQSA-0193-092. SO_2 and TRS measurements allow a maximum precision error of 10% of the reported value. A tolerance around the zero-point of plus or minus 5 ppb is permitted. All effort is made to reduce the error to a minimum. Data collection must be above 90% for valid statistical analysis in terms of South African National Standard (SANAS) quality assurance standards.

Table 1: Quality Assurance

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

APPENDIX C
EMISSION INVENTORY

Table 1: Emission Inventory - 2023

Industry	Description	SO_2 Emission 2022 (t)	SO_2 Emission 2022 (t)	SO_2 Contribution (%)
Foskor	Acid Plant	2384	2394	14%
	Boiler	11		
Tongaat Hulett	Boiler	287	287	2%
Mondi	Flume 1	1413	3072	18%
	Flume 2	834		
	Power Boiler	793		
	Incinerator	8		
	Bleach Plant	24		
Mpact	Babcock	119	340	2%
	JT Boiler	221		
	Oil Burner	0		
RBM	Char Plant	467	540	3%
	Miscellaneous	34		
	MSP (Drier)	38		
	Smokers	1		
South32	FTC	1880	10532	60%
	GTC 1	1949		
	GTC 2	1676		
	GTC 3	1574		
	GTC 4	1574		
	GTC 5	1625		
	Potrooms	253		
Tronox	Tank 1	251	251	1%
Total		17416	17416	100%

Notes:
- Tongaat Hullet shut down during the 1st quarter and last month of the year.
- TATA stopped operations in May 2015

APPENDIX D
OPERATIONAL REPORT

Table 1: Maximum concentrations for PM_{10} and $PM_{2.5}$.

RBCAA: Annual Report for 2023						
PM_{10} daily averages						
Station	*Concentration (µg/m³)*	*% of RSA Standard (75 µg/m³)*	*% of WHO Guideline (45 µg/m³)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
CBD	57.0	76%	**127%**	2023/09/30 00:00	81	4.2
eSikhaleni	49.0	65%	**109%**	2023/11/22 00:00	214	1.7
Felixton	27.0	36%	60%	2023/09/15 00:00	No Data	No Data
Richardia	76.0	**101%**	**169%**	2023/07/08 00:00	347	3.0
Scorpio	443.0	**591%**	**984%**	2023/09/15 00:00	37	2.9
$PM_{2.5}$ daily averages						
Station	*Concentration (µg/m³)*	*% of RSA Standard (40 µg/m³)*	*% of WHO Guideline (15 µg/m³)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
Brackenham	44.0	**110%**	**293%**	2023/10/07 00:00	147	5.1
Felixton	62.0	**155%**	**413%**	2023/04/04 00:00	No Data	No Data
Harbour West	162.0	**405%**	**1080%**	2023/07/30 00:00	No Data	2.4
Scorpio	107.0	**268%**	**713%**	2023/09/15 00:00	37	2.9

LEGEND
Yellow: = 50% of the guideline/standard
Red: >= 100% of the guideline/standard (i.e. exceedance)
Turquoise: = 10% of the guideline/standard

NOTES
Dates used for time intervals are time beginning.
Wind speeds of < 1 m/s are considered calms; wind directions measured under these conditions cannot be used for incident investigations.
This report is an interim report in terms of AIMS' quality system classification. Final data will be published in the monthly report for the system.

STATUS
Meteorology
Airport, Arboretum, Brackenham, CBD, eSikhaleni, and Harbour West have meteorology.
Scorpio uses meteorology from Harbour West, and Felixton uses meteorology from eSikhaleni.

MISSING DATA
Data < 80% - data capture less than 80% (not suitable for statistical analysis)
No Data – no data available.

Table 2: Maximum concentrations for SO_2.

RBCAA: Annual Report for 2023						
SO_2 10-minute averages						
Station	*Concentration (ppb)*	*% of RSA Standard & WHO Guideline (500 µg/m³ / 191 ppb)*		*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
Arboretum	49.2	26%		2023/06/19 22:00	240	4.2
Brackenham	62.5	33%		2023/12/26 14:30	198	5.1
CBD	139.5	73%		2023/11/29 18:20	220	3.2
eSikhaleni	33.5	18%		2023/10/02 09:50	61	3.6
Felixton	55.8	29%		2023/07/05 16:00	No Data	No Data
Harbour West	337.2	**177%**		2023/01/03 03:50	46	3.6
Richardia	129.5	68%		2023/11/08 20:00	126	2.2
Scorpio	381.3	**200%**		2023/06/20 18:00	206	1.4
SO_2 hourly averages						
Station	*Concentration (ppb)*	*% of RSA Standard (350 µg/m³ / 134 ppb)*	*No WHO Guideline*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
Arboretum	34.0	25%	-	2023/08/01 08:00	249	4.2
Brackenham	36.7	27%	-	2023/12/26 14:00	196	5.8
CBD	72.2	54%	-	2023/06/04 02:00	245	4.2
eSikhaleni	14.2	11%	-	2023/10/02 10:00	96	3.0
Felixton	33.3	25%	-	2023/07/05 16:00	No Data	No Data
Harbour West	188.6	**141%**	-	2023/01/03 04:00	47	4.0
Richardia	124.5	93%	-	2023/11/08 20:00	131	1.8
Scorpio	222.2	**166%**	-	2023/06/20 18:00	195	1.8
SO_2 daily averages						
Station	*Concentration (ppb)*	*% of RSA Standard (125 µg/m³ / 48 ppb)*	*% of WHO Guideline (40 µg/m³ / 15 ppb)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
Arboretum	6.9	14%	46%	2023/07/05 00:00	229	4.2
Brackenham	8.4	18%	56%	2023/12/26 00:00	208	3.7
CBD	23.2	48%	**155%**	2023/06/04 00:00	234	2.1
eSikhaleni	2.4	5%	16%	2023/06/07 00:00	44	2.7
Felixton	5.6	12%	37%	2023/10/17 00:00	No Data	No Data
Harbour West	40.5	84%	**270%**	2023/01/03 00:00	58	4.8
Richardia	40.4	84%	**269%**	2023/10/10 00:00	92	1.8
Scorpio	50.0	**104%**	**333%**	2023/06/20 00:00	208	2.6

Table 3: Maximum concentrations for TRS.

RBCAA: Annual Report for 2023						
TRS 10-minute averages						
Station	*Concentration (ppb)*	*No RSA Standard*	*% of OME TRS Guideline (13.0 µg/m³ / 9.3 ppb)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
CBD	63.2	-	**680%**	2023/05/22 23:40	244	1.8
eSikhaleni	36.9	-	**397%**	2023/11/02 04:30	37	0.7
Felixton	240.2	-	**2583%**	2023/08/03 02:50	No Data	No Data
Richardia	21.8	-	**234%**	2023/11/18 18:40	No Data	No Data
TRS 30-minute averages						
Station	*Concentration (ppb)*	*No RSA Standard*	*% of WHO H_2S Guideline (7.0 µg/m³ / 5.0 ppb)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
CBD	49.5	-	**990%**	2023/05/22 23:30	257	1.7
eSikhaleni	31.0	-	**620%**	2023/11/02 04:30	28	0.7
Felixton	142.0	-	**2840%**	2023/08/03 03:00	No Data	No Data
Richardia	13.8	-	**276%**	2023/11/18 18:30	No Data	No Data
TRS daily averages						
Station	*Concentration (ppb)*	*No RSA Standard*	*% of OME TRS Guideline (14.0 µg/m³ / 10.1 ppb)*	*Time*	*Wind Direction (°)*	*Wind Speed (m/s)*
CBD	3.7	-	37%	2023/03/05 00:00	28	2.6
eSikhaleni	2.9	-	29%	2023/11/02 00:00	67	2.2
Felixton	11.8	-	**117%**	2023/08/03 00:00	No Data	No Data
Richardia	1.4	-	14%	2023/09/28 00:00	14	2.5

APPENDIX E
RAINFALL

Table 1: Annual Rainfall

	2016	2017	2018	2019	2020	2021	2022	2023	Average
Richards Bay	1834	1973	1798	1850	1540	2234	1893	2034	**1874**
Felixton	1126	1512	1354	1261	987	1530	1288	1347	**1294**
RBCT	936	1555	1005	1317	1049	1669	1934	1740	**1352**
South32	-	-	-	-	-	-	1336	1280	**1336**
Average	**1298**	**1680**	**1386**	**1476**	**1192**	**1811**	**1613**	**1600**	**1464**

Table 2: Monthly Rainfall Richards Bay

Month	Richards Bay							
	2016	2017	2018	2019	2020	2021	2022	2023
Jan	84	277	94	182	47	305	127	167
Feb	100	345	232	195	377	229	193	410
Mar	137	142	139	78	139	217	62	141
Apr	179	22	261	214	141	96	647	87
May	291	476	311	9	53	165	130	356
Jun	152	62	70	78	114	140	60	33
Jul	293	25	20	16	48	57	20	196
Aug	41	75	100	160	107	59	77	20
Sep	172	51	85	43	144	216	93	23
Oct	205	94	213	260	171	214	101	345
Nov	128	144	119	296	122	72	131	61
Dec	53	260	156	320	77	464	253	195
Minimum	41	22	20	9	47	57	20	20
Average	153	164	150	154	128	186	158	169
Maximum	293	476	311	320	377	464	647	410
Total	1834	1973	1798	1850	1540	2234	1893	2034

Table 3: Monthly Felixton

Month	Felixton							
	2016	2017	2018	2019	2020	2021	2022	2023
Jan	64	193	43	138	71	207	68	57
Feb	61	277	129	138	214	231	78	188
Mar	83	101	89	70	89	126	95	80
Apr	116	116	138	143	106	135	368	58
May	243	286	342	9	42	57	120	245
Jun	32	24	60	53	44	98	20	14
Jul	183	27	22	17	37	39	15	146
Aug	20	54	83	39	67	55	37	18
Sep	92	95	53	79	84	191	51	43
Oct	124	119	201	144	67	145	98	318
Nov	77	82	84	121	106	35	174	34
Dec	32	138	111	311	64	212	163	146
Minimum	20	24	22	9	37	35	15	14
Average	94	126	113	105	82	127	107	112
Maximum	243	286	342	311	214	231	368	318
Total	1126	1512	1354	1261	987	1530	1288	1347

Table 4: RBCT

Month	RBCT							
	2016	2017	2018	2019	2020	2021	2022	2023
Jan	-	160	42	110	33	215	54	136
Feb	-	323	137	124	166	146	131	344
Mar	96	98	78	172	109	194	161	69
Apr	75	32	161	174	111	69	642	30
May	162	382	175	14	69	171	268	442
Jun	80	41	59	24	52	124	30	34
Jul	240	23	21	5	39	64	30	162
Aug	8	51	35	68	64	56	25	30
Sep	144	70	41	59	104	187	115	30
Oct	55	103	80	164	121	156	71	293
Nov	58	89	70	186	77	43	129	42
Dec	19	183	104	216	104	245	279	127
Minimum	8	23	21	5	33	43	25	30
Average	94	130	84	110	87	139	161	145
Maximum	240	382	175	216	166	245	642	442
Total	936	1555	1005	1317	1049	1669	1934	1740

Table 5: South32

Month	South32 (mm)							
	2016	2017	2018	2019	2020	2021	2022	2023
Jan	-	-	-	-	-	-	-	91
Feb	-	-	-	-	-	-	115	256
Mar	-	-	-	-	-	-	149	51
Apr	-	-	-	-	-	-	505	43
May	-	-	-	-	-	-	106	230
Jun	-	-	-	-	-	-	25	11
Jul	-	-	-	-	-	-	12	165
Aug	-	-	-	-	-	-	30	13
Sep	-	-	-	-	-	-	64	18
Oct	-	-	-	-	-	-	64	271
Nov	-	-	-	-	-	-	101	36
Dec	-	-	-	-	-	-	163	95
Minimum	-	-	-	-	-	-	12	11
Average	-	-	-	-	-	-	121	107
Maximum	-	-	-	-	-	-	505	271
Total	-	-	-	-	-	-	1336	1280

APPENDIX F
COMPLAINTS LOG

Table 1: Complaints

No	Date	Region	Type	Source	Description	Response
	January 2023					
1	2023/01/01 02:23	Foskor Area	Clinical + Odour	Foskor	Gas leak at C Plant	97
2	2023/01/18 14:15	Alton	Coal dust + Clinical	Phinda	Significant coal dust emanating from the coal stockpile located on the Phinda site, causing coughing and damage to equipment	101
3	2023/01/18 14:40	Alton	Coal dust	Phinda	Significant coal dust emanating from the coal stockpile located on the Phinda site. Employer has been forced to provide his employees with masks.	101
4	2023/01/27 06:45	Arboretum Ext	Odour	Mondi	strong cat urine odour at 06:45	96
5	2023/01/27 06:47	Arboretum Ext	Odour	Mondi	Cat urine	96
6	2023/01/29 21:30	Veldenvlei	Odour	Mondi	Odour that had a taste to it.	98
7	2023/01/29 21:56	Veldenvlei	Odour	Mondi	“Strange smell in the air”	98
8	2023/01/29 23:00	Brackenham	Odour	Mondi	Mondi odour in Brackenham	98
9	2023/01/30 16:55	JR Highway	Odour	Foskor - meteorology	Pungent odour that was also present in Baines Str Empangeni from +_ 12h00 – 13h00.	102, 1
	February 2023					
1	2023/02/06 10:46	Veldenvlei	Visible	Foskor	Badly visible stack emissions from the Granulation plant	100
2	2023/02/10 08:15	Brackenham	Odour	Mondi	Rotten egg type odour	99
3	2023/02/11 14:42	Veldenvlei	Odour	Mondi	Background Mondi odour	99
4	2023/02/22 05:30	Arboretum Ext	Odour	Foskor - meteorology	Strong Foskor odour.	106, 1
	March 2023					
1	2023/03/14 21:30	Richards Bay	Odour	Mondi	Bad odour	103
2	2023/03/16 00:00	Meerensee	Clinical + Odour	Mondi	Early hours, Foul smell causing burning nose.	104

No	Date	Region	Type	Source	Description	Response
3	2023/03/16 03:00	Meerensee	Clinical + Odour	Mondi	From 03h00 and worse at 05h00, Strong odour causing wheezing.	104
4	2023/03/16 05:00	Meerensee	Clinical + Odour	Mondi	Mondi odour causing shortness of breath.	104
5	2023/03/16 05:30	Meerensee	Clinical + Odour	Mondi	From 05h30 and got worse, Mondi odour causing burning eyes and throat. “My 3 little ones have red watery eyes.”	104
6	2023/03/16 06:30	Greenhill	Odour	Mondi	“Strong Mondi odour”	104
7	2023/03/16 07:00	Meerensee	Clinical + Odour	Mondi	Pungent odour causing burning eyes and headache.	104
8	2023/03/16 07:40	Meerensee	Clinical + Odour	Mondi	Bad smell causing burning skin, eyes and nose. “When I breathe my throat burns.”	104
9	2023/03/22 07:12	Veldenvlei	Odour	Mondi	Bad odour described as Guava odour	105
10	2023/03/22 07:30	Alton	Odour	Mondi	Bad odour described as Cat urine	105
11	2023/03/23 08:00	Alton	Odour	Mondi	Bad odour described as Cat urine	105
12	2023/03/23 08:01	Birdswood	Odour	Mondi	Described as Cabbage odour	105
13	2023/03/23 08:25	Veldenvlei	Odour	Mondi	Bad odour described as Sulphirc odour	105
	April 2023					
1	2023/04/05 07:15	Alton	Odour	Mondi	Described as cat urine/rotten egg.	110
2	2023/04/06 06:40	Arboretum Ext	Odour	Mondi	Described as Mondi guava odour.	107
3	2023/04/06 06:40	Arboretum Ext	Odour	Mondi	Described as Mondi guava odour.	107
4	2023/04/10 22:42	Wildenweide	Odour	Mondi	Described as Mondi 0dour.	108
5	2023/04/13 06:55	Alton	Odour	Mondi	Described as pungent Mondi odour.	109
6	2023/04/17 00:00	Arboretum	Coal dust	TPT	Black dust. “I am concerned about the amount of black dust like particles we are finding in our home. I assume its from the coal trucks being off-loaded. Are the Authorities doing anything to control the dust levels?”	111, 113
7	2023/04/17 00:00	Arboretum Ext	Coal dust	TPT	Black Dust. House and vehicle covered in black dust.	111, 113
8	2023/04/17 00:00	Arboretum	Coal dust	TPT	17 - 23 April, Black Dust, “The whole of last week my 3 year old son came home from school with black in his nostrils, that I’ve had to saline spray and wipe repeatedly in order to clean it.	111, 113

No	Date	Region	Type	Source	Description	Response
					Symprtoms – light coughing each day and today being day 7 his breathing and coughing has worsened.”	
9	2023/04/18 00:00	Veldenvlei	Coal dust	TPT	18 – 23 April, Coal dust. Everything inside and outside the house covered in coal dust. Cannot walk barefoot because of the amount of coal dust on the floor. Causing sinus irritation and coughing.	111, 113
10	2023/04/18 00:00	Arboretum	Coal dust	TPT	18 & 23 April, Black Dust. I recently moved into the suburb of Arboretum and within a few days saw a problem. After cleanning and scrubbing and swipping the house floor multiple times, at the end of the day our little bays's leges were black after crawling, as were our feet if we walked barefoot. After speaking with few Arboretum residents, I quikcly realized that we are not the only ones. It is clear no "dirthy" floors but some residue is entering our homes. Coal, titanium?who knows. But is our floors look like this, what is the condition of the air we breathe in? very concerning, specially from a parent of a baby.	111, 113
11	2023/04/27 00:00	Veldenvlei	Coal dust	TPT	Vehicle covered in coal dust after having being washed 2 days prior	112, 113, 127
	May 2023					
1	2023/05/01 00:00	Arboretum	Coal dust	TPT	Window sills covered in coal dust.	112, 113, 127
2	2023/05/07 00:00	Arboretum Ext	Odour	Foskor	Foskor alarm accompanied by an acid smell.	119
3	2023/05/07 06:00	Foskor Area	Clinical + Odour	Foskor	Running past Foskor “Odour as we ran past Foskor which badly burnt our eyes. I had to pull my cap right down to cover my eyes.”	119
4	2023/05/07 07:10	Foskor Area	Clinical + Odour	Foskor	“acid in the air which burnt my eyes and throat and caused severe coughing.”	119
5	2023/05/07 07:54	Arboretum Ext	Clinical + Odour	Foskor	"Foskor odour and alarm, causing burning eyes, throat and coughing. Even my dog is wheezing”.	119
6	2023/05/07 11:00	Arboretum Ext	Clinical + Odour	Foskor	Odour causing burning sensation in throat. Had to close doors.	119
7	2023/05/07 11:00	Arboretum	Clinical + Odour	Foskor	Odour causing dizziness.	119
8	2023/05/09 06:30	Alton	Odour	Mondi	06:30 – 08:00 Odour described as bad Mondi odour	114
9	2023/05/10 09:00	Alton	Clinical + Odour	Mondi	Odour described as Mondi odour causing headache.	115
10	2023/05/10 19:00	Meerensee	Odour	Mondi - meteorology	strong “Cat Urine Odour”	116
11	2023/05/11 07:35	Port of Richards Bay	Alumina	South32	Cars, offices, ground were covered in alumina dust since 10 May. Number of employees complaint to Ms Nyembe.	117
12	2023/05/15 07:50	Meerensee	Clinical + Odour	Mondi	During the night from about 20h00 on the 15th until 09h00 on the 16th, “pungent chemical smell, causing headache, nausea and sinus.”	118

No	Date	Region	Type	Source	Description	Response
13	2023/05/16 00:00	Arboretum	Clinical + Odour	Mondi	Early morning, bad odour causing headache.	118
14	2023/05/16 00:00	Meerensee	Odour	Mondi	since early morning, Foul smell in the air.	118
15	2023/05/16 00:00	Arboretum	Clinical + Odour	Mondi	from early hours of the morning, Terrible odour causing headaches, nausea and burning eyes.	118
16	2023/05/16 02:30	Arboretum	Clinical + Odour	Mondi	Strong cat urine odour causing sore throat and affecting lungs. Complainant suffers with asthma.	118
17	2023/05/16 02:30	Arboretum	Clinical + Odour	Mondi	sulphur smell causing burning eyes and chest.	118
18	2023/05/16 03:00	Arboretum	Clinical + Odour	Mondi	from 03h00, strong urine smell affecting sinuses, eyes and causing headache.	118
19	2023/05/16 03:00	Arboretum	Clinical + Odour	Mondi	from 03h00, sulphur urine smell affecting sinuses and causing burning eyes and headache.	118
20	2023/05/16 03:08	Arboretum	Clinical + Odour	Mondi	Bad odour. Battling to breathe. Sore throat, sinus and headache.	118
21	2023/05/16 05:30	Meerensee	Clinical + Odour	Mondi	“Smells like ammonia. Sore throat.”	118
22	2023/05/16 06:00	Meerensee	Clinical + Odour	Mondi	Cat urine odour causing headache, and burning skin and eyes.	118
23	2023/05/16 06:00	Arboretum	Clinical + Odour	Mondi	nauseating cat urine odour.	118
24	2023/05/16 06:00	Arboretum	Clinical + Odour	Mondi	from 06h00, “Horrible gas smell. It’s burning my nose and really difficult to breathe.”	118
25	2023/05/16 06:30	Meerensee	Odour	Mondi	“Incredibly bad cat urine odour”	118
26	2023/05/16 06:30	Meerensee	Clinical + Odour	Mondi	“Gassy type smell causing nausea and burning eyes.”	118
27	2023/05/16 06:35	Arboretum	Clinical + Odour	Mondi	Strong cat urine smell. Burning nose, eyes and throat. Tight chest. Complainant is an asthmatic.	118
28	2023/05/16 06:45	Arboretum Ext	Clinical + Odour	Mondi	Strong cat urine smell causing headache and coughing.	118
29	2023/05/16 06:45	JR Highway	Clinical + Odour	Mondi	Strong cat urine odour causing sneezing and headache.	118
30	2023/05/16 06:48	Arboretum	Odour	Mondi	Strong urine smell.	118
31	2023/05/16 06:48	Arboretum	Odour	Mondi	strong urine like smell.	118
32	2023/05/16 07:00	Meerensee	Clinical + Odour	Mondi	“Chemical cat pee vrot offensive suffocating smell. Restrict breathing and what absorption happen in our blood and organs ??”	118

No	Date	Region	Type	Source	Description	Response
33	2023/05/16 07:00	JR Highway	Clinical + Odour	Mondi	“acrid harsh chemical smell causing scratch throat.	118
34	2023/05/16 07:07	Arboretum Ext	Clinical + Odour	Mondi	“Vile super strong cat pee smell, reall really bad. Throat, nose and eyes burning. Smells so bad makes me want to vomit.”	118
35	2023/05/16 07:14	Arboretum	Clinical + Odour	Mondi	Awful cat urine type odour. Battle to breath. Has a choking effect.	118
36	2023/05/16 07:17	Arboretum	Clinical + Odour	Mondi	Urine smell causing burning throat and eyes.	118
37	2023/05/16 07:24	Arboretum	Clinical + Odour	Mondi	Bad smell. Struggling to breathe. Affecting eyes.	118
38	2023/05/16 07:30	Meerensee	Odour	Mondi	“Terrible smell in Meerensee. Smells like Mondi”	118
39	2023/05/16 07:30	Meerensee	Odour	Mondi	Cat urine odour.	118
40	2023/05/16 07:33	Meerensee	Odour	Mondi	“terrible cat urine odour”.	118
41	2023/05/16 07:34	Meerensee	Odour	Mondi	Cat urine odour.	118
42	2023/05/16 07:36	Meerensee	Clinical + Odour	Mondi	Chemical smell causing burning eyes, nose and skin.	118
43	2023/05/16 07:40	Meerensee	Clinical + Odour	Mondi	“the smell in the air is absolutely nauseating. Almost like animal urine. Also burning my eyes and throat.”	118
44	2023/05/16 07:45	Meerensee	Clinical + Odour	Mondi	Intense feline urination smell, causing headache.	118
45	2023/05/16 07:48	Meerensee	Clinical + Odour	Mondi	Cat urine odour causing burning eyes, dizziness and runny nose.	118
46	2023/05/16 07:50	Meerensee	Odour	Mondi	“Very strong chemical smell.”	118
47	2023/05/16 07:50	Arboretum	Clinical + Odour	Mondi	strong cat urine smell causing burning nose.	118
48	2023/05/16 08:00	Meerensee	Clinical + Odour	Mondi	“There is a terrible smell in Meerensee this morning. Making me feel nauseous and have developed a bad headache.”	118
49	2023/05/16 08:57	Meerensee	Odour	Mondi	“strong odour”	118
50	2023/05/21 20:16	Wildenweide	Odour	Mondi	Strong Mondi odour	122
51	2023/05/22 00:00	Arboretum	Clinical + Odour	Mondi - meteorology	There has been a very foal smell since last night 22/03/2023 in the air. Its a smell that ranges between a sewer and gas and something that has died. Its unbearable to breath in. We had to close all our windows and doors as we couldn't breath in it. A while after i started getting a very	121, 1

No	Date	Region	Type	Source	Description	Response
					bad headache and still have it till today. RBCAA - Allocated on meteorology and description.	
52	2023/05/22 00:00	Arboretum	Clinical + Odour	Mondi - meteorology	This morning/last night (late) My whole house smelt absolutely terrible the I had a pack of dogs and the spoilet everywhere in my house but it was just a really bad smell outside it was terrible you actually woke me up and my 2 week old baby and myself is now so congested this morning from it please this needs to stop. RBCAA - Allocated on meteorology and description.	121, 1
53	2023/05/22 09:20	Arboretum	Odour	Mondi - meteorology	Pungent Foskor odour. RBCAA - Allocated on meteorology and description.	120, 1
54	2023/05/22 13:00	Veldenvlei	Odour	Mondi - meteorology	Extremely strong Foskor odour. RBCAA - Allocated on meteorology and description.	120, 1
55	2023/05/22 18:00	Arboretum	Odour	Mondi - meteorology	When driving pass the Richardsbay High school there is a very bad odour hanging in the area once you approach the 4 way stop between essenwood way and via Ricardia . I Experienced this bad smell yesterday 22/05 2 18:00 and again this morning at 06:30. RBCAA - Allocated on meteorology and description.	121, 1
56	2023/05/22 19:24	Veldenvlei	Clinical + Odour	Mondi - meteorology	Acidic \ Cat Urine type odour causing sinus irritation. RBCAA - Allocated on meteorology and description.	1
57	2023/05/22 20:00	Arboretum Ext	Clinical + Odour	Unknown source	Sulphur smell causing tight chest, burning eyes and nose. RBCAA allocation - Unknown source west of the cluster of complaints.	123
58	2023/05/22 20:00	Arboretum Ext	Clinical + Odour	Unknown source	Started around 20h00 very strong 22h00- 23h00, gas smell causing headaches, burning eyes, nose and throat, and tight chest. RBCAA allocation - Unknown source west of the cluster of complaints.	123
59	2023/05/22 22:00	Arboretum Ext	Clinical + Odour	Unknown source	22h00 – 23h00, Strong acidic smell causing burning eyes and coughing. RBCAA allocation - Unknown source west of the cluster of complaints.	123
60	2023/05/22 22:00	Arboretum Ext	Clinical + Odour	Unknown source	Strong acid smell causing tight chest, sore throat and burning eyes. RBCAA allocation - Unknown source west of the cluster of complaints.	123
61	2023/05/22 22:00	Arboretum Ext	Clinical + Odour	Unknown source	Bad odour causing burning eyes and throat, headache and tight chest. RBCAA allocation - Unknown source west of the cluster of complaints.	123
62	2023/05/22 23:00	Arboretum Ext	Clinical + Odour	Unknown source	Very strong gas smell causing headache. RBCAA allocation - Unknown source west of the cluster of complaints.	123
63	2023/05/22 23:00	Arboretum Ext	Clinical + Odour	Unknown source	Strong Sulphur smell causing burning eyes and sore throat. RBCAA allocation - Unknown source west of the cluster of complaints.	123
64	2023/05/22 23:15	Arboretum Ext	Odour	Unknown source	Strong sulphur odour. RBCAA allocation - Unknown source west of the cluster of complaints.	123
65	2023/05/22 23:16	Arboretum Ext	Odour	Unknown source	Strong sulphur smell. RBCAA allocation - Unknown source west of the cluster of complaints.	123
66	2023/05/22 23:35	Arboretum Ext	Clinical + Odour	Unknown source	Strong sulphur smell causing nose and eye discomfort. RBCAA allocation - Unknown source west of the cluster of complaints.	123
67	2023/05/22 23:40	Arboretum	Clinical + Odour	Mondi - meteorology	I stay in Arboretum, Ext 3. Last night, 22/05/2023 at round about 23:40 I woke up with a scratchy throat.	121, 1

No	Date	Region	Type	Source	Description	Response
					I went to get a glass of water and went and sat down in the lounge. Closer to midnight a horrible smell started coming into the house from outside as it was a bit windy. This morning I woke up with a tight chest and a persistent cough and a headache. RBCAA - Allocated on meteorology and description.	
68	2023/05/23 00:00	Arboretum	Odour	General air quality complaint	Odor smell from Foskor heavy for the last 3 days in Arboretum.	121, 1
69	2023/05/23 00:00	Arboretum	Clinical	General air quality complaint	Both my son 11 years and Father 71 years have constant nausea. Been to doc many to treat for flu symptoms, evven after taking med's thee symptoms remain the same. Similar nausea annd vomiting symptoms have occurred multiple times over the year 2022 and now in 2023	121, 1
70	2023/05/23 06:00	Arboretum Ext	Clinical + Odour	Unknown source	Strong acid smell causing tight chest, sore throat and burning eyes. RBCAA allocation - Unknown source west of the cluster of complaints.	123
71	2023/05/23 06:26	Arboretum Ext	Clinical + Odour	Unknown source	Strong smell causing headache, burning of eyes and throat. RBCAA allocation - Unknown source west of the cluster of complaints.	123
72	2023/05/23 06:40	Arboretum Ext	Clinical + Odour	Unknown source	Sulphur smell causing tight chest, burning eyes and nose. RBCAA allocation - Unknown source west of the cluster of complaints.	123
73	2023/05/23 06:40	Alton	Clinical + Odour	Unknown source	Gas smell causing headache and nausea.	123
74	2023/05/23 06:45	Veldenvlei	Clinical + Odour	Unknown source	Gas like odour causing headache and nausea. RBCAA - Allocation possible related to burning activities by vagrants living in the greenbelt.	123
75	2023/05/23 07:15	Veldenvlei	Clinical + Odour	Unknown source	Strong gas smell RBCAA - Allocation possible related to burning activities by vagrants living in the greenbelt.	123
76	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
77	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
78	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
79	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
80	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
81	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130

No	Date	Region	Type	Source	Description	Response
82	2023/05/24 07:00	North East of Richards Bay	Clinical + Visible	Controlled Forest Burn	Complaints all relating to severe smoke hanging over Richards Bay on 24 May from 07h00 onwards causing eye and respiratory irritation	130
83	2023/05/27 08:58	Engen Garage on the N2 Highway	Odour	Unknown Source	Odour in the vicinity of the Engen Garage on the N2 Highway just NNE of the Mpact Operations	126, 1
	June 2023					
1	2023/06/16 06:55	Wildenweide	Odour	Mondi	Strong “Mondi Odour”	124
2	2023/06/16 07:23	Veldenvlei	Odour	Mondi	Mondi guava odour.	128
3	2023/06/16 07:32	Veldenvlei	Odour	Mondi	“pungent Mondi Odour”	124
4	2023/06/18 07:38	Foskor Area	Visible	Foskor	dark visibility of the Sulphuric A&B stack.	125
	July 2023					
1	2023/07/02 03:00	Meerensee	Odour	Mondi	Cat urine odour	131
2	2023/07/02 15:10	eNseleni	Odour	Mondi	Cat urine odour	132
3	2023/07/03 00:05	Veldenvlei	Clinical + Odour	Mondi	Bad odour “ I woke from the smell and its just getting worse. I have a terrible headache.”	129
4	2023/07/03 00:41	Unknown	Odour	Mondi	“very strong onion\guava smell. Had to close windows and bring dogs inside.”	129
5	2023/07/03 00:50	Veldenvlei	Clinical + Odour	Mondi	I was woken by a horrendous Mondi odour which had permeated throughout my home despite my windows being closed. I had a feeling of suffocation, headache and extreme nausea.	129
6	2023/07/03 01:00	Veldenvlei	Clinical + Odour	Mondi	Between midnight and 01h00, “very strong odour. Could barely breathe”	129
7	2023/07/03 01:00	Veldenvlei	Odour	Mondi	Strong cat urine smell.	129
8	2023/07/03 01:10	Birdswood	Odour	Mondi	“Very strong cat urine odour”	129
9	2023/07/03 01:24	Veldenvlei	Odour	Mondi	“ Cat urine type odour”	129
10	2023/07/03 01:27	Birdswood	Clinical + Odour	Mondi	“Very bad and strong odour in the air. Really uncomfortable to breathe, making throat dry and having a burning sensation.	129
11	2023/07/03 02:00	Arboretum	Clinical + Odour	Mondi	“Bad odour causing horrible headache”	129

No	Date	Region	Type	Source	Description	Response
12	2023/07/03 02:00	Veldenvlei	Clinical + Odour	Mondi	“Strong cat urine smell. Very difficult to breath, headache this morning and bad sinus.	129
13	2023/07/03 03:56	Unknown	Clinical + Odour	Mondi	“ Woke up from a cat urine type smell causing burning of the nose.”	129
14	2023/07/16 18:00	Brackenham	Clinical + Odour	Mondi	18h00 – 20h30, “Bad foul smell creeping into the house and leaving a stench behind. Causing blocked nose and sinus issues.”	136
15	2023/07/17 03:00	Arboretum Ext	Noise	Foskor	Very loud noises coming from Foskor at around 3am followed by an alarm at 03h:03 which stopped after about 15 seconds and was followed by more noises.	135
16	2023/07/24 14:00	Felixton Village	Odour	CoU Felixton Sewage Station	“Terribly fishy\sewage\vomit smell”	133, 134, 137
17	2023/07/26 13:00	Port of Richards Bay	Gas explosion / leak	BTT	Employee notified complainant of a gas explosion\leak at BTT.	138, 141
	August 2023					
1	2023/08/08 07:45	Felixton Village	Odour	Mondi - meteorology	Rotten odour, also experienced earlier travelling along the John Ross	139, 143, 144
2	2023/08/20 06:45	Veldenvlei	Clinical + Odour	Mondi	Strong cat-urine like smell in the air, sinuses affected and eyes burning	140
3	2023/08/21 06:45	Foskor Area	Clinical + Odour	Non-industrial local source	RBCAA received a call from R.B Hoerskool stating that 3 students travelling in a bus reported having been overcome by a strong gas smell. The 3 students complained of nausea, dizziness and difficulty breathing. One of the students fainted a number of times and was admitted to hospital. The RBCAA immediately notified Foskor on receiving the first call from the school on 21 August at 07h47. The RBCAA also established that the WD at the time was a very strong northerly wind, and therefore informed the school that based on WD and WS it was unlikely to be an industrial source, however RBCAA procedures would be implemented and the incident investigated. The RBCAA established that the 3 students were sitting together behind the bus driver. The RBCAA suggested to the school that the incident may have been related to something released in\from the bus given that the 3 students were all seated together. One of the parents that the RBCAA spoke with expressed extreme concern regarding the condition of the bus. Further feedback was provided by the school the following day stating that other students travelling on the same bus reported not feeling well in the afternoon after they returned home. The school also confirmed that the bus had been inspected and given the all-clear, however a report had not been made available to the school. The bus service is outsourced. The RBCAA notified the Ward Cllr of the complaint. No other community complaints were received.	142, 144
4	2023/08/28 14:00	Veldenvlei	Clinical + Visible	TPT coal dust	My complaint relates to clouds of coal dust emanating from the Port of Richards Bay on 28 August, observed at 14h00. (see attached photographs) I speak on behalf of the community when I say this situation can simply not be allowed to	1, 144

No	Date	Region	Type	Source	Description	Response
					continue. The community is being smothered under a blanket of coal dust daily. Our homes, gardens, vehicles, and pools are covered in coal dust. More importantly we are breathing in the coal dust and have been forced to do so for at least the past 2 years. This is causing eye and respiratory related health issues in the community. I have lived in Richards Bay since 1986 and have never had a compromised respiratory system until this year. My story is that of many, many people living in Richards Bay, and I shudder to think what effect this is having on the health of those with already compromised health, the elderly, and babies. The question that needs to be answered is why the Port of Richards Bay, in particular TPT, is being allowed to operate with such impunity. If any other industry in Richards Bay were resulting in fallout of this nature compliance enforcement would be actioned by the Authorities. These are photographs taken at various times at my home in Veldenvlei, which is 6.5km (as the crow flies) from the Port; The photographs below were submitted by residents living in Arboretum; The photographs below are of from a mother who stated that; “The whole of last week my 3-year-old son came home from school with black in his nostrils, that I’ve had to saline spray and wipe repeatedly in order to clean it. Symptoms – light coughing each day and today being day 7 his breathing and coughing has worsened.” As evidenced in the above photographs the dust fallout in residential areas is significant and unacceptable. I implore the Authorities to enforce and protect our constitutional right to breathe clean air. (PS: Photos available on email)	
	September 2023					
1	2023/09/01 07:20	Alton	Clinical + Odour	Mondi	“Cat urine odour causing burning nose”	145
2	2023/09/15 00:00	Veldenvlei	Fallout	South32	15 Sept, early morning, Alumina fallout observed on vehicle.	146, 147
3	2023/09/15 00:00	Arboretum	Fallout	South32	Early morning, Alumina fallout observed on vehicle past couple of days	146, 147
4	2023/09/16 00:00	Veldenvlei	Fallout	South32	Alumina fallout observed on vehicle after it had been washed the day before.	146, 147
	October 2023					
1	2023/10/13 05:00	Arboretum Ext	Clinical + Odour	Foskor - meteorology	“Strong “acetone” type odour” causing burning chest, nose, eyes and throat.”	150, 158
2	2023/10/13 06:00	Arboretum Ext	Clinical + Odour	Foskor - meteorology	“Bad odour causing headache, sinus, eye and chest discomfort.”	150, 158
3	2023/10/14 07:50	Alton	Clinical + Odour	Foskor	Very bad acid smell causing burning of the eyes.	151
4	2023/10/17 00:00	Veldenvlei	Odour	Mondi	Mondi odour causing headache.	149
5	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149

No	Date	Region	Type	Source	Description	Response
6	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149
7	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149
8	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149
9	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149
10	2023/10/17 00:00	Unknown	Odour	Mondi	“Rotten gas smell.”	149
11	2023/10/17 23:51	Veldenvlei	Clinical + Odour	Mondi	Cat urine odour causing burning eyes and throat.	149
12	2023/10/21 00:00	Veldenvlei	Environmental	THS	Molasses leak incident	152
13	2023/10/25 20:10	Brackenham	Odour	Mondi	“Bad rotten smell”	148, 1
14	2023/10/27 17:10	Brackenham	Odour	Mondi	“Same rotten smell as the one experienced on the 25th.”	156
15	2023/10/29 08:09	Unknown	Clinical + Odour	Mondi	Bad Rotten onion type odour causing burning eyes.	157
16	2023/10/29 08:17	Veldenvlei	Odour	Mondi	“bad odour”	157
17	2023/10/29 09:00	Veldenvlei	Odour	Mondi	Pungent Mondi odour	157
	November 2023					
1	2023/11/15 06:47	eNseleni	Coal dust	Navarest	I'm writing to express serious concern about the illegal coal stockpiling facility, Navarest Properties on Portion 5 Lot K26 Farm No. 12453 at Nseleni Station, N2, nextdoor to our residence and workplace. Despite repeated requests, no precautionary measures have been taken, and the coal dust is severely impacting our health and lifestyle. Attached is our complaint letter to the EAP and images pre- and post-rainfall illustrating the extent of the issue. Urgent action is needed. Your feedback will be greatly appreciated as we are truly concerned for our health!	158
2	2023/11/19 06:47	Veldenvlei	Odour	Mondi	Mondi odour	155
3	2023/11/21 19:15	Brackenham	Clinical + Odour	Mondi	“Rotten egg” smell causing asthma symptoms.	154
4	2023/11/24 08:10	Veldenvlei	Fallout	South32	Significant clouds of alumina dust emanating from Hillside.	153

No	Date	Region	Type	Source	Description	Response
	December 2023					
1	2023/12/04 19:00	Veldenvlei	Odour	CoU	The complainant says that they have been experiencing the odour for weeks, and that it started after the Vlei area between their house and Coral Shower was excavated.	1
17	2023/12/06 05:45	Alton	Sulphur Spillage	CoU	One of our contractors this morning reported a sulphur spillage on the gravel road to Umhlatuze Water treatment works. I have investigated, and the illegal dumping on this road is significant. There is coal, rubble, general waste etc. and I suspect the sulphur was also dumped here. Mondi does not purchase or dispose of this type of sulphur so it was not destined for Mondi and neither did it come from Mondi.	1

Table 2: Responses

Response	Industry Feedback
1	Unresolved / No Response
2	No response required
97	Foskor- Charles Mavuso responded (2023/01/01 15:11: There was 1 environmental complaint reported by NCT Agriculture Forestry at about 02:23, the wind direction was ENE and there was a gas leak at C Plant which was attended by the plant immediately and it was successful.
98	Mondi - Candice Webb responded (2023/01/31 14:09): Fugitive Emissions from the Soft Wood Non-Condensable Gas system. The Process Engineer together with the support of the Shift-Coordinator identified that a buildup of condensate in the Soft Wood Non-Condensable Line was preventing the flow of gas to the Lime Kiln for incineration. The condensate was drained and by 23:30 the line was back under vacuum
99	Mondi - Candice Webb responded (2023/02/13 09:39): All point source TRS emission sources were confirmed to be in specification. However, based on the description of the odour and prevailing wet weather conditions it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour. The SETP was switched off for a period of time.
100	Foskor- Sandile Mdamba responded (2023/01/09 09:51): The “Bad stack” was as a result of water vapour arising from cleaning of the fans using raw water. This is a normal process operation of which; introduces water to the RGCE fans to prevent solid build up on the impellers. The vibrations on the impellers result in high temperatures so when this comes in contact with the water during the cleaning, this results in water vapour which then evaporates and escapes through the stack and this contributed to the stack being more visible.
101	RBCAA- Sandy Camminga responded (2023/02/25 16:29): Please allocate the following complaints to PHINDA. I have requested a response from the Authorities.
102	Mondi - Candice Webb responded (2023/02/28 15:44): No source within Mondi identified
103	Mondi - Candice Webb responded (2023/03/17 08:57): Prior to the time of the complaint non-condensable gases were in the Incinerator for destruction as per standard operating procedure. At 19:21 gases tripped out of the Incinerator and were diverted to the Flare for destruction. However, the moisture content of the gases was high causing the Flare temperature to drop and inefficient destruction of the gases before release to atmosphere.
104	Mondi - Candice Webb responded (2023/03/17 12:56): Prior to the time of the complaint non-condensable gases were in the Flare for incineration and was recording elevated TRS. Gases were switched to the Incinerator and TRS was reduced back within specification. Mondi is still in the process of conducting detailed investigation to determine root cause.
105	Mondi - Candice Webb responded (2023/03/24 15:40): Mondi undertook a controlled trial as part of a troubleshooting exercise between 07:00 and 08:00 on 24 March 2023 and identified a gasket leak on the top of the CPX tank
106	Foskor- Sandile Mdamba responded (2023/03/29 11:34): No possible root cause could be identified all SO2 limits were within the AEL Limit, no fugitive leaks could be identified given the wind direction at the time and the low ambient temperature in the morning this could have contributed to the odour at arboretum

Response	Industry Feedback
107	Mondi - Candice Webb responded (2023/04/28 11:27): based on the description of the odour, and recent start up of the mill it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour.
108	Mondi - Candice Webb responded (2023/04/28 11:27): based on the description of the odour, it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour.
109	Mondi - Candice Webb responded (2023/04/28 11:27): All point source TRS emission sources were confirmed to be in specification.However, based on the description of the odour, it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour.
110	Mondi - Candice Webb responded (2023/04/28 11:27): TRS from Flare during start up conditions. Prior to the time of the complaint non-condensable gases were in the Flare for destruction as per standard operating procedure. However, the moisture content of the gases was high causing the Flare temperature to drop and inefficient destruction of the gases before release to atmosphere.
111	RBCT - Thobile Nkosi responded (2023/05/02 15:02): Based on wind direction and particulate matter monitoring results from 16-23 April 2023 RBCT is no responsible for the complaint.
112	RBCT - Thobile Nkosi responded (2023/05/05 11:57): Based on wind speed and direction, and particulate matter monitoring results from 25 April - 1 May 2023, RBCT is not responsible for the complaint.
113	Transnet Port Terminals (TPT) Richards Bay is handling both bulk and break-bulk commodities. Some of these commodities are being temporarily stored in open stockpiles at both facilities before export where there is a potential for dust emissions. TPT understands the Duty of Care obligation as set out in the National Environmental Management Act, Section 28 – and monthly dust fall is being undertaken as part of our air quality monitoring program. TPT is presently responding to the Coal Market increased export requirement with volumes having increased drastically over the last 12 months. With the increased storage is the potential for emissions as well as emissions from the export activities. The following immediate dust mitigation measures have been put in place to minimize emissions within TPT's boundary: ▪ Dust is continuously suppressed on road surfaces within the port using a water tanker, ▪ Spillages are being retrieved and recovered back into stockpiles, ▪ Industrial sweeping is taking place on all road surfaces, ▪ Customers have been instructed to cover all cargo in transit, ▪ A longer-term initiative of wind barriers in the form of netting is in the final stages of implementation and will be installed around the stockpiles to contain the emissions. Furthermore, if the idea is accepted and supported by the Association - TPT is willing to form part of the Stakeholder Engagement process where fugitive dust management plans, updates and issues pertaining to emissions will be discussed together with the stakeholders which will include members suggested by the Association. TPT will await such an invite and attend accordingly.
114	Mondi - Candice Webb responded (2023/05/10 15:36): Mondi was notified of the complaint by the RBCAA at 09:37. The Mondi Environmental Manager commenced with an investigation. All point source TRS emission sources were confirmed to be in specification.However, based on the description of the odour, it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour.
115	Mondi - Candice Webb responded (2023/05/10 15:36): Mondi was notified of the complaint by the RBCAA at 09:13. The Mondi Environmental Manager commenced with an investigation. All point source TRS emission sources were confirmed to be in specification.However, based on the description of the odour, it was determined that the Secondary Effluent Treatment Plant (SETP) was the most likely source of the odour.
116	Mondi - Candice Webb responded (2023/05/12 13:30): Wind direction recorded at Brakenham station indicated that Mondi was a possible source of the complaint. However, ambient TRS at the Alton station (situated between Mondi and the complainant) indicated no elevated levels of TRS. Mondi confirmed all point source TRS emissions were well within specification and the mill was operating under stable conditions. The non-condensable gases were stable in the lime kiln for incineration. The Secondary Effluent Treatment Plant (SETP) was online at the time; however, the description of the odour is not typically associated with the SETP and as such it has been excluded as the source. Based on wind direction and the description of the odour, it is possible that fugitive emissions from Mondi were the source.

Response	Industry Feedback
117	South 32 - Dan Mkhwanazi responded (2023/05/12 01:08): Alumina leaked from the apex of the main chute due to a crack on the metal structure. It leaked to the expansion bin below and to the 18kt silo dome.
118	Mondi - Candice Webb responded (2023/05/18 12:42): Venting of Non-Condensable Gases. The Evaporation Plant Operator informed that Shift Coordinator that he had found a Non-Condensable Gas (NCG) vent valve in the open position at 06:00 after shift change and closed it. b. The Shift Coordinator notified the Environmental Manager, and it was agreed that this was the most likely source of the odour, however all plants would continue with their odour checklists.
119	Foskor- Sandile Mdamba responded (2023/05/19 10:20): On the 07 May 2023, the ammonia tankers were placed in position for off-loading at 10H40.This was followed by an inspection which lasted for approximately 5 minutes. The off-loading commenced immediately after inspection. On the same day, the RBCAA called Foskor standby at 10h54 to enquire about the alarm going off at Foskor. Foskor standby was unable to provide any information as preliminary investigations were under way. At llhl4 the RBCAA called Foskor standby for an update. Foskor confirmed an alarm activation at Granulation which was being investigated. At llh25 Foskor notified the RBCAA that it could have been a "false alarm". Further investigation later confirmed that indeed there was a leak from the off-loading flexi hose.
120	Foskor- Sandile Mdamba responded (2023/05/25 17:39): • An investigation was conducted by environmental officer at the phosphoric Acid Plant, Sulphuric and Granulation plant along with relevant plant personnel. • Upon investigation, it was discovered that there were no abnormalities in the plants.
121	South 32 - Dan Mkhwanazi responded (2023/05/30 08:42): Our investigation is complete. No exceedances and/or abnormal occurrences were experienced during this period. I have attached our Hourly emissions as evidence of normal emissions.
122	Mondi - Candice Webb responded (2023/06/05 13:38): Mondi investigated the complaint received at 20:19. Mondi was in the process of shutting down the mill for Annual Maintenance as per the notification to authorities and stakeholders. Noncondensable gases were in the Flare and Incinerator for destruction according to the Odour Management Plan. At the time of the complaint Mondi was having challenges with TRS reduction efficiency of the Flare. Consequently, during the Maintenance shut the Flare was opened for inspection to determine root cause of the efficiency challenges, and the Flame Arrester was found to be damaged. The Flame Arrester was removed, and a new Flame Arrester has been subsequently installed.
123	RBCAA - Sandy Camminga responded (2023/06/08 01:27): The complaints in the email below reported on 22 & 23 May can be allocated to an unknown source West of the cluster of complaints. With the exception of the 2 complaints logged on the 23rd from Arum Lily (Highlighted in the email below). All the complaints came from a 3-street cluster in Arboretum Extension. Based on the descriptions of the odour it may be related to burning activities by vagrants living in the bushes.
124	Mondi - Candice Webb responded (2023/06/19 13:31): Mondi identified a fluctuation of Non-Condensable Gas (NCG) volumes in the Flare since 01:00 in the morning. The NCG system was then stabilised.
125	Foskor- Charles Mavuso responded (2023/06/20 12:10: Plant moisture/water ingress affecting acid strength control. On the evening of the 17th of June 2023 around 17:30 PM A plants were reduced to minimum due to low steam demand. The final acid strength control valve (A) was malfunctioning at lower plant rates, the plant changed over to the standby controller (B) so (A) can be calibrated & fine-tuned for low rates operation. On the morning of Sunday (18th of June 2023) (A) controller was brought back online to test run after the calibration work when the reported incident took place.
126	Mpact - Anzel Horn responded (2023/06/21 07:31): Considering that the source of the complaint was NNE of Mpact, and the wind direction was NNW with low average wind speeds, the meteorological conditions were not in favour of potential odour emissions from the Mpact Operation in relation to the source of the complaint. It was found that Mpact did not contribute to the root cause of the complaint
127	Grindrod - Valentine Ndlovu (2023/06/20 12:58): Kusasa has one small, 20 000 tons capacity open stockpile that is quite insignificant in terms of dust fallout. There have been no measured exceedances in dust fallout monitoring reports for all the Grindrod Terminals sites for this year in terms of the National Dust Fallout Standards during 2023. Navitrade, being Grindrod Richards Bay's largest coal handling facility, also indicated no exceedances of the National Dust Fallout Standards over the course of this current year. With regards to Particulate Matter, the PM2.5 concentration remained low throughout the period in between the 27 April 2023 – 01 May 2023 while PM10 indicated only a slight exceedance of PM10 NEMA National daily standard on the 28th of April 2023 as a result of the wind direction and high wind speed at the time. The NEMA National standard limit being 75 (µg/m³) average per day, Navitrade recorded 77 (µg/m³). There were no other measured exceedances during the period the complaints were raised. Based on the above information, it can be concluded that Grindrod could have not contributed to the complaints received, Grindrod's air quality impact is considered to be minor compared to other, larger industries that are located much closer to the surrounding residential areas that are within the dominant wind direction

Response	Industry Feedback
128	Mondi - Candice Webb responded (2023/07/03 12:37): Mondi identified a fluctuation of Non-Condensable Gas (NCG) volumes in the Flare since 01:00 in the morning. The NCG system was then stabilised. At 08:13 the RBCAA confirmed that the odour had dissipated.
129	Mondi - Candice Webb responded (2023/07/03 14:44): The Environmental Manager confirmed that all point source emissions were within specification by 01:15. The Shift Coordinator walked to the Evaporation plant to support in the investigation. At 01:42 a leak on the Methanol supply line to Recovery Boiler 1 was identified as a probable source of the complaints. Process Engineers and maintenance team were called out to assist with the repair
130	RBCAA - Sandy Camminga responded (2023/07/05 10:16): The smoke was coming from a controlled forest burn north east of Richards Bay. Due to an unexpected change in wind direction the smoke was now blowing towards Richards Bay and made worse by an inversion layer with no wind. The controlled burn should have been completed by 17h00. Corrective action as per information on email.
131	Mondi - Candice Webb responded (2023/07/18 08:17): The restart of the mill commenced at 02:28. The Non-Condensable Gases (NCG) were diverted to the Flare for incineration between 01:42 and 03:00 as per design. During this time there was a peak of TRS from the Flare of 20ppm. Once NCGs were switched back to the Lime kiln at 03:00 the NCG system stabilised and TRS was back within control.
132	Mondi - Candice Webb responded (2023/07/18 08:17): At 15:36 on 2nd July a complaint was received from the RBCAA regarding Cat Urine odour at the Nseleni Railway station, an investigation was undertaken, however no source was identified. Mondi considered that the complaint may have been attributed to fugitive emissions attributed to start up of the mill and in particular Evaporation plant after an unplanned outage of the mill earlier in the day.
133	Mpact - Anzel Horn responded (2023/06/25 10:40): It was found that Mpact did not contribute to the root cause of the complaint.
134	Tongaat Hulett - Nicolas Govender responded (2023/07/26 15:14): During site investigations it was noticed that the sewage station situated at the Felixton village was overflowing significantly. These overflows have been going on for the course of the month(July) and reported to the CoU. I have also attached pictures from the overflow. - Further action taken by TH was that we have formally raised a second complaint with the DWS for further investigations.
135	Foskor- Sandile Mdamba responded (2023/07/21 13:41): This morning at around 03h:00 am, a back tipper truck was offloading sulphur and the beam of the truck accidently collided with the top part of the structure at the sulphur store. This collision not only resulted in the loud bang but the friction of the truck and the structure, led to ignition of a minor fire which was quickly extinguished by our deluge system and the Fire Watch crew stationed at the sulphur store. An alarm was manually triggered by our Phos plant operators to vacate employees working around the area.
136	RBCAA Allocation (2023/08/08 15:00): Mondi - effluent treatment plant
137	RBCAA Allocation (2023/08/08 15:00): CoU Felixton Sewage Station overflow.
138	RBCAA- Sandy Camminga responded (2023/08/15 08:13): The RBCAA immediately contacted BTT who confirmed that there had been an incident. No official notification or report has been forthcoming.
139	Mpact - Anzel Horn responded (2023/08/18 13:17): Mpact did not perform any activities on Tuesday, 08 August 2023 that could have been the source of the odours detected in the Felixton Village. • It was confirmed that the effluent treatment plant was running under stable conditions at the time. • It was found that Mpact did not contribute to the root cause of the complaint.
140	Mondi - Candice Webb responded (2023/08/22 09:26): Source of odour: Fugitive Emissions. Root cause of these exceedances are attributed to the leachate pond and the Mondi landfill. The monitoring station is within 300meters of the leachate pond. Based on concentration recorded and proximity of the pond to the monitoring station. It is unlikely the pond was the source of the odour. Slightly elevated levels of TRS at Hytec station indicate a possible source form the Mondi mill and not leachate pond.
141	RBCAA- Sandy camminga fowared BTT incident investigation on (2023/08/24 20:01): Butane LOC due to failed gasket on top of Tank 8501.
142	Foskor- Sandile Mdamba responded (2023/08/27 12:06): Based on the investigation conducted and data collated, inclusive of the prevailing wind direction at the time, Foskor is of the view that the source of the gas odour lies outside of Foskor, and we are willing to work with RBCAA and other stakeholders to locate the source.

Response	Industry Feedback
143	Tongaat Hulett - Nicolas Govender responded (2023/09/01 09:53): The effluent plant was stable with no abnormal activities noted on the day. • The boilers and smuts plant was also stable with no abnormalities noted. Root cause: Non identified.
144	RBCAA Allocation (2023/09/07 15:30)
145	Mondi - Candice Webb responded (2023/09/29 14:51): It is possible based on wind direction, wind speed, temperature inversion at elevated TRS at Landfill station at the time of the compliant, that the odour identified in Alton was due to fugitive emissions from Mondi Richards Bay mill.
146	South 32 - Londiwe Molebale responded (2023/10/11 08:07): The plant has confirmed that there were no upset conditions on the day however moving forward we have agreed that we will collect a sample so that we can understand what is in the dust particles. (2023/10/12 15:22): I have investigated on the day, we did not have any upset conditions, a GTC trip was reported. When a GTC trips, the fresh alumina is stopped resulting in no flow of Alumina within the GTC's. I have attached the RCA for the trip. I have also asked the harbour team if there were any events on their side and none have been reported.
147	RBCAA Allocation: 2023/10/27
148	Mondi - Candice Webb responded (2023/10/27 01:47): Mondi identified a vent of residual Non-Condensable Gas (NCG) from the A&B stream Evaporators. The vent occurred at 19:01. As can be seen by the ambient TRS monitoring stations, the pocket of odours gas release by the vent moved slowly from the Brakenham area where the Landfill station is situated towards the CBD under very calm wind speeds.
149	Mondi - Candice Webb responded (2023/10/27 09:30): "at the time of complaint Mondi was in the process of reclaiming effluent from the Mondi emergency ponds back into the Mondi effluent treatment plant to ensure adequate space available in the Emergency Ponds for the upcoming shut down. Mondi had been requested to use the ponds by Umgeni Water Board who were having problems on the marine outfall (A-Line). Local meteorological conditional at the time of the complaints were cloudy with heavy precipitation and low temperatures which are not conducive to adequate dispersion.
150	Foskor- Silungile Msane responded (2023/11/15 13:02): There were no root causes as all the plants, Sulphuric Acid, Phosphoric Acid and Granulation had no upset conditions at that time.
151	Foskor- Silungile Msane responded (2023/11/15 13:02): At the sulphuric Acid plant, the higher-than-normal chloride in the water at the cooling tower might have contributed to the slight burning sensation.
152	Tongaat Hulett - Nicolas Govender responded (2023/11/16 10:10): "...Molasses spillage that occurred on the 19 October 2023 which contaminated the Stormwater canal. We had created a berm to contain the molasses west of the N2 in the stormwater water canal to prevent further contamination downstream, monitoring results of the area indicate low PH's, odours were also observed in the vicinity. " ...related to the Molasses spillage that occurred on the 19 October 2023. Although a large amount of the spill in this area was cleaned out, the process of rehabilitation has not yet begun due to approvals from the DWS"
153	South 32 -Zanele Madinane responded (2023/12/01 12:57) A quantity of spilled alumina, estimated to be between 5-10 tons, flowed through equipment openings in the transfer tower structure and fell approximately 25 m to the ground being blown by the strong wing that was blowing at the time. As the alumina exited the tower it landed on the road alongside the tower and the grassed area alongside Potroom B directly to the south of the tower.
154	Mondi - Candice Webb responded (2023/11/24 14:26): "..., based on ambient TRS at Landfill monitoring station, the Mondi Secondary Effluent Treatment Plant (SETP) was identified as a potential source, and was taken offline. Ambient TRS at Landfill station decreased soon after. Prior to taking the SETP offline, it was determined that elevated TRS at the Landfill station was localised and attributed to the Leachate pond"
155	Mondi - Candice Webb responded (2023/11/24 14:26): Prior to the complaint the Mond Evaporation plant had experienced an outage when a pump on the 5A effects tripped. This resulted in the release of Non-Condensable Gases (NCG) to atmosphere.
156	Mondi - Candice Webb responded (2023/11/24 13:40): However, based on ambient TRS at Landfill monitoring station, the Mondi Secondary Effluent Treatment Plant (SETP) was identified as a potential source, and was taken offline. Ambient

Response	Industry Feedback
	TRS at Landfill station decreased soon after. Prior to taking the SETP offline, it was determined that elevated TRS at the Landfill station was localised and attributed to the Leachate pond.
157	Mondi - Candice Webb responded (2023/11/24 13:40): At 03:15 Recovery Boiler 2 tripped causing instability of the Non-condensable Gas (NCG) system. Although no point source emissions were identified as the root cause and no venting occurred, it is possible that fugitive emissions coupled with low temperature inversion and wet weather conditions contributed to the odour complaints
158	RBCAA Allocation (2023/12/07 13:30)
159	Mondi - Candice Webb responded (2023/12/08 07:54): Mondi identified a failed rupture disc as the root cause of the odour. A rupture disc is a relief device that enables the venting of the process when a predetermined pressure and temperature are exceeded in the process. This ruptured disc allowed malodourous gases to be released from the process despite stable pressure and temperature in the process.

APPENDIX G
PM_{10} EXCEEDANCE LOG

Table 1:PM_{10} Exceedances

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2023						
1	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/01/25 0:00	84.0	113	5.3	TWK (Richards Bay Wood Chip Mill) - meteorology	None	1
2	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/01/25 0:00	84.0	113	5.3	No response required	None	2
			February 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/02/06 0:00	58.0	232	1.9	No response required	None	2
2	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/02/21 0:00	90.0	220	4.8	Grindrod - meteorology	Kusasa	1
3	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/02/21 0:00	90.0	220	4.8	No response required	None	2
			March 2023						
			April 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/04/14 0:00	50.0	227	4.5	No response required	None	2
2	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/04/08 0:00	99.0	212	2.0	Grindrod - meteorology	Kusasa	1
3	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/08 0:00	99.0	212	2.0	No response required	None	2
4	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/13 0:00	70.0	316	2.2	No response required	None	2
5	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/14 0:00	46.0	23	3.2	No response required	None	2
6	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/17 0:00	71.0	236	2.8	No response required	None	2
7	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/04/23 0:00	80.0	256	2.1	Grindrod - meteorology	Navitrade	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
8	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/23 0:00	80.0	256	2.1	No response required	None	2
9	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/25 0:00	63.8	211	4.0	No response required	None	2
10	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/26 0:00	52.2	210	3.2	No response required	None	2
11	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/04/28 0:00	77.0	222	4.1	Grindrod - meteorology	Kusasa	1
12	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/28 0:00	77.0	222	4.1	No response required	None	2
13	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/04/29 0:00	62.0	41	2.9	No response required	None	2
			May 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/05/17 0:00	48.0	2	1.1	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/05/26 0:00	52.0	219	3.9	No response required	None	2
			June 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/06/12 0:00	48.0	312	2.7	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/06/26 0:00	50.0	288	1.7	No response required	None	2
3	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/07 0:00	64.0	17	3.4	No response required	None	2
4	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/08 0:00	64.0	262	3.0	No response required	None	2
5	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/15 0:00	51.0	206	2.7	No response required	None	2
6	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/20 0:00	58.0	208	2.6	No response required	None	2
7	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/25 0:00	68.0	303	1.1	No response required	None	2
8	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/06/26 0:00	114.0	312	0.8	TPT / Grindrod - Coal Dust	Coal dust	1
9	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/26 0:00	114.0	312	0.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
10	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/06/27 0:00	93.0	332	1	TPT / Grindrod - Coal Dust	Coal dust	1
11	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/06/27 0:00	93.0	332	1	No response required	None	2
			July 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/07/02 0:00	50.0	297	2.6	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/07/04 0:00	54.0	265	2.9	No response required	None	2
3	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/07/05 0:00	59.0	229	4.2	No response required	None	2
4	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/07/07 0:00	51.0	10	4.3	No response required	None	2
5	PM_{10} Daily RSA Limit (75 µg/m³)	Richardia	2023/07/08 0:00	76.0	346	3.1	Local Source - fire	RBCAA allocation	1, 3
6	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/07/08 0:00	76.0	346	3.1	No response required	None	2
7	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/07/08 0:00	80.0	358	2.7	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
8	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/07/08 0:00	80.0	358	2.7	No response required	None	2
9	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/07/27 0:00	111.0	35	3.1	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
10	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/07/27 0:00	111.0	35	3.1	No response required	None	2
11	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/07/28 0:00	133.0	32	2.6	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
12	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/07/28 0:00	133.0	32	2.6	No response required	None	2
13	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/07/30 0:00	101.0	63	2.4	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
14	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/07/30 0:00	101.0	63	2.4	No response required	None	2
15	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/07/31 0:00	180.0	64	1.1	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
16	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/07/31 0:00	180.0	64	1.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			August 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/08/26 0:00	51.0	205	4.2	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/08/23 0:00	64.0	239	3.7	No response required	None	2
3	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/02 0:00	296.0	52	1.9	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
4	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/02 0:00	296.0	52	1.9	No response required	None	2
5	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/07 0:00	99.0	67	2.3	Grindrod - meteorology	RBCAA allocation	1, 3
6	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/07 0:00	99.0	67	2.3	No response required	None	2
7	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/08 0:00	125.0	47	2	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
8	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/08 0:00	125.0	47	2	No response required	None	2
9	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/09 0:00	50.0	61	3.2	No response required	None	2
10	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/10 0:00	52.0	32	2.0	No response required	None	2
11	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/11 0:00	183.0	56	3.9	Local Source - fire	RBCAA allocation	1, 3
12	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/11 0:00	183.0	56	3.9	No response required	None	2
13	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/12 0:00	61.0	53	4.2	No response required	None	2
14	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/14 0:00	78.0	251	2.3	Grindrod - coal transport, handling and stockpiling	RBCAA allocation	1, 3
15	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/14 0:00	78.0	251	2.3	No response required	None	2
16	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/17 0:00	64.0	44	6.0	No response required	None	2
17	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/18 0:00	110.0	245	2.6	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
18	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/18 0:00	110.0	245	2.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
19	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/21 0:00	103.0	47	4.3	Local Source - fire	RBCAA allocation	1, 3
20	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/21 0:00	103.0	47	4.3	No response required	None	2
21	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/22 0:00	125.0	244	2.6	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
22	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/22 0:00	125.0	244	2.6	No response required	None	2
23	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/23 0:00	133.0	262	3.4	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
24	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/23 0:00	133.0	262	3.4	No response required	None	2
25	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/24 0:00	74.0	86	2.7	No response required	None	2
26	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/25 0:00	124.0	43	5.5	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
27	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/25 0:00	124.0	43	5.5	No response required	None	2
28	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/08/26 0:00	144.0	227	4.3	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 3
29	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/26 0:00	144.0	227	4.3	No response required	None	2
30	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/27 0:00	54.0	256	3.7	No response required	None	2
31	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/08/28 0:00	48.0	37	2.3	No response required	None	2
			September 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/09/30 0:00	57.0	80	4.2	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	eSikhaleni	2023/09/30 0:00	64.0	203	5.8	No response required	None	2
3	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/09/01 0:00	53.0	235	5.3	No response required	None	2
4	PM_{10} Daily WHO Limit (45 µg/m³)	Richardia	2023/09/11 0:00	65.0	223	6.2	No response required	None	2
5	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/01 0:00	48.0	256	5.2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
6	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/02 0:00	70.0	332	3.2	No response required	None	2
7	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/03 0:00	60.0	40	3.6	No response required	None	2
8	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/04 0:00	63.0	248	2.6	No response required	None	2
9	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/05 0:00	93.0	316	3.6	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
10	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/05 0:00	93.0	316	3.6	No response required	None	2
11	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/07 0:00	69.0	22	2.9	No response required	None	2
12	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/08 0:00	83.0	49	3.2	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4
13	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/08 0:00	83.0	49	3.2	No response required	None	2
14	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/09 0:00	80.0	48	5.3	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4
15	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/09 0:00	80.0	48	5.3	No response required	None	2
16	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/10 0:00	104.0	11	4.4	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
17	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/10 0:00	104.0	11	4.4	No response required	None	2
18	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/11 0:00	60.0	246	5.6	No response required	None	2
19	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/14 0:00	72.0	45	5.2	No response required	None	2
20	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/15 0:00	445.0	37	2.9	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
21	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/15 0:00	445.0	37	2.9	No response required	None	2
22	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/16 0:00	121.0	193	3.9	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
23	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/16 0:00	121.0	193	3.9	No response required	None	2
24	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/18 0:00	48.0	30	4.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
25	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/19 0:00	58.0	50	4.3	No response required	None	2
26	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/20 0:00	117.0	229	4.2	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
27	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/20 0:00	117.0	229	4.2	No response required	None	2
28	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/21 0:00	90.0	44	3.2	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
29	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/21 0:00	90.0	44	3.2	No response required	None	2
30	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/22 0:00	116.0	237	3.0	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
31	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/22 0:00	116.0	237	3.0	No response required	None	2
32	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/23 0:00	116.0	180	2.5	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
33	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/23 0:00	116.0	180	2.5	No response required	None	2
34	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/25 0:00	55.0	61	4.5	No response required	None	2
35	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/26 0:00	109.0	226	3.9	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
36	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/26 0:00	109.0	226	3.9	No response required	None	2
37	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/27 0:00	77.0	228	3.5	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
38	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/27 0:00	77.0	228	3.5	No response required	None	2
39	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/09/30 0:00	120.0	78	4.4	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	4, 1
40	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/09/30 0:00	120.0	78	4.4	No response required	None	2
			October 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/10/01 0:00	46.0	214	3.9	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/10/08 0:00	52.0	208	4.3	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
3	PM_{10} Daily WHO Limit (45 µg/m³)	CBD	2023/10/14 0:00	48.0	219	4.9	No response required	None	2
4	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/10/03 0:00	63.0	46	6.1	No response required	None	2
5	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/10/04 0:00	116.0	78	4.0	NCT	Fire	1, 5
6	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/10/04 0:00	116.0	78	4.0	No response required	None	2
7	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/10/05 0:00	133.0	52	4	NCT	Fire	1, 5
8	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/10/05 0:00	133.0	52	4	No response required	None	2
9	PM_{10} Daily RSA Limit (75 µg/m³)	Scorpio	2023/10/06 0:00	122.0	162	4.6	NCT	Fire	1, 5
10	PM_{10} Daily WHO Limit (45 µg/m³)	Scorpio	2023/10/06 0:00	122.0	162	4.6	No response required	None	2
			November 2023						
1	PM_{10} Daily WHO Limit (45 µg/m³)	eSikhaleni	2023/11/21 0:00	47.0	1	3.1	No response required	None	2
2	PM_{10} Daily WHO Limit (45 µg/m³)	eSikhaleni	2023/11/22 0:00	49.0	214	1.7	No response required	None	2
			December 2023						

Table 2:PM_{10} Responses

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
3	RBCAA Allocation, (2023/09/07 15:30)
4	RBCAA Allocation, (2023/10/27 12:30)
5	RBCAA Allocation, (2023/12/07 13:30)

APPENDIX H
$PM_{2.5}$ EXCEEDANCE LOG

Table 1:$PM_{2.5}$ Exceedances

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/01/20 00:00	22.0	47	2	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/01/21 00:00	18.0	62	3.1	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/01/23 00:00	26.0	59	3.5	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/01/24 00:00	18.0	56	4.7	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/01/20 00:00	16.0	97	2.2	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/01/25 00:00	19.0	113	5.3	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/01/26 00:00	16.0	86	3.1	No response required	None	2
			February 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/02/21 00:00	18.0	191	4.9	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/02/20 00:00	19.0	28	5.4	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/02/23 00:00	32.0	53	2.2	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/02/24 00:00	26.0	32	4.3	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/02/25 00:00	19.0	232	3.8	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/02/05 00:00	17.0	88	2.2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/02/06 00:00	19.0	231	1.9	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/02/21 00:00	22.0	220	4.8	No response required	None	2
			March 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/03/19 00:00	19.0	157	1.9	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/03/22 00:00	17.0	208	1.5	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/03/19 00:00	27.0	230	2.1	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/03/20 00:00	19.0	38	2.9	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/03/22 00:00	18.0	243	2.4	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/03/26 00:00	20.0	255	5.3	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/03/29 00:00	19.0	274	4.2	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/01 00:00	19.0	226	4.2	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/03 00:00	17.0	54	2.3	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/05 00:00	17.0	58	3.6	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/08 00:00	29.0	42	3.7	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/10 00:00	18.0	94	2.3	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/11 00:00	23.0	49	5	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/15 00:00	26.0	48	2.2	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/16 00:00	19.0	259	1.4	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/17 00:00	20.0	54	2.9	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/22 00:00	18.0	237	2.9	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/23 00:00	23.0	37	2.4	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/24 00:00	22.0	46	2.7	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/25 00:00	16.0	51	5.5	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/26 00:00	16.0	256	6.7	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/28 00:00	20.0	24	4.2	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/03/29 00:00	16.0	283	5.5	No response required	None	2
			April 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/08 00:00	19.0	195	1.7	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/13 00:00	20.0	339	2	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/14 00:00	24.0	210	4.8	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/15 00:00	16.0	220	2.5	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/18 00:00	17.0	358	2.7	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/21 00:00	17.0	215	4.5	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/23 00:00	17.0	213	1.6	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/25 00:00	23.0	297	2.5	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/04/26 00:00	18.0	19	2.6	No response required	None	2
10	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Felixton	2023/04/04 00:00	63.0	246	3.8	THS	Boiler start up on coal	20, 21
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/04 00:00	63.0	246	3.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/08 00:00	26.0	244	2.1	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/13 00:00	29.0	278	1.5	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/14 00:00	27.0	244	4.1	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/16 00:00	16.0	34	1.9	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/18 00:00	30.0	55	2.1	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/19 00:00	19.0	48	3.0	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/21 00:00	22.0	248	5.4	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/22 00:00	16.0	33	2.0	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/23 00:00	22.0	241	1.7	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/25 00:00	25.0	265	3.2	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/26 00:00	23.0	61	5.6	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/27 00:00	20.0	51	5.0	No response required	None	2
24	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/28 00:00	18.0	245	4.0	No response required	None	2
25	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/04/29 00:00	18.0	241	3.6	No response required	None	2
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/02 00:00	17.0	50	3.9	No response required	None	2
27	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/05 00:00	26.0	252	2.2	No response required	None	2
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/07 00:00	18.0	67	2.1	No response required	None	2
29	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/08 00:00	19.0	212	2	No response required	None	2
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/11 00:00	19.0	233	2.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/12 00:00	20.0	27	2.8	No response required	None	2
32	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/13 00:00	20.0	316	2.2	No response required	None	2
33	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/04/14 00:00	46.0	240	5.3	TPT meteorology	Localised source	1
34	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/14 00:00	46.0	240	5.3	No response required	None	2
35	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/15 00:00	23.0	255	3.5	No response required	None	2
36	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/16 00:00	22.0	16	2.1	No response required	None	2
37	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/18 00:00	21.0	40	3.0	No response required	None	2
38	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/19 00:00	17.0	49	3.6	No response required	None	2
39	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/20 00:00	18.0	48	5.4	No response required	None	2
40	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/21 00:00	29.0	251	6.0	No response required	None	2
41	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/23 00:00	27.0	256	2.1	No response required	None	2
42	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/24 00:00	18.0	34	3.4	No response required	None	2
43	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/25 00:00	34.0	345	2.8	No response required	None	2
44	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/27 00:00	26.0	50	5.0	No response required	None	2
45	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/04/28 00:00	22.0	222	4.1	No response required	None	2
46	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/08 00:00	21.0	212	2	No response required	None	2
47	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/13 00:00	16.0	316	2.2	No response required	None	2
48	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/14 00:00	16.0	240	5.3	No response required	None	2
49	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/18 00:00	16.0	40	3.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
50	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/23 00:00	21.0	256	2.1	No response required	None	2
51	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/25 00:00	18.0	345	2.8	No response required	None	2
52	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/28 00:00	16.0	222	4.1	No response required	None	2
53	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/04/29 00:00	16.0	242	4.3	No response required	None	2
			May 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/02 00:00	16.0	229	2.1	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/05 00:00	20.0	214	1.9	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/12 00:00	18.0	217	1.9	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/17 00:00	16.0	338	1.3	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/18 00:00	21.0	226	1.4	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/24 00:00	23.0	349	1.9	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/26 00:00	18.0	196	4.2	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/29 00:00	16.0	233	3.1	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/05/30 00:00	17.0	347	2.3	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/05 00:00	21.0	258	2.7	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/12 00:00	20.0	243	2.9	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/17 00:00	20.0	334	1.1	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/22 00:00	16.0	252	4.4	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/24 00:00	30.0	37	2.2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/25 00:00	30.0	40	4.7	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/26 00:00	29.0	232	3.2	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/28 00:00	16.0	49	4.3	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/29 00:00	21.0	255	4.0	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/30 00:00	17.0	34	2.7	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/05/31 00:00	17.0	40	3.0	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/03 00:00	18.0	262	3	No response required	None	2
22	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/05/04 00:00	65.0	24	2.7	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/04 00:00	65.0	24	2.7	No response required	None	2
24	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/05 00:00	21.0	252	2.6	No response required	None	2
25	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/06 00:00	21.0	41	3.5	No response required	None	2
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/11 00:00	25.0	37	2.6	No response required	None	2
27	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/12 00:00	17.0	259	2.9	No response required	None	2
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/13 00:00	21.0	266	2.4	No response required	None	2
29	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/14 00:00	19.0	270	1.8	No response required	None	2
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/17 00:00	27.0	2	1.1	No response required	None	2
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/18 00:00	19.0	264	2.1	No response required	None	2
32	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/20 00:00	21.0	317	1.4	No response required	None	2
33	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/05/21 00:00	47.0	358	1.4	TPT	Dust generation	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
								from truck activities associated with the Port.	
34	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/21 00:00	47.0	358	1.4	No response required	None	2
35	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/22 00:00	30.0	247	4.5	No response required	None	2
36	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/23 00:00	16.0	28	2.7	No response required	None	2
37	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/24 00:00	23.0	25	2.5	No response required	None	2
38	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/25 00:00	20.0	43	5.8	No response required	None	2
39	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/26 00:00	21.0	219	3.9	No response required	None	2
40	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/05/27 00:00	74.0	356	2.2	TPT	Dust generation from truck activities associated with the Port.	1
41	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/27 00:00	74.0	356	2.2	No response required	None	2
42	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/28 00:00	39.0	55	4.0	No response required	None	2
43	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/29 00:00	30.0	263	4.2	No response required	None	2
44	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/30 00:00	25.0	21	2.9	No response required	None	2
45	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/05/31 00:00	21.0	39	3.9	No response required	None	2
46	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/05/17 00:00	17.0	2	1.1	No response required	None	2
47	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/05/24 00:00	17.0	25	2.5	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
48	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/05/26 00:00	20.0	219	3.9	No response required	None	2
			June 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/05 00:00	18.0	225	2.6	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/07 00:00	17.0	353	3.2	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/08 00:00	23.0	218	2.5	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/09 00:00	16.0	207	1.2	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/12 00:00	18.0	300	2.1	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/14 00:00	16.0	345	2.3	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/18 00:00	21.0	260	2.7	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/19 00:00	22.0	343	3	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/21 00:00	19.0	330	2	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/24 00:00	25.0	329	2.2	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/25 00:00	22.0	310	1.1	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/26 00:00	33.0	277	1.2	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/27 00:00	32.0	339	1.3	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/28 00:00	20.0	1	2.5	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/06/30 00:00	16.0	295	1.1	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/04 00:00	21.0	243	2.0	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/05 00:00	21.0	254	2.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/07 00:00	26.0	44	2.7	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/08 00:00	36.0	262	3.2	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/09 00:00	17.0	224	1.5	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/10 00:00	19.0	260	2.2	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/12 00:00	27.0	31	2.4	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/13 00:00	22.0	342	1.3	No response required	None	2
24	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/14 00:00	30.0	33	2.1	No response required	None	2
25	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/15 00:00	29.0	353	2.8	No response required	None	2
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/16 00:00	16.0	258	2.9	No response required	None	2
27	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/18 00:00	23.0	270	3	No response required	None	2
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/19 00:00	30.0	31	2.8	No response required	None	2
29	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/20 00:00	23.0	227	2.2	No response required	None	2
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/21 00:00	35.0	343	1.9	No response required	None	2
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/06/26 00:00	20.0	248	0.9	No response required	None	2
32	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/01 00:00	22.0	270	2.5	No response required	None	2
33	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/02 00:00	32.0	14	1.7	No response required	None	2
34	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/03 00:00	26.0	22	1.6	No response required	None	2
35	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/04 00:00	31.0	256	1.9	No response required	None	2
36	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/06/05 00:00	51.0	269	2.5	TPT - coal dust	None	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
37	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/05 00:00	51.0	269	2.5	No response required	None	2
38	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/06 00:00	31.0	24	3.3	No response required	None	2
39	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/06/07 00:00	61.0	17	3.4	TPT - coal dust	None	1
40	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/07 00:00	61.0	17	3.4	No response required	None	2
41	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/08 00:00	26.0	262	3.0	No response required	None	2
42	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/10 00:00	32.0	270	2.4	No response required	None	2
43	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/11 00:00	23.0	30	2.7	No response required	None	2
44	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/06/12 00:00	46.0	330	2.4	TPT - coal dust	None	1
45	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/12 00:00	46.0	330	2.4	No response required	None	2
46	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/06/13 00:00	45.0	337	2	TPT - coal dust	None	1
47	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/13 00:00	45.0	337	2	No response required	None	2
48	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/14 00:00	23.0	2	2.3	No response required	None	2
49	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/06/16 00:00	21.0	256	2.9	No response required	None	2
50	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/07 00:00	23.0	17	3.4	No response required	None	2
51	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/08 00:00	21.0	262	3.0	No response required	None	2
52	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/15 00:00	16.0	206	2.7	No response required	None	2
53	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/18 00:00	16.0	286	2.9	No response required	None	2
54	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/20 00:00	23.0	208	2.6	No response required	None	2
55	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/21 00:00	19.0	329	2.2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
56	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/24 00:00	18.0	358	2.9	No response required	None	2
57	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/25 00:00	24.0	303	1.1	No response required	None	2
58	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/26 00:00	37.0	312	0.8	No response required	None	2
59	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/27 00:00	34.0	332	1	No response required	None	2
60	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/06/28 00:00	21.0	34	2.7	No response required	None	2
			July 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/01 00:00	16.0	355	2.1	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/02 00:00	19.0	286	1.9	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/03 00:00	20.0	340	2.4	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/04 00:00	25.0	255	2.4	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/05 00:00	17.0	208	3.1	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/07 00:00	32.0	2	3.7	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/08 00:00	39.0	337	2.3	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/16 00:00	22.0	305	1.3	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/17 00:00	21.0	351	2.2	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/18 00:00	28.0	346	2	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/19 00:00	24.0	214	4.8	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/23 00:00	20.0	345	2.0	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/27 00:00	25.0	358	2.7	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/28 00:00	23.0	353	2.7	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/29 00:00	17.0	6	3.8	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/30 00:00	18.0	247	2.4	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/07/31 00:00	16.0	330	1.2	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/07/07 00:00	18.0	46	4.3	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/07/08 00:00	21.0	12	1.5	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/07/27 00:00	21.0	34	3.4	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/07/28 00:00	16.0	47	3.4	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/04 00:00	16.0	286	2.7	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/05 00:00	19.0	249	3.7	No response required	None	2
24	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/07/08 00:00	41.0	358	2.7	TPT - coal dust	None	22
25	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/08 00:00	41.0	358	2.7	No response required	None	2
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/11 00:00	37.0	251	4.5	No response required	None	2
27	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/15 00:00	30.0	24	3.9	No response required	None	2
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/16 00:00	36.0	295	1.5	No response required	None	2
29	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/18 00:00	31.0	77	1.8	No response required	None	2
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/22 00:00	21.0	13	4.7	No response required	None	2
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/23 00:00	23.0	63	1.3	No response required	None	2
32	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/07/30 00:00	162.0	63	2.4	TPT - coal dust	None	22

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
33	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/07/30 00:00	162.0	63	2.4	TPT - coal dust	None	2
34	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/02 00:00	16.0	305	2.3	No response required	None	2
35	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/03 00:00	16.0	11	3.0	No response required	None	2
36	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/04 00:00	18.0	286	2.7	No response required	None	2
37	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/07 00:00	22.0	43	5.1	No response required	None	2
38	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/08 00:00	30.0	358	2.7	No response required	None	2
39	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/16 00:00	20.0	295	1.5	No response required	None	2
40	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/17 00:00	17.0	26	2.4	No response required	None	2
41	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/18 00:00	20.0	77	1.8	No response required	None	2
42	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/19 00:00	16.0	113	4.4	No response required	None	2
43	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/23 00:00	20.0	63	1.3	No response required	None	2
44	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/27 00:00	26.0	35	3.1	No response required	None	2
45	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/28 00:00	23.0	32	2.6	No response required	None	2
46	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/30 00:00	19.0	63	2.4	No response required	None	2
47	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/07/31 00:00	22.0	64	1.1	No response required	None	2
			August 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/01 00:00	19.0	219	2.4	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/02 00:00	16.0	326	1.5	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/07 00:00	23.0	253	2.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/08 00:00	23.0	345	2.2	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/09 00:00	16.0	193	3.2	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/14 00:00	26.0	224	1.9	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/18 00:00	19.0	202	2.1	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/21 00:00	18.0	30	2.9	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/22 00:00	19.0	186	1.9	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/23 00:00	23.0	224	3.9	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/25 00:00	23.0	4	4.1	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/08/26 00:00	19.0	191	4.4	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/08/08 00:00	16.0	37	2.3	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/08/21 00:00	16.0	54	4.4	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/08/25 00:00	18.0	47	4.4	No response required	None	2
16	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/08/03 00:00	75.0	19	3.7	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1,23
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/03 00:00	75.0	19	3.7	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/04 00:00	23.0	15	5.1	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/07 00:00	17.0	67	2.3	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/08 00:00	17.0	47	2	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/18 00:00	23.0	245	2.6	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/21 00:00	34.0	47	4.3	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/23 00:00	36.0	262	3.4	No response required	None	2
24	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/08/25 00:00	60.0	43	5.5	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 23
25	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/25 00:00	60.0	43	5.5	No response required	None	2
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/27 00:00	38.0	256	3.7	No response required	None	2
27	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/08/30 00:00	104.0	49	5.7	TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 23
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/30 00:00	104.0	49	5.7	No response required	None	2
29	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/08/31 00:00	43.0	50	5.7	TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 23
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/08/31 00:00	43.0	50	5.7	No response required	None	2
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/02 00:00	32.0	52	1.9	No response required	None	2
32	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/07 00:00	18.0	67	2.3	No response required	None	2
33	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/08 00:00	22.0	47	2	No response required	None	2
34	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/11 00:00	37.0	56	3.9	No response required	None	2
35	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/14 00:00	22.0	251	2.3	No response required	None	2
36	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/18 00:00	18.0	245	2.6	No response required	None	2
37	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/21 00:00	19.0	47	4.3	No response required	None	2
38	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/22 00:00	19.0	244	2.6	No response required	None	2
39	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/23 00:00	24.0	262	3.4	No response required	None	2
40	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/25 00:00	22.0	43	5.5	No response required	None	2
41	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/08/26 00:00	19.0	227	4.3	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			September 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/01 00:00	17.0	220	5.0	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/02 00:00	16.0	313	2.7	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/04 00:00	21.0	201	2.6	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/05 00:00	24.0	267	3.5	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/08 00:00	21.0	6	2.9	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/09 00:00	19.0	11	4.8	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/10 00:00	20.0	327	3.9	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/11 00:00	17.0	207	5.4	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/20 00:00	24.0	205	4.2	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/22 00:00	19.0	189	2.2	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/23 00:00	23.0	83	2.3	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/24 00:00	18.0	185	2.7	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/25 00:00	16.0	17	3.4	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/09/30 00:00	22.0	60	4.6	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/09/10 00:00	17.0	31	4.9	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/09/20 00:00	18.0	241	3.6	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Felixton	2023/09/23 00:00	16.0	117	2.2	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/09/15 00:00	32.0	37	2.9	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/04 00:00	17.0	248	2.6	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/05 00:00	21.0	316	3.6	No response required	None	2
21	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/07 00:00	17.0	22	2.9	No response required	None	2
22	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/08 00:00	19.0	49	3.2	No response required	None	2
23	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/09 00:00	18.0	48	5.3	No response required	None	2
24	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/10 00:00	19.0	11	4.4	No response required	None	2
25	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Scorpio	2023/09/15 00:00	107.0	37	2.9	Grindrod & TPT - coal transport, handling and stockpiling	RBCAA allocation	24, 1
26	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/15 00:00	107.0	37	2.9	No response required	None	2
27	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/16 00:00	22.0	193	3.9	No response required	None	2
28	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/20 00:00	24.0	229	4.2	No response required	None	2
29	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/21 00:00	16.0	44	3.2	No response required	None	2
30	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/22 00:00	22.0	237	3.0	No response required	None	2
31	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/23 00:00	26.0	180	2.5	No response required	None	2
32	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/24 00:00	16.0	217	2.8	No response required	None	2
33	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/09/26 00:00	18.0	226	3.9	No response required	None	2
			October 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/04 00:00	17.0	47	3	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/05 00:00	22.0	9	3.3	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/06 00:00	18.0	232	3.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
4	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Brackenham	2023/10/07 00:00	44.0	140	5.1	NCT	Fire	1, 25
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/07 00:00	44.0	140	5.1	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/08 00:00	16.0	197	4.9	No response required	None	2
7	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/10/27 00:00	18.0	343	5.2	No response required	None	2
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/10/04 00:00	19.0	78	4	No response required	None	2
9	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/10/05 00:00	41.0	52	4	NCT	Fire	1, 25
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/10/05 00:00	41.0	52	4	No response required	None	2
11	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/10/06 00:00	41.0	162	4.6	TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 25
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/10/06 00:00	41.0	162	4.6	No response required	None	2
13	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/10/07 00:00	18.0	222	5.2	No response required	None	2
14	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/10/09 00:00	21.0	53	2.5	No response required	None	2
15	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/04 00:00	17.0	78	4	No response required	None	2
16	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/05 00:00	22.0	52	4	No response required	None	2
17	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/06 00:00	20.0	162	4.6	No response required	None	2
18	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/07 00:00	16.0	222	5.2	No response required	None	2
19	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/10 00:00	16.0	173	1.7	No response required	None	2
20	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/10/17 00:00	27.0	210	3.6	No response required	None	2
			November 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/11/19 00:00	16.0	358	2.9	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/11/21 00:00	20.0	315	3.3	No response required	None	2
3	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/11/22 0:00	17.0	86	2.1	No response required	None	2
4	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/11/23 00:00	17.0	160	2.1	No response required	None	2
5	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Brackenham	2023/11/24 00:00	18.0	332	4.1	No response required	None	2
6	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/11/21 00:00	17.0	352	3.8	No response required	None	2
7	$PM_{2.5}$ Daily RSA Limit (40 µg/m³)	Harbour West	2023/11/22 00:00	118.0	176	2.2	TPT - coal transport, handling and stockpiling	RBCAA allocation	1, 25
8	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/11/22 00:00	118.0	176	2.2	No response required	None	2
9	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/11/21 00:00	18.0	352	3.8	No response required	None	2
10	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/11/22 00:00	23.0	176	2.2	No response required	None	2
11	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/11/23 00:00	19.0	193	2.2	No response required	None	2
12	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Scorpio	2023/11/24 00:00	16.0	15	5.1	No response required	None	2
			December 2023						
1	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/12/01 00:00	26.0	59	4.6	No response required	None	2
2	$PM_{2.5}$ Daily WHO Limit (15 µg/m³)	Harbour West	2023/12/02 00:00	25.0	41	5.1	No response required	None	2

Table 2:$PM_{2.5}$ Responses

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
20	Tongaat Hulett - Nicolas Govender responded (2023/05/02 08:39): The exceedances below was a result of Tongaat Hulett commissioning for the 2023 season start up communicated earlier. During that specific time we had raised steam with coal, we were busy with commissioning the scrubbers and the new delko belt system. This would therefore produce slightly higher PM for a short period.
21	Mpact - Anzel Horn responded, (2023/05/02 13:29): Based on the paper machine and boilerhouse shift log reports for the 4th of April, there were no abnormal conditions except very short periods of de-ashing at boiler 7, however the weather conditions (average wind direction of 232° SW from 10h55 – 17h05) confirm that it is unlikely that Mpact contributed to the PM2.5 exceedance.
22	RBCAA Allocation, (2023/08/08 15:30): TPT coal truck dust
23	RBCAA Allocation, (2023/09/07 15:30)
24	RBCAA Allocation, (2023/10/27 12:30)
25	RBCAA Allocation, (2023/12/07 13:30)

APPENDIX I
SO_2 EXCEEDANCE LOG

Table 1:SO_2 Exceedances

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2023						
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/01/03 00:00	40.5	58	4.8	Foskor	Acid Plant Ducts leaks	100, 101
2	SO_2 Hourly RSA Limit (134 ppb)	Harbour West	2023/01/03 03:00	160.2	44	3.9	Foskor	Acid Plant Ducts leaks	100, 101
3	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 03:10	198.1	45	3.3	Foskor	Acid Plant Ducts leaks	100, 101
4	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 03:40	236.8	48	3.6	Foskor	Acid Plant Ducts leaks	100, 101
5	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 03:50	337.2	46	3.6	Foskor	Acid Plant Ducts leaks	100, 101
6	SO_2 Hourly RSA Limit (134 ppb)	Harbour West	2023/01/03 04:00	188.6	47	4	Foskor	Acid Plant Ducts leaks	100, 101
7	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 04:40	279.6	48	4.7	Foskor	Acid Plant Ducts leaks	100, 101
8	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 04:50	325.0	49	3.3	Foskor	Acid Plant Ducts leaks	100, 101
9	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 05:00	241.4	46	3.8	Foskor	Acid Plant Ducts leaks	100, 101
10	SO_2 Hourly RSA Limit (134 ppb)	Harbour West	2023/01/03 05:00	158.9	48	3.9	Foskor	Acid Plant Ducts leaks	100, 101
11	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 05:40	226.9	48	3.7	Foskor	Acid Plant Ducts leaks	100, 101
12	SO_2 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2023/01/03 05:50	192.7	56	3.2	Foskor	Acid Plant Ducts leaks	100, 101
13	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/01/25 00:00	25.9	113	5.3	No response required	None	2
14	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/01/25 18:00	172.5	56	3.9	Unknown source	NE of station	102, 106

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
15	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/25 18:30	217.1	56	4.1	Unknown source	NE of station	102, 106
16	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/25 18:40	218.0	56	4	Unknown source	NE of station	102, 106
17	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/01/25 19:00	177.6	60	3.6	Unknown source	NE of station	102, 106
18	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/25 19:20	207.0	56	3.5	Unknown source	NE of station	102, 106
19	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/25 19:30	225.6	56	3.8	Unknown source	NE of station	102, 106
20	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/25 19:50	229.7	61	3.7	Unknown source	NE of station	102, 106
21	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/01/26 00:00	24.5	86	3.1	No response required	None	2
22	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/26 14:50	229.6	71	3.6	Unknown source	NE of station	102, 106
23	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/26 15:00	230.8	71	3.4	Unknown source	NE of station	102, 106
24	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/01/26 15:00	170.8	71	3.1	Unknown source	NE of station	102, 106
25	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/26 15:10	192.7	69	3.3	Unknown source	NE of station	102, 106
26	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/01/26 16:00	148.9	78	2.9	Unknown source	NE of station	102, 106
27	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/01/26 16:40	208.3	82	2.8	Unknown source	NE of station	102, 106
			February 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/02/11 00:00	17.3	226	3.5	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/02/20 00:00	32.3	28	5.4	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/02/20 00:00	37.6	28	5.4	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/02/24 00:00	22.0	32	4.3	No response required	None	2
			March 2023						

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/03/25 00:00	18.7	51	5.5	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/03/29 00:00	15.6	283	5.5	No response required	None	2
3	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/03/01 21:00	315.3	200	4	Foskor - meteorology	Responded: South32	103, 1
4	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/03/01 21:10	267.0	200	4.3	Foskor - meteorology	Responded: South32	103, 1
5	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/03/14 00:00	15.7	50	2.3	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/03/15 00:00	20.2	48	2.2	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/03/24 00:00	17.6	46	2.7	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/03/26 00:00	21.7	256	6.7	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/03/29 00:00	38.4	283	5.5	No response required	None	2
10	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/03/29 06:00	139.7	42	2.3	Foskor	Acid Plant Ducts leaks	104, 105
			April 2023						
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/04/18 00:00	17.3	40	3.0	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/04/19 00:00	17.1	49	3.6	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/04/20 00:00	24.5	48	5.4	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/04/27 00:00	20.4	50	5.0	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/04/08 00:00	15.1	212	2	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/04/18 00:00	36.3	40	3.0	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/04/20 00:00	17.4	48	5.4	No response required	None	2
			May 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/05/15 00:00	15.7	233	4.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/05/06 00:00	29.9	41	3.5	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/05/25 00:00	31.4	43	5.8	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/05/28 00:00	27.8	55	4.0	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/05/31 00:00	20.7	39	3.9	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/05/04 00:00	22.9	24	2.7	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/05/06 00:00	31.7	41	3.5	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/05/17 00:00	24.6	2	1.1	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/05/26 00:00	32.8	219	3.9	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/05/31 00:00	18.8	39	3.9	No response required	None	2
			June 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/06/04 00:00	23.2	228	2.1	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/06/07 00:00	21.8	17	3.4	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/06/17 00:00	36.2	42	4.3	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/06/19 00:00	33.8	23	4.1	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/06/24 00:00	17.8	358	2.9	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/03 00:00	20.6	22	1.6	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/06 00:00	16.0	24	3.3	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/07 00:00	38.3	17	3.4	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/08 00:00	17.8	262	3.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
10	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/14 00:00	28.2	2	2.3	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/17 00:00	30.6	42	4.3	No response required	None	2
12	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/18 00:00	23.1	286	2.9	No response required	None	2
13	SO_2 Daily RSA Limit (48 ppb)	Scorpio	2023/06/19 00:00	48.3	23	4.1	Foskor	Acid Plant Ducts leaks	110, 111
14	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/19 00:00	48.3	23	4.1	No response required	None	2
15	SO_2 Daily RSA Limit (48 ppb)	Scorpio	2023/06/20 00:00	50.0	208	2.6	Foskor	Acid Plant Ducts leaks	107, 111
16	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/20 00:00	50.0	208	2.6	No response required	None	2
17	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/06/20 17:00	179.2	209	1.5	Foskor	Acid Plant Ducts leaks	108, 111
18	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 17:20	198.9	203	1.7	Foskor	Acid Plant Ducts leaks	109, 111
19	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 17:50	212.1	208	1.4	Foskor	Acid Plant Ducts leaks	109, 111
21	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 18:00	381.3	206	1.4	Foskor	Acid Plant Ducts leaks	109, 111
20	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/06/20 18:00	222.2	195	1.8	Foskor	Acid Plant Ducts leaks	109, 111
22	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 18:10	289.0	204	1.7	Foskor	Acid Plant Ducts leaks	109, 111
24	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 19:00	231.4	178	2.5	Foskor	Acid Plant Ducts leaks	109, 111
23	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/06/20 19:00	164.4	184	1.8	Foskor	Acid Plant Ducts leaks	109, 111
25	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/06/20 19:50	196.4	188	1.7	Foskor	Acid Plant Ducts leaks	109, 111
26	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/21 00:00	25.5	329	2.2	No response required	None	2
27	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/28 00:00	27.4	34	2.7	No response required	None	2
28	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/06/29 00:00	28.9	340	3.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			July 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/07/10 00:00	23.0	235	5.8	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/07/11 00:00	21.4	240	4.7	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/03 00:00	18.5	11	3.0	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/07 00:00	37.9	43	5.1	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/08 00:00	17.7	358	2.7	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/15 00:00	31.9	24	3.9	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/18 00:00	17.9	77	1.8	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/22 00:00	34.1	13	4.7	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/07/29 00:00	22.5	17	5.2	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/02 00:00	25.2	305	2.3	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/03 00:00	27.3	11	3.0	No response required	None	2
12	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/04 00:00	20.4	286	2.7	No response required	None	2
13	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/07 00:00	47.5	43	5.1	No response required	None	2
14	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/07/07 04:00	138.0	31	4.5	South32 - meteorology	Responded:South32	112, 113
15	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/08 00:00	46.7	358	2.7	No response required	None	2
16	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/07/08 03:50	195.6	30	4	South32 - meteorology	Responded:South32	112, 113
17	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/07/08 20:20	217.1	344	0.3	South32 - meteorology	Responded:South32	112, 113
18	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/13 00:00	17.1	350	0.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
19	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/15 00:00	39.2	24	3.9	No response required	None	2
20	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/18 00:00	24.5	77	1.8	No response required	None	2
21	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/22 00:00	42.8	13	4.7	No response required	None	2
22	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/23 00:00	20.6	63	1.3	No response required	None	2
23	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/07/27 00:00	15.5	35	3.1	No response required	None	2
			August 2023						
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/06 00:00	17.2	18	3.7	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/11 00:00	15.5	56	3.9	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/12 00:00	22.0	53	4.2	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/13 00:00	23.9	48	4.5	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/17 00:00	18.7	44	6.0	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/21 00:00	17.5	47	4.3	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/25 00:00	35.4	43	5.5	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/30 00:00	20.4	49	5.7	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/08/31 00:00	17.9	50	5.7	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/08/24 00:00	15.2	66	2.6	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/08/29 00:00	22.5	29	3.6	No response required	None	2
12	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/02 00:00	18.2	52	1.9	No response required	None	2
13	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/02 21:40	208.5	8	2	South32 - meteorology	RBCAA allocation	1, 114

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
14	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/08/02 22:00	142.0	39	1.9	South32 - meteorology	RBCAA allocation	1, 114
15	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/02 22:10	212.3	9	2	South32 - meteorology	RBCAA allocation	1, 114
16	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/03 00:00	20.2	19	3.7	No response required	None	2
17	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/05 00:00	18.9	19	4.1	No response required	None	2
18	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/06 00:00	20.5	18	3.7	No response required	None	2
19	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/07 00:00	15.4	67	2.3	No response required	None	2
20	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/13 00:00	18.8	48	4.5	No response required	None	2
21	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/17 00:00	15.9	44	6.0	No response required	None	2
22	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/21 00:00	16.2	47	4.3	No response required	None	2
23	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/08/24 00:00	151.1	177	3.5	Foskor - meteorology	RBCAA allocation	1, 114
24	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/24 00:00	18.2	86	2.7	No response required	None	2
25	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/24 00:40	204.8	177	3.4	Foskor - meteorology	RBCAA allocation	1, 114
26	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/24 00:50	268.6	171	2.9	Foskor - meteorology	RBCAA allocation	1, 114
27	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/24 01:00	270.1	166	2.8	Foskor - meteorology	RBCAA allocation	1, 114
28	SO_2 Hourly RSA Limit (134 ppb)	Scorpio	2023/08/24 01:00	155.1	165	2.4	Foskor - meteorology	RBCAA allocation	1, 114
29	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/08/24 01:10	225.1	170	2.3	Foskor - meteorology	RBCAA allocation	1, 114
30	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/25 00:00	29.6	43	5.5	No response required	None	2
31	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/08/29 00:00	15.2	53	3.6	No response required	None	2
			September 2023						

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/09/08 00:00	15.5	49	3.2	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/09/09 00:00	22.9	48	5.3	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/09/14 00:00	20.1	45	5.2	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/09/19 00:00	19.5	50	4.3	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/09/29 00:00	20.8	51	3.5	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/02 00:00	22.4	304	3.4	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/03 00:00	24.6	23	3.8	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/04 00:00	18.4	216	3.1	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/05 00:00	26.3	227	3.6	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/06 00:00	16.9	217	3.7	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/07 00:00	19.2	8	2.9	No response required	None	2
12	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/08 00:00	28.1	26	3.5	No response required	None	2
13	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/13 00:00	17.8	14	3.9	No response required	None	2
14	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/14 00:00	17.8	20	4.8	No response required	None	2
15	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/18 00:00	36.1	10	3.8	No response required	None	2
16	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/19 00:00	22.1	28	4.2	No response required	None	2
17	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/20 00:00	17.3	208	4.1	No response required	None	2
18	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/21 00:00	19.5	23	3.5	No response required	None	2
19	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/27 00:00	17.5	203	4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
20	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/28 00:00	30.4	15	2.5	No response required	None	2
21	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/29 00:00	26.5	29	2.8	No response required	None	2
22	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/09/30 00:00	19.1	66	4.6	No response required	None	2
23	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/07 00:00	25.9	22	2.9	No response required	None	2
24	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/08 00:00	18.7	49	3.2	No response required	None	2
25	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/14 00:00	17.3	45	5.2	No response required	None	2
26	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/15 00:00	23.3	37	2.9	No response required	None	2
27	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/20 00:00	15.5	229	4.2	No response required	None	2
28	SO_2 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2023/09/26 14:50	261.4	176	4.6	Foskor - meteorology	RBCAA allocation	115, 1
29	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/09/30 00:00	23.8	78	4.4	No response required	None	2
			October 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/10/29 00:00	16.6	231	4.8	No response required	None	2
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/10/03 00:00	27.3	46	6.1	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/01 00:00	16.9	207	4.4	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/02 00:00	27.2	29	3.7	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/03 00:00	16.1	24	5.3	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/04 00:00	22.7	68	4.2	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/05 00:00	38.4	24	3.8	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/09 00:00	20.4	40	2.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
8	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/10 00:00	40.4	98	1.8	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/11 00:00	19.6	31	3.7	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/13 00:00	33.4	212	2.5	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/14 00:00	22.5	219	5.9	No response required	None	2
12	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/16 00:00	33.1	338	2.3	No response required	None	2
13	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/18 00:00	40.1	66	3.1	No response required	None	2
14	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/19 00:00	24.4	207	2.4	No response required	None	2
15	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/20 00:00	19.0	28	4.3	No response required	None	2
16	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/23 00:00	22.4	213	3.7	No response required	None	2
17	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/25 00:00	28.3	211	3.2	No response required	None	2
18	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/26 00:00	30.6	37	4.1	No response required	None	2
19	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/30 00:00	26.2	237	5.1	No response required	None	2
20	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/10/31 00:00	31.6	236	2.8	No response required	None	2
21	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/10/17 00:00	43.8	210	3.6	No response required	None	2
			November 2023						
1	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/11/04 00:00	24.2	47	6.6	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/11/11 00:00	17.8	28	6.4	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/11/16 00:00	16.5	48	6.0	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/11/21 00:00	17.0	352	3.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
5	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/01 00:00	39.0	352	2.5	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/02 00:00	30.6	61	3.2	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/03 00:00	29.7	38	4.9	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/05 00:00	27.6	22	3.7	No response required	None	2
9	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/06 00:00	16.3	34	4.9	No response required	None	2
10	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/08 00:00	31.6	197	3.8	No response required	None	2
11	SO_2 Daily WHO Limit (15 ppb)	Richardia	2023/11/09 00:00	17.8	108	1.4	No response required	None	2
			December 2023						
1	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/12/05 00:00	18.1	216	4.1	No response required	None	2
2	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/12/10 00:00	22.6	228	4.7	No response required	None	2
3	SO_2 Daily WHO Limit (15 ppb)	CBD	2023/12/11 00:00	19.4	245	3.1	No response required	None	2
4	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/12/02 00:00	17.0	41	5.1	No response required	None	2
5	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/12/03 00:00	16.4	47	4.7	No response required	None	2
6	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/12/08 00:00	19.8	41	4.7	No response required	None	2
7	SO_2 Daily WHO Limit (15 ppb)	Harbour West	2023/12/14 00:00	21.5	36	6.5	No response required	None	2
8	SO_2 Daily WHO Limit (15 ppb)	Scorpio	2023/12/27 00:00	18.8	164	3	No response required	None	2

Table 2:SO_2 Responses

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
111	Foskor - Sandile Mdamba responded (2023/07/10 12:58): Please take note of the exceedances of the hourly average maximum SO2 concentration that occurred at the Scorpio monitoring station on 20 June 2023 from 17:20 - 19:50: A pin hole leak was detected on the ducting around the super heater. on 20 June 2023 at 00:00: There were no leaks at the time as a pin hole leak on the superheater duct was detected and repaired much earlier than the time of this exceedance. Due to the weather conditions at the time and temperature inversions, Foskor could have contributed to the exceedance at Scorpio station.
112	South32- Molebale, Londiwe responded (2023/07/18 03:47): There were no abnormal occurrences reported on 7 and 8 July. All SO2 levels were within the permitted limits. Due to the wind direction at Scorpio station Hillside may have contributed to the cumulative effect.
113	RBCAA Allocation, (2023/08/08 15:30): Soth32 meteorology
114	RBCAA Allocation, (2023/09/07 15:30)
115	RBCAA Allocation, (2023/10/26 12:30)

APPENDIX J
TRS EXCEEDANCE LOG

Table 1: TRS Exceedances

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2023						
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/06 22:30	5.1	241	6.1	Mondi - meteorology	None	249, 1
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/06 23:30	5.3	243	5.4	Mondi - meteorology	None	249, 1
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/07 07:30	6.2	242	4.9	Mondi - meteorology	None	249, 1
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/07 21:30	5.8	284	1.9	Mondi - meteorology	None	249, 1
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/22 13:30	5.6	94	5.9	Local source - unknown	Possibly ablution related	238, 1
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/22 14:00	6.2	96	5.1	Local source - unknown	Possibly ablution related	238, 1
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/22 17:00	5.3	78	3.6	Local source - unknown	Possibly ablution related	238, 1
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/23 16:00	5.6	80	5.7	Local source - unknown	Possibly ablution related	237, 1
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/24 15:30	6.8	53	4.3	Local source - unknown	Possibly ablution related	236, 1
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/28 15:00	5.1	89	5.0	Local source - unknown	Possibly ablution related	249, 1
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/28 17:00	5.1	68	3.5	Local source - unknown	Possibly ablution related	249, 1
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/28 17:30	6.2	70	3.4	Local source - unknown	Possibly ablution related	249, 1
13	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/01/29 21:30	5.2	263	4.2	Mondi - meteorology	None	249, 1
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/01 20:00	5.9	60	1.5	THS - meteorology	Responded: Mpact	231, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
15	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/20 18:30	7.1	No Data	No Data	THS	Hulett effluent treatment dams. PH was low .	243, 239
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/20 22:30	10.9	198	0.9	THS	Hulett effluent treatment dams. PH was low .	243, 239
17	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/20 22:40	15.7	205	1.1	THS	Hulett effluent treatment dams. PH was low .	243, 239
18	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/20 22:50	14.2	196	0.7	THS	Hulett effluent treatment dams. PH was low .	243, 239
19	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/20 23:00	10.5	198	0.7	THS	Hulett effluent treatment dams. PH was low .	243, 239
20	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/20 23:00	11.9	180	0.9	THS	Hulett effluent treatment dams. PH was low .	243, 239
21	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/20 23:10	10.1	170	1.0	THS	Hulett effluent treatment dams. PH was low .	243, 239
22	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/20 23:20	15.0	172	1.0	THS	Hulett effluent treatment dams. PH was low .	243, 239
23	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/22 04:30	6.0	31	1.8	Mondi - meteorology	Fugitive emissions	238, 240
24	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/22 06:00	5.5	49	2.8	Mondi - meteorology	Fugitive emissions	238, 240
25	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/22 06:30	6.4	48	3.0	Mondi - meteorology	Fugitive emissions	238, 240
26	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/22 14:20	9.9	87	5.8	Mondi - meteorology	Fugitive emissions	238, 240
27	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/22 14:30	19.0	89	5.1	Mondi - meteorology	Fugitive emissions	238, 240
28	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/22 14:30	10.6	88	5.0	Mondi - meteorology	Fugitive emissions	238, 240
29	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/22 14:40	10.0	83	5.3	Mondi - meteorology	Fugitive emissions	238, 240
30	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/24 20:30	8.0	57	4.5	Mondi - meteorology	Fugitive emissions	236
31	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/24 20:50	13.3	58	4.3	Mondi - meteorology	Fugitive emissions	236
32	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 07:30	8.9	246	5.8	THS	Hulett effluent treatment dams. PH was low .	241, 243
33	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/25 07:40	12.1	246	6.0	THS	Hulett effluent treatment dams. PH was low .	241, 243

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
34	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/25 07:50	11.2	247	5.7	THS	Hulett effluent treatment dams. PH was low .	241, 243
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 08:00	16.8	246	6.7	THS	Hulett effluent treatment dams. PH was low .	241, 243
36	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/25 08:10	18.3	244	6.6	THS	Hulett effluent treatment dams. PH was low .	241, 243
37	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/25 08:20	23.1	248	7.0	THS	Hulett effluent treatment dams. PH was low .	241, 243
38	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/01/25 08:30	21.4	245	7.3	THS	Hulett effluent treatment dams. PH was low .	241, 243
39	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 08:30	10.6	247	6.4	THS	Hulett effluent treatment dams. PH was low .	241, 243
40	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 19:00	6.0	181	2.8	THS	Hulett effluent treatment dams. PH was low .	241, 243
41	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 19:30	6.0	185	3.3	THS	Hulett effluent treatment dams. PH was low .	241, 243
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 20:00	6.6	191	2.8	THS	Hulett effluent treatment dams. PH was low .	241, 243
43	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/01/25 20:30	7.6	198	3.0	THS	Hulett effluent treatment dams. PH was low .	241, 243
			February 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/03 12:30	5.5	No Data	0.5	Mondi	Effluent Treatment Plant	244
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/06 23:30	6.2	266	2.0	Mondi	Effluent Treatment Plant	244
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/10 05:00	5.7	260	4.5	Mondi	Effluent Treatment Plant	244
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/10 09:00	6.0	231	4.6	Mondi	Effluent Treatment Plant	244
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/11 03:00	5.3	235	4.2	Mondi	Effluent Treatment Plant	244
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/11 05:30	5.4	238	3.7	Mondi	Effluent Treatment Plant	244
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/11 15:30	5.1	221	1.6	Mondi	Effluent Treatment Plant	244
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/13 20:30	5.4	No Data	0.5	Mondi	Effluent Treatment Plant	244

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/17 00:00	5.5	253	3.6	Mondi	Effluent Treatment Plant	244
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/24 02:00	6.0	351	2.1	Mondi	Effluent Treatment Plant	244
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/25 02:00	5.9	262	2.9	Mondi	Effluent Treatment Plant	244
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/25 04:30	6.2	247	3.2	Mondi	Effluent Treatment Plant	244
13	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/02/25 05:00	11.0	245	3.6	Mondi	Effluent Treatment Plant	244
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/25 05:00	9.7	250	3.5	Mondi	Effluent Treatment Plant	244
15	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/02/25 05:10	12.0	254	3.7	Mondi	Effluent Treatment Plant	244
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/26 02:30	5.6	227	4.4	Mondi	Effluent Treatment Plant	244
17	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/26 05:00	5.9	248	3.6	Mondi	Effluent Treatment Plant	244
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/02/26 22:30	5.1	252	2.1	Mondi	Effluent Treatment Plant	244
			March 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/04 11:00	7.2	36	2.9	Mondi	Effluent Treatment Plant	244
2	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/04 11:20	9.9	26	3.5	Mondi	Effluent Treatment Plant	244
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/04 14:00	5.5	56	2.8	Mondi	Effluent Treatment Plant	244
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/04 15:30	7.7	85	4.6	Mondi	Effluent Treatment Plant	244
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/04 22:30	7.6	26	1.0	Mondi	Effluent Treatment Plant	244
6	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/04 22:40	9.4	26	1.0	Mondi	Effluent Treatment Plant	244
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/04 23:00	5.7	26	1.1	Mondi	Effluent Treatment Plant	244
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 02:00	5.6	23	1.3	Mondi	Effluent Treatment Plant	244

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 06:00	6.3	34	1.2	Mondi	Effluent Treatment Plant	244
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 09:00	6.0	21	3.2	Mondi	Effluent Treatment Plant	244
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 09:30	5.2	21	2.9	Mondi	Effluent Treatment Plant	244
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 10:30	5.1	29	3.5	Mondi	Effluent Treatment Plant	244
13	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 11:00	5.2	26	3.8	Mondi	Effluent Treatment Plant	244
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 15:30	5.1	38	3.7	Mondi	Effluent Treatment Plant	244
15	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/05 17:30	5.1	42	2.2	Mondi	Effluent Treatment Plant	244
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/06 15:00	5.1	No Data	No Data	Mondi	Effluent Treatment Plant	244
17	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/07 03:30	5.7	241	3.7	Mondi	Effluent Treatment Plant	244
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/07 06:30	5.6	226	5.0	Mondi	Effluent Treatment Plant	244
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/07 14:00	5.6	340	1.3	Mondi	Effluent Treatment Plant	244
20	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/08 06:30	9.8	347	2.4	Mondi	Effluent Treatment Plant	244
21	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/08 06:30	5.8	351	2.6	Mondi	Effluent Treatment Plant	244
22	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/08 11:30	5.7	26	5.1	Mondi	Effluent Treatment Plant	244
23	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/08 12:00	5.1	26	4.4	Mondi	Effluent Treatment Plant	244
24	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/08 17:00	6.4	40	2.9	Mondi	Effluent Treatment Plant	244
25	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/08 17:30	5.5	32	2.7	Mondi	Effluent Treatment Plant	244
26	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/12 06:00	5.9	No Data	No Data	Mondi	Effluent Treatment Plant	244
27	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/12 06:30	6.0	No Data	No Data	Mondi	Effluent Treatment Plant	244

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
28	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/12 16:30	5.1	No Data	No Data	Mondi	Effluent Treatment Plant	244
29	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/13 11:00	10.1	213	2.0	Mondi	Flare	245
30	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/13 11:10	10.7	235	1.9	Mondi	Flare	245
31	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/13 11:20	10.9	193	1.7	Mondi	Flare	245
32	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/13 11:30	13.7	235	2.2	Mondi	Flare	245
33	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/13 11:30	8.1	196	1.9	Mondi	Flare	245
34	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/15 07:30	5.8	No Data	No Data	Mondi	Flare	245
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/16 23:00	6.6	318	1.0	Mondi	Flare	245
36	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/16 23:20	11.2	311	1.0	Mondi	Flare	245
37	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/17 00:00	5.6	No Data	0.9	Mondi	Effluent Treatment Plant	244
38	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/17 08:00	6.3	295	1.7	Mondi	Effluent Treatment Plant	244
39	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/03/17 08:30	10.1	No Data	0.8	Mondi	Effluent Treatment Plant	244
40	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/17 08:30	6.9	No Data	0.9	Mondi	Effluent Treatment Plant	244
41	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/22 06:00	5.4	256	2.8	Mondi	Gasket leak on CPX tank	246
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/22 06:30	5.1	261	2.7	Mondi	Gasket leak on CPX tank	246
43	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/03/28 03:00	5.1	324	1.3	Mondi	Effluent Treatment Plant	244
44	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/03/17 21:00	5.6	55	2.6	Mondi	Effluent Treatment Plant	244
			April 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/02 16:30	5.1	60	2.4	Mondi	Effluent Treatment Plant	244

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/03 23:00	5.3	258	5.1	Mondi	Effluent Treatment Plant	244
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/04 02:30	6.5	221	4.4	Mondi	Flare	245
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/04 10:00	5.6	212	5.5	Mondi	Flare	245
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/05 05:00	6.7	262	3.5	Mondi	Effluent Treatment Plant	244
6	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/04/05 05:20	9.6	263	3.7	Mondi	Effluent Treatment Plant	244
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/05 05:30	5.4	259	3.5	Mondi	Effluent Treatment Plant	244
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/07 17:30	5.7	71	1.8	Mondi	Effluent Treatment Plant	244
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/09 16:00	5.1	29	4.4	Mondi	Effluent Treatment Plant	244
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/09 16:30	5.4	29	4.1	Mondi	Effluent Treatment Plant	244
11	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/04/20 14:30	9.7	28	5.1	Mondi	Effluent Treatment Plant	244
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/04/20 14:30	6.9	30	4.6	Mondi	Effluent Treatment Plant	244
13	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/04/07 23:30	5.2	263	1.0	Mondi	Effluent Treatment Plant	244
			May 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/01 16:30	6.3	32	2.6	Localised source - unkown	Possibly ablution related. Responded: Mondi	247, 1
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/01 23:00	5.4	29	3.4	Localised source - unkown	Possibly ablution related. Responded: Mondi	247, 1
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/03 16:30	6.7	201	2.7	Mondi	Fugitive emissions	248
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/03 23:30	6.5	277	2.4	Mondi	Fugitive emissions	248
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/05 01:30	5.2	263	1.6	Mondi	Effluent Treatment Plant	250
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/05 04:00	5.2	235	4.3	Mondi	Effluent Treatment Plant	250

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/05 18:30	6.6	No Data	0.3	Mondi	Effluent Treatment Plant	250
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/06 21:30	5.2	14	2.2	Mondi	Effluent Treatment Plant	250
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/06 23:00	5.5	20	1.9	Mondi	Effluent Treatment Plant	250
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/12 12:00	5.3	211	3.3	Mondi	Effluent Treatment Plant	250
11	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/05/22 23:30	29.3	248	1.6	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/22 23:30	49.5	257	1.7	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
13	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/05/22 23:40	63.2	244	1.8	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
14	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/05/22 23:50	55.9	279	1.8	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
15	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/05/23 00:00	49.6	301	1.6	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/05/23 00:00	17.6	302	2.0	Localised source - unkown	Meteorology (wind speed and direction).	251, 1
			June 2023						
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/06/09 02:00	7.9	248	2.3	Mondi	Effluent Treatment Plant	260
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/06/09 04:00	5.5	260	2.6	Mondi	Effluent Treatment Plant	260
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/06/10 04:00	7.2	251	2.9	Mondi	Effluent Treatment Plant	260
4	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/06/10 04:20	18.1	246	2.6	Mondi	Effluent Treatment Plant	260
5	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/06/10 04:30	19.6	257	3.4	Mondi	Effluent Treatment Plant	260
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/06/10 04:30	11.4	259	3.6	Mondi	Effluent Treatment Plant	260
7	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/06/10 04:40	11.0	262	3.6	Mondi	Effluent Treatment Plant	260
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/06/10 05:00	7.2	257	3.5	Mondi	Effluent Treatment Plant	260

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
9	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/06/10 05:20	11.5	252	3.4	Mondi	Effluent Treatment Plant	260
10	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/14 02:30	9.5	44	1.6	Mondi	Effluent Treatment Plant	266
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/14 02:30	5.7	80	1.5	Mondi	Effluent Treatment Plant	266
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/14 07:30	6.8	33	2.4	Mondi - meteorology	Fugitive emissions	267
13	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/14 07:40	11.0	31	2.3	Mondi - meteorology	Fugitive emissions	267
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/18 00:00	5.3	62	2.1	Mondi	Effluent Treatment Plant	266
15	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/18 00:20	11.6	56	2.4	Mondi	Effluent Treatment Plant	266
16	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/18 00:30	11.8	56	2.5	Mondi	Effluent Treatment Plant	266
17	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/18 00:30	7.6	69	1.9	Mondi	Effluent Treatment Plant	266
18	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/18 00:40	10.0	56	2.0	Mondi	Effluent Treatment Plant	266
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/21 07:00	8.0	30	2.3	Mondi - meteorology	Responded: Mpact	257, 1
20	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/21 07:10	11.7	25	2.6	Mondi - meteorology	Responded: Mpact	257, 1
21	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/21 10:30	6.5	35	5.8	Mondi - meteorology	Responded: Mpact	257, 1
22	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/22 23:00	5.6	358	0.2	Mondi - meteorology	Responded: Mpact	258, 1
23	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/24 07:30	9.4	51	2.2	Mondi - meteorology	Fugitive emissions	267
24	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/24 07:40	14.0	58	2.0	Mondi - meteorology	Fugitive emissions	267
25	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/06/24 08:00	7.7	58	2.0	Mondi - meteorology	Fugitive emissions	267
26	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/06/24 08:20	10.2	57	2.4	Mondi - meteorology	Fugitive emissions	267
27	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/09 16:30	14.5	202	1.2	THS - meteorology	smuts clarifiers	252

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
28	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/09 16:40	17.1	207	1.0	THS - meteorology	smuts clarifiers	252
29	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/09 16:50	19.1	211	1.5	THS - meteorology	smuts clarifiers	252
30	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/10 12:00	5.7	236	4.7	THS - meteorology	smuts clarifiers	253
31	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/10 12:30	7.8	231	4.9	THS - meteorology	smuts clarifiers	253
32	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/10 12:40	10.0	233	5.6	THS - meteorology	smuts clarifiers	253
33	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 04:20	13.0	95	1.4	Mondi	Start up	254, 260, 265
34	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 04:30	33.0	118	1.0	Mondi	Start up	254, 260, 265
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 04:30	27.0	106	1.1	Mondi	Start up	254, 260, 265
36	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 04:40	27.1	95	1.3	Mondi	Start up	254, 260, 265
37	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 04:50	21.0	108	1.2	Mondi	Start up	254, 260, 265
38	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:00	49.6	80	1.8	Mondi	Start up	254, 260, 265
39	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 05:00	47.9	57	1.3	Mondi	Start up	254, 260, 265
40	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:10	66.3	53	0.9	Mondi	Start up	254, 260, 265
41	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:20	27.7	38	1.1	Mondi	Start up	254, 260, 265
42	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:30	38.1	333	0.8	Mondi	Start up	254, 260, 265
43	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 05:30	26.8	41	1.5	Mondi	Start up	254, 260, 265
44	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:40	27.4	36	2.0	Mondi	Start up	254, 260, 265
45	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 05:50	14.9	68	1.8	Mondi	Start up	254, 260, 265
46	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 06:00	25.5	50	1.8	Mondi	Start up	254, 260, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
47	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 06:00	12.4	50	1.1	Mondi	Start up	254, 260, 265
48	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 06:10	11.0	22	0.9	Mondi	Start up	254, 260, 265
49	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 06:30	5.6	45	1.7	Mondi	Start up	254, 260, 265
50	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 07:30	20.0	65	2.3	Mondi	Start up	254, 260, 265
51	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 07:30	14.0	74	2.4	Mondi	Start up	254, 260, 265
52	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 07:40	11.8	75	2.1	Mondi	Start up	254, 260, 265
53	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 07:50	10.3	82	2.7	Mondi	Start up	254, 260, 265
54	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 08:00	11.8	87	1.6	Mondi	Start up	254, 260, 265
55	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 08:00	13.1	63	1.7	Mondi	Start up	254, 260, 265
56	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 08:10	14.4	58	1.8	Mondi	Start up	254, 260, 265
57	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 08:20	13.2	44	1.6	Mondi	Start up	254, 260, 265
58	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 08:30	11.6	55	2.2	Mondi	Start up	254, 260, 265
59	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 08:40	19.1	60	2.4	Mondi	Start up	254, 260, 265
60	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 08:50	12.4	59	2.2	Mondi	Start up	254, 260, 265
61	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/12 09:00	9.8	25	2.4	Mondi	Start up	254, 260, 265
62	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/12 09:00	5.4	28	2.7	Mondi	Start up	254, 260, 265
63	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/15 03:00	12.2	200	2.8	THS	Smuts clarifiers	254, 265
64	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/15 03:20	28.6	204	2.9	THS	Smuts clarifiers	254, 265
65	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/15 03:30	24.2	200	2.3	THS	Smuts clarifiers	254, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
66	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/15 03:30	20.6	201	2.0	THS	Smuts clarifiers	254, 265
67	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/15 03:40	30.7	198	2.1	THS	Smuts clarifiers	254, 265
68	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 02:00	12.4	224	3.5	THS	Smuts clarifiers	254, 265
69	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/16 02:00	13.3	223	3.5	THS	Smuts clarifiers	254, 265
70	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 02:10	13.3	222	3.5	THS	Smuts clarifiers	254, 265
71	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 02:20	14.2	223	3.4	THS	Smuts clarifiers	254, 265
72	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/16 02:30	9.9	228	2.5	THS	Smuts clarifiers	254, 265
73	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 02:50	12.2	226	2.2	THS	Smuts clarifiers	254, 265
74	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 03:00	11.7	226	2.2	THS	Smuts clarifiers	254, 265
75	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/16 03:00	10.0	225	2.7	THS	Smuts clarifiers	254, 265
76	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/16 03:10	11.6	225	2.8	THS	Smuts clarifiers	254, 265
77	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/18 15:00	8.2	233	4.0	THS	Smuts clarifiers	254, 265
78	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 15:10	9.6	234	3.4	THS	Smuts clarifiers	254, 265
79	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/18 15:30	6.2	237	3.9	THS	Smuts clarifiers	254, 265
80	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/18 16:00	7.1	237	3.0	THS	Smuts clarifiers	254, 265
81	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:00	11.7	9	1.5	THS	Smuts clarifiers	254, 265
82	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/18 23:00	28.9	7	1.3	THS	Smuts clarifiers	254, 265
83	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:10	36.0	5	1.4	THS	Smuts clarifiers	254, 265
84	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:20	38.9	6	1.1	THS	Smuts clarifiers	254, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
85	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:30	55.9	350	1.0	THS	Smuts clarifiers	254, 265
86	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/18 23:30	42.7	40	0.6	THS	Smuts clarifiers	254, 265
87	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:40	47.3	49	0.4	THS	Smuts clarifiers	254, 265
88	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/18 23:50	25.0	82	0.6	THS	Smuts clarifiers	254, 265
89	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:00	26.4	62	0.8	THS	Smuts clarifiers	255, 265
90	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/19 00:00	25.3	71	0.7	THS	Smuts clarifiers	255, 265
91	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:10	26.3	68	0.8	THS	Smuts clarifiers	255, 265
92	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:20	23.2	82	0.5	THS	Smuts clarifiers	255, 265
93	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:30	11.7	88	0.5	THS	Smuts clarifiers	255, 265
94	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/19 00:30	32.1	98	0.5	THS	Smuts clarifiers	255, 265
95	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:40	38.0	112	0.4	THS	Smuts clarifiers	255, 265
96	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 00:50	46.6	94	0.4	THS	Smuts clarifiers	255, 265
97	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/19 01:00	16.6	67	0.7	THS	Smuts clarifiers	255, 265
98	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/19 01:00	8.1	56	0.8	THS	Smuts clarifiers	255, 265
99	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 04:30	17.4	204	3.4	THS	Smuts clarifiers	256, 265
100	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 04:50	40.7	205	3.1	THS	Smuts clarifiers	256, 265
101	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 06:00	19.5	222	2.3	THS	Smuts clarifiers	256, 265
102	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 06:00	21.6	229	2.0	THS	Smuts clarifiers	256, 265
103	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 06:10	36.3	243	2.0	THS	Smuts clarifiers	256, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
104	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 06:30	15.3	209	2.8	THS	Smuts clarifiers	256, 265
105	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 06:30	7.2	209	2.5	THS	Smuts clarifiers	256, 265
106	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 07:00	7.5	212	2.1	THS	Smuts clarifiers	256, 265
107	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 07:10	11.1	219	2.0	THS	Smuts clarifiers	256, 265
108	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 09:30	11.2	285	0.8	THS	Smuts clarifiers	256, 265
109	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 09:40	19.4	340	0.4	THS	Smuts clarifiers	256, 265
110	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 10:00	5.8	231	1.7	THS	Smuts clarifiers	256, 265
111	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 10:20	10.6	245	2.0	THS	Smuts clarifiers	256, 265
112	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 12:30	22.4	No Data	No Data	THS	Smuts clarifiers	256, 265
113	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 12:30	18.9	No Data	No Data	THS	Smuts clarifiers	256, 265
114	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 12:40	23.6	No Data	No Data	THS	Smuts clarifiers	256, 265
115	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 12:50	10.6	No Data	No Data	THS	Smuts clarifiers	256, 265
116	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 13:00	18.9	No Data	No Data	THS	Smuts clarifiers	256, 265
117	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 13:10	25.0	No Data	No Data	THS	Smuts clarifiers	256, 265
118	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 13:20	24.7	No Data	No Data	THS	Smuts clarifiers	256, 265
119	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 13:30	28.3	No Data	No Data	THS	Smuts clarifiers	256, 265
120	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 13:30	30.3	No Data	No Data	THS	Smuts clarifiers	256, 265
121	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 13:40	20.6	No Data	No Data	THS	Smuts clarifiers	256, 265
122	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 13:50	42.1	No Data	No Data	THS	Smuts clarifiers	256, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
123	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 14:00	12.2	No Data	No Data	THS	Smuts clarifiers	256, 265
124	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 14:00	13.0	No Data	No Data	THS	Smuts clarifiers	256, 265
125	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 14:10	17.3	No Data	No Data	THS	Smuts clarifiers	256, 265
126	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 14:20	9.5	No Data	No Data	THS	Smuts clarifiers	256, 265
127	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 14:30	11.4	No Data	No Data	THS	Smuts clarifiers	256, 265
128	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 14:30	10.3	No Data	No Data	THS	Smuts clarifiers	256, 265
129	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 14:50	13.4	No Data	No Data	THS	Smuts clarifiers	256, 265
130	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 15:00	24.0	No Data	No Data	THS	Smuts clarifiers	256, 265
131	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 15:00	9.7	No Data	No Data	THS	Smuts clarifiers	256, 265
132	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/20 16:00	21.5	No Data	No Data	THS	Smuts clarifiers	256, 265
133	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 16:10	30.0	No Data	No Data	THS	Smuts clarifiers	256, 265
134	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/20 16:20	29.9	No Data	No Data	THS	Smuts clarifiers	256, 265
135	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/21 04:20	10.6	116	0.2	THS	Smuts clarifiers	257, 265
136	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/21 04:30	34.8	97	0.5	THS	Smuts clarifiers	257, 265
137	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/21 04:30	21.3	65	0.6	THS	Smuts clarifiers	257, 265
138	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/21 04:40	17.3	51	0.7	THS	Smuts clarifiers	257, 265
139	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/21 04:50	11.8	51	0.6	THS	Smuts clarifiers	257, 265
140	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/22 03:30	6.5	231	3.1	THS	Smuts clarifiers	258, 265
141	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/22 03:40	9.9	225	2.7	THS	Smuts clarifiers	259, 265

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
142	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/25 13:30	5.2	203	2.1	THS	Smuts clarifiers	265
143	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 15:30	7.4	202	2.2	THS	Smuts clarifiers	262, 265
144	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 15:50	14.9	203	1.9	THS	Smuts clarifiers	262, 265
145	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 16:00	19.5	207	2.3	THS	Smuts clarifiers	262, 265
146	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 16:00	8.5	220	1.4	THS	Smuts clarifiers	262, 265
147	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 17:00	26.9	267	0.6	THS	Smuts clarifiers	262, 265
148	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 17:00	21.1	319	0.6	THS	Smuts clarifiers	262, 265
149	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 17:10	21.5	326	0.6	THS	Smuts clarifiers	262, 265
150	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 17:20	14.8	332	0.7	THS	Smuts clarifiers	262, 265
151	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 17:30	5.4	275	0.6	THS	Smuts clarifiers	262, 265
152	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 19:00	10.7	87	0.5	THS	Smuts clarifiers	262, 265
153	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 19:20	30.6	72	0.3	THS	Smuts clarifiers	262, 265
154	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 19:30	42.9	27	0.4	THS	Smuts clarifiers	262, 265
155	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/26 19:30	27.0	340	0.4	THS	Smuts clarifiers	262, 265
156	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/26 19:40	29.5	330	0.6	THS	Smuts clarifiers	262, 265
157	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/27 14:30	5.3	184	2.2	THS	Smuts clarifiers	263, 265
158	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/06/28 09:00	10.2	37	1.7	Mondi	Effluent Treatment Plant	264, 265, 266
159	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/28 09:10	9.7	28	1.7	Mondi	Effluent Treatment Plant	264, 265, 266
160	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/28 09:20	18.6	34	1.7	Mondi	Effluent Treatment Plant	264, 265, 266

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
161	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/06/28 09:30	9.4	44	2.5	Mondi	Effluent Treatment Plant	264, 265, 266
			July 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/07/02 04:00	5.7	136	1.1	Mondi	Methanol leak	261
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/07/04 01:00	5.4	68	2.1	Mondi	Effluent Treatment Plant	266
3	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/07/04 01:30	12.0	56	2.3	Mondi	Effluent Treatment Plant	266
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/07/04 01:30	7.1	49	2.6	Mondi	Effluent Treatment Plant	266
5	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/07/04 04:30	12.9	88	1.2	Mondi	Effluent Treatment Plant	266
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/07/04 04:30	9.1	74	1.1	Mondi	Effluent Treatment Plant	266
7	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/07/04 04:40	11.2	73	1.1	Mondi	Effluent Treatment Plant	266
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/07/07 07:30	5.9	28	2.3	Local Source - unknown	None	1, 280
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/01 04:00	15.6	42	1.1	Mondi	Effluent Treatment Plant	266
10	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 04:20	41.5	42	1.0	Mondi	Effluent Treatment Plant	266
11	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 06:30	15.0	91	0.1	Mondi	Effluent Treatment Plant	266
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/01 06:30	19.9	85	0.5	Mondi	Effluent Treatment Plant	266
13	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 06:40	30.0	97	0.5	Mondi	Effluent Treatment Plant	266
14	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 06:50	14.6	71	0.9	Mondi	Effluent Treatment Plant	266
15	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 07:00	13.5	57	1.3	Mondi	Effluent Treatment Plant	266
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/01 07:00	12.2	55	1.0	Mondi	Effluent Treatment Plant	266
17	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 07:10	10.9	60	0.9	Mondi	Effluent Treatment Plant	266

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
18	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 07:20	12.2	46	0.7	Mondi	Effluent Treatment Plant	266
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/01 08:00	8.5	58	1.2	Mondi	Effluent Treatment Plant	266
20	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/01 08:20	10.4	44	0.5	Mondi	Effluent Treatment Plant	266
21	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/04 08:00	8.8	39	1.5	Mondi	Effluent Treatment Plant	266
22	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/04 08:20	20.4	36	1.2	Mondi	Effluent Treatment Plant	266
23	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 01:00	19.5	19	2.2	Mondi	Methanol to effluent plant	268, 270, 281
24	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/08 01:00	14.8	15	1.8	Mondi	Methanol to effluent plant	268, 270, 281
25	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 01:10	17.9	11	1.7	Mondi	Methanol to effluent plant	268, 270, 281
26	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/08 08:30	10.6	42	1.6	Mondi	Methanol to effluent plant	268, 270, 281
27	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 08:50	22.1	25	1.8	Mondi	Methanol to effluent plant	268, 270, 281
28	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 09:00	50.9	42	1.3	Mondi	Methanol to effluent plant	268, 270, 281
29	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/08 09:00	70.4	51	1.4	Mondi	Methanol to effluent plant	268, 270, 281
30	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 09:10	97.5	52	1.5	Mondi	Methanol to effluent plant	268, 270, 281
31	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 09:20	62.7	59	1.2	Mondi	Methanol to effluent plant	268, 270, 281
32	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/08 09:30	9.5	60	1.4	Mondi	Methanol to effluent plant	268, 270, 281
33	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/09 04:00	7.0	192	2.5	THS - meteorology	smuts clarifiers	269, 270
34	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/09 04:30	8.2	191	2.5	THS - meteorology	smuts clarifiers	269, 270
35	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/09 04:50	10.5	186	3.0	THS - meteorology	smuts clarifiers	269, 270
36	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/09 13:00	5.1	226	4.7	THS - meteorology	smuts clarifiers	269, 270

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
37	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/09 16:30	5.1	224	5.6	THS - meteorology	smuts clarifiers	269, 270
38	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/09 17:00	6.1	222	6.4	THS - meteorology	smuts clarifiers	269, 270
39	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/19 01:30	27.6	184	0.6	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
40	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/19 01:30	14.6	211	0.7	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
41	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/19 01:40	14.3	207	0.9	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/19 03:00	9.5	100	0.7	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
43	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/19 03:10	14.4	101	0.9	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
44	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/19 03:20	11.0	107	0.6	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
45	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/19 05:00	5.3	69	1.6	Local Source - unknown	Responded: Mpact and THS	271, 272, 282
46	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/30 06:30	27.5	99	1.1	Local Source - unknown	Responded: THS, Mondi and Mpact	272, 273, 274, 282
47	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/30 06:30	13.3	67	0.7	Local Source - unknown	Responded: THS, Mondi and Mpact	272, 273, 274, 282
48	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/31 05:30	11.3	81	1.1	Local Source - unknown	Responded: Mpact and THS	275, 277, 282
49	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/07/31 05:30	15.2	70	1.2	Local Source - unknown	Responded: Mpact and THS	275, 277, 282
50	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/07/31 05:40	25.6	70	1.4	Local Source - unknown	Responded: Mpact and THS	275, 277, 282
			August 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/13 04:30	6.5	31	0.9	Mondi	Effluent Treatment Plant	286
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/13 05:00	5.4	61	2.6	Mondi	Effluent Treatment Plant	286
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/19 07:00	7.2	24	0.8	Local Source - unknown	RBCAA allocation	291, 1, 300
4	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/19 07:20	10.2	24	0.8	Local Source - unknown	RBCAA allocation	291, 1, 300

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
5	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/19 07:30	10.6	349	0.7	Local Source - unknown	RBCAA allocation	291, 1, 300
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/19 07:30	5.8	338	0.7	Local Source - unknown	RBCAA allocation	291, 1, 300
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/23 03:30	5.1	53	1.4	THS - meteorology	Responded: Mpact	291, 1, 300
8	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/23 04:00	20.8	31	0.9	THS - meteorology	Responded: Mpact	291, 1, 300
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/23 04:00	11.4	38	1.6	THS - meteorology	Responded: Mpact	291, 1, 300
10	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/23 04:10	10.5	29	1.8	THS - meteorology	Responded: Mpact	291, 1, 300
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/23 06:00	5.4	43	1.8	THS - meteorology	Responded: Mpact	291, 1, 300
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/25 22:00	7.5	20	3.1	Mondi	RBCAA allocation	1, 300
13	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/25 22:10	11.9	21	3.1	Mondi	RBCAA allocation	1300
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/27 20:00	5.9	273	1.3	THS - meteorology	Responded: Mpact	296, 1, 300
15	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/27 21:30	10.2	274	0.3	THS - meteorology	Responded: Mpact	296, 1, 300
16	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/27 21:40	9.5	246	0.6	THS - meteorology	Responded: Mpact	296, 1, 300
17	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/27 21:50	12.8	311	0.0	THS - meteorology	Responded: Mpact	296, 1, 300
18	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/08/27 22:00	14.7	283	0.1	THS - meteorology	Responded: Mpact	296, 1, 300
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/08/27 22:00	9.4	266	0.2	THS - meteorology	Responded: Mpact	296, 1, 300
19	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 06:20	12.5	39	1.3	Mondi	Effluent Treatment Plant	277, 279, 283
20	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 06:30	34.9	8	0.4	Mondi	Effluent Treatment Plant	277, 279, 283
21	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/01 06:30	17.2	5	0.7	Mondi	Effluent Treatment Plant	277, 279, 283
22	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 06:40	15.1	13	0.8	Mondi	Effluent Treatment Plant	277, 279, 283

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
23	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:00	10.4	204	2.6	THS - meteorology	Effluent Treatment Plant	277, 279
24	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/01 16:00	11.5	204	2.9	THS - meteorology	Effluent Treatment Plant	277, 279
25	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:10	12.7	203	3.1	THS - meteorology	Effluent Treatment Plant	277, 279
26	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:20	11.4	206	3.0	THS - meteorology	Effluent Treatment Plant	277, 279
27	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:30	15.7	207	2.8	THS - meteorology	Effluent Treatment Plant	277, 279
28	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/01 16:30	18.0	206	2.6	THS - meteorology	Effluent Treatment Plant	277, 279
29	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:40	19.3	209	2.4	THS - meteorology	Effluent Treatment Plant	277, 279
30	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/01 16:50	18.9	202	2.7	THS - meteorology	Effluent Treatment Plant	277, 279
31	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/02 21:00	5.2	50	1.1	Mondi	Effluent Treatment Plant	276, 277, 284
32	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/02 21:20	12.5	41	1.4	Mondi	Effluent Treatment Plant	276, 277, 284
33	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/02 22:00	7.4	23	1.4	Mondi	Effluent Treatment Plant	276, 277, 284
34	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/02 22:20	15.4	24	1.3	Mondi	Effluent Treatment Plant	276, 277, 284
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/02 22:30	7.9	12	0.9	Mondi	Effluent Treatment Plant	276, 277, 284
36	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/02 22:40	21.7	15	0.8	Mondi	Effluent Treatment Plant	276, 277, 284
37	TRS 24-hr-OME Limit (10.1 ppb)	Felixton	2023/08/03 00:00	11.8	43	4.1	Mondi	Effluent Treatment Plant	277, 278, 284
38	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 02:30	124.5	27	1.4	Mondi	Effluent Treatment Plant	277, 278, 284
39	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 02:40	127.2	38	1.5	Mondi	Effluent Treatment Plant	277, 278, 284
40	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 02:50	240.2	21	1.4	Mondi	Effluent Treatment Plant	277, 278, 284
41	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:00	198.6	37	1.2	Mondi	Effluent Treatment Plant	277, 278, 284

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 03:00	142.0	31	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
43	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:10	119.3	34	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
44	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:20	108.2	22	0.5	Mondi	Effluent Treatment Plant	277, 278, 284
45	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:30	98.2	18	1.1	Mondi	Effluent Treatment Plant	277, 278, 284
46	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 03:30	67.3	30	1.3	Mondi	Effluent Treatment Plant	277, 278, 284
47	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:40	81.0	28	1.6	Mondi	Effluent Treatment Plant	277, 278, 284
48	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 03:50	22.9	44	1.1	Mondi	Effluent Treatment Plant	277, 278, 284
49	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 04:30	11.2	12	0.6	Mondi	Effluent Treatment Plant	277, 278, 284
50	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 04:30	14.8	24	0.6	Mondi	Effluent Treatment Plant	277, 278, 284
51	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 04:40	25.5	17	0.5	Mondi	Effluent Treatment Plant	277, 278, 284
52	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 05:00	5.4	29	0.7	Mondi	Effluent Treatment Plant	277, 278, 284
53	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 05:20	11.4	30	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
54	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 05:30	27.9	54	1.1	Mondi	Effluent Treatment Plant	277, 278, 284
55	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 05:30	40.0	59	1.1	Mondi	Effluent Treatment Plant	277, 278, 284
56	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 05:40	53.6	60	1.0	Mondi	Effluent Treatment Plant	277, 278, 284
57	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 05:50	38.5	62	1.2	Mondi	Effluent Treatment Plant	277, 278, 284
58	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:00	31.3	31	1.0	Mondi	Effluent Treatment Plant	277, 278, 284
59	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 06:00	33.4	26	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
60	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:10	38.0	12	0.6	Mondi	Effluent Treatment Plant	277, 278, 284

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
61	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:20	30.9	36	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
62	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:30	23.6	34	0.8	Mondi	Effluent Treatment Plant	277, 278, 284
63	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 06:30	18.6	37	0.5	Mondi	Effluent Treatment Plant	277, 278, 284
64	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:40	18.5	52	0.3	Mondi	Effluent Treatment Plant	277, 278, 284
65	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 06:50	13.6	26	0.3	Mondi	Effluent Treatment Plant	277, 278, 284
66	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 07:00	12.7	40	0.2	Mondi	Effluent Treatment Plant	277, 278, 284
67	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/03 07:00	10.0	14	0.4	Mondi	Effluent Treatment Plant	277, 278, 284
68	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/03 07:10	10.4	355	0.3	Mondi	Effluent Treatment Plant	278, 284
69	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/08 07:00	23.6	74	1.2	Mondi	Effluent Treatment Plant	284, 287
70	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/08 07:10	21.3	65	1.1	Mondi	Effluent Treatment Plant	284, 287
71	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/08 07:20	45.5	80	1.0	Mondi	Effluent Treatment Plant	284, 287
72	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/08 07:30	38.8	63	1.3	Mondi	Effluent Treatment Plant	284, 287
73	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/08 07:30	25.8	55	1.4	Mondi	Effluent Treatment Plant	284, 287
74	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/08 07:40	30.0	63	1.3	Mondi	Effluent Treatment Plant	284, 287
75	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/10 06:00	9.7	104	1.0	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300
76	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/10 06:00	14.8	86	1.0	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300
77	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/10 06:10	16.2	79	1.0	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300
78	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/10 06:20	18.4	74	1.0	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300
79	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/10 06:30	12.5	51	0.8	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
80	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/10 06:30	9.4	44	0.6	Local Source - unknown	RBCAA allocation - sewage pump station.	285, 289, 300
81	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/14 01:30	21.3	245	0.3	THS	Smuts clarifiers	288, 289
82	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 01:40	11.1	266	0.3	THS	Smuts clarifiers	288, 289
83	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 01:50	52.1	191	0.0	THS	Smuts clarifiers	288, 289
84	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 02:00	42.8	336	0.4	THS	Smuts clarifiers	288, 289
85	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/14 02:00	23.0	306	0.3	THS	Smuts clarifiers	288, 289
86	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 02:10	17.8	303	0.3	THS	Smuts clarifiers	288, 289
87	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/14 05:00	11.5	43	1.3	THS	Smuts clarifiers	288, 289
88	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 05:10	11.8	39	1.6	THS	Smuts clarifiers	288, 289
89	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 05:20	18.7	59	0.8	THS	Smuts clarifiers	288, 289
90	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 05:30	14.8	263	1.1	THS	Smuts clarifiers	288, 289
91	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/14 05:30	7.4	255	0.9	THS	Smuts clarifiers	288, 289
92	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 08:30	11.9	51	1.4	THS	Smuts clarifiers	288, 289
93	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/14 08:30	9.0	32	1.1	THS	Smuts clarifiers	288, 289
94	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/14 08:40	10.6	28	1.0	THS	Smuts clarifiers	288, 289
95	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/15 17:00	5.1	230	2.7	THS	Smuts clarifiers	287, 289
96	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 13:30	5.6	197	2.7	Mpact - meteorology	Emergency Ponds	290, 298
97	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 14:00	7.7	197	2.3	Mpact - meteorology	Emergency Ponds	290, 297
98	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 14:30	6.9	201	2.8	Mpact - meteorology	Emergency Ponds	290, 297

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
99	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/18 15:00	9.4	201	2.2	Mpact - meteorology	Emergency Ponds	290, 297
100	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 15:00	10.2	202	2.1	Mpact - meteorology	Emergency Ponds	290, 297
101	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/18 15:10	10.5	199	1.8	Mpact - meteorology	Emergency Ponds	290, 297
102	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/18 15:20	10.7	207	2.2	Mpact - meteorology	Emergency Ponds	290, 297
103	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 15:30	5.7	207	2.1	Mpact - meteorology	Emergency Ponds	290, 297
104	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/18 17:00	5.9	204	2.8	Mpact - meteorology	Emergency Ponds	290, 297
105	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/19 06:30	14.2	34	1.1	Local Source - unknown	Responded: Mpact and THS	291, 297, 1, 300
106	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/19 06:40	17.8	35	1.4	Local Source - unknown	Responded: Mpact and THS	291, 297, 1, 300
107	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/19 06:50	16.2	32	1.0	Local Source - unknown	Responded: Mpact and THS	291, 297, 1, 300
108	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/19 07:00	12.5	30	1.0	Local Source - unknown	Responded: Mpact and THS	291, 297, 1, 300
109	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/19 07:00	5.2	24	0.8	Local Source - unknown	Responded: Mpact and THS	291, 297, 1, 300
110	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/20 03:30	6.9	149	1.6	Mpact - meteorology	Emergency Ponds	293, 297
111	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/20 03:50	12.2	99	1.9	Mpact - meteorology	Emergency Ponds	293, 297
112	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/22 21:00	5.1	243	0.5	Local Source - unknown	Responded: Mpact and THS	292, 297, 1, 300
113	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/22 21:10	9.5	239	0.3	Local Source - unknown	Responded: Mpact and THS	292, 297, 1, 300
114	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/22 23:30	12.1	43	1.1	Local Source - unknown	Responded: Mpact and THS	292, 297, 1, 300
115	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/22 23:40	18.4	53	0.9	Local Source - unknown	Responded: Mpact and THS	292, 297, 1, 300
116	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/23 00:20	11.7	39	1.2	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
117	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/23 00:30	13.4	31	1.3	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
118	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/23 00:30	6.4	31	1.5	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
119	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/23 02:30	7.1	270	0.2	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
120	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/23 02:50	10.7	254	0.3	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
121	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/23 23:20	10.0	189	2.9	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
122	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/23 23:30	5.3	189	2.3	Local Source - unknown	Sewage pump station. Responded: Mpact and THS	292, 297, 1, 300
123	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/24 00:30	8.6	194	2.2	THS - meteorology	Responded: Mpact and THS	295, 297, 300
124	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/24 00:40	11.2	194	2.2	THS - meteorology	Responded: Mpact and THS	295, 297, 300
125	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/24 00:50	13.8	189	2.3	THS - meteorology	Responded: Mpact and THS	295, 297, 300
126	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/24 01:00	10.0	192	1.7	THS - meteorology	Responded: Mpact and THS	295, 297, 300
127	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/24 03:00	6.4	180	2.4	THS - meteorology	Responded: Mpact and THS	295, 297, 300
128	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/24 03:30	10.5	176	1.7	THS - meteorology	Responded: Mpact and THS	295, 297, 300
129	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/24 03:30	6.6	175	1.8	THS - meteorology	Responded: Mpact and THS	295, 297, 300
130	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/24 04:30	5.1	156	1.3	THS - meteorology	Responded: Mpact and THS	295, 297, 300
131	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 03:30	10.5	11	1.6	THS - meteorology	Responded: THS	297, 1, 300
132	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 03:30	53.8	14	1.4	THS - meteorology	Responded: THS	297, 1, 300
133	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 03:50	142.7	15	1.5	THS - meteorology	Responded: THS	297, 1, 300
134	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 04:00	177.7	20	1.7	THS - meteorology	Responded: THS	297, 1, 300
135	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 04:00	125.8	16	1.6	THS - meteorology	Responded: THS	297, 1, 300
136	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 04:10	142.4	14	1.6	THS - meteorology	Responded: THS	297, 1, 300

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
137	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 04:20	57.3	13	1.6	THS - meteorology	Responded: THS	297, 1, 300
138	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 04:30	16.9	12	2.1	THS - meteorology	Responded: THS	297, 1, 300
139	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 04:30	5.9	19	2.1	THS - meteorology	Responded: THS	297, 1, 300
140	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 05:00	15.4	44	1.2	THS - meteorology	Responded: THS	297, 1, 300
141	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 05:10	25.4	61	1.1	THS - meteorology	Responded: THS	297, 1, 300
142	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 05:20	18.6	42	1.1	THS - meteorology	Responded: THS	297, 1, 300
143	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 05:30	11.8	36	0.9	THS - meteorology	Responded: THS	297, 1, 300
144	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 05:30	8.7	39	1.0	THS - meteorology	Responded: THS	297, 1, 300
145	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 05:40	11.2	38	1.1	THS - meteorology	Responded: THS	297, 1, 300
146	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 06:30	10.8	43	1.3	THS - meteorology	Responded: THS	297, 1, 300
147	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 06:50	31.0	45	1.4	THS - meteorology	Responded: THS	297, 1, 300
148	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 07:00	36.9	36	1.4	THS - meteorology	Responded: THS	297, 1, 300
149	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/08/29 07:00	23.0	27	1.8	THS - meteorology	Responded: THS	297, 1, 300
150	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/08/29 07:10	27.8	27	2.1	THS - meteorology	Responded: THS	297, 1, 300
			September 2023		**0**				
1	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/09/20 03:30	13.2	14	2.1	Mondi	Effluent Treatment Plant	301, 1, 309
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/20 03:30	5.7	9	2.4	Mondi	Effluent Treatment Plant	301, 1, 309
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/21 06:30	5.1	20	1.3	Mondi	Effluent Treatment Plant	301, 1, 310
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/23 01:00	13.7	40	0.6	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
5	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/09/23 01:10	18.9	33	0.7	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
6	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/09/23 01:20	18.8	32	0.7	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
7	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/09/23 01:30	11.2	14	0.6	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/23 01:30	10.3	2	0.4	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
9	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/09/23 01:40	14.4	355	0.4	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/23 02:00	5.2	350	0.0	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/23 02:30	6.6	51	0.7	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/23 06:00	6.1	59	0.4	Mondi	Fugitive emissions due to instabiilty of Evaportion Plant	301, 1, 311
13	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 21:00	5.2	214	6.1	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 21:30	5.5	217	5.6	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
15	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 22:00	6.2	215	4.7	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 22:30	5.7	211	5.9	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
17	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 23:00	5.6	209	5.4	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/09/30 23:30	5.9	208	5.8	Local Source - unknown	Responded: Mondi, Mpact and THS	325, 321, 330
19	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 05:00	12.3	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
20	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/02 05:00	14.8	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
21	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 05:10	29.6	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
22	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 05:30	11.8	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
23	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/02 05:30	6.4	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
24	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:00	34.5	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
25	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/02 07:00	28.5	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
26	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:10	31.2	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
27	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:20	19.8	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
28	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:30	16.1	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
29	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/02 07:30	23.4	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
30	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:40	39.1	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
31	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/02 07:50	15.1	No Data	No Data	Mondi	Effluent Treatment Plant	298, 301, 312
32	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/03 22:00	13.5	No Data	No Data	Mondi	Effluent Treatment Plant	299, 301, 312
33	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/03 22:20	30.4	No Data	No Data	Mondi	Effluent Treatment Plant	299, 301, 312
34	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/03 22:30	11.9	No Data	No Data	Mondi	Effluent Treatment Plant	299, 301, 312
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/03 22:30	5.9	No Data	No Data	Mondi	Effluent Treatment Plant	299, 301, 312
36	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/15 05:20	10.6	No Data	No Data	Mpact	Cleaning and draining activities	301, 302, 1
37	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/15 05:30	19.2	No Data	No Data	Mpact	Cleaning and draining activities	301, 302, 1
38	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/15 05:30	15.7	No Data	No Data	Mpact	Cleaning and draining activities	301, 302, 1
39	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/15 05:40	20.7	No Data	No Data	Mpact	Cleaning and draining activities	301, 302, 1
40	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/15 21:20	11.9	30	4.3	Mpact	Cleaning and draining activities	301, 302, 1
41	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/15 21:30	16.9	30	3.8	Mpact	Cleaning and draining activities	301, 302, 1
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/15 21:30	8.7	36	3.8	Mpact	Cleaning and draining activities	301, 302, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
43	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/16 00:00	6.0	29	1.0	Mpact	Cleaning and draining activities	301, 302, 1
44	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/16 06:00	5.6	224	4.0	Mpact	Cleaning and draining activities	301, 302, 1
45	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/16 20:30	6.0	192	3.1	Mpact	Cleaning and draining activities	301, 302, 1
46	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/16 21:30	5.8	194	1.8	Mpact	Cleaning and draining activities	301, 302, 1
47	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/16 22:00	5.9	190	2.0	Mpact	Cleaning and draining activities	301, 302, 1
48	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/17 17:00	8.7	156	0.2	Mpact	Cleaning and draining activities	302, 1
49	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/17 17:20	17.8	222	0.3	Mpact	Cleaning and draining activities	302, 1
50	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 07:00	34.3	228	1.2	THS - meteorology	smuts clarifiers	303, 313, 330
51	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 07:00	13.0	236	1.8	THS - meteorology	smuts clarifiers	303, 313, 330
52	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 11:30	5.1	234	6.3	THS - meteorology	smuts clarifiers	303, 313, 330
53	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 16:00	5.3	231	6.4	THS - meteorology	smuts clarifiers	303, 313, 330
54	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 17:30	6.1	220	4.0	THS - meteorology	smuts clarifiers	303, 313, 330
55	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 20:30	9.1	205	2.6	THS - meteorology	smuts clarifiers	303, 313, 330
56	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 20:40	10.0	205	2.8	THS - meteorology	smuts clarifiers	303, 313, 330
57	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 20:50	17.1	204	2.0	THS - meteorology	smuts clarifiers	303, 313, 330
58	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:00	34.1	201	2.5	THS - meteorology	smuts clarifiers	303, 313, 330
59	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 21:00	40.1	202	2.2	THS - meteorology	smuts clarifiers	303, 313, 330
60	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:10	44.3	205	2.4	THS - meteorology	smuts clarifiers	303, 313, 330
61	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:20	42.0	201	1.9	THS - meteorology	smuts clarifiers	303, 313, 330

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
62	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:30	30.6	203	1.7	THS - meteorology	smuts clarifiers	303, 313, 330
63	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 21:30	45.6	202	1.8	THS - meteorology	smuts clarifiers	303, 313, 330
64	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:40	49.9	203	2.2	THS - meteorology	smuts clarifiers	303, 313, 330
65	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 21:50	56.2	199	1.6	THS - meteorology	smuts clarifiers	303, 313, 330
66	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 22:00	66.6	197	1.5	THS - meteorology	smuts clarifiers	303, 313, 330
67	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 22:00	57.5	200	1.5	THS - meteorology	smuts clarifiers	303, 313, 330
68	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 22:10	55.1	201	1.5	THS - meteorology	smuts clarifiers	303, 313, 330
69	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 22:20	50.9	202	1.5	THS - meteorology	smuts clarifiers	303, 313, 330
70	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 22:30	19.4	199	1.2	THS - meteorology	smuts clarifiers	303, 313, 330
71	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/20 22:30	10.4	200	0.9	THS - meteorology	smuts clarifiers	303, 313, 330
72	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/20 22:40	9.8	202	0.8	THS - meteorology	smuts clarifiers	303, 313, 330
73	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/21 02:30	12.0	356	0.4	Mondi	Effluent Treatment Plant	304, 1, 314
74	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/21 02:30	8.7	332	0.3	Mondi	Effluent Treatment Plant	304, 1, 314
75	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/21 02:40	10.5	337	0.3	Mondi	Effluent Treatment Plant	304, 1, 314
76	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/21 04:30	12.6	17	0.6	Mondi	Effluent Treatment Plant	304, 1, 314
77	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/21 04:50	33.5	7	0.7	Mondi	Effluent Treatment Plant	304, 1, 314
78	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/21 05:00	11.7	1	0.5	Mondi	Effluent Treatment Plant	304, 1, 314
79	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 02:30	5.2	51	0.7	Mondi	Effluent Treatment Plant	305, 1, 315
80	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 04:30	6.1	356	0.5	Mondi	Effluent Treatment Plant	305, 1, 315

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
81	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 05:00	5.3	10	0.4	Mondi	Effluent Treatment Plant	305, 1, 315
82	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 14:30	5.3	198	3.3	THS - meteorology	smuts clarifiers	305, 316, 330
83	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 15:30	5.5	197	3.3	THS - meteorology	smuts clarifiers	305, 316, 330
84	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/23 16:00	6.9	199	2.8	THS - meteorology	smuts clarifiers	305, 316, 330
85	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/24 17:00	14.6	190	2.4	THS - meteorology	smuts clarifiers	306, 317, 330
86	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/24 17:00	10.8	192	2.4	THS - meteorology	smuts clarifiers	306, 317, 330
87	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/24 17:10	13.1	196	2.6	THS - meteorology	smuts clarifiers	306, 317, 330
88	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/26 20:30	5.2	226	3.0	THS - meteorology	smuts clarifiers	307, 317, 330
89	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/26 21:00	5.9	225	3.8	THS - meteorology	smuts clarifiers	307, 317, 330
90	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/26 21:30	5.1	231	4.9	THS - meteorology	smuts clarifiers	307, 317, 330
91	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/26 22:00	5.6	224	5.7	THS - meteorology	smuts clarifiers	307, 317, 330
92	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 04:30	5.5	223	4.1	THS - meteorology	smuts clarifiers	308, 318, 330
93	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 05:00	6.1	225	3.9	THS - meteorology	smuts clarifiers	308, 318, 330
94	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 05:30	6.8	229	4.1	THS - meteorology	smuts clarifiers	308, 318, 330
95	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 06:00	7.1	230	4.4	THS - meteorology	smuts clarifiers	308, 318, 330
96	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 15:30	6.3	193	2.0	THS - meteorology	smuts clarifiers	308, 318, 330
97	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/27 15:50	9.7	191	2.0	THS - meteorology	smuts clarifiers	308, 318, 330
98	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/27 17:00	12.8	190	1.4	THS - meteorology	smuts clarifiers	308, 318, 330
99	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/27 17:00	7.4	202	1.3	THS - meteorology	smuts clarifiers	308, 318, 330

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
100	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/28 21:30	5.4	20	1.4	Mondi	Effluent Treatment Plant	319, 323
101	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/28 22:00	5.6	38	1.6	Mondi	Effluent Treatment Plant	319, 323
102	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/28 22:20	12.5	47	1.9	Mondi	Effluent Treatment Plant	319, 323
103	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/29 21:30	9.9	No Data	No Data	THS - meteorology	smuts clarifiers	320,324, 330
104	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/29 21:40	11.6	No Data	No Data	THS - meteorology	smuts clarifiers	320,324, 330
105	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/29 21:50	10.4	No Data	No Data	THS - meteorology	smuts clarifiers	320,324, 330
106	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/29 23:30	9.5	No Data	No Data	THS - meteorology	smuts clarifiers	320,324, 330
107	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/09/29 23:40	14.9	No Data	No Data	THS - meteorology	smuts clarifiers	320,324, 330
108	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/30 19:30	5.2	229	7.6	THS - meteorology	smuts clarifiers	321, 325, 330
109	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/30 20:00	6.2	223	5.9	THS - meteorology	smuts clarifiers	321, 325, 330
110	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/09/30 22:00	5.6	215	4.7	THS - meteorology	smuts clarifiers	321, 325, 330
			October 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/17 23:00	7.5	254	3.2	Mondi	Effluent Treatment Plant	334, 335
2	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/17 23:10	9.6	254	3.5	Mondi	Effluent Treatment Plant	334, 335
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/17 23:30	6.6	260	3.6	Mondi	Effluent Treatment Plant	334, 335
4	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/18 00:00	11.9	262	3.4	Mondi	Effluent Treatment Plant	336
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/18 00:00	9.7	257	3.5	Mondi	Effluent Treatment Plant	336
6	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/18 00:10	10.1	255	3.6	Mondi	Effluent Treatment Plant	336
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/18 06:00	6.6	281	1.5	Mondi	Effluent Treatment Plant	336

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
8	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/18 06:20	11.3	296	1.5	Mondi	Effluent Treatment Plant	336
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 01:30	5.3	313	1.0	Mondi	Effluent Treatment Plant	350
10	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/19 04:30	12.0	265	2.4	Mondi	Effluent Treatment Plant	350
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 04:30	10.1	246	1.8	Mondi	Effluent Treatment Plant	350
12	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/19 04:40	13.4	241	1.5	Mondi	Effluent Treatment Plant	350
13	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 05:00	11.2	269	1.8	Mondi	Effluent Treatment Plant	350
14	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/19 05:10	13.8	265	1.9	Mondi	Effluent Treatment Plant	350
15	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/19 05:20	11.8	280	1.6	Mondi	Effluent Treatment Plant	350
16	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 05:30	5.1	No Data	0.7	Mondi	Effluent Treatment Plant	350
17	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 06:00	7.3	276	2.3	Mondi	Effluent Treatment Plant	350
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/19 06:30	5.3	245	3.0	Mondi	Effluent Treatment Plant	350
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/22 08:30	6.7	261	4.2	Mondi	Fugitive emissions - Shut Conditions	351
20	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/23 04:00	5.4	265	4.1	Mondi	Fugitive emissions - Shut Conditions	351
21	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 01:00	13.7	256	3.2	Mondi	NCG vent - Shut Conditions	352
22	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 01:00	11.7	256	3.4	Mondi	NCG vent - Shut Conditions	352
23	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 01:10	9.9	255	3.7	Mondi	NCG vent - Shut Conditions	352
24	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 01:20	11.5	258	3.2	Mondi	NCG vent - Shut Conditions	352
25	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 01:30	11.3	258	3.4	Mondi	NCG vent - Shut Conditions	352
26	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 01:30	7.5	256	3.2	Mondi	NCG vent - Shut Conditions	352

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
27	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 02:00	6.4	262	3.4	Mondi	NCG vent - Shut Conditions	352
28	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 02:30	11.9	255	2.9	Mondi	NCG vent - Shut Conditions	352
29	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 02:40	13.4	248	2.8	Mondi	NCG vent - Shut Conditions	352
30	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 02:50	14.1	255	2.9	Mondi	NCG vent - Shut Conditions	352
31	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 03:00	13.6	252	2.7	Mondi	NCG vent - Shut Conditions	352
32	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 03:00	10.6	250	2.7	Mondi	NCG vent - Shut Conditions	352
33	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 03:20	11.0	249	2.8	Mondi	NCG vent - Shut Conditions	352
34	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 20:00	9.8	276	1.0	Mondi	NCG vent - Shut Conditions	352
35	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 20:20	18.8	292	0.8	Mondi	NCG vent - Shut Conditions	352
36	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 20:30	23.0	303	1.4	Mondi	NCG vent - Shut Conditions	352
37	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 20:30	29.2	305	1.1	Mondi	NCG vent - Shut Conditions	352
38	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 20:40	30.9	309	1.2	Mondi	NCG vent - Shut Conditions	352
39	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 20:50	33.8	No Data	0.8	Mondi	NCG vent - Shut Conditions	352
40	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 21:00	34.2	304	1.0	Mondi	NCG vent - Shut Conditions	352
41	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 21:00	34.4	293	1.2	Mondi	NCG vent - Shut Conditions	352
42	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 21:10	47.6	286	1.2	Mondi	NCG vent - Shut Conditions	352
43	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/25 21:20	21.3	290	1.3	Mondi	NCG vent - Shut Conditions	352
44	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/25 21:30	6.1	304	1.1	Mondi	NCG vent - Shut Conditions	352
45	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/26 00:30	14.5	No Data	0.3	Mondi	Effluent Treatment Plant	353

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
46	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/26 00:30	9.9	No Data	0.3	Mondi	Effluent Treatment Plant	353
47	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/26 00:40	11.9	No Data	0.2	Mondi	Effluent Treatment Plant	353
48	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/28 04:00	7.2	258	4.4	Mondi	Effluent Treatment Plant	354
49	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/28 04:20	13.0	255	4.4	Mondi	Effluent Treatment Plant	354
50	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/28 04:30	15.8	267	4.5	Mondi	Effluent Treatment Plant	354
51	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/28 04:30	10.3	260	4.2	Mondi	Effluent Treatment Plant	354
52	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 00:00	5.3	266	3.7	Mondi	Effluent Treatment Plant	340, 354
53	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 04:00	7.5	266	3.4	Mondi	Effluent Treatment Plant	340, 354
54	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/31 04:10	9.5	264	3.5	Mondi	Effluent Treatment Plant	340, 354
55	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 04:30	6.3	262	3.2	Mondi	Effluent Treatment Plant	340, 354
56	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 11:30	6.9	252	4.1	Mondi	Effluent Treatment Plant	340, 354
57	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 12:30	5.2	253	3.1	Mondi	Effluent Treatment Plant	340, 354
58	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 13:00	6.9	266	3.2	Mondi	Effluent Treatment Plant	340, 354
59	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 20:00	6.8	259	3.0	Mondi	Effluent Treatment Plant	340, 354
60	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/31 20:20	11.1	265	3.0	Mondi	Effluent Treatment Plant	340, 354
61	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 21:30	7.2	271	2.9	Mondi	Effluent Treatment Plant	340, 354
62	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/31 21:50	10.7	268	2.8	Mondi	Effluent Treatment Plant	340, 354
63	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 22:00	9.2	263	3.1	Mondi	Effluent Treatment Plant	340, 354
64	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/31 22:10	9.7	260	2.9	Mondi	Effluent Treatment Plant	340, 354

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
65	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/10/31 22:30	9.4	264	3.0	Mondi	Effluent Treatment Plant	340, 354
66	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 22:30	7.2	263	2.8	Mondi	Effluent Treatment Plant	340, 354
67	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/10/31 23:00	6.1	282	2.0	Mondi	Effluent Treatment Plant	340, 354
68	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/10/26 02:30	11.0	44	0.7	Mondi	Effluent Treatment Plant	354
69	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/10/26 02:30	10.9	36	0.4	Mondi	Effluent Treatment Plant	354
70	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/10/26 02:40	11.8	27	0.4	Mondi	Effluent Treatment Plant	354
71	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/10/26 02:50	9.8	35	0.2	Mondi	Effluent Treatment Plant	354
72	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/10/26 03:00	7.0	35	0.4	Mondi	Effluent Treatment Plant	354
73	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/01 03:30	6.5	No Data	No Data	THS - meteorology	smuts clarifiers	322, 326, 330
74	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/01 07:00	5.4	No Data	No Data	THS - meteorology	smuts clarifiers	322, 326, 330
75	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/08 11:30	5.5	273	No Data	THS - meteorology	smuts clarifiers	327, 330
76	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/08 12:00	5.8	No Data	No Data	THS - meteorology	smuts clarifiers	327, 330
77	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/10 19:00	12.0	213	0.7	THS - meteorology	smuts clarifiers	328, 330, 331
78	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/10 19:20	24.4	179	0.4	THS - meteorology	smuts clarifiers	328, 330, 331
79	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/10 19:30	7.4	217	0.8	THS - meteorology	smuts clarifiers	328, 330, 331
80	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/11 04:00	5.6	39	0.3	Local Source - unknown	Effluent Treatment Plant	329, 332
81	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/16 18:00	14.1	70	0.3	Local Source - unknown	Responded: Mpact, THS and Mondi	333, 344, 355
82	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/16 18:00	11.8	106	0.6	Local Source - unknown	Responded: Mpact, THS and Mondi	333, 344, 355
83	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/16 18:10	14.4	175	0.6	Local Source - unknown	Responded: Mpact, THS and Mondi	333, 344, 355

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
84	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/17 03:00	6.0	190	4.7	Mondi	Effluent Treatment Plant	334, 335
85	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 01:50	12.6	44	0.5	Mondi	Effluent Treatment Plant	337, 344, 356
86	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:00	25.7	71	0.7	Mondi	Effluent Treatment Plant	337, 344, 356
87	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/20 02:00	21.4	87	0.6	Mondi	Effluent Treatment Plant	337, 344, 356
88	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:10	23.3	94	0.7	Mondi	Effluent Treatment Plant	337, 344, 356
89	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:20	15.1	96	0.5	Mondi	Effluent Treatment Plant	337, 344, 356
90	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:30	19.0	92	0.7	Mondi	Effluent Treatment Plant	337, 344, 356
91	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/20 02:30	14.4	75	0.7	Mondi	Effluent Treatment Plant	337, 344, 356
92	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:40	12.4	64	0.8	Mondi	Effluent Treatment Plant	337, 344, 356
93	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 02:50	11.7	70	0.5	Mondi	Effluent Treatment Plant	337, 344, 356
94	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 03:00	20.3	81	0.8	Mondi	Effluent Treatment Plant	337, 344, 356
95	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/20 03:00	22.0	83	0.9	Mondi	Effluent Treatment Plant	337, 344, 356
96	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 03:10	23.4	90	0.9	Mondi	Effluent Treatment Plant	337, 344, 356
97	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 03:20	22.4	78	0.9	Mondi	Effluent Treatment Plant	337, 344, 356
98	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 03:30	17.5	74	1.1	Mondi	Effluent Treatment Plant	337, 344, 356
99	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/20 03:30	10.1	74	1.2	Mondi	Effluent Treatment Plant	337, 344, 356
100	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/20 03:40	9.9	73	1.2	Mondi	Effluent Treatment Plant	337, 344, 356
101	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/22 04:20	11.0	170	3.2	THS	Molasses spillage	338, 344, 1
102	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/26 02:30	5.3	36	0.4	THS	Molasses spillage	344

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
103	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/26 05:30	10.5	68	1.4	THS	Molasses spillage	344
104	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/26 05:40	13.9	71	1.5	THS	Molasses spillage	344
105	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/26 05:50	10.5	76	1.9	THS	Molasses spillage	344
106	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/31 14:30	12.3	179	2.3	THS	Molasses spillage	340, 344
107	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/31 14:30	8.4	187	2.1	THS	Molasses spillage	340, 344
108	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/31 15:00	13.2	185	2.1	THS	Molasses spillage	340, 344
109	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/10/31 15:00	12.3	194	2.0	THS	Molasses spillage	340, 344
110	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/10/31 15:10	15.0	192	1.9	THS	Molasses spillage	340, 344
			November 2023		**0**				
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/01 00:00	5.9	279	1.7	Mondi	NCG Vent	357
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/09 06:30	10.5	266	1.6	Mondi	Effluent Treatment Plant	345, 358
3	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/09 06:40	14.0	267	1.7	Mondi	Effluent Treatment Plant	345, 358
4	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/09 06:50	10.8	277	1.6	Mondi	Effluent Treatment Plant	345, 358
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/09 07:00	5.5	287	1.6	Mondi	Effluent Treatment Plant	345, 358
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/19 00:00	5.1	No Data	0.2	Mondi	Fugitive Emisison - Evaaps plant Trip	347, 359
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/19 06:00	11.1	214	1.9	Mondi	Fugitive Emisison - Evaaps plant Trip	347, 359
8	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/19 06:10	14.9	214	2.1	Mondi	Fugitive Emisison - Evaaps plant Trip	347, 359
9	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/19 06:20	12.5	222	2.1	Mondi	Fugitive Emisison - Evaaps plant Trip	347, 359
10	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/21 21:00	14.1	274	3.2	Mondi	Effluent Treatment Plant	360

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/21 21:00	8.8	276	2.7	Mondi	Effluent Treatment Plant	360
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/22 05:30	6.3	316	1.0	Mondi	Unstable operating conditions	349, 363
13	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/22 06:00	23.4	279	1.5	Mondi	Unstable operating conditions	349, 363
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/22 06:00	19.1	269	1.5	Mondi	Unstable operating conditions	349, 363
15	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/22 06:10	20.8	271	1.4	Mondi	Unstable operating conditions	349, 363
16	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/22 06:20	13.0	258	1.6	Mondi	Unstable operating conditions	349, 363
17	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/11/22 06:30	9.8	234	1.7	Mondi	Unstable operating conditions	349, 363
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/25 04:30	5.6	254	2.1	Mondi - meteorology	Responded: Mpact	364, 369
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/11/25 05:00	5.9	245	2.6	Mondi - meteorology	Responded: Mpact	364, 369
20	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/02 04:00	7.1	64	1.0	Mondi	Soft Wood Non-Condensable Gas	339, 341
21	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 04:20	14.4	72	1.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
22	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 04:30	36.9	37	0.7	Mondi	Soft Wood Non-Condensable Gas	339, 341
23	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/02 04:30	31.0	28	0.7	Mondi	Soft Wood Non-Condensable Gas	339, 341
24	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 04:40	30.6	23	0.9	Mondi	Soft Wood Non-Condensable Gas	339, 341
25	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 04:50	25.5	23	0.5	Mondi	Soft Wood Non-Condensable Gas	339, 341
26	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:00	22.5	341	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
27	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/02 05:00	17.0	289	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
28	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:10	15.2	278	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
29	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:20	13.3	254	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
30	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:30	11.5	334	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
31	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/02 05:30	11.8	8	0.2	Mondi	Soft Wood Non-Condensable Gas	339, 341
32	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:40	10.9	38	0.4	Mondi	Soft Wood Non-Condensable Gas	339, 341
33	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 05:50	12.8	11	0.2	Mondi	Soft Wood Non-Condensable Gas	339, 341
34	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 06:00	13.8	289	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/02 06:00	12.4	333	0.2	Mondi	Soft Wood Non-Condensable Gas	339, 341
36	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 06:10	12.9	310	0.1	Mondi	Soft Wood Non-Condensable Gas	339, 341
37	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2023/11/02 06:20	10.3	65	0.4	Mondi	Soft Wood Non-Condensable Gas	339, 341
38	TRS 30-minute WHO H_2S Limit (5.0 ppb)	eSikhaleni	2023/11/05 06:30	6.3	48	2.4	Mondi	Effluent Treatment Plant	342, 360
39	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/02 07:00	10.3	54	1.6	Mondi	Soft Wood Non-Condensable Gas	339
40	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/02 07:20	21.9	61	1.6	Mondi	Soft Wood Non-Condensable Gas	339
41	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/02 07:30	18.6	55	1.7	Mondi	Soft Wood Non-Condensable Gas	339
42	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/02 07:30	11.0	58	1.7	Mondi	Soft Wood Non-Condensable Gas	339
43	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/05 03:00	8.7	284	0.4	THS	Molasses spillage	342, 344
44	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/05 03:20	11.4	258	0.5	THS	Molasses spillage	342, 344
45	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/05 03:30	5.2	268	0.5	THS	Molasses spillage	342, 344
46	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/08 20:00	6.3	96	0.5	THS	Molasses spillage	343, 344
47	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/08 23:00	12.4	344	0.3	THS	Molasses spillage	343, 344
48	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/08 23:00	8.4	52	1.7	THS	Molasses spillage	343, 344

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
49	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/09 18:00	6.9	102	0.6	THS	Molasses spillage	344, 345
50	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/09 21:00	8.5	267	1.0	THS	Molasses spillage	344, 345
51	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/09 21:10	17.5	261	1.3	THS	Molasses spillage	344, 345
52	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/15 01:30	6.1	57	0.8	Mondi	Effluent Treatment Plant	346, 361
53	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 01:50	13.4	52	0.7	Mondi	Effluent Treatment Plant	346, 361
54	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 02:00	23.6	61	1.4	Mondi	Effluent Treatment Plant	346, 361
55	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/15 02:00	22.7	61	1.3	Mondi	Effluent Treatment Plant	346, 361
56	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 02:10	25.5	62	1.1	Mondi	Effluent Treatment Plant	346, 361
57	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 02:20	19.0	59	1.4	Mondi	Effluent Treatment Plant	346, 361
58	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 02:30	14.2	66	1.3	Mondi	Effluent Treatment Plant	346, 361
59	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/15 02:30	10.0	72	1.3	Mondi	Effluent Treatment Plant	346, 361
60	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/15 02:40	9.9	65	1.2	Mondi	Effluent Treatment Plant	346, 361
61	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 00:30	7.5	53	0.8	Mondi	Effluent Treatment Plant	347, 361
62	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/19 00:50	16.5	74	0.9	Mondi	Effluent Treatment Plant	347, 361
63	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/19 01:00	14.5	63	1.4	Mondi	Effluent Treatment Plant	347, 361
64	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 01:00	13.2	65	1.6	Mondi	Effluent Treatment Plant	347, 361
65	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/19 01:10	14.1	68	1.1	Mondi	Effluent Treatment Plant	347, 361
66	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/19 01:20	10.9	65	2.3	Mondi	Effluent Treatment Plant	347, 361
67	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 01:30	6.6	65	1.2	Mondi	Effluent Treatment Plant	347, 361

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
68	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 03:00	5.4	308	0.3	Mondi	Effluent Treatment Plant	347, 361
69	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 04:00	5.5	301	0.5	Mondi	Effluent Treatment Plant	347, 361
70	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/19 04:30	5.9	263	1.6	Mondi	Effluent Treatment Plant	347, 361
71	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/20 00:30	6.2	128	1.1	THS	Hulett effluent treatment dams. PH was low .	348, 368
72	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/20 00:50	14.4	93	1.3	THS	Hulett effluent treatment dams. PH was low .	348, 368
73	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/20 01:00	5.9	60	2.6	THS	Hulett effluent treatment dams. PH was low .	348, 368
74	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/22 00:00	27.0	272	1.4	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
75	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 00:10	10.5	263	1.4	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
76	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 00:20	69.7	288	0.8	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
77	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 00:30	24.0	26	0.1	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
78	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/22 00:30	20.6	318	0.5	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
79	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 00:40	19.0	308	0.4	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
80	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 00:50	18.8	263	1.0	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
81	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 01:00	13.0	282	0.7	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
82	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/22 01:00	8.8	271	1.2	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
83	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 01:10	10.6	263	1.0	THS	Hulett effluent treatment dams. PH was low .	349, 363, 368
84	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/22 20:00	5.3	63	1.0	Mondi	Effluent Treatment Plant	349, 363
85	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/22 23:30	6.9	67	1.5	Mondi	Effluent Treatment Plant	349, 363
86	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/22 23:50	10.3	65	1.6	THS	Settling tank desludging activities	349, 368

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
87	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/23 02:30	6.0	281	0.5	THS	Settling tank desludging activities	361, 362, 368
88	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/23 03:30	9.6	63	1.8	THS	Settling tank desludging activities	361, 362, 368
89	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/23 03:30	7.7	57	1.9	THS	Settling tank desludging activities	361, 362, 368
90	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/25 15:00	5.1	192	2.3	THS	Settling tank desludging activities	364, 368
91	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/25 17:00	5.1	212	1.5	THS	Settling tank desludging activities	364, 368
92	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/27 22:00	10.5	107	0.8	THS	Settling tank desludging activities	365, 368
93	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/27 22:00	6.8	123	1.1	THS	Settling tank desludging activities	365, 368
94	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/30 21:30	11.2	31	0.1	THS	Settling tank desludging activities	366, 368
95	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/30 21:50	21.5	23	0.1	THS	Settling tank desludging activities	366, 368
96	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/11/30 22:00	17.4	37	0.1	THS	Settling tank desludging activities	366, 368
97	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/30 22:00	11.2	33	0.1	THS	Settling tank desludging activities	366, 368
98	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/11/30 22:30	8.0	288	0.7	THS	Settling tank desludging activities	366, 368
			December 2023						
1	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/02 23:30	6.1	264	2.3	Mondi - meteorology	RBCAA allocation	1, 391
2	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/11 20:00	6.1	248	2.4	Mondi	Secondary Effluent Treatment Plant	375
3	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/13 02:00	5.9	249	3.0	Mondi	Secondary Effluent Treatment Plant	372
4	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/13 05:30	5.4	253	2.2	Mondi	Secondary Effluent Treatment Plant	372
5	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/15 04:00	6.7	228	4.2	Mondi - meteorology	RBCAA allocation	1, 391
6	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/15 06:00	5.9	250	3.2	Mondi - meteorology	RBCAA allocation	1, 391

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
7	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/15 07:00	5.1	235	4.1	Mondi - meteorology	RBCAA allocation	1, 391
8	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/19 21:00	5.2	256	3.0	Mondi	Secondary Effluent Treatment Plant	373
9	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/20 00:30	5.3	240	1.2	Mondi	Secondary Effluent Treatment Plant	374
10	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/20 01:00	5.7	252	1.1	Mondi	Secondary Effluent Treatment Plant	374
11	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/22 02:30	5.2	264	3.7	Mondi - meteorology	RBCAA allocation	1, 391
12	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/24 03:30	5.7	269	2.0	Mondi - meteorology	RBCAA allocation	1, 391
13	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/12/24 04:00	10.6	236	2.3	Mondi - meteorology	RBCAA allocation	1, 391
14	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/24 04:00	7.8	243	2.3	Mondi - meteorology	RBCAA allocation	1, 391
15	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/24 04:30	7.3	261	2.4	Mondi - meteorology	RBCAA allocation	1, 391
16	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/12/24 04:50	12.9	266	2.4	Mondi - meteorology	RBCAA allocation	1, 391
17	TRS 10-minute OME Limit (9.3 ppb)	CBD	2023/12/24 05:00	13.2	258	2.0	Mondi - meteorology	RBCAA allocation	1, 391
18	TRS 30-minute WHO H_2S Limit (5.0 ppb)	CBD	2023/12/24 05:00	8.6	297	1.4	Mondi - meteorology	RBCAA allocation	1, 391
19	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/01 00:30	6.5	52	0.7	THS	Settling tank desludging activities	367, 368
20	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/12 00:30	13.5	308	0.2	CoU	Sewage related - THS environmental forum	370, 1,391
21	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 00:40	21.2	318	0.1	CoU	Sewage related - THS environmental forum	370, 1,391
22	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 00:50	12.5	299	0.2	CoU	Sewage related - THS environmental forum	370, 1,391
23	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 01:00	10.5	335	0.2	CoU	Sewage related - THS environmental forum	370, 1,391
24	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/12 01:00	5.4	304	0.5	CoU	Sewage related - THS environmental forum	370, 1,391
25	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/12 01:30	8.9	345	0.4	CoU	Sewage related - THS environmental forum	370, 1,391

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
26	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 01:40	10.9	344	0.2	CoU	Sewage related - THS environmental forum	370, 1,391
27	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 01:50	14.0	304	0.8	CoU	Sewage related - THS environmental forum	370, 1,391
28	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 02:00	14.5	335	0.5	CoU	Sewage related - THS environmental forum	370, 1,391
29	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/12 02:00	9.1	319	0.9	CoU	Sewage related - THS environmental forum	370, 1,391
30	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/12 02:10	11.2	317	1.1	CoU	Sewage related - THS environmental forum	370, 1,391
31	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/16 07:30	6.8	268	1.1	CoU	Sewage related - THS environmental forum	371, 378, 1, 391
32	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/16 07:40	11.6	261	1.1	CoU	Sewage related - THS environmental forum	371, 378, 1, 391
33	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/17 06:00	5.3	75	0.8	CoU	Sewage related - THS environmental forum	377, 379, 1, 391
34	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/17 06:30	17.6	89	1.5	CoU	Sewage related - THS environmental forum	377, 379, 1, 391
35	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/17 06:30	13.6	85	1.7	CoU	Sewage related - THS environmental forum	377, 379, 1, 391
36	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/17 06:40	17.5	76	1.8	CoU	Sewage related - THS environmental forum	377, 379, 1, 391
37	TRS 30-minute WHO H_2S Limit (5.0 ppb)	Felixton	2023/12/21 02:00	7.3	34	0.2	CoU	Sewage related - THS environmental forum	376, 383, 1, 391
38	TRS 10-minute OME Limit (9.3 ppb)	Felixton	2023/12/21 02:10	10.9	36	0.2	CoU	Sewage related - THS environmental forum	376, 383, 1, 391

Table 2: TRS Responses

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
3	Mondi - Candice Webb responded, (10 /01/2022 08:12): Please be advised that based on Wind Direction it is unlikely that Mondi is the source of TRS.
4	Mondi - Candice Webb responded, 10 /01/2022 08:46: Mondi has investigated and identified fugitive emissions due to partial mill start up as the source of the TRS.
5	Mondi - Candice Webb responded, (10 /01/2022 08:51): Mondi has investigated and identified fugitive emissions as a result of partial mill start up as the root cause of the following TRS exceedances: TRS 30-minute WHO H2S Guideline 5 eSikhaleni 2022/01/01 00:00 6.0 303 0.4 TRS 30-minute WHO H2S Guideline 5 eSikhaleni 2022/01/01 00:30 5.4 285 0.3 TRS 30-minute WHO H2S Guideline 5 eSikhaleni 2022/01/01 03:30 6.8 75 0.4 TRS 30-minute WHO H2S Guideline 5 eSikhaleni 2022/01/01 04:00 5.4 59 0.3 TRS 30-minute WHO H2S Guideline 5 Felixton 2022/01/01 04:30 8.2 62 1.2 TRS 30-minute WHO H2S Guideline 5 Felixton 2022/01/01 05:00 41.8 31 1.7 Based on wind direction, it is unlikely that Mondi contributed to the following exceedances: TRS 30-minute WHO H2S Guideline 5 Felixton 2022/01/01 22:30 15.4 276 1.0 TRS 30-minute WHO H2S Guideline 5 Felixton 2022/01/01 23:00 7.4 262 1.6
6	Mpact - Yolandi Schoeman responded, (10/01/2022 11:23): Reports show that the paper machine had short stops from 16h00 and was running smoothly by the time when the TRS exceedance occurred at 22h30 . Effluent Plant did not conduct any pond or clarifier cleaning activities on Friday 7 Jan 2022. The reports show that the boilers ran well and therefore could not have impacted the air quality to generate a high TRS. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Friday ,7 Jan 2022.
7	Mpact - Yolandi Schoeman responded, (10/01/2022 11:23): On 8 Jan 2022 the paper machine ran smoothly with no unexpected/abnormal stops or start-ups around 03h00 to 04h00 the morning when the TRS exceedance occurred. Effluent Plant did not conduct any pond or clarifier cleaning activities at that time of the night. The reports show that the boilers ran well and therefore could not have impacted the air quality to generate a high TRS. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Saturday ,8 Jan 2022.
8	Mpact - Yolandi Schoeman responded, 10/01/2022 11:23: Reports show that the paper machine ran smoothly with no unexpected/abnormal stops or start-ups around midnight when the TRS exceedance occurred. Effluent Plant did not conduct any pond or clarifier cleaning activities at that time of the night. The reports show that the boilers ran well and therefore could not have impacted the air quality to generate a high TRS. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Sunday ,9 Jan 2022.
9	Mpact - Yolandi Schoeman responded, (10/01/2022 11:27): Reports show that the paper machine ran smoothly with no unexpected/abnormal stops or start-ups before or during the TRS exceedance. Effluent Plant did not conduct any pond or clarifier cleaning activities at that time of the night. The reports show that the boilers ran well and therefore could not have impacted the air quality to generate a high TRS. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Thursday ,5 Jan 2022.

Response	Industry Feedback
10	Mondi - Candice Webb responded, (11/01/2022 08:18): Based on prevailing wind direction and start-up conditions at the mill. It is possible that Mondi contributed to the TRS.
11	Mondi - Candice Webb responded, (11/01/2022 08:19): Based on prevailing wind direction and start-up conditions at the mill. It is possible that Mondi contributed to the TRS.
12	Mondi - Candice Webb responded, (11 /01/2022 08:21): Based on prevailing wind direction and start-up conditions at the mill, it is possible Mondi contributed to the following TRS exceedances:
13	Tongaat Hulett - Nicolas Govender responded (13/01/2022 10:05, 10:12, 10:13, 10:17, 10:18, 10:19): Response for Felixton Station, we have shut down mill operations completely since the 21st December 2021. All effluent plant operations were normal. These exceedances can possibly be related to our effluent operations which is currently being investigated by an external service provider. Further communication regarding investigations will be communicated at a later stage.
14	Tongaat Hulett - Nicolas Govender responded (13/01/2022 10:20, 10:22): We have shut down mill operations completely since the 21st December 2021. All effluent plant operations were normal. Wind directions also indicate this couldn't be related to TH.
15	Mondi - Candice Webb responded, (14 /01/2022 14:24): Based on wind direction it is unlikely that Mondi contributed to the TRS.
16	Mpact - Maggie Odayar responded, (18/01/2022 11:15): Mpact has investigated the TRS exceedance at the Felixton Station on the 14th of January 2022. The paper machine had no stops on the day as well as the steam generation plant. The effluent plant operated smoothly with no cleaning activities. Mpact is unlikely to have contributed to the exceedance in TRS.
17	Mondi - Candice Webb responded, 19 /01/2022 08:07: Based on wind direction it is possible that Mondi contributed to the TRS.
18	Tongaat Hulett - Nicolas Govender responded (19/01/2022 16:00, 16:01): We have shut down mill operations completely since the 21st December 2021. We do conduct general cleaning in the plant that cannot contribute to TRS. All effluent plant operations were normal. We are currently investigating the TRS exceedances through an external service provider.
19	Tongaat Hulett - Nicolas Govender responded 19/01/2022 16:02, 16:03: We have shut down mill operations completely since the 21st December 2021. We do conduct general cleaning in the plant that cannot contribute to TRS. All effluent plant operations were normal. We are currently investigating the TRS exceedances through an external service provider.
20	Tongaat Hulett - Nicolas Govender responded (19/01/2022 16:04, 16:05): We have shut down mill operations completely since the 21st December 2021. We do conduct general cleaning in the plant that cannot contribute to TRS. All effluent plant operations were normal. We are currently investigating the TRS exceedances through an external service provider.
21	Mpact - Yolandi Schoeman responded, (20 /01/2022 08:03): On Thursday, 13 January predominately South Westerly winds were blowing. Reports show that before and during the periods of exceedances the paper machine ran well, no ESKOM power dips occurred or any abnormal incidents that might have impacted the processes. The boiler house reports show that the stack opacities were well below the limits and there were no abnormal incidents before or during the periods of TRS exceedances. The effluent plant conducted no pond/clarifier cleaning activities on Thursday. Mpact could not have the source of the TRS exceedances experienced at the Felixton monitoring station. Effluent Plant did not conduct any pond or clarifier cleaning activities on Friday 7 Jan 2022. The reports show that the boilers ran well and therefore could not have impacted the air quality to generate a high TRS. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Friday ,7 Jan 2022.
22	Mpact - Yolandi Schoeman responded, (20/01/2022 08:18): On Friday evening, 14 January, a Northernly wind was blowing. The paper machine ran smoothly, there were no ESKOM power dips or abnormal incidences that could of disturbed the processes. The boiler house reports indicated there were no abnormal incidences. At 21h00 the evening there were no effluent pond/clarifier cleaning activities that could of contributed to the TRS exceedance.

Response	Industry Feedback
	Mpact could not have been the source of the TRS exceedances experienced at the Felixton monitoring station.
231	Mpact - Maggie Odayar responded, (2023/01/11 15:36): An easterly wind was detected at the time of the exceedance, not favouring Mpact. Investigations show that the process was stable and Mpact is unlikely to have contributed to the TRS exceedance in Felixton.
232	Tongaat Hulett - Nicolas Govender responded (2022/12/ 17 10:10): based on wind direction it is likely that our effluent plant may have caused these exceedances. We were experiencing issues with the handling of smuts clarifier water for awhile due to the delko belts. These issues will be rectified during this off crop and our dams will be better.
233	Mondi- Candice Webb Responded (2022/01/19 09:55): no root cause was identified however, based on wind direction it is possible Mondi contributed to the TRS.
234	Mondi- Candice Webb Responded (2022/01/19 09:55): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the CBD TRS. The Odour Abatement Task Team has been working on a Effluent Plant TRS reduction project.
235	Tongaat Hulett - Nicolas Govender responded (2022/12/ 17 10:10): THS did not accept responsibility for these exceedances.
236	Mondi- Candice Webb Responded (2022/01/27 10:23): **CBD** station at 15:30: Mondi has investigated and based on wind direction it is unlikely that Mondi is the source. **Felixton**: Mondi has investigated and based on wind direction it is likely that Mondi is the source. However root cause could not be identified, it is possible that fugitive emissions contributed to the TRS.
237	Mondi- Candice Webb Responded (2022/01/27 10:24): Mondi has investigated. Based on wind direction it is unlikely that Mondi is the source.
238	Mondi- Candice Webb Responded (2022/01/27 10:30): CBD station: Mondi has investigated and based on wind direction it is unlikely that Mondi is the source. Felixton station: Mondi has investigated and based on wind direction it is likely that Mondi is the source. However, root cause could not be identified, it is possible that fugitive emissions contributed to the TRS.
239	Mpact - Maggie Odayar responded, (2023/01/25 15:48): From investigations via shift reports, the paper machine and boiler house ran well on Friday night, the 20th of January. There were no unplanned stoppages and no upset conditions that could have impacted other processes. The Effluent Treatment Plant did not conduct any pond, clarifier or reservoir cleaning activities that could have potentially emitted odours. Mpact is unlikely to have contributed to the TRS exceedances on the 20th of January 2022.
240	Mpact - Maggie Odayar responded, (2023/01/25 16:14): From investigations Mpact is unlikely to have contributed to the TRS exceedances on the 22nd of January 2022. All processes were running steady and there was no cleaning activities at the effluent treatment plant. Wind speeds and wind directions were easterly which do not favour Mpact contributing to the Felixton station.
241	Mpact - Maggie Odayar responded, (2023/03/01 13:18): From investigations via January shift reports, the paper machine shut on the 25th of January 2023 between 17h50 and 20h07 for a breakdown, however the boiler house continued to run at reduced throughputs. The Effluent Treatment Plant did not conduct any pond, clarifier or reservoir cleaning activities that could have potentially emitted odours. It is very unlikely that Mpact contributed to the TRS exceedances on the 25th of January 2022, however it is possible.
242	Mpact - Maggie Odayar responded, (2023/03/01 13:08): From investigations Mpact is unlikely to have contributed to the TRS exceedances on the 24nd of January 2023. All processes were running steady and there was no cleaning activities at the effluent treatment plant. Wind speeds and wind directions were North easterly which do not favour Mpact contributing to the below exceedance.
243	Tongaat Hulett - Nicolas Govender responded (2023/03/06 08:36): 2023-01-20 exceedances were related to Tongaat Hulett effluent treatment dams. PH was low at the time of exceedances and wind direction confirms the point of source.

Response	Industry Feedback
	2023-01-25, exceedances were related to Tongaat Hulett effluent treatment dams. PH was low at the time of exceedances and wind direction confirms the point of source.
244	Mondi - Candice Webb responded, (2023/04/25 12:58): Mondi has investigated and identified the Secondary Effluent Treatment Plant (SETP) as the source of the exceedance. The SETP was stopped and ambient TRS decreased. The Odour Abatement Task team is working on addressing odour from the effluent plant ahead of the winter months.
245	Mondi - Candice Webb responded, (2023/04/2025 13:41): Mondi has investigated and identified instability of the Flare during upset conditions of the mill. Mondi aims to have the flare replaced by end of 2023 as part of the odour abatement project.
246	Mondi - Candice Webb responded, (2023/04/25 13:41): Mondi has investigated and suspected a possible leak on the methanol system. Consequently, Mondi undertook a controlled trial as part of a troubleshooting exercise between 07:00 and 08:00 on 24 March 2023 and identified a gasket leak on the top of the CPX tank. The leak was repaired on 25 March 2023.
247	Mondi - Candice Webb responded, (2023/04/25 13:41): Mondi has investigated the exceedances listed below. Based on stable operating conditions and wind direction, it is unlikely that Mondi contributed to the odour.
248	Mondi - Candice Webb responded, (2023/05/05 08:02): Mondi has investigated but has not been able to identify root cause of the exceedances listed below. It is possible that fugitive emissions from the mill contributed to the exceedances.
249	RBCAA - Sandy Camminga responded, (2023/05/11 08:51): Allocated as follows: • 6th & 7th Mondi based on WD • 28th Localised source • 29th Mondi based on WD
250	Mondi - Candice Webb responded, (2023/05/16 15:58): Mondi has investigated and identified the Secondary Effluent Treatment Plant (SETP) as the source of the exceedance. The SETP was stopped and ambient TRS decreased. The Odour Abatement Task team is working on addressing odour from the effluent plant ahead of the winter months.
251	Mondi - Candice Webb responded, (2023/05/23 14:16): Mondi has investigated. Based on wind direction it is possible that Mondi was the source, however the mill was in complete shut down with no malodourous gases generated either prior or at the time of the exceedance. In addition, no exceedances were recorded by the Mondi ambient TRS monitoring station prior to the exceedance at CBD. RBCAA - Sandy Camminga responded, (2023/05/25 18:44): Please highlight this exceedance for further investigation.
252	Tongaat Hulett - Nicolas Govender responded (2023/06/13 11:01): TH effluent plant is stabilized and have no abnormalities reported. Operations are normal during this time with no upset conditions. Based on wind direction the exceedance is likely to have been coming from our smuts clarifiers.
253	Tongaat Hulett - Nicolas Govender responded (2023/06/13 11:02): TH effluent plant is stabilized and have no abnormalities reported. Operations are normal during this time with no upset conditions. Based on wind direction the exceedance is likely to have been coming from our smuts clarifiers.
254	Mpact - Maggie Odayar responded, (2023/06/19 14:23): The attached exceedances occurred between Monday 12th of June to Sunday 18th of June. Mpact was on commercial downtime from the 8th of June until present. There were no operations active at the Paper Machine, Boiler House and Effluent Treatment plant during this period, that could have contributed to these exceedances. The Emergency Wastewater ponds were also not utilised or discharged from during this period. It is highly unlikely that Mpact is the source of the TRS exceedance
255	Mpact - Anzel Horn responded, (2023/06/20 11:54): Please see Mpact's response to the below exceedances on the 19th of June 2023: There were no operations active at the Paper Machine and Boiler House during this period that could have contributed to these exceedances. The Effluent Treatment plant is currently in operation but there were no upset conditions reported since start-up. Furthermore, the exceedances happened in the very early hours of the morning while our effluent plant was only

Response	Industry Feedback
	operational from 12 noon on the 19th, hence it is highly unlikely that Mpact is the source of the TRS exceedances. Please also note that we are still currently on commercial downtime.
256	Mpact - Maggie Odayar responded, (2023/06/22 08:35): Kindly find Mpact's response to the TRS exceedance at the Felixton station for the 20th of June. Mpact is on commercial downtime from the 8th of June until present. There were no operations active at the Paper Machine and Boiler House. The Effluent Treatment Plant is partially in operation however there are no cleaning or desludging activities taking place that could be the source of the TRS exceedances.
257	Mpact - Maggie Odayar responded, (2023/06/22 12:45): Kindly find Mpact's response to the TRS exceedances at the Felixton station for the 21st of June. Mpact is on commercial downtime from the 8th of June until present. There were no operations active at the Paper Machine and Boiler House. The Effluent Treatment Plant is partially in operation however there are no cleaning or desludging activities taking place that could be the source of the TRS exceedances.
258	Mpact - Anzel Horn responded, (2023/06/26 08:28): Kindly find Mpact's response to the TRS exceedance at the Felixton station on the 22nd of June: Mpact is on commercial downtime from the 8th of June until present. There were no operations active at the Paper Machine and Boiler House. The Effluent Treatment Plant was partially in operation and there were no cleaning or desludging activities that took place. The effluent plant was stopped at 05h00 on the 22nd, hence there were no activities that could have been the source of the TRS exceedances.
259	Mpact - Anzel Horn responded, (2023/06/26 08:30): Mpact is on commercial downtime from the 8th of June until present. There were no operations active at the Paper Machine and Boiler House. The Effluent Treatment Plant was partially in operation and there were no cleaning or desludging activities that took place. The effluent plant was stopped at 05h00 on the 22nd, hence there were no activities that could have been the source of the TRS exceedances.
260	Mondi - Candice Webb responded, (2023/07/03 12:32): Mondi has investigated. Based on wind direction it is possible that Mondi was the source, Mondi was in the process of starting the millat the time of the exceedaces.
261	Mondi - Candice Webb responded, (2023/07/03 12:43): Mondi has investigated. The exceedance is most likely due to a methanol leak that was identified during the early hours of the morning. The leak has since been repaired.
262	Mpact - Anzel Horn responded, (2023/07/03 13:39): Please see response below for the TRS exceedances on the 26th of June 2023: It should be noted that the mill started up again from the 26th of June following the extended commercial shut that took place. Due to start-up, some pulp and stagnant water during the shutdown period could have released some odours. Effluent Plant reports indicated that the plant was running under normal conditions. No cleaning, desludging or draining activities took place at the time that could have contributed to any odours. The wastewater ponds were stagnant over the commercial shut and this may have developed odours, however the wind direction (SW-NW) during the time was not in favour of Mpact.
263	Mpact - Anzel Horn responded, (2023/07/03 14:03): Please see the below response for the TRS exceedance recorded on the 27th of June 2023: It should be noted that the mill started up again from the 26th of June following the extended commercial shut that took place. Due to start-up, some pulp and stagnant water during the shutdown period could have released some odours. Effluent Plant reports indicated that the plant was running under normal conditions. No cleaning, desludging or draining activities took place at the time that could have contributed to any odours. The wastewater ponds were stagnant over the commercial shut and this may have developed odours and due to a southerly (184°) wind, some odours could have potentially contributed to the exceedance recorded at the Felixton station.
264	Mpact - Anzel Horn responded, (2023/07/03 15:08): Please see the response below for the TRS exceedances recorded on the 28th of June 2023: It should be noted that the mill started up again from the 26th of June following the extended commercial shut that took place. Due to start-up, some pulp and stagnant water during the shutdown period could have released some odours. Effluent Plant reports indicated that the plant was running under normal conditions. Wastewater from the ponds were recovered and treated in the effluent treatment plant. Furthermore, the wind direction during the time was not in favour of possible odours arising from the Mpact facility.
265	Tongaat Hulett - Nicolas Govender responded (2023/07/04 15:35): The effluent plant operations and the factory are normal. No abnormalities noted in recent weeks. Kindly note that lines 174 to 302 is related to our smuts clarifiers and I am currently discussing with the engineer on a long term strategy.
266	Mondi - Nosipho Ntombela responded, (2023/07/06 13:25): Mondi has investigated and identified the Secondary Effluent Treatment Plant (SETP) as the source of the exceedance. The SETP was stopped and ambient TRS decreased. Mondi has identified an SETP Management Procedure for the winter months in response to elevated ambient TRS from monitoring stations.

Response	Industry Feedback
267	Mondi - Nosipho Ntombela responded, (2023/07/06 13:25): Mondi has investigated. Based on wind direction , it is possible Mondi is the source due to a low moving plume of odour after switching off the SETP.
268	Mpact - Anzel Horn responded, (2023/07/11 14:11): Please see response to the TRS exceedances on the 8th of July below:The effluent treatment plant shift reports indicate that no abnormal conditions occurred and that the plant ran well with no stagnant water that could cause odours. The weather conditions indicate that N-NE winds were present at the time of the exceedances, which are not in favour of any odours arising from Mpact operations.
269	Mpact - Anzel Horn responded, (2023/07/11 14:1): Please see response to the TRS exceedances on the 9th of July below: The effluent treatment plant shift reports indicate that no abnormal conditions occurred and that the plant ran well with no stagnant water that could cause odours. The weather conditions indicate that SSW & SW winds were present at the time of the exceedances, which are not in favour of any odours arising from Mpact operations.
270	Tongaat Hulett - Nicolas Govender responded (2023/07/18 10:36): Our effluent plant is very stable currently with no abnormalities. The smuts clarifiers were drained and cleaned out for sludge and ash build up. Therefore lines 326 to 335 is highly unlikely to be TH. Exceedances on lines 336 to 341 may have been from the smuts clarifiers based on wind direction, however no abnormalities were noted during this time. We are investigating this further.
271	Mpact - Anzel Horn responded, (2023/07/20 15:41): Please see response to the TRS exceedances for the 19th of July: Effluent Treatment Plant shift reports indicated no abnormal conditions within the plant at the time of the exceedances and the wind direction (SW-E) was not in favour of possible odours caused by activities at Mpact. Also note that the paper machine is on shutdown.
272	Tongaat Hulett - Nicolas Govender responded (2023/07/31 13:39): Our effluent plant is very stable currently with no abnormalities noted. Based on wind direction it is unlikely that TH had contributed to these exceedances from lines 326 to 335. The effluent has no abnormalities currently, the smuts clarifiers were drained and cleaned out therefore these exceedances for Lines 342 to 350 are not likely to have come from TH.
273	Mondi - Candice Webb responded, (2023/08/01 09:04): Mondi has investigated this exceedance and determined that mill was operating under stable conditions, all point source emissions were within specification and the Secondary Effluent Treatment Plant was offline at the time. Based on this and low wind speed, it is unlikely that Mondi was the source.
274	Mpact - Anzel Horn responded, (2023/08/01 10:14): Please see response to the TRS exceedance on the 30th of July: Kindly note that we were on annual shut at the time and our effluent plant was subsequently offline as well. Considering the wind direction (ENE) and wind speed, Mpact was unlikely to have contributed to the TRS exceedance at the Felixton station.
275	Mpact - Anzel Horn responded, (2023/08/01 13:38): Please see response to the TRS exceedances on the 31st of July: Kindly note that we were on annual shut at the time and our effluent plant was subsequently offline as well. Considering the wind direction (E) and wind speed, Mpact was unlikely to have contributed to the TRS exceedance at the Felixton station.
276	Mpact - Anzel Horn responded, (2023/08/04 10:08): Please note that our effluent treatment plant was running under stable conditions on the 2nd of August. The wind direction (NE) and wind speed was not in favour of any emissions caused by Mpact operational activities.
277	Tongaat Hulett - Nicolas Govender responded (2023/08/07 15:17): Please responses below for exceedances on TRS. Lines 351 to 353 & 355 to 358 – Effluent plant and smuts plant was operational with no abnormalities noted. Based on wind direction the exceedances are highly unlikely to have emanated from the sugar mill. Lines 359 to 366 – Effluent plan and smuts plant was operational with no abnormalities noted during this time. Based on wind direction and speed it is likely that H2S gases may have carried up to village from the effluent plant. Line 367 to 403 - Effluent plant and smuts plant was operational with no abnormalities noted. Based on wind direction the exceedances are highly unlikely to have emanated from the sugar mill.
278	Mpact - Anzel Horn responded, (2023/08/08 08:03): Please see response to the TRS exceedances on the 3rd of August 2023: The effluent plant shift reports indicate that the plant was running under normal conditions. The wind direction was predominantly NE from 00h00 to 07h00 and N from 07h10, hence the wind direction and wind speed was not in favour of any emissions from Mpact operational activities.

Response	Industry Feedback
279	Mpact - Anzel Horn responded, (2023/08/08 08:19): Please see response to the TRS exceedances on the 1st of August 2023: The effluent plant shift reports indicate that the plant was running under stable conditions. The wind direction was predominantly NNE from 06H20 to 06H40 and SSW from 16H00 to 16H50, hence the wind direction, wind speed and operational activities at the time, was not in favour of any emissions from Mpact.
280	RBCAA Allocation, (2023/08/08 15:30): 270° unkown local source (sewage maybe)
281	Mondi - Candice Webb responded, (2023/08/08 15:00, RBCAA and Candice telephonic reply): Methanol to effluent plant.
282	RBCAA Allocation, (2023/08/08 15:30): Unkown local source.
283	Mondi - Candice Webb responded, (2023/08/11 12:14): Mondi has investigated. Based on wind direction , it is possible Mondi is the source from Mondi SETP.
284	Mondi - Candice Webb responded, (2023/08/11 12:14): Mondi has investigated. Based on wind direction , it is possible Mondi is the source from Mondi SETP.
285	Mondi - Candice Webb responded, (2023/08/11 12:16): Mondi has investigated, based on low wind speeds, stable operating conditions and the fact that the Mondi effluent treatment plan was offline at the time of this incident. Mondi feels that it is unlikely that Mondi contributed to the exceedance.
286	Mondi - Candice Webb responded, (2023/08/14 12:32): Mondi has investigated the TRS exceedance below. The exceedance aligns with a dip in mill effluent pH at 02:00 on the morning of the 13th August. Although the automated neutralisation system did activate as is required, it was insufficient to reduce the TRS released from the effluent plant. As corrective action, Mondi will investigate possible improvements to prevent a reoccurrence.
287	Mpact - Anzel Horn responded, (2023/08/16 12:23): The effluent plant shift reports indicated no abnormal conditions that could have caused exceeding TRS emissions on the 15th of August 2023. The south-westerly wind was not in favour of Mpact operational activities.
288	Mpact - Anzel Horn responded, (2023/08/16 12:23): During 01h50 the wind direction was south (191 degrees), however the effluent plant shift reports confirm that the plant was running well and under stable conditions on the 14th of August 2023. The dominant wind directions further indicates that north-easterly and north-westerly winds occurred during the exceedance times, which is not in favour of Mpact operational activities.
289	Tongaat Hulett - Nicolas Govender responded (2023/08/16 15:11): Lines 413 to 418, Effluent plant and smuts plant was operational with no abnormalities noted. Based on wind direction the exceedances are highly unlikely to have emanated from the sugar mill. Lines 419 to 432, investigations indicated that we used coal from around 23:00 on the 13th August 2023 through till about 05:00am. This may have caused the exceedances which emanated from the smuts clarifiers. High coal usage was recorded due to one boiler being taken out for emergency maintenance. Line 433 – possibly emanated from the smuts clarifiers due to the high coal usage the previous day.
290	Mpact - Anzel Horn responded, (2023/09/01 09:35): Based on shift reports the process was running under fairly stable conditions on the 18th of August. Treated effluent was pumped into the emergency storage ponds due to a pipeline failure. Based on wind directions there is a possibility that emissions emanated from Mpact operational activities.
291	Mpact - Anzel Horn responded, (2023/09/01 09:37): Based on shift reports the process was running under fairly stable conditions on the 19th of August. Treated effluent was pumped into the emergency storage ponds due to a pipeline failure, however the north-easterly wind was not in favour of emissions from Mpact operational activities.
292	Mpact - Anzel Horn responded, (2023/09/01 09:40): The effluent shift reports indicate that the effluent treatment plant was operating under stable conditions on the 22nd of August. The wind direction further was not in favour of any emissions from Mpact operational activities.
293	Mpact - Anzel Horn responded, (2023/09/01 09:39): Based on wind directions there is a possibility that emissions emanated from Mpact operational activities on the 20th of August 2023. Treated effluent was pumped into the emergency storage ponds due to a pipeline failure and this could have potentially contributed to the TRS exceedances.
294	Mpact - Anzel Horn responded, (2023/09/01 09:41): The effluent plant shift report for the 23rd of August indicates no abnormal operating conditions that could have contributed to the TRS exceedances. The wind direction was also not in favour of emissions from Mpact operational activities.

Response	Industry Feedback
295	Mpact - Anzel Horn responded, (2023/09/01 09:42): The effluent plant shift report for the 24th of August indicates no abnormal operating conditions that could have contributed to the TRS exceedances. The wind direction was not in favour of emissions from Mpact operational activities either as it was a predominantly SSW wind at the time.
296	Mpact - Anzel Horn responded, (2023/09/01 09:45): Based on wind direction, Mpact did not contribute to the TRS exceedance on the 27th of August.
297	Tongaat Hulett - Nicolas Govender responded (2023/09/01 12:13): Kindly see responses for TRS exceedances below. Line 451 to 459 - Effluent plant and smuts plant was operational with no abnormalities noted. PH's at the effluent plant were all within spec with no excessive loading from the plant. Exceedances are highly unlikely to have emanated from the sugar mill. Line 460 to 466 – Effluent plant and smuts plant was operational with no abnormalities noted. PH's at the effluent plant were all within spec with no excessive loading from the plant. Exceedances are highly unlikely to have emanated from the sugar mill. Line 467 to 475 - Effluent plant and smuts plant was operational with no abnormalities noted. PH's at the effluent plant were all within spec with no excessive loading from the plant. Exceedances are highly unlikely to have emanated from the sugar mill. Line 476 to 485 - Effluent plant and smuts plant was operational with no abnormalities noted. PH's at the effluent plant were all within spec with no excessive loading from the plant. Exceedances are highly unlikely to have emanated from the sugar mill. Line 486 to 505 - Effluent plant and smuts plant was operational with no abnormalities noted. PH's at the effluent plant were all within spec with no excessive loading from the plant. Exceedances are highly unlikely to have emanated from the sugar mill. Wind direction and speed indicate that it could have not emanated from the sugar mill.
298	Mpact - Anzel Horn responded, (2023/09/06 07:26): The effluent treatment plant shift report for the 2nd of September 2023 indicates that our clarifier was being manually desludged from 07:00 to 16:00, which could have contributed to the TRS exceedances recorded, however no wind data was available to confirm if the meteorological conditions were in favour of Mpact operational activities at the time of the exceedances.
299	Mpact - Anzel Horn responded, (2023/09/06 09:06): The effluent treatment plant shift report for the 3rd of September 2023 indicates that our clarifier was being manually desludged from 07:00 to 16:00, however the TRS exceedances were recorded much later at 22h00 and 22h30 at night. Furthermore no wind data was available to confirm if the meteorological conditions were in favour of Mpact operational activities, hence it was concluded that Mpact did not contributed to the exceedances at the time.
300	RBCAA Allocation, (2023/09/07 15:30)
301	Tongaat Hulett - Nicolas Govender responded (2023/09/19 08:55): Kindly see responses below for exceedances on TRS, Lines 507 to 519 – Effluent plant PH was normal, throughput tonnages were also within parameters. No abnormal activities were conducted to have caused these exceedances. Lines 520 to 523 - Effluent plant PH was normal, throughput tonnages were also within parameters. No abnormal activities were conducted to have caused these exceedances. Lines 524 to 535 - Effluent plant PH was normal, throughput tonnages were also within parameters. No abnormal activities were conducted to have caused these exceedances
302	Mpact - Anzel Horn responded, (2023/09/19 10: 10, 10:11 and 10:13): Mpact Operations shut at 6am on the 15th of September. The effluent plant continued to run as normal. Cleaning and draining took place which could possibly have contributed to the high TRS concentrations recorded.
303	Mpact - Anzel Horn responded, (2023/09/28 13:40): Mpact Operations was shut on the 20th of September. The effluent plant continued to run as normal. Cleaning and draining took place which could contribute to TRS emissions, however the wind direction was not in favour of Mpact operational activities during the times recorded below.

Response	Industry Feedback
304	Mpact - Anzel Horn responded, (2023/09/28 13:43): Mpact Operations was shut on the 21st of September. The effluent plant continued to run as normal. Cleaning and draining took place which could contribute to TRS emissions, however the wind direction was not in favour of Mpact operational activities during the times recorded below.
305	Mpact - Anzel Horn responded, (2023/09/28 14:25): Mpact Operations was shut on the 23rd of September. The effluent plant continued to run as normal. Cleaning and draining took place which could contribute to TRS emissions, however the wind direction was not in favour of Mpact operational activities during the times recorded below.
306	Mpact - Anzel Horn responded, (2023/09/28 14:25): Mpact Operations was shut on the 24th of September. The effluent plant continued to run as normal. Cleaning and draining took place which could contribute to TRS emissions, however the wind direction was not in favour of Mpact operational activities during the times recorded below.
307	Mpact - Anzel Horn responded, (2023/09/28 15:00): Mpact operations was shut and the effluent plant operated under stable conditions on the 26th of September. Cleaning and draining took place which could contribute to TRS emissions, however the wind directions confirm that Mpact could not have contributed to the TRS exceedances below
308	Mpact - Anzel Horn responded, (2023/09/28 15:02): Mpact operations was shut and the effluent plant operated under stable conditions on the 27th of September. Cleaning and draining took place which could contribute to TRS emissions, however the wind directions confirm that Mpact could not have contributed to the TRS exceedances below.
309	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction , it is possible Mondi is the source from Mondi SETP.
310	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction , it is possible Mondi is the source from Mondi SETP.
311	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction and mill instabilities t is possible TRS was genearted by fugitive emissions from Mondi Evaportaion plant.
312	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. It is possible Mondi is the source from Mondi SETP.
313	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction it is unlikly that Mond is the source.
314	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. It is possible Mondi is the source from Mondi SETP.
315	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. It is possible Mondi is the source from Mondi SETP.
316	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction it is unlikly that Mond is the source.
317	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction it is unlikly that Mond is the source.
318	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Based on wind direction it is unlikly that Mond is the source.
319	Mondi - Candice Webb responded, (2023/09/29 15:45 on exceedance log): Mondi has investigated. Fugitive emisisons from the Secondary Effluent Treatment plant is the most likely source.
320	Mondi - Candice Webb responded, (2023/10/02 08:08): Mondi has investigated the TRS exceedances for both the 10min and 30min averages on the 29th of September 2023. Based on stable operating conditions and calm wind speeds it is more likely that the source of the TRS was local.
321	Mondi - Candice Webb responded, (2023/10/02 08:11): Mondi has investigated the TRS exceedances on 30th September 2023. Based on wind direction it is unlikely that Mondi is the source.
322	Mondi - Candice Webb responded, (2023/10/02 08:13): Mondi has investigated the TRS exceedances on the 01st of October 2023. Based on stable operating conditions and calm wind speeds it is more likely that the source of the TRS was local.
323	Mpact - Anzel Horn responded, (2023/10/03 09:49 and 09:50): The effluent treatment plant shift report indicates that the plant ran under stable conditions on the 28th of September, and the wind direction was not in favour of any TRS emissions from Mpact operational activities at the time of the exceedances.

Response	Industry Feedback
324	Mpact - Anzel Horn responded, (2023/10/06 13:15 and 13:17): The effluent treatment plant shift report indicates that the plant ran under stable conditions on the 29th of September. Unfortunately no wind data was available during the time of the exceedances, however plant conditions indicate that the exceedances were unlikely to be caused by Mpact operational activities.
325	Mpact - Anzel Horn responded, (2023/10/06 13:17): The effluent treatment plant shift report indicates that the plant ran under stable conditions on the 30th of September, and the wind direction was not in favour of any TRS emissions from Mpact operational activities at the time of the exceedances.
326	Mpact - Anzel Horn responded, (2023/10/06 13:18): The effluent treatment plant shift report indicates that the plant ran under stable conditions on the 1st of October. Unfortunately no wind data was available during the time of the exceedances, however plant conditions indicate that the exceedances were unlikely to be caused by Mpact operational activities.
327	Mondi - Candice Webb responded, (2023/10/10 09:50): Mondi has investigated. Based on wind direction, it is unlikely that Mondi was the source.
328	Mondi - Candice Webb responded, (2023/10/11 09:51): Mondi has investigated. Based on wind direction, it is unlikely that Mondi was the source.
329	Mondi - Candice Webb responded, (2023/10/12 09:51): Mondi has investigated. Based on wind direction it is likely that Mondi is the source. Root cause is most likely associated with the SETP which was only switched off at 04:00 as per existing odour management plan.
330	Tongaat Hulett - Nicolas Govender responded (2023/10/17 14:36): Kindly see feedback below and allocate accordingly. 556 to 578 – The effluent plant operations were stable with all Ph's normal. The plant conditions was also normal. Based on the wind direction it is possible that the Smuts plant may have contributed to the TRS exceedances for this period. 588 to 605 – The effluent plant operations were stable with all Ph's normal. The plant conditions was also normal. Based on the wind direction it is possible that the Smuts plant may have contributed to the TRS exceedances for this period. 609 to 616 – The effluent plant operations were stable with all Ph's normal. The plant conditions was also normal. Based on the wind direction for the 30th it is possible that the Smuts plant may have contributed to the TRS exceedances for the both days. 618 to 624 – The effluent plant operations were stable with all Ph's normal. The plant conditions was also normal. Based on the available data for wind direction for the period between the 1st and the 10th it is possible that the Smuts plant may have contributed to the TRS exceedances for these days. The Smuts accumulation around the Smuts plant would contribute to TRS especially if there had been any overflows from the cooling towers or any other water sources.
331	Mpact - Anzel Horn responded, (2023/10/17 13:42): The effluent plant shift reports indicate that the plant was running under stable conditions on the evening of the 10th of October. Mpact operational activities could therefore not have been the source of the exceedances recorded.
332	Mpact - Anzel Horn responded, (2023/10/17 13:43): The effluent plant shift reports indicate that the plant was running under stable conditions on the morning of the 11th of October. Mpact operational activities could therefore not have been the source of the exceedances recorded.
333	Mpact - Anzel Horn responded, (2023/10/17 13:44): The effluent plant shift reports indicate that the plant was running under stable conditions on the evening of the 16th of October. Mpact operational activities could therefore not have been the source of the exceedances recorded.
334	Mpact - Anzel Horn responded, (2023/10/18 10:05): The effluent plant shift reports confirm that the plant ran well and under stable conditions on the 17th of October. The wind direction confirms that Mpact operational activities were not the root cause of the exceedance recorded at 03h00 in the morning at Felixton.
335	Mondi - Candice Webb responded, (2023/10/19 13:09): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the odour at the CBD station. During the time of the exceedances, Mondi was processing poor quality effluent through the treatment plant, and at the same time reclaiming effluent from the Emergency Ponds. This coupled with inclement weather conditions resulted in the exceedances. Mondi has revised the SETP Odour Management Procedure to state that reclaiming from the emergency ponds will no longer occur during the night. The updated procedure will be communicated to all operators and managers.
336	Mondi - Candice Webb responded, (2023/10/19 13:08): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the odour. During the time of the exceedances, Mondi was processing poor quality effluent through the treatment plant, and at the same time reclaiming effluent from the Emergency Ponds. This coupled with inclement weather conditions resulted in the exceedances.

Response	Industry Feedback
	Mondi has revised the SETP Odour Management Procedure to state that reclaiming from the emergency ponds will no longer occur during the night. The updated procedure will be communicated to all operators and managers.
337	Mpact - Anzel Horn responded, (2023/10/24 14:12): The effluent plant shift report for the 20th of October indicates that the plant was running under stable conditions during the time of the TRS exceedances. There were no abnormal conditions during this time. The TRS source is unlikely to be from Mpact.
338	Mpact - Anzel Horn responded, (2023/10/24 14:14): The effluent plant shift report for the 22nd of October indicates that the plant was running under stable conditions during the time of the TRS exceedances and the average wind direction was not in favour of Mpact operational activities.
339	Mondi - Candice Webb responded, (2023/11/03 08:37): Mondi has investigated and identified a vent of Soft Wood Non-Condensable Gas, as the root cause of the TRS exceedance. Mondi is undertaking an investigation to identify appropriate preventative measures.
340	Mpact - Anzel Horn responded, (2023/11/07 08:31): The plant shift reports confirms that the process experienced no abnormal conditions on the 31st of October 2023 that could have caused any TRS exceedances.
341	Mpact - Anzel Horn responded, (2023/11/10 07:36): The effluent plant shift reports confirm that the plant was running well and under stable conditions on the 2nd of November 2023. The wind direction was ENE, which is not in favour of Mpact operational activities.
342	Mpact - Anzel Horn responded, (2023/11/10 07:37): The effluent plant shift reports confirm that the plant was running well and under stable conditions on the 5th of November 2023. No abnormal conditions or draining/cleaning occurred in the plant, therefore Mpact could not have contributed to the TRS exceedances recorded.
343	Mpact - Anzel Horn responded, (2023/11/16 08:45): The process plant was confirmed to be operating under stable conditions on the 8th of November 2023. The plant did not experience any upset conditions at the time the TRS exceedances were recorded.
344	Tongaat Hulett - Nicolas Govender responded (2023/11/16 10:10): Lines 698 to 700 – Investigations indicate no abnormalities in operations and the effluent plant was stable. Based on this and the wind direction, it is unlikely to be Tongaat Hulett. Lines 702 to 717 - Investigations indicate no abnormalities in operations and the effluent plant was stable. PH's at the effluent plant and smuts plant was also normal. Based on this and wind direction it is unlikely to be Tongaat Hulett. Lines 718 to 727 – These exceedances are related to a Molasses spillage that occurred on the 19 October 2023 which contaminated the Stormwater canal. We had created a berm to contain the molasses west of the N2 in the stormwater water canal to prevent further contamination downstream, monitoring results of the area indicate low PH's, odours were also observed in the vicinity. Lines 757 to 765 - These exceedances are also related to the Molasses spillage that occurred on the 19 October 2023. Although a large amount of the spill in this area was cleaned out, the process of rehabilitation has not yet begun due to approvals from the DWS.
345	Mpact - Anzel Horn responded, (2023/11/17 08:47): The process plant was running under stable conditions on the 9th of November, however the reservoir to sea pump had to go offline from 09h45 until 04h00 on the 10th as per planned maintenance on the side of Umngeni-Uthukela Water, hence there were overflows to the emergency storage pond during that time. The overflows did not cause any abnormal emissions during the time.
346	Mpact - Anzel Horn responded, (2023/11/24 09:07): The process plant was running well and under stable conditions on the 15th of November and the wind direction was not in favour of any emissions from Mpact operational activities.
347	Mpact - Anzel Horn responded, (2023/11/24 09:08): The process plant shift reports indicate that the plant was running well and under stable conditions on the 19th of November. The wind direction was recorded predominantly NE, W to NW which are not in favour of any emissions from Mpact operational activities.
348	Mpact - Anzel Horn responded, (2023/11/24 09:08): The process plant was running well and under stable conditions on the 20th of November despite the south-easterly wind direction at 00h30. No abnormal/cleaning/desludging activities were recorded. Hence it was concluded that Mpact operational activities could not have contributed to the exceedances recorded at the time.
349	Mpact - Anzel Horn responded, (2023/11/24 09:08): The process plant shift reports confirm that the plant was running well and under stable conditions on the 22nd of November and the west to north-westerly winds were not in favour of any emissions from Mpact operational activities.
350	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the odour at the CBD station. During the time of the exceedances, Mondi was processing poor quality effluent through the treatment plant.

Response	Industry Feedback
351	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated and identified fugitive emissions during shut conditions wich contributed to the odour.
352	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated and identified NCG vent on start up of the mill as root cause.
353	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated and identified NCG vent on start up of the mill as root cause.
354	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the odour . During the time of the exceedances, Mondi was processing poor quality effluent through the treatment plant.
355	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated, based on low wind speeds, stable operating conditions and the fact that the Mondi effluent treatment plan was offline at the time of this incident. Mondi feels that it is unlikely that Mondi contributed to the exceedance.
356	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated,it is likely the SETP contributed to the odour.
357	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated,it is likely that a softwood NCG vent contributed to the odour.
358	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated,it is likely the SETP contributed to the odour.
359	Mondi - Candice Webb responded, (2023/11/24 13:00): Mondi has investigated,it is likely tthat fugitive emissions as a reslt of the Evaportaion Plant tripping wasthe contributing factor.
360	Mondi - Candice Webb responded, (2023/11/24 13:00 and 16:02): Mondi has investigated,it is likely the SETP contributed to the odour.
361	Mpact - Maggie Odayar responded, (2023/11/24 14:08): The process plant was running well with no abnormal/desludging activities reported on the 23rd of November. The wind direction was NE at 03h30 which is not in favour of emissions caused by Mpact operational activities.
362	Mondi - Candice Webb responded, (2023/11/24 15:51): Mondi has investigated. Based on low wind speeds, and stable operating conditions it is unlikely that Mondi was the source.
363	Mondi - Candice Webb responded, (2023/11/24 16:01): The Felixton exceedances at 20:00 and 23:30 on the 22 November 2023, were most likely attributed to the Secondary Effluent Treatment Plant at Mondi. However, based on wind direction it is unlikely that Mondi contributed tot the Felixton exceedances between midnight and 01:00.
364	Mpact - Maggie Odayar responded, (2023/12/04 14:07): The process plant was running well and under stable conditions on Saturday 25th November. There were no desludging or cleaning activities on the day. It is unlikely Mpact is the source of the TRS exceedances.
365	Mpact - Maggie Odayar responded, (2023/12/04 14:30): The process plant was running well and under stable conditions on the 27th of November. The secondary clarifier was being manually desludged during the day however this does not correspond with the time of the exceedances. It is unlikely Mpact is the source of the TRS exceedances.
366	Mpact - Maggie Odayar responded, (2023/12/04 14:37): The process plant was running well and under stable conditions on the 30th of November. There were upset conditions at the paper machine during the day, and the secondary clarifier was being manually desludged during the day. It is unlikely Mpact is the source of the TRS exceedances.
367	Mpact - Maggie Odayar responded, (2023/12/04 14:43): It is unlikely Mpact is the source of the TRS exceedances, process conditions were stable on the day and no abnormal conditions occurred.
368	Tongaat Hulett - Nicolas Govender responded (2023/12/07 10:21): Kindly see responses for exceedances below. Lines 799 to 811, We had experienced some low Ph's on dam 1, there was a slight odour and this may have led to the exceedances. Lines 814 to 826 and line 829, we were desludging our settling tank during this time and this may have led to the exceedances.
369	RBCAA Allocation, (2023/12/07 13:30)
370	Mpact - Anzel Horn responded, (2023/12/13 10:11): The process plant shift reports indicate that the plant was running under stable conditions with no abnormal conditions occurring on the 12th of December, hence Mpact could not have been the source of the TRS exceedances recorded at the time

Response	Industry Feedback
371	Mpact - Anzel Horn responded, (2023/12/20 13:56): The process plant shift reports indicate that the plant was running under stable conditions on the 16th of December. The effluent plant was shut since the morning of 15th and subsequent overflows was sent to the emergency storage ponds. The wind direction was not in favour of any emissions from Mpact operational activities at the time of the exceedances.
372	Mondi - Candice Webb responded, (2023/12/21 08:59): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the TRS. Mondi is investigating options to improve the odour.
373	Mondi - Candice Webb responded, (2023/12/21 09:00): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the TRS. Mondi is investigating options to improve the odour.
374	Mondi - Candice Webb responded, (2023/12/21 09:01): Mondi has investigated and identified the Secondary Effluent Treatment Plant as the source of the TRS. Mondi is investigating options to improve the odour.
375	Mondi - Candice Webb responded, (2023/12/12 09:25): Mondi has investigated and identified the Mondi Secondary Effluent Treatment Plant (SETP) as the source of the odour. Once the SETP was switched offline the ambient odour dissipated. Mondi is reviewing further mitigation measures to reduce fugitive emissions from the SETP.
376	Mondi - Candice Webb responded, (2023/12/22 10:37): Mondi has investigated, based on low wind speeds, stable operating conditions and the fact that the Mondi effluent treatment plant was offline at the time of this incident. Mondi feels that it is unlikely that Mondi contributed to the exceedance.
377	Mondi - Candice Webb responded, (2023/12/21 09:06): The mill was experiencing stable operating conditions, all point source emissions were within specification and the Secondary Treatment Plant was offline at the time for odour control measures. Based on low wind speed, it may be possible that the TRS was generated in a localised area.
378	Mondi - Candice Webb responded, (2023/12/21 09:06): based on wind direction, it is unlikely that Mondi is the source of the odour.
379	Mpact - Anzel Horn responded, (2023/12/20 13:58): The process plant shift reports confirm that the plant was on shutdown from the 17th of December with no abnormal/cleaning activities that occurred at the time. The wind direction was not in favour of any emissions from Mpact operational activities at the time of the exceedances.
380	Mondi - Candice Webb responded, (2024/01/08 15:17): Mondi has investigated. Based on Wind Direction, Mondi is the source, however we have not yet been able to identify root cause. We will continue to investigate.
381	Mondi - Candice Webb responded, (2024/01/08 15:09): Mondi has investigated. Based on wind direction, low wind speed and stable operating conditions, it is unlikely that Mondi is the source of the TRS.
382	Mondi - Candice Webb responded, (2024/01/08 15:14): Mondi has investigated. Prior to the exceedance there was a trip of the foul condensate pump which resulted in release of emissions to atmosphere.
383	Mpact - Anzel Horn responded, (2024/01/09 12:48 and 12:49): The process plant shift reports indicate that there were no abnormal conditions in the plant on the 21st of December 2023 and that the mill was on shutdown, therefore it is highly unlikely that Mpact could have contributed to the TRS exceedance recorded
384	Mpact - Anzel Horn responded, (2024/01/09 12:50): The process plant shift reports indicate that there were no abnormal conditions in the plant on the 5th of January 2024 and that the mill was still on shutdown, therefore it is highly unlikely that Mpact could have contributed to the TRS exceedances recorded.
385	Mondi - Candice Webb responded, (2024/01/10 09:22): Mondi has investigated. Based on wind direction, it is unlikely that Mondi is the source.
386	Mpact - Anzel Horn responded, (2024/01/16 11:13): There were no abnormal conditions in the process plant on the 9th of January 2024 and the effluent plant was running under stable conditions. Westerly winds occurred at the time of the exceedances which confirm that Mpact could not have contributed to the TRS exceedances.
387	Mondi - Candice Webb responded, (2024/01/22 09:49): Mondi has investigated and identified fugitive emission as a result of start up as the cause of the TRS exceedance. The Odour Abatement Task Team has been assigned to audit the mill to identify all possible fugitive emissions sources which may have contributed. This includes leaks, open inspection hatches etc.
388	Mondi - Candice Webb responded, (2024/01/22 09:50): Mondi has investigated. Base don wind direction it is unlikely that Mondi is the source.

Response	Industry Feedback
389	Mpact - Anzel Horn responded, (2024/01/31 09:40): The process plant shift reports indicate that the plant was running under stable conditions on the morning of the 21st of January 2024. There were no abnormal conditions that could have led to the TRS exceedances recorded, hence it was concluded that Mpact was not the root cause.
390	Mpact - Anzel Horn responded, (2024/01/31 09:58): The process plant shift reports for the 30th of January 2024, indicated that the paper machine was down at the time, and the rest of the plant was running well with no abnormal conditions that could have contributed to the TRS exceedance recorded.
391	RBCAA Allocation, (2024/02/09 13:30)


AIMS