

Monthly Air Quality

March 2026

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1. INTRODUCTION

This monthly air quality report, provided by the Richards Bay Clean Air Association (RBCAA), offers a comprehensive overview of air quality monitoring data for the month under review. It aims to provide a detailed analysis of meteorology, particulate matter (PM₁₀ and PM_{2.5}), sulphur dioxide (SO₂), and total reduced sulphur (TRS) levels measured by the RBCAA's monitoring network. Each monthly report focuses on a single calendar month, highlighting any notable incidents or exceedances of the applicable ambient air quality standards during that period. By analysing the monthly data, trends and patterns in air quality can be identified, helping to assess potential environmental impacts and mitigate any adverse effects.

In addition to the monthly reports, RBCAA publishes annual air quality reports summarising the key findings and trends observed over a complete calendar year. These annual reports provide a comprehensive overview of the region's overall air quality performance and long-term trends. They provide stakeholders with a thorough understanding of air quality and serve as a valuable tool for informed decision-making, policy development, and environmental management. By consistently monitoring and reporting air quality data, the RBCAA aims to promote transparency, facilitate ongoing environmental assessments, and ensure the well-being of the local community and the surrounding environment.

The RBCAA monitoring network comprises eleven (11) primary monitoring stations (Figure 1.1 and Table 1.1). Airport, Felixton Met and Meerensee are meteorological stations and do not operate continuous air-quality analysers. The network also includes a secondary screening network comprising 10 AirGradient monitors (Table 1.2).



Figure 1.1: RBCAA monitoring network.

Table 1.1: Primary monitoring network station coordinates.

Station	Latitude	Longitude	Elevation (m)
Airport	-28.738161	32.093332	33.99
Arboretum	-28.752377	32.062791	25.20
Brackenham	-28.731325	32.039059	56.28
CBD	-28.744693	32.054851	32.26
eSikhaleni	-28.865278	31.911679	14.54
Felixton	-28.829255	31.893636	56.59
Meerensee	-28.772104	32.101308	14.89
Felixton Met	-28.836487	31.892513	27.87
Harbour West	-28.787297	32.027133	7.36
Richardia	-28.762769	32.066068	19.96
Scorpio	-28.769694	32.034282	29.39

Table 1.2: Secondary screening network coordinates (AirGradient monitors).

Site	Latitude (°)	Longitude (°)	Elevation (m)	UTM Zone 36S X (m)	UTM Zone 36S Y (m)
Airport	-28.738161	32.093332	33.99	411467	6820686
Brackenham	-28.731325	32.039059	56.28	406161	6821402
CBD	-28.744693	32.054851	32.26	407715	6819933
Empangeni	-28.734970	31.896245	109.85	392217	6820877
eSikhaleni	-28.865278	31.911679	14.54	393857	6806453
Felixton	-28.829255	31.893636	56.59	392060	6810428
Harbour West	-28.787297	32.027133	7.36	405047	6815191
Meerensee	-28.772104	32.101308	14.89	412274	6816931
Mtunzini	-28.959335	31.743905	84.00	377603	6795870
Richardia	-28.762769	32.066068	19.96	408826	6817939

2. METEOROLOGY

2.1. Data Completeness

The percentage of valid data received from the meteorological network for March 2026 is shown in Table 2.1.

Table 2.1: Meteorological data capture.

Station	Availability (%)	Wind (%)	Temperature (%)	RH (%)	Pressure (%)	SR (%)	Rain (%)
Airport	98	97	97	97	98	98	-
Arboretum	100	98	100	-	-	-	-
Brackenham	100	100	100	-	-	-	-
CBD	100	100	100	100	-	-	-
CBD Rain	99	-	-	-	-	-	99
eSikhaleni	100	100	100	100	-	-	-
Felixton	99	-	-	-	-	-	-
Felixton Met	100	100	100	100	-	-	-
Harbour West	99	99	99	-	-	-	-
Meerensee Rain	98	-	-	-	-	-	98

Notes:

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

Missing Data (Station and Meteorology):

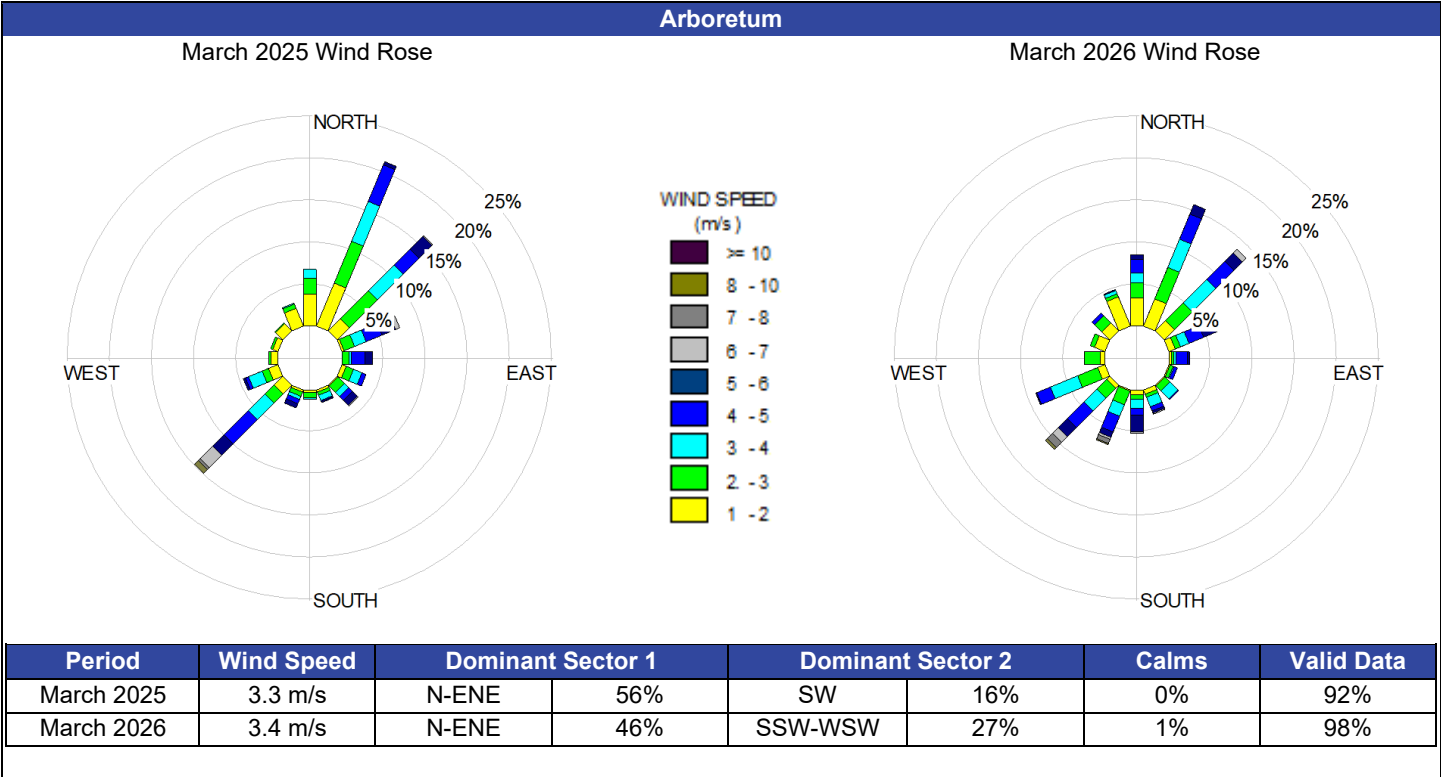
- Airport – Power outages (2 days with <80% data capture, 4 and 13 March 2026).
- Meerensee Rain – Power outage (1 day with <80% data capture, 6 March 2026).

2.2.Wind Roses

Monthly wind roses for March 2025 and March 2026 at Arboretum are presented in Figure 2.1. They indicate that the wind blew predominantly along the NE and SW axes. 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.

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 winds occur throughout the year and are typically associated with the arrival of coastal lows and cold fronts. Coastal lows are more frequent during summer, which explains the slightly higher proportion of these winds.

Diurnal wind roses for March 2026 are shown in Figure 2.2. ESE to SSE wind primarily consists of 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.



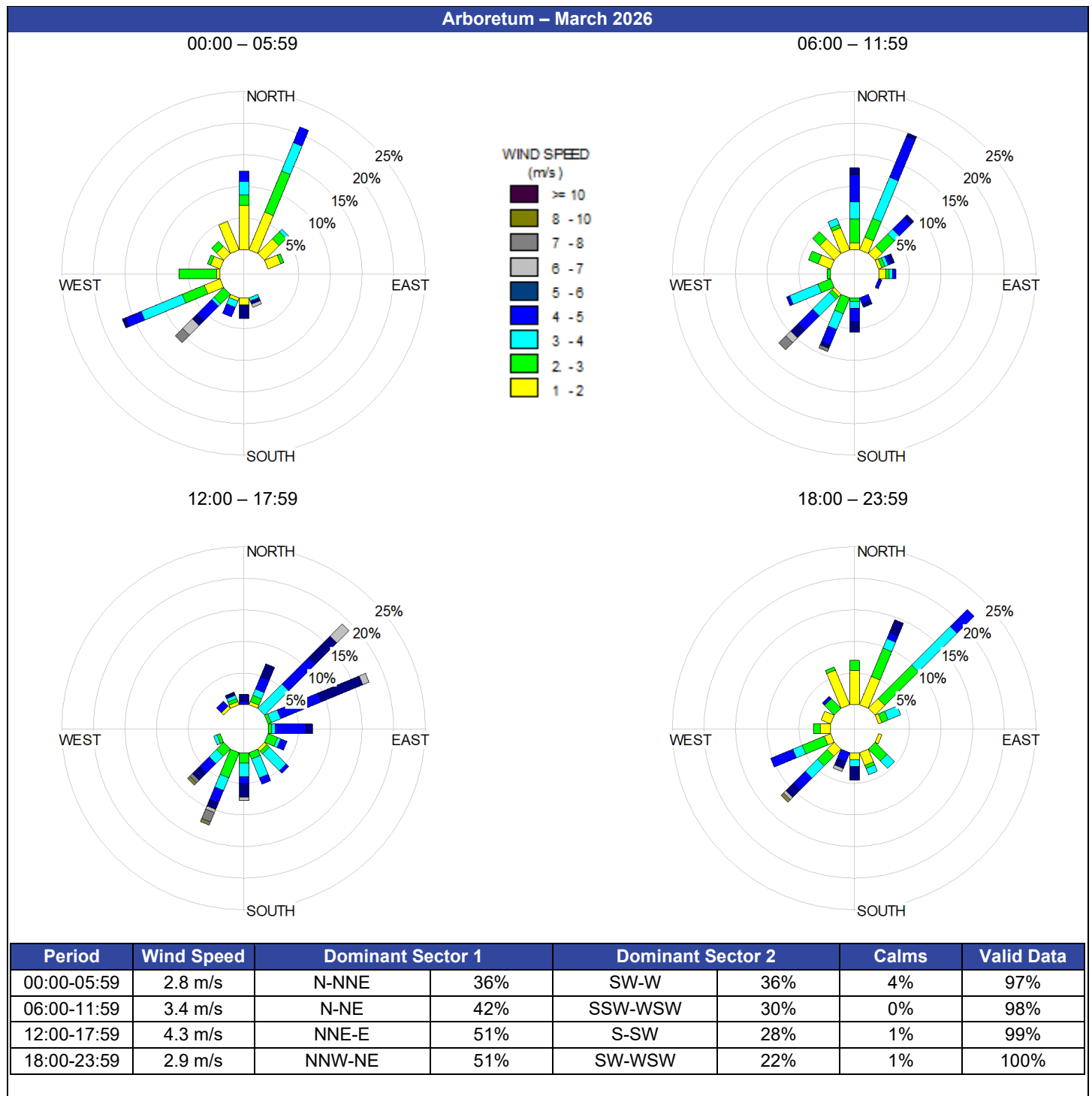


Figure 2.2: Wind roses - diurnal.

2.3. Rainfall

Monthly rainfall totals measured at the reporting locations are presented in Table 2.2 and Figure 2.3 to Figure 2.8 (see Appendix E for tabulated rainfall data).

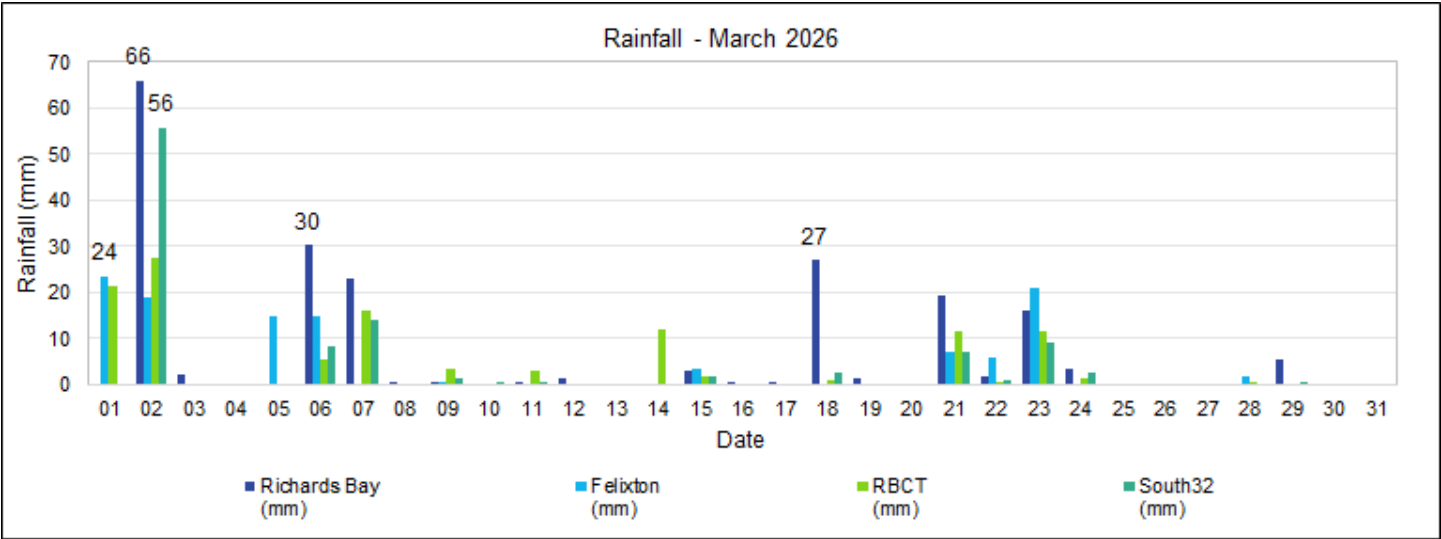


Figure 2.3: Rainfall.

Table 2.2: Rainfall – monthly totals and network average.

Month	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	Meerensee (mm)	South32 (mm)	Average (mm)
March 2026	202	112	118	80	105	123

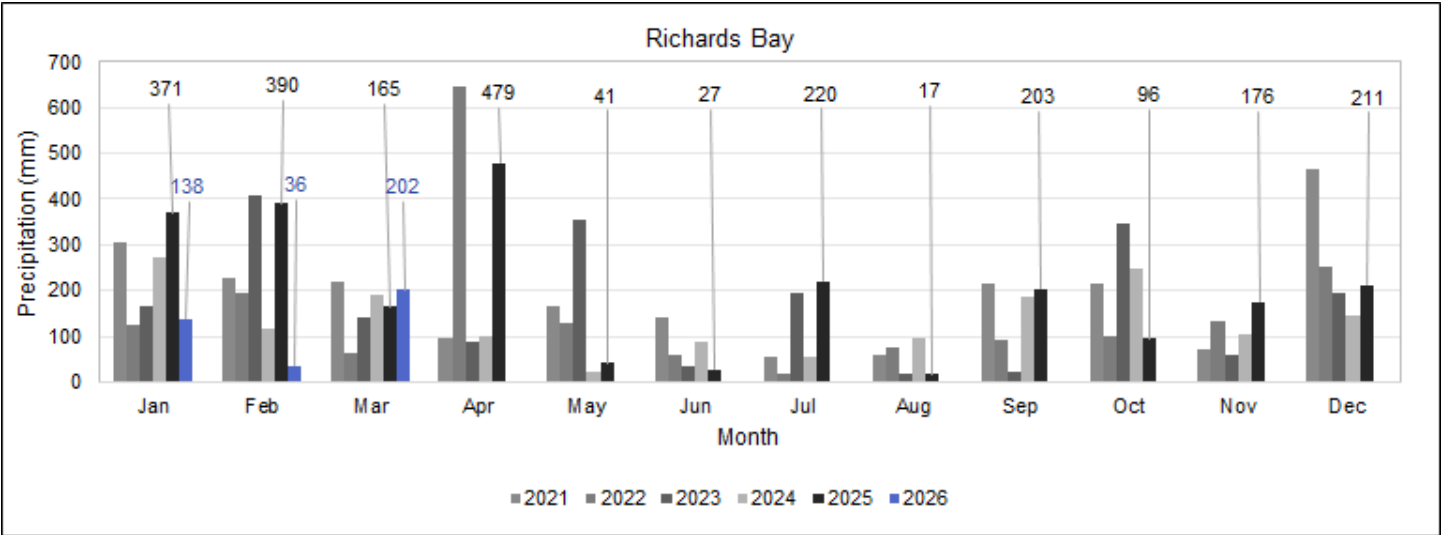


Figure 2.4: Rainfall – Richards Bay.

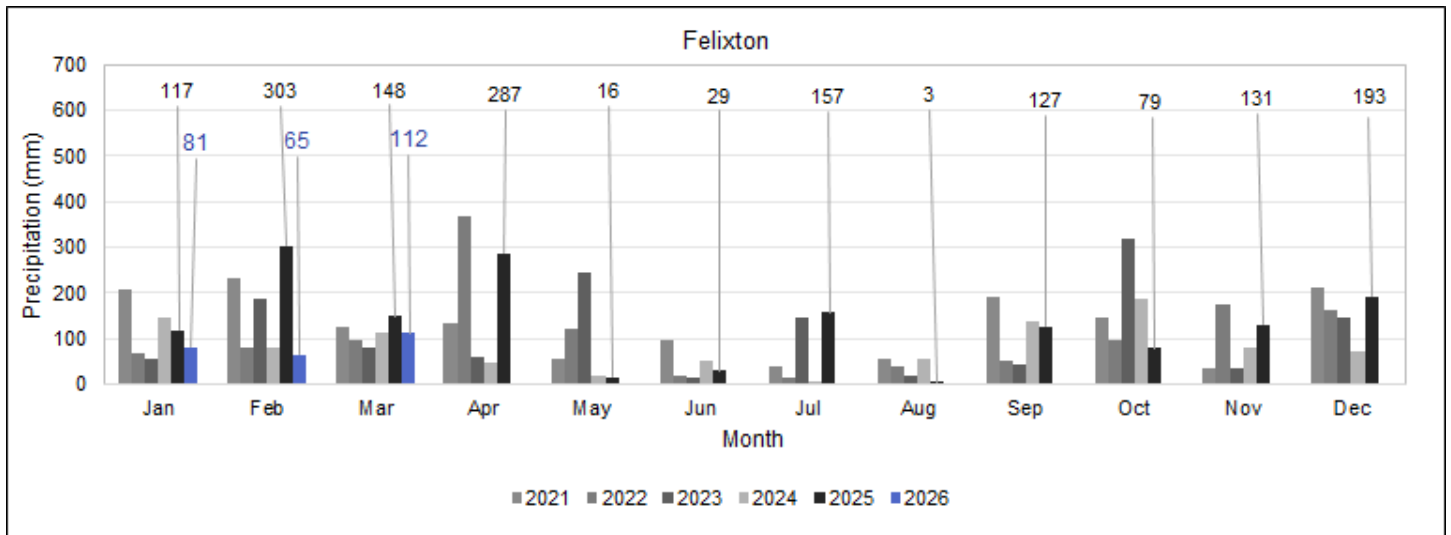


Figure 2.5: Rainfall – Felixton.

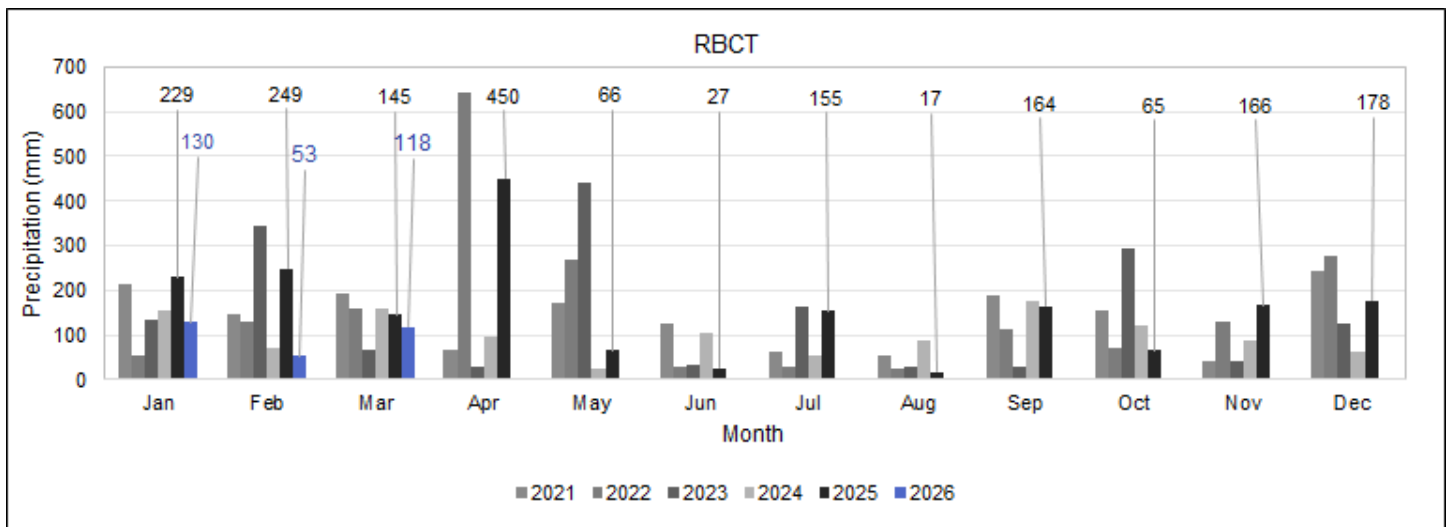


Figure 2.6: Rainfall – RBCT.

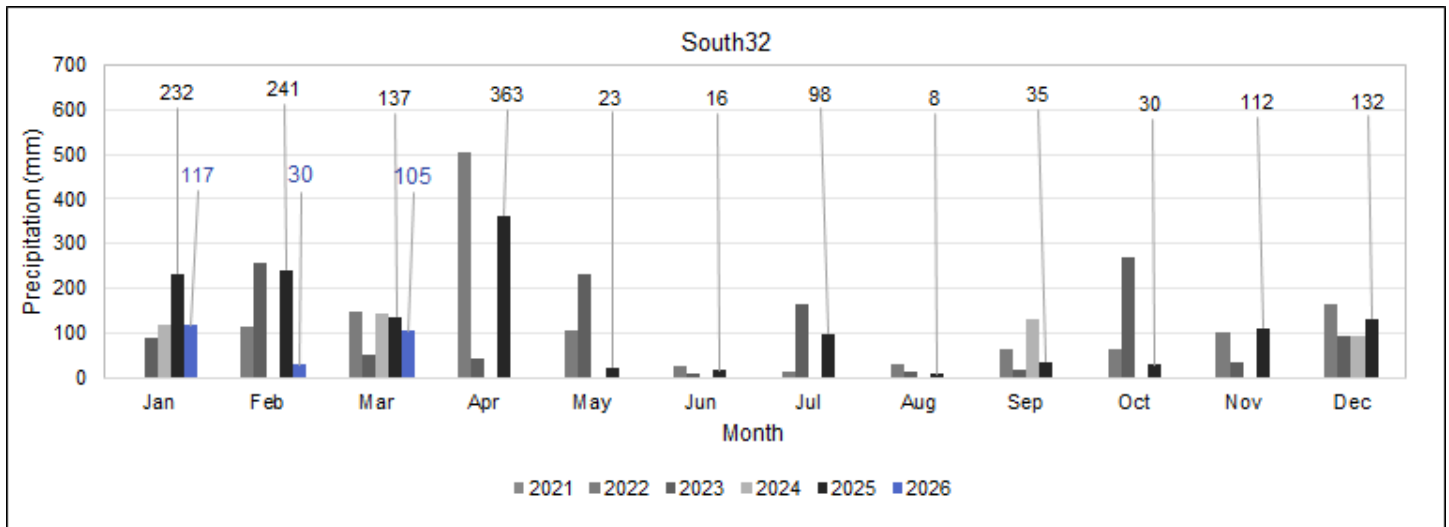


Figure 2.7: Rainfall – South32.

Note: South32 experienced rain-gauge data-quality issues in 2024.

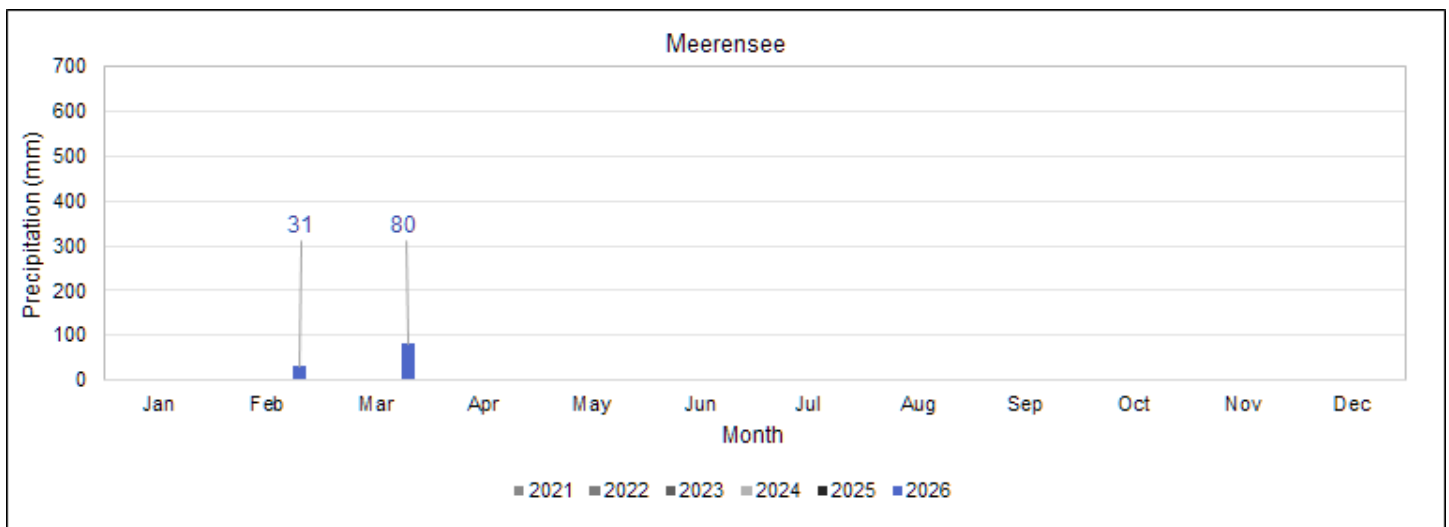


Figure 2.8: Rainfall – Meerensee.

Note: The Meerensee rain gauge was commissioned in February 2026.

3. AIR QUALITY COMPLAINTS

Detailed complaint records are maintained, updated, and distributed weekly to the RBCAA's complaints mailing list. The following sections summarise and analyse the complaints received during March 2026. Please see Appendix F for the complaints log.

3.1. Field Observations

Thirty-five (35) air quality complaints were received during March 2026, compared with forty-four (44) complaints logged in March 2025. The daily complaint count and monthly historical comparison are shown in Figure 3.1 and Figure 3.2.

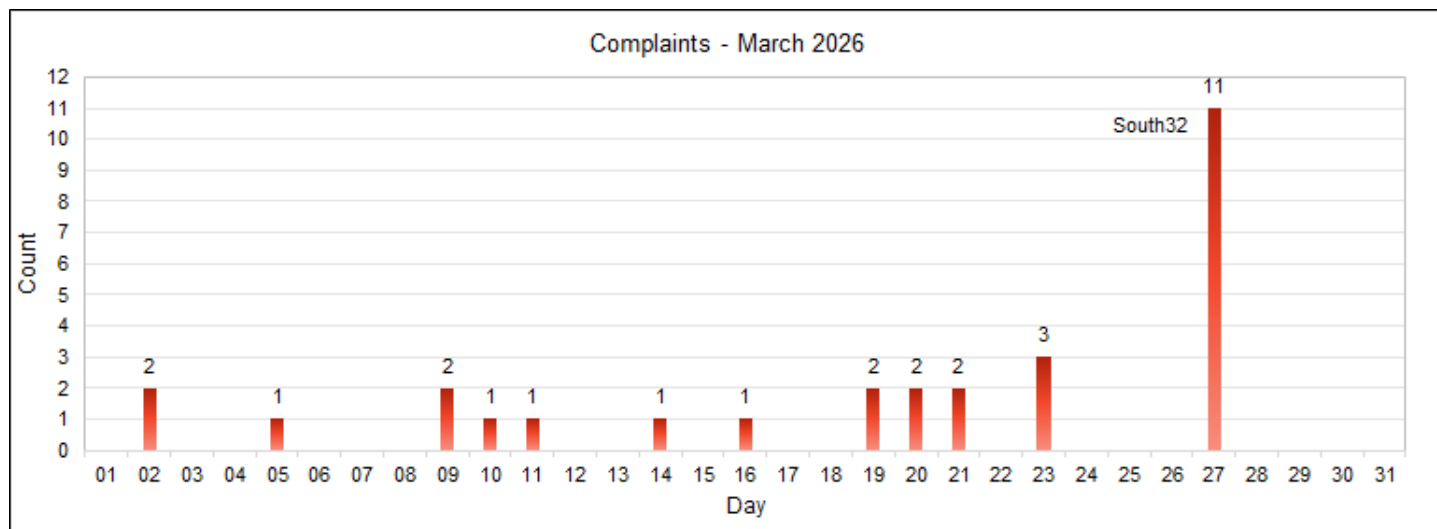


Figure 3.1: Complaints – daily.

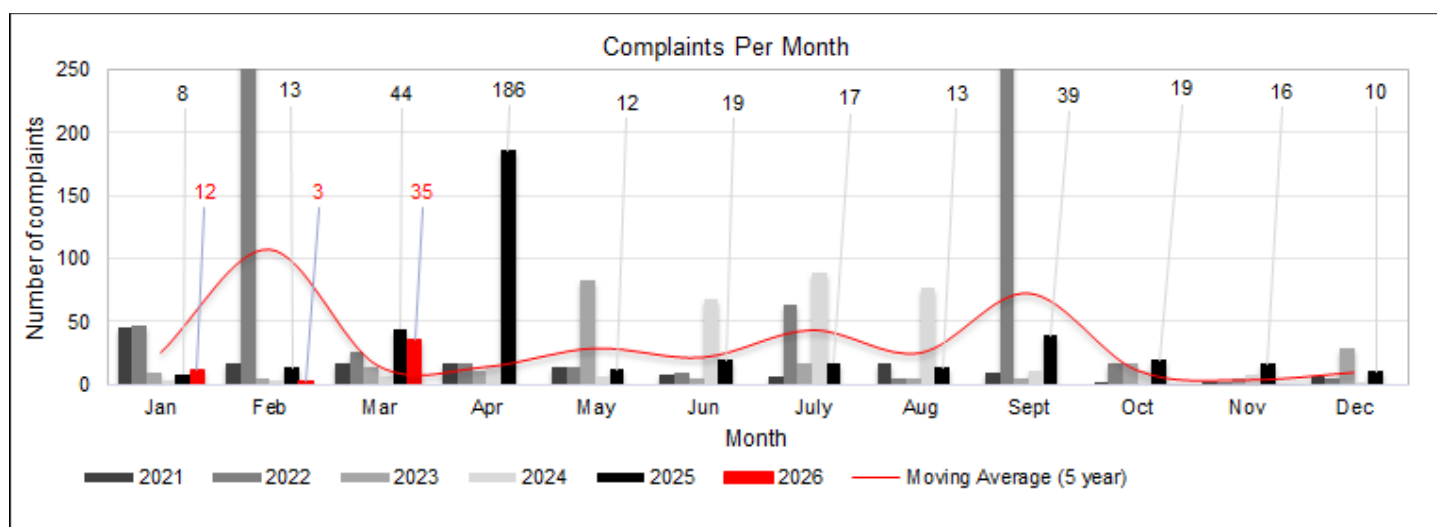


Figure 3.2: Complaints - historical monthly comparison.

3.2. Complaints Distribution

The distribution of complaints in March 2026 by region, type, and source is presented in Figure 3.3, Figure 3.4, and Figure 3.5.

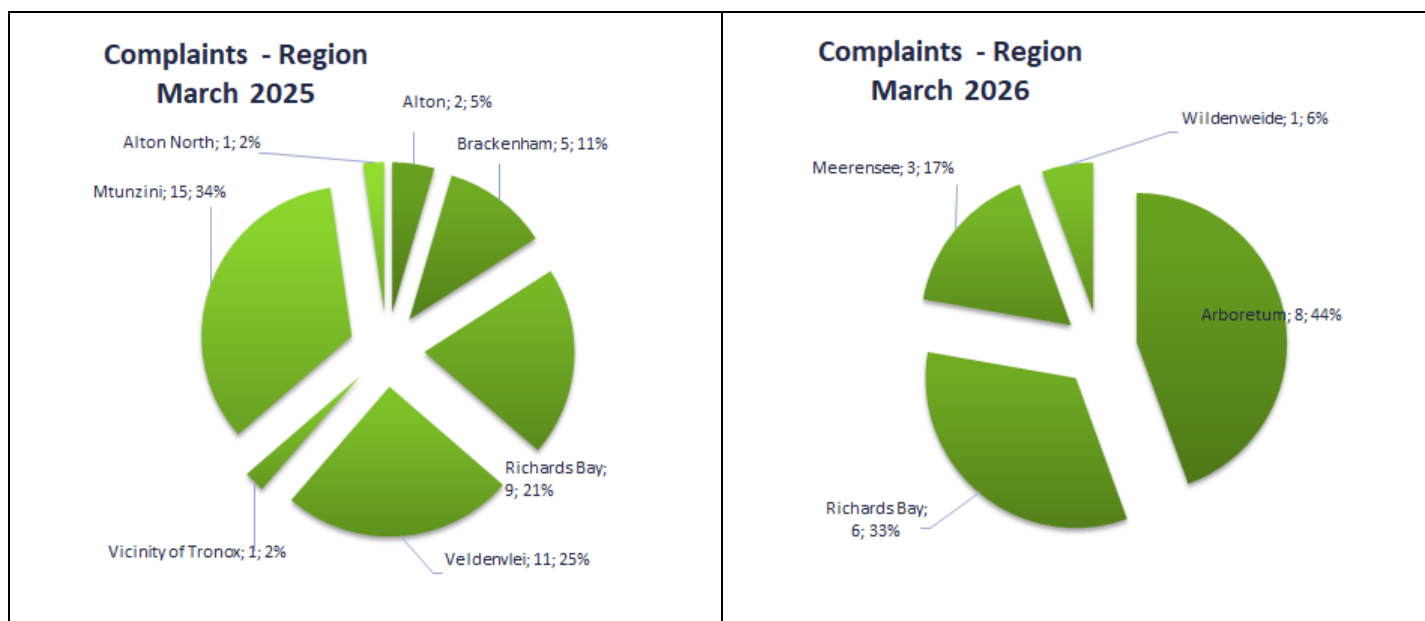


Figure 3.3: Complaints - region.

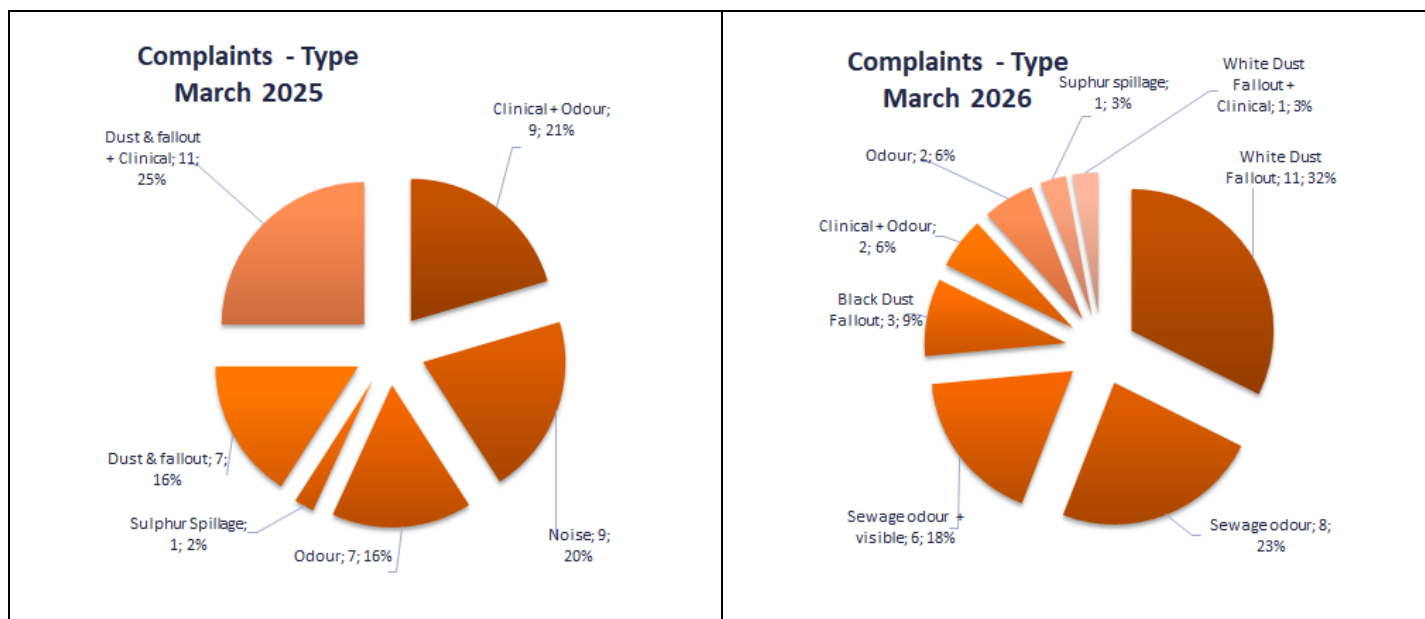


Figure 3.4: Complaints - type.

The complaints received were allocated as follows: CoU (15, 42.9%), South32 (12, 34.3%), TPT (4, 11.4%), Mondi (3, 8.6%), and Mondi - root-cause investigations ongoing (1, 2.9%).

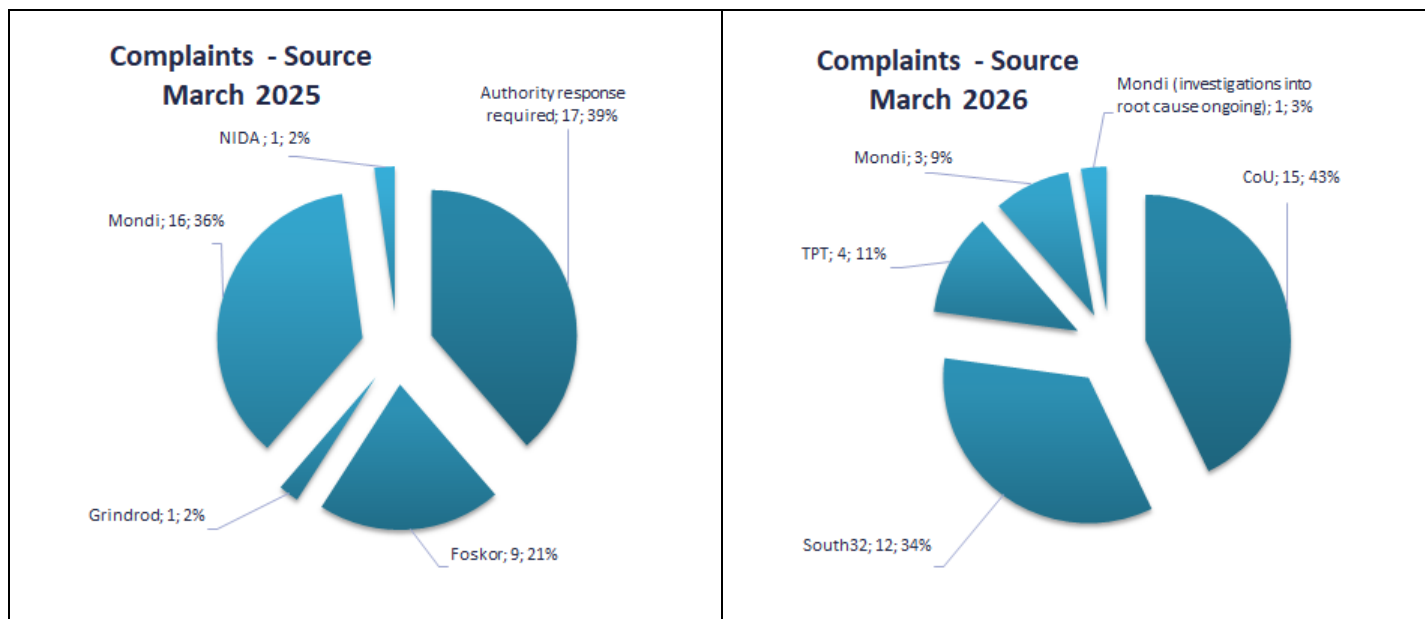


Figure 3.5: Complaints - source.

Table 3.1: Complaint - allocation, region, and type.

March 2026		35
CoU		15
Sewage odour		8
Veldenvlei		2
Arboretum		6
Sewage odour + visible		6
Veldenvlei		1
Richards Bay		2
Meerensee		3
Sulphur Spillage		1
Richards Bay		1
Mondi		3
Clinical + Odour		1
Veldenvlei		1
Odour		2
Veldenvlei		2
Mondi (root-cause investigations ongoing)		1
Clinical + Odour		1
Veldenvlei		1
South32		12
White Dust Fallout		11
Wildenweide		1
Arboretum		1
Veldenvlei		9
White Dust Fallout + Clinical		1
Veldenvlei		1

March 2026	35
TPT	4
Black Dust Fallout	3
Richards Bay	3
Black Dust Fallout + Clinical	1
Arboretum	1

4. PARTICULATE MONITORING

Particulate Matter (PM) refers to the solid particles and liquid droplets in the atmosphere. Many anthropogenic and natural sources emit PM directly or release other pollutants into the atmosphere, which subsequently form secondary PM. Particle size varies; for example, particles less than 10 micrometres (μm) in aerodynamic diameter are classified as PM_{10} , and particles less than 2.5 micrometres (μm) in aerodynamic diameter are classified as $\text{PM}_{2.5}$.

Inhalable particles, particularly $\text{PM}_{2.5}$, can penetrate deep into the respiratory system. Sustained exposure to high concentrations may therefore be associated with the following health effects:

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

At eSikhaleni and Richardia, particulate matter (PM) monitoring uses Tapered Element Oscillating Microbalance (TEOM) devices, which are U.S. EPA-approved for continuous PM measurement. These instruments determine particle mass by detecting frequency changes in a vibrating element as particles accumulate on it. Brackenham, CBD, Felixton, Scorpio and Harbour West use E-Samplers, which combine real-time light scattering with filter-based sampling to measure particulate concentrations. The E-Sampler is certified under the UK's Monitoring Certification Scheme (MCERTS) as an indicative ambient particulate monitor; quantitative interpretation should therefore remain subject to the applicable site-specific calibration and QA/QC controls.

4.1. Ambient Air Quality Standards

Ambient air quality standards for particulate matter are listed in Table 4.1.

Table 4.1: Particulate ambient air quality limits.

Organisation	Limit	PM_{10} Daily Average ($\mu\text{g}/\text{m}^3$)	PM_{10} Annual Average ($\mu\text{g}/\text{m}^3$)	$\text{PM}_{2.5}$ Daily Average ($\mu\text{g}/\text{m}^3$)	$\text{PM}_{2.5}$ Annual Average ($\mu\text{g}/\text{m}^3$)
RSA [a, d]	Standard	75 [b]	40 [c]	40 [b]	20 [c]
WHO [e]	Guideline	45 [c]	15 [c]	15 [c]	5 [c]

Notes:

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

4.2. Data Completeness

The percentage of valid data received from the PM analysers for March 2026 is shown in Table 4.2.

Table 4.2: PM data capture.

Station	Availability (%)	PM ₁₀ (%)	PM _{2.5} (%)
Brackenham ES2	100	-	100
CBD ES1	100	100	-
eSikhaleni	100	100	-
Felixton ES1	100	100	-
Felixton ES2	99	-	99
Harbour West ES2	99	-	99
Richardia	98	-	94
Scorpio ES1	85	85	-
Scorpio ES2	100	-	100

Missing Data (PM₁₀):

- Richardia – Analyser converted to PM_{2.5} (29 days with <80% data capture, 3–31 March 2026).
- Scorpio ES1 – Analyser decommissioned and sent to the agents for a firmware upgrade (5 days with <80% data capture, 27–31 March 2026).

Missing Data (PM_{2.5}):

- Richardia – Analyser converted to PM_{2.5} (2 days with <80% data capture, 1–2 March 2026).

4.3. Monthly

Monthly mean PM_{10} concentrations were below the South African annual standard at all stations with sufficient March PM_{10} data. The WHO annual guideline value was exceeded at CBD, eSikhaleni and Scorpia; this monthly comparison is indicative only and does not constitute an annual compliance determination (Figure 4.1). Richardia PM_{10} results should not be interpreted as a March monthly mean because the analyser was converted to $PM_{2.5}$, and PM_{10} data were unavailable for 3–31 March 2026. Comparisons to previous months are also provided (Figure 4.2).

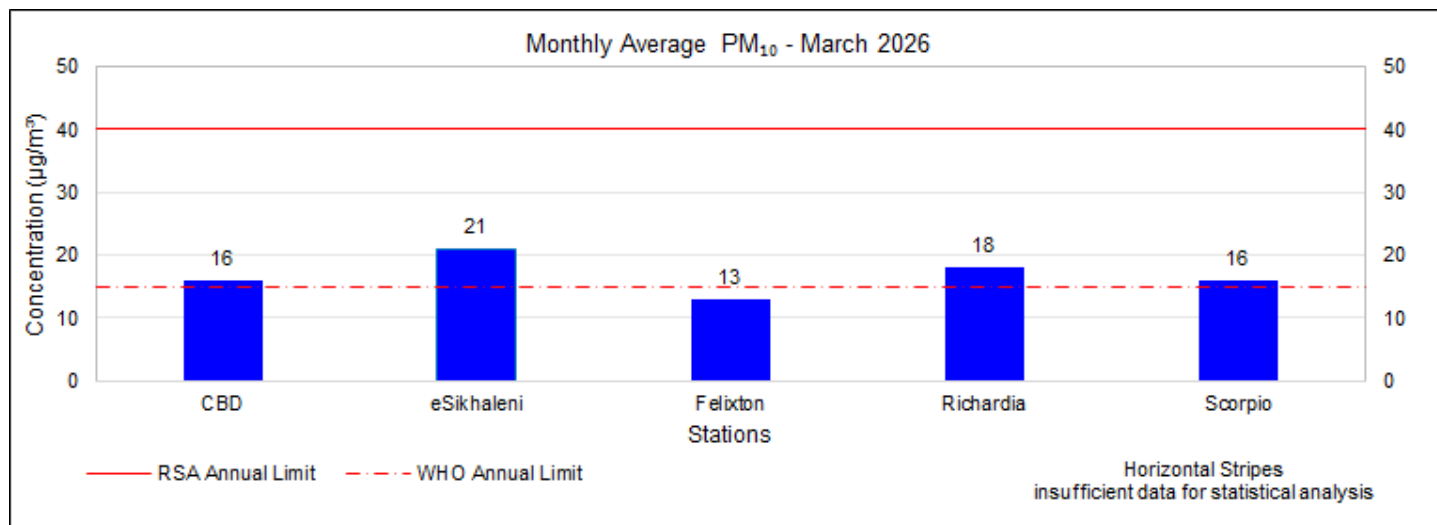


Figure 4.1: PM_{10} monthly concentrations.

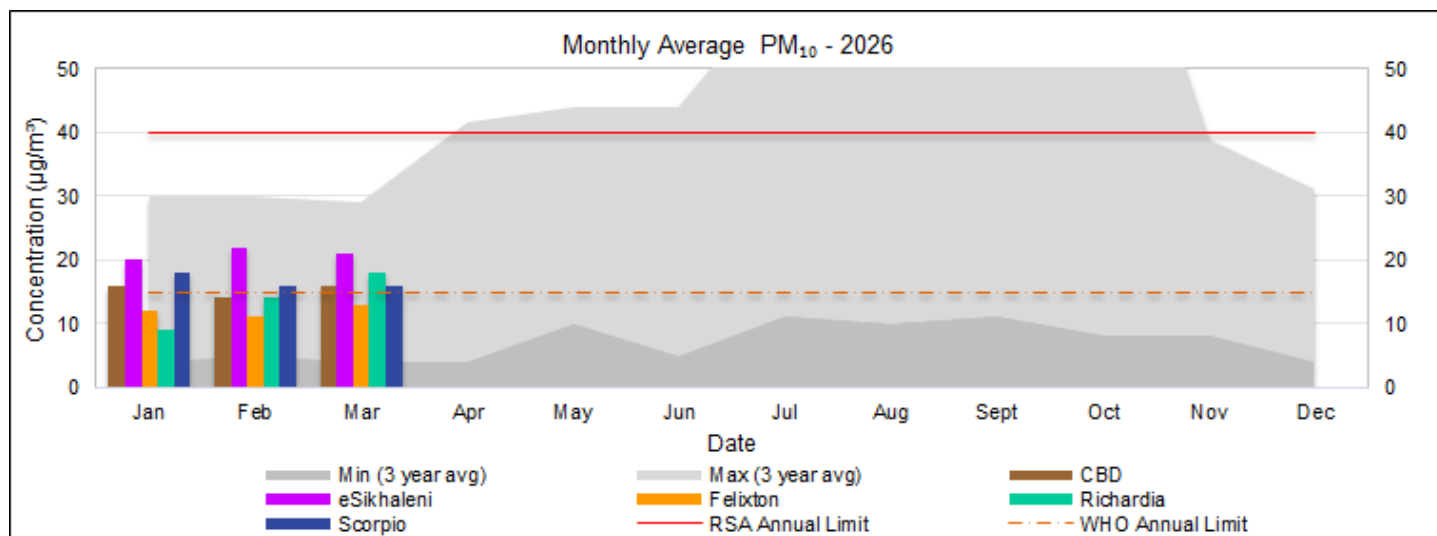


Figure 4.2: PM_{10} monthly comparison.

Monthly mean $PM_{2.5}$ concentrations were below the South African annual standard at all stations. The WHO annual guideline value was exceeded at Brackenham, Felixton, Harbour West, Richardia and Scorpio; this monthly comparison is indicative only and does not constitute an annual compliance determination (Figure 4.3). Comparisons to previous months are also provided (Figure 4.4).

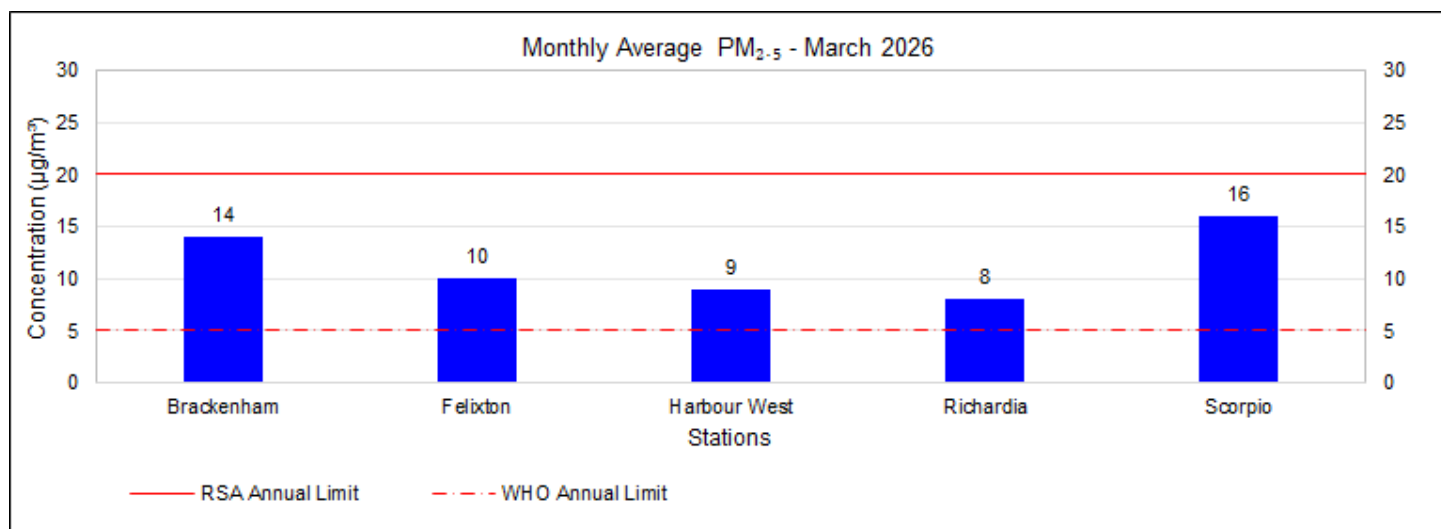


Figure 4.3: $PM_{2.5}$ monthly concentrations.

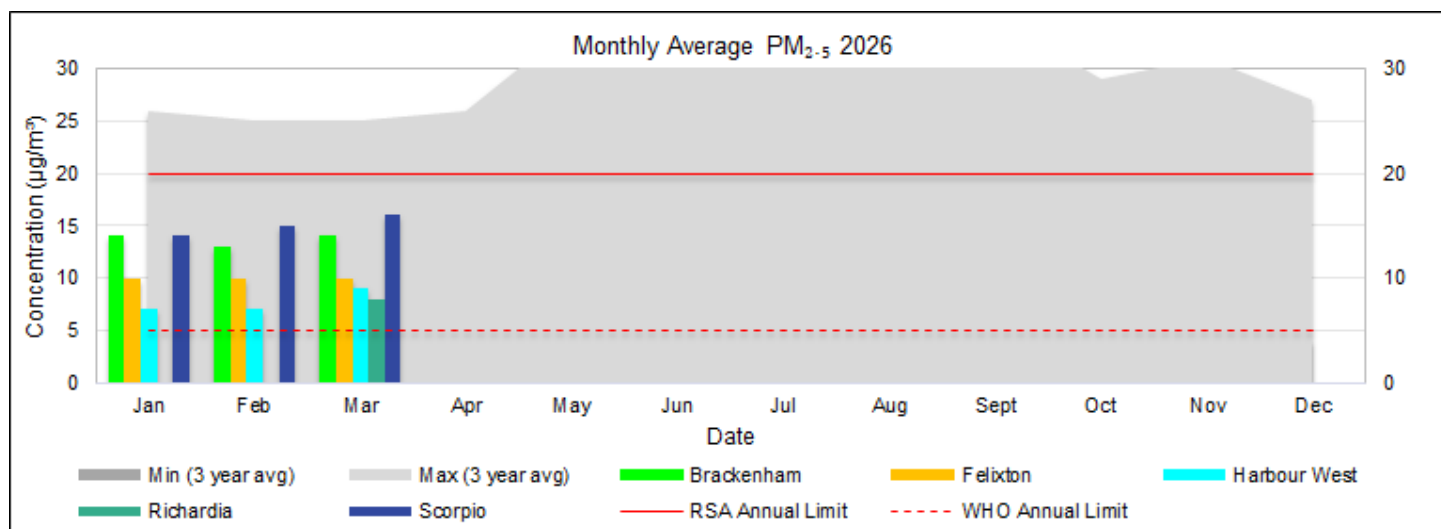


Figure 4.4: $PM_{2.5}$ monthly comparison.

4.4. Diurnal

PM diurnal concentration profiles are shown in Figure 4.5 and Figure 4.6. For visual reference, the diurnal PM profiles are plotted against the 24-hour RSA and WHO reference values. PM₁₀ profile values remained below the RSA 24-hour value (75 µg/m³), while the WHO 24-hour value (45 µg/m³) was exceeded at eSikhaleni and, subject to the limited Richardia PM₁₀ data availability, Richardia. PM_{2.5} profile values remained below the RSA 24-hour value (40 µg/m³), while the WHO 24-hour value (15 µg/m³) was exceeded at Brackenham, Felixton and Scorpio.

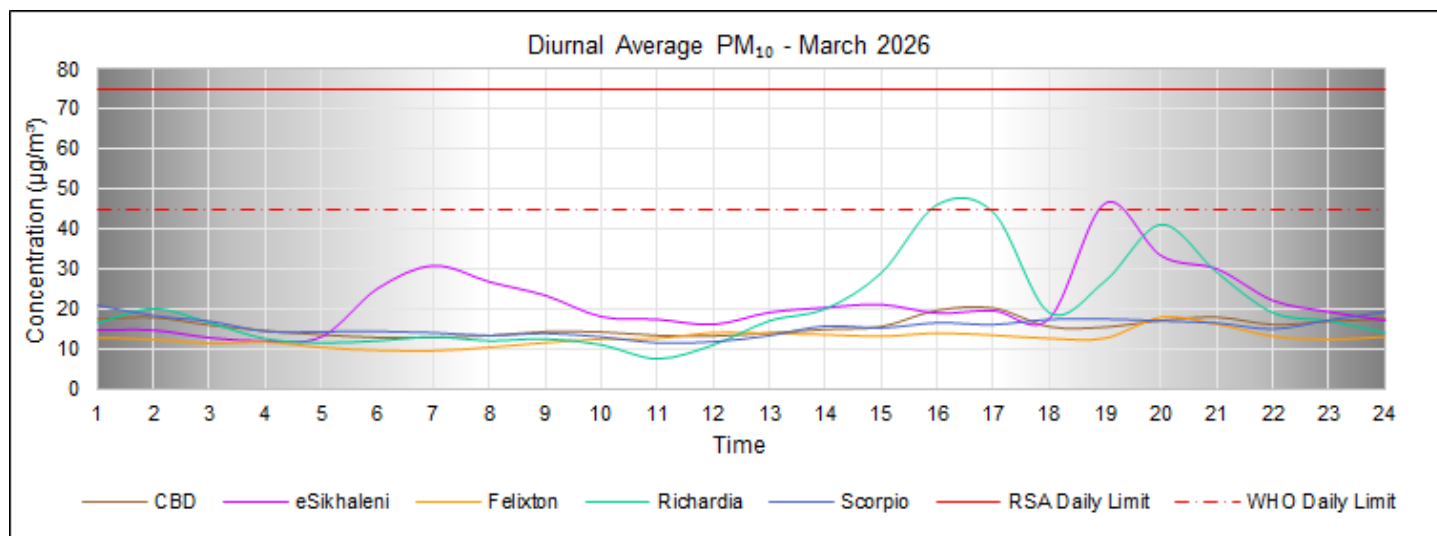


Figure 4.5: PM₁₀ diurnal concentrations.

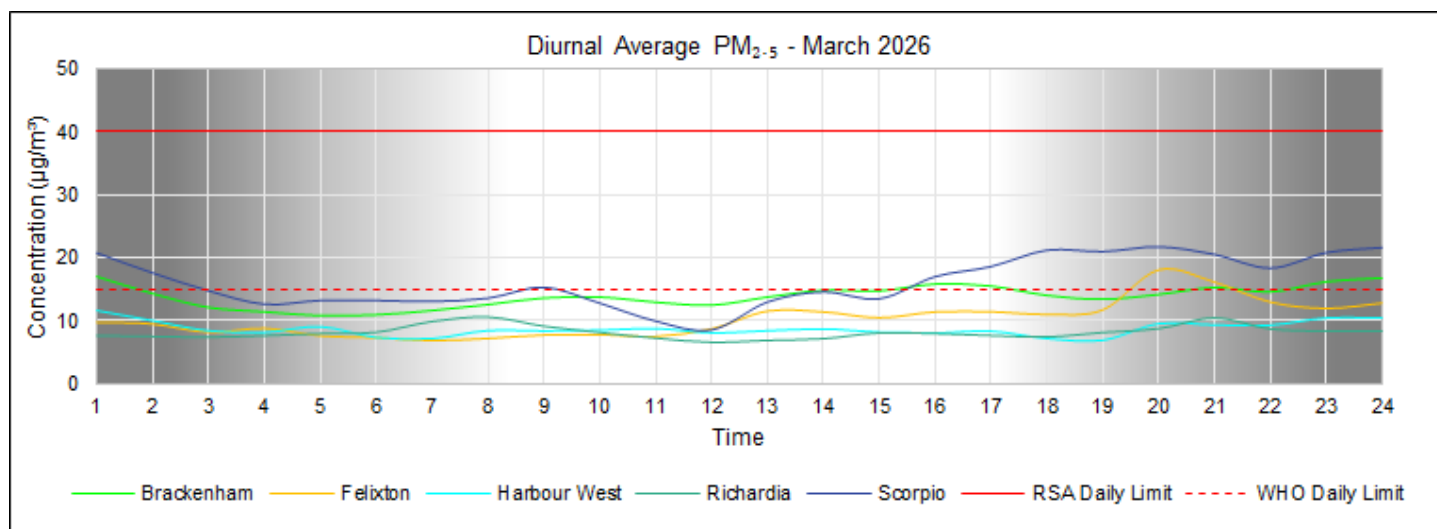


Figure 4.6: PM_{2.5} diurnal concentrations.

4.5. Daily

PM₁₀ daily concentrations are shown in Figure 4.7, and exceedances are summarised in Table 4.3. There were:

- ▶ No (0) measured exceedances of the RSA 24-hour standard (75 µg/m³); and,
- ▶ One (1) measured exceedance of the WHO 24-hour guideline (45 µg/m³).

Table 4.3: PM₁₀ 24-hour average exceedances.

PM ₁₀ Daily WHO Limit (45 µg/m ³)	1
No response required	1
Scorpio	1

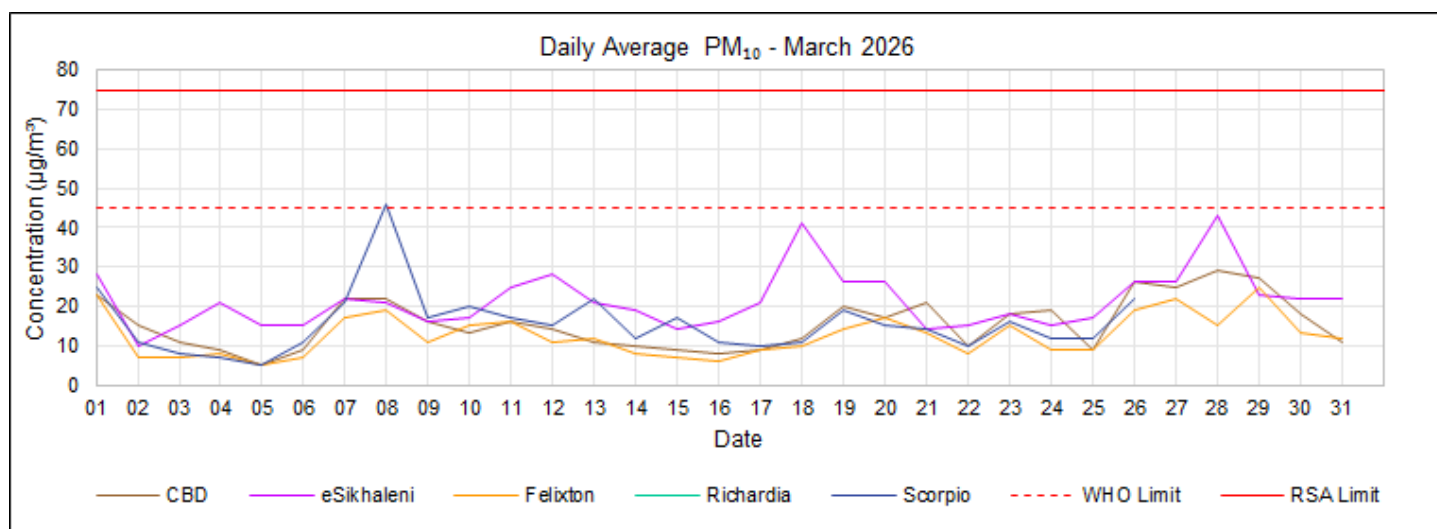


Figure 4.7: PM₁₀ 24-hour average concentrations.

Missing Data (PM₁₀)

- Richardia – Analyser converted to PM_{2.5} (29 days with <80% data capture, 3–31 March 2026).
- Scorpio ES1 – Analyser decommissioned and sent to the agents for a firmware upgrade (5 days with <80% data capture, 27–31 March 2026).

PM_{2.5} daily concentrations are shown in Figure 4.8, and exceedances are summarised in Table 4.4. There were:

- ▶ One (1) measured exceedance of the RSA 24-hour standard (40 µg/m³); and,
- ▶ Thirty-one (31) measured station-day exceedances of the WHO 24-hour guideline (15 µg/m³).

Table 4.4: PM_{2.5} 24-hour exceedances.

PM_{2.5} Daily RSA Limit (40 µg/m³)	1
Grindrod & TPT - Meteorology	1
RBCAA allocation	1
Scorpio	1
PM_{2.5} Daily WHO Limit (15 µg/m³)	31
No response required	31
None	31
Brackenham	11
Felixton	4
Scorpio	14
Harbour West	2

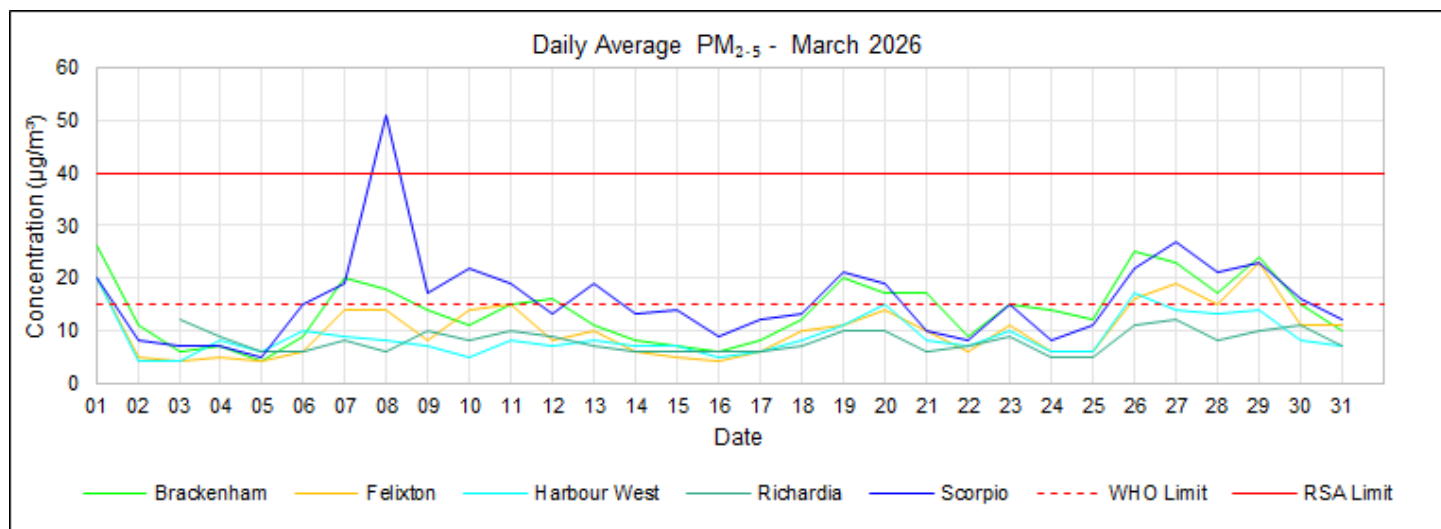


Figure 4.8: PM_{2.5} daily average concentrations.

Missing Data (PM_{2.5})

- Richardia – Analyser converted to PM_{2.5} (2 days with <80% data capture, 1–2 March 2026).

4.6. Exceedances

The number of days on which exceedances occurred, together with comparisons to previous months for PM_{10} and $PM_{2.5}$, is shown in Figure 4.9 and Figure 4.10. Summaries of PM_{10} and $PM_{2.5}$ exceedances by station are presented in Table 4.5 and Table 4.6, respectively. For pollutants, stations or averaging periods with no measured exceedance, results remained below the applicable criterion for the assessed period.

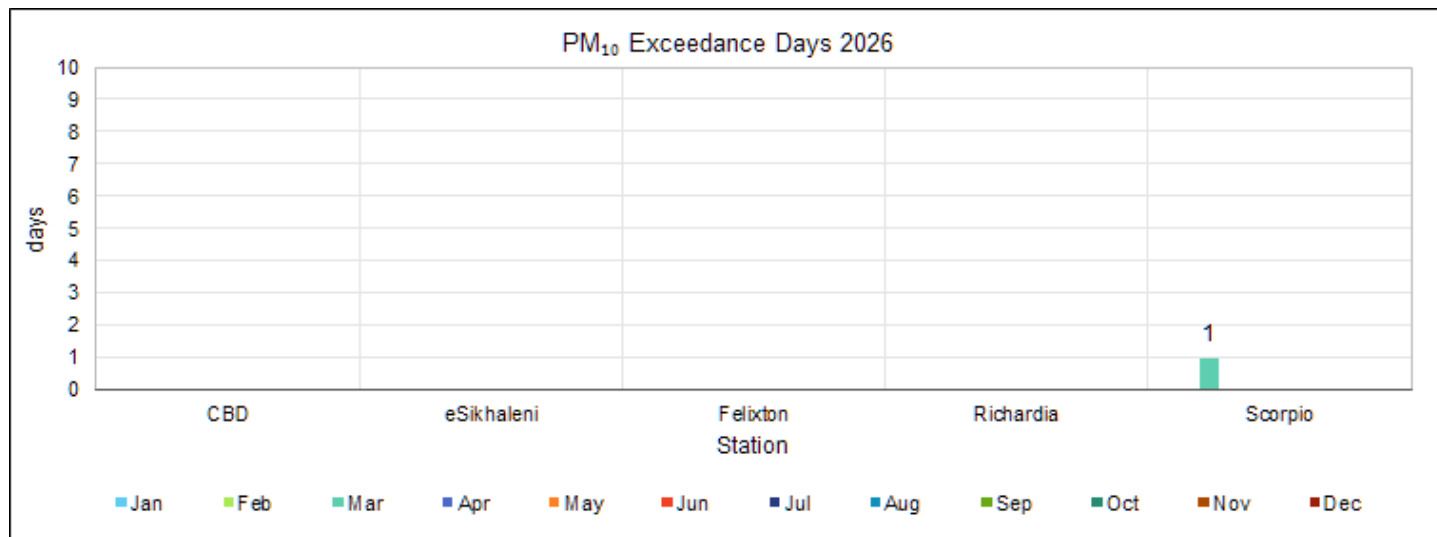


Figure 4.9: PM_{10} exceedance days.

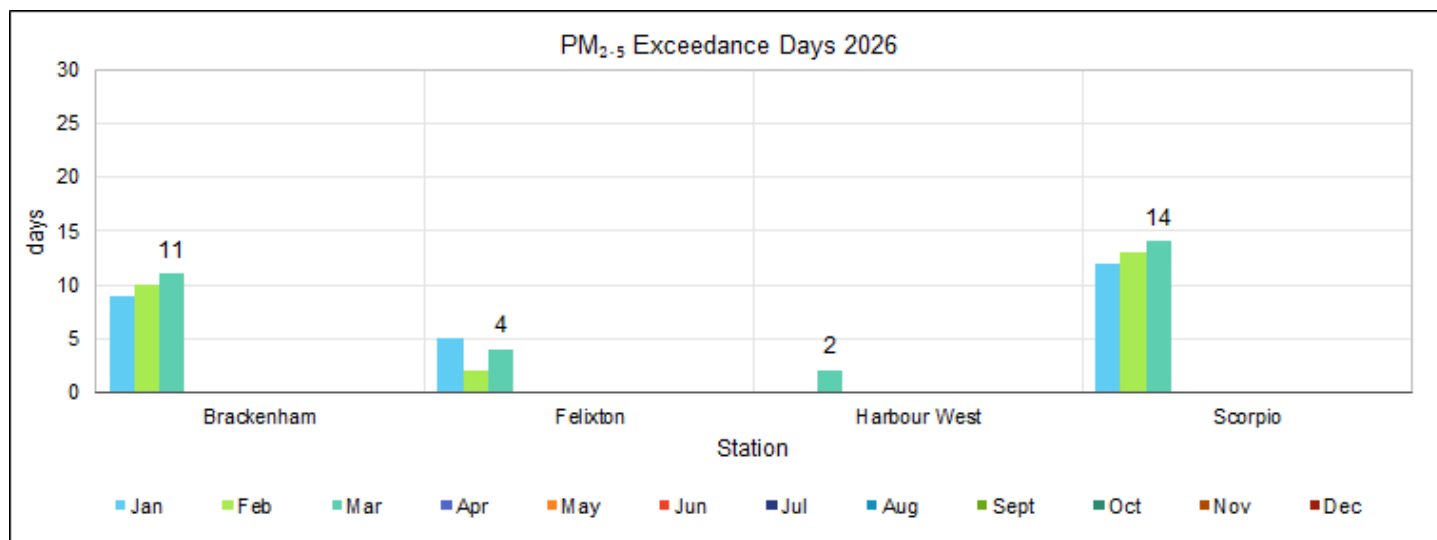


Figure 4.10: $PM_{2.5}$ exceedance days.

Table 4.5: PM₁₀ exceedance summary.

2026	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM₁₀ Daily RSA Limit (75 µg/m³)													
Brackenham	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	0
PM₁₀ Daily WHO Limit (45 µg/m³)													
Brackenham	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	1	-	-	-	-	-	-	-	-	-	1

Table 4.6: PM_{2.5} exceedance summary.

2026	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM_{2.5} Daily RSA Limit (40 µg/m³)													
Brackenham	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	1	-	-	-	-	-	-	-	-	-	1
PM_{2.5} Daily WHO Limit (15 µg/m³)													
Brackenham	9	10	11	-	-	-	-	-	-	-	-	-	30
Felixton	5	2	4	-	-	-	-	-	-	-	-	-	11
Harbour West	-	-	2	-	-	-	-	-	-	-	-	-	2
Scorpio	12	13	14	-	-	-	-	-	-	-	-	-	39

4.7. Conclusion

4.7.1. Monthly air quality (March 2026)

- Data completeness (March 2026): PM₁₀ data capture ranged from 85–100% at stations with PM₁₀ reporting, and PM_{2.5} data capture ranged from 94–100% at stations with PM_{2.5} reporting. Scorpio ES1 achieved 85% PM₁₀ capture after the analyser was decommissioned and sent to the agents for a firmware upgrade (5 days with <80% data capture, 27-31 March 2026). Richardia PM₁₀ was not available for 29 days (3–31 March 2026) after the analyser was converted to PM_{2.5}; Richardia PM_{2.5} achieved 94% capture, with the first two days of March excluded during conversion.
- Regulatory (RSA NAAQS): 0 exceedances of the PM₁₀ 24-hour standard (75 µg/m³) and one (1) exceedance of the PM_{2.5} 24-hour standard (40 µg/m³).
- Health guidance (WHO): PM₁₀ recorded one (1) exceedance of the WHO 24-hour guideline (45 µg/m³) at Scorpio. PM_{2.5} recorded 31 station-day exceedances of the WHO 24-hour guideline (15 µg/m³) across Brackenham (11), Felixton (4), Harbour West (2), and Scorpio (14).

4.7.2. Year-to-date (2026 calendar year)

- ▶ Regulatory (RSA NAAQS; max 4 exceedances/year): PM₁₀ remained within the annual allowable exceedance frequency at all reporting stations, with 0 measured exceedances of the 24-hour standard year-to-date. PM_{2.5} remained within the annual allowable exceedance frequency at all reporting stations, with one (1) 24-hour exceedance recorded at Scorpio year-to-date.
- ▶ Health guidance (WHO): PM₁₀ recorded one (1) exceedance of the WHO 24-hour guideline at Scorpio year-to-date. PM_{2.5} WHO 24-hour guideline station-day exceedances totalled Brackenham (30), Felixton (11), Harbour West (2), and Scorpio (39).

5. SULPHUR DIOXIDE MONITORING

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

SO₂ is associated with adverse respiratory effects because it is highly soluble and 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

5.1. Ambient Air Quality Standards

South African ambient air quality standards for SO₂ are listed below (Table 5.1).

Table 5.1: SO₂ ambient air quality limits.

Organisation	Limit	10-min Average	Hourly Average	Daily Average	Annual Average
RSA ^[a]	SO ₂ Standard	500 µg/m ³ ^[b]	350 µg/m ³ ^[c]	125 µg/m ³ ^[d]	50 µg/m ³ ^[e]
		191 ppb ^[b]	134 ppb ^[c]	48 ppb ^[d]	19 ppb ^[e]
WHO ^[f]	SO ₂ Guideline	500 µg/m ³	-	40 µg/m ³	-
		191 ppb	-	15 ppb	-

Notes:

- a) SA Government Gazette 32816 (published 24 December 2009) in terms of the National Environmental Management: Air Quality Act 39 of 2004 (RSA-NEMAQA, 2009)
- b) Not to be exceeded more than 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)

5.2. Data Completeness

The percentage of valid data received from the SO₂ analysers for March 2026 is shown in Table 5.2.

Table 5.2: SO₂ data capture.

Station	Availability (%)	SO ₂ (%)
Arboretum	100	100
Brackenham	100	99
CBD	100	98
eSikhaleni	100	100
Felixton	99	99
Harbour West	99	99
Richardia	98	98
Scorpio	99	99

Notes:

- Red - Not acceptable for statistical purposes (<80%)
- Orange – Does not meet SANAS data capture requirements (<90%)
- Yellow - Below RBCAA operational target (<95%)

Missing Data (SO₂):

- Richardia – Power outage and data invalidation (1 day with <80% data capture, 25 March 2026).

5.3. Monthly

The monthly mean SO₂ concentration was below the South African annual standard at all stations; this monthly comparison is indicative only and does not constitute an annual compliance determination (Figure 5.1). Comparisons to previous months are also provided (Figure 5.2).

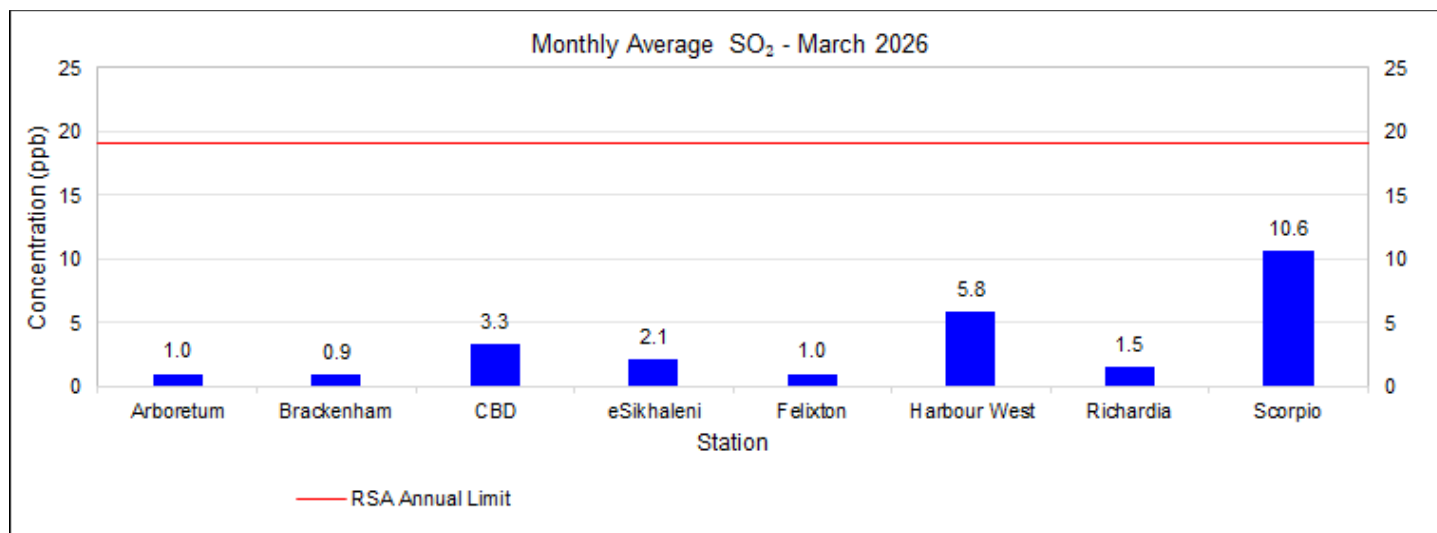


Figure 5.1: SO₂ monthly concentrations.

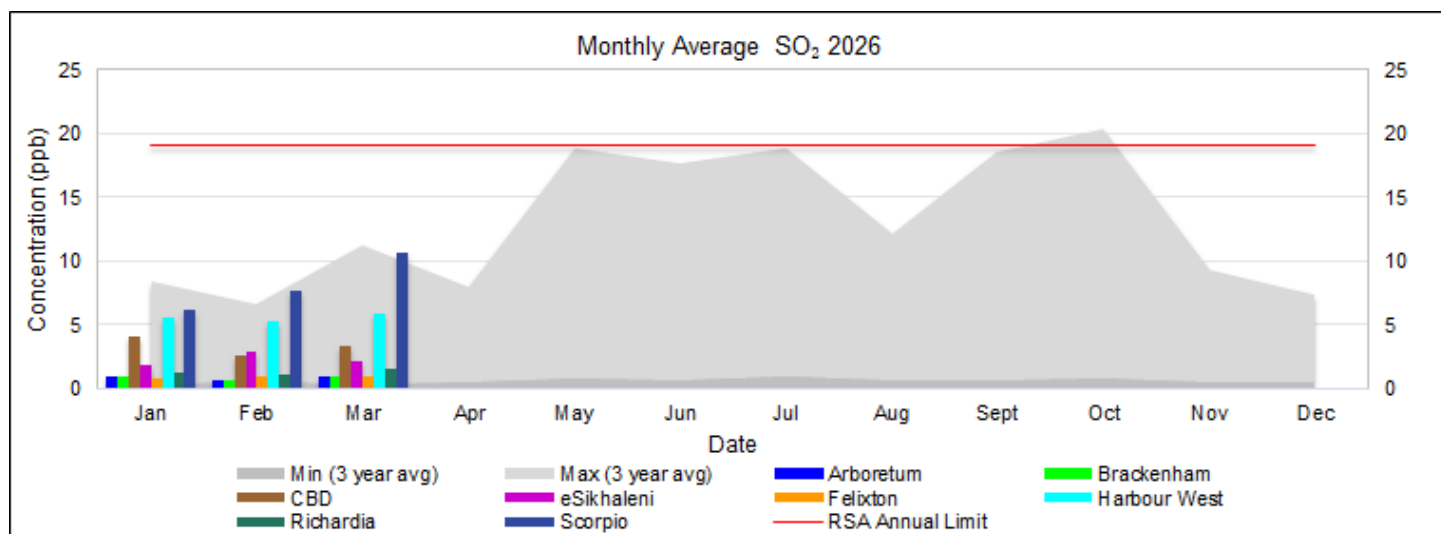


Figure 5.2: SO₂ monthly comparison.

5.4. Diurnal

Diurnal SO₂ concentrations are shown below (Figure 5.3). For visual reference, the diurnal SO₂ profile is plotted against the 24-hour RSA and WHO reference values. SO₂ profile values remained below the RSA 24-hour value (48 ppb), while the WHO 24-hour value (15 ppb) was exceeded at Scorpio.

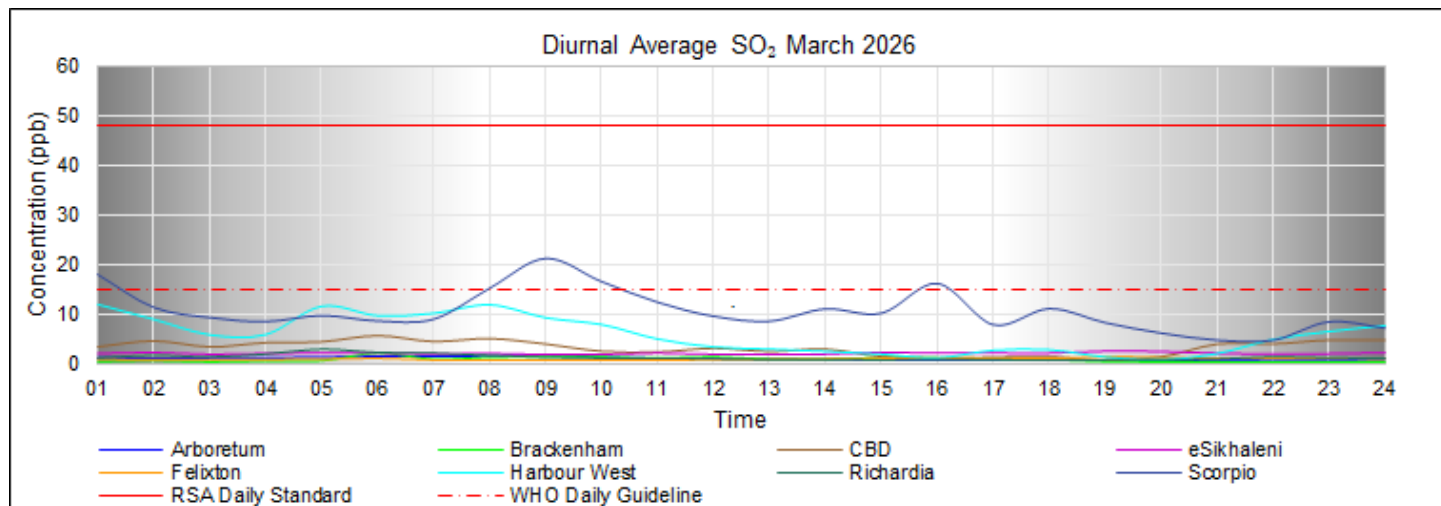


Figure 5.3: SO₂ diurnal concentrations.

5.5. Daily

SO₂ daily average concentrations are shown in Figure 5.4, and exceedances are summarised in Table 5.3. There were:

- ▶ Two (2) measured exceedances of the RSA 24-hour standard (48 ppb); and,
- ▶ Seven (7) measured exceedance-days of the WHO 24-hour guideline (15 ppb).

Table 5.3: SO₂ 24-hour average exceedances.

SO₂ Daily RSA Limit (48 ppb)	2
Foskor - meteorology	1
Scorpio	1
South32 - meteorology	1
Scorpio	1
SO₂ Daily WHO Limit (15 ppb)	7
No response required	7
Harbour West	2
Scorpio	5

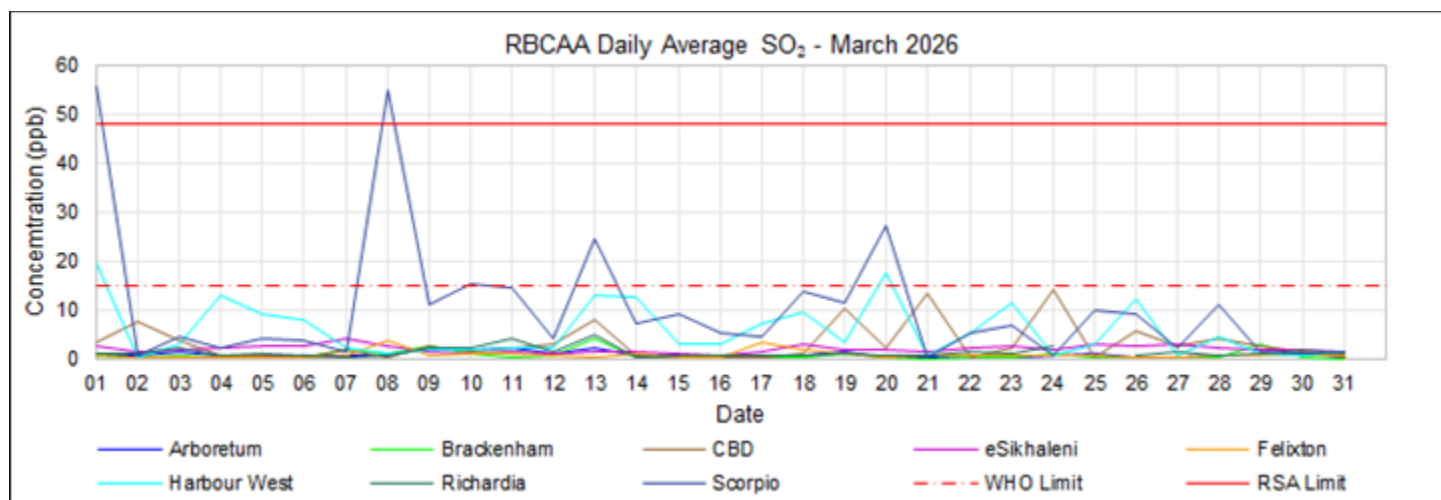


Figure 5.4: SO₂ 24-hour average concentrations.

Missing Data (SO₂):

- Richardia – Power outage and data invalidation (1 day with <80% data capture, 25 March 2026).

5.6. Hourly

SO₂ hourly average concentrations are shown in Figure 5.5. Three (3) measured exceedances of the RSA 1-hour limit (134 ppb) were recorded (Table 5.4).

Table 5.4: SO₂ 1-hour exceedances.

SO ₂ Hourly RSA Limit (134 ppb)	3
South32	2
Valve not opened as per procedure	1
Harbour West	1
High SO ₂ emissions at the FTC stack	1
Scorpio	1
Foskor - meteorology	1
Foskor - meteorology	1
Scorpio	1

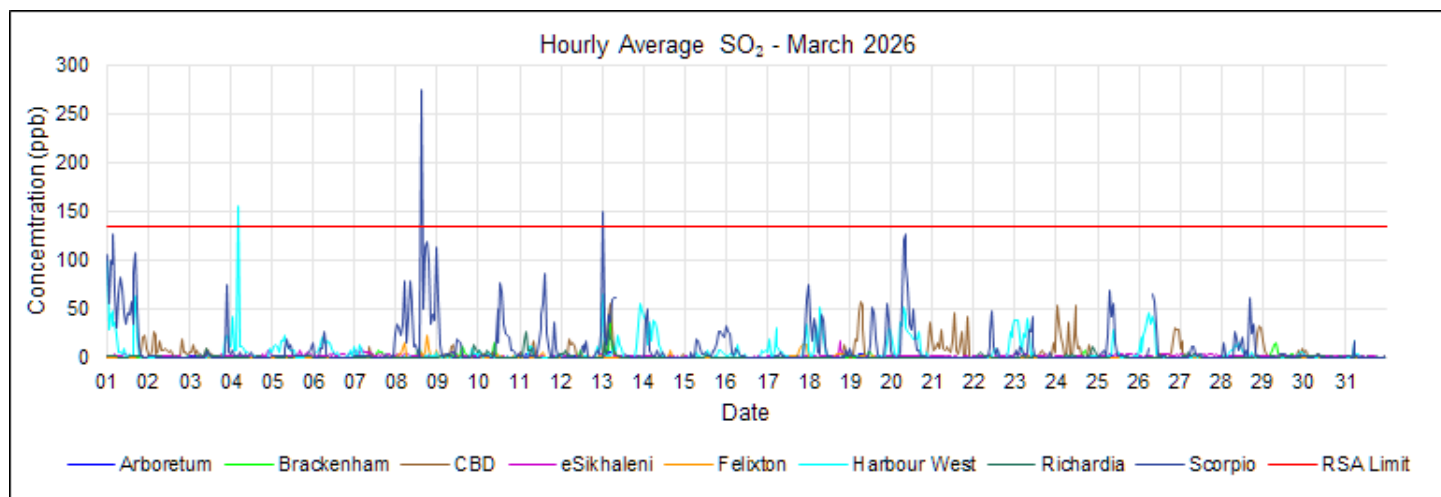


Figure 5.5: SO₂ 1-hour average concentrations.

5.7. 10-minute

SO₂ 10-minute average concentrations are shown in Figure 5.6. Six (6) measured exceedances of the RSA 10-minute standard and the WHO 10-minute guideline (191 ppb) were recorded (Table 5.5).

Table 5.5: SO₂ 10-minute exceedances.

SO ₂ 10-minute RSA & WHO Limit (191 ppb)	6
Industry response required	2
Scorpio	2
Foskor - meteorology	4
Scorpio	4

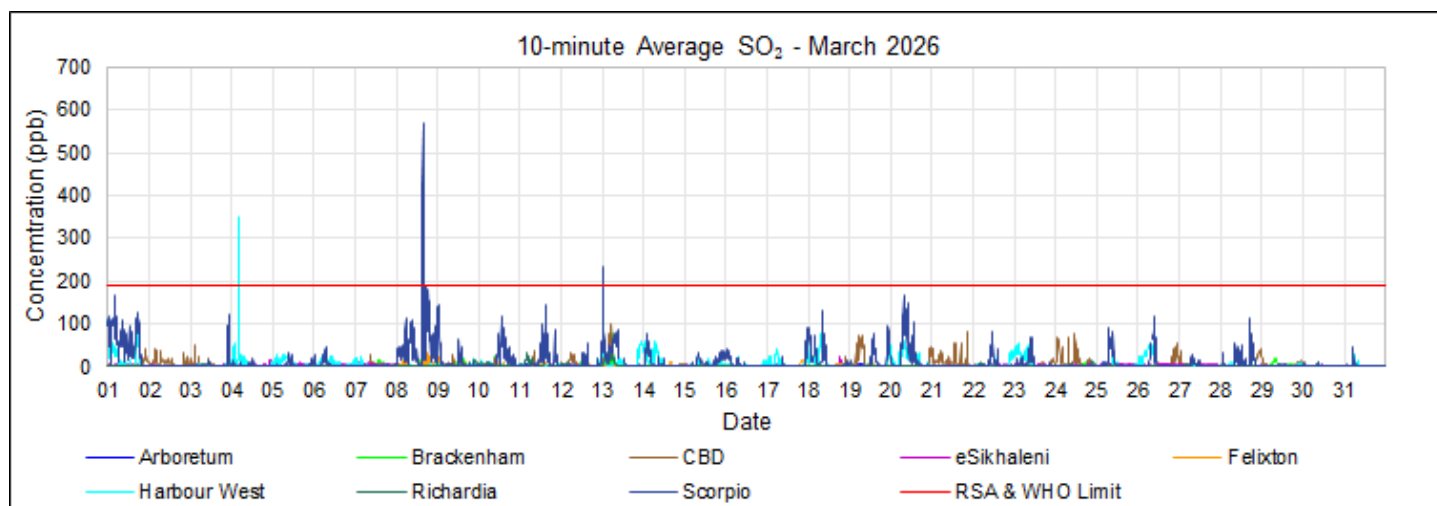
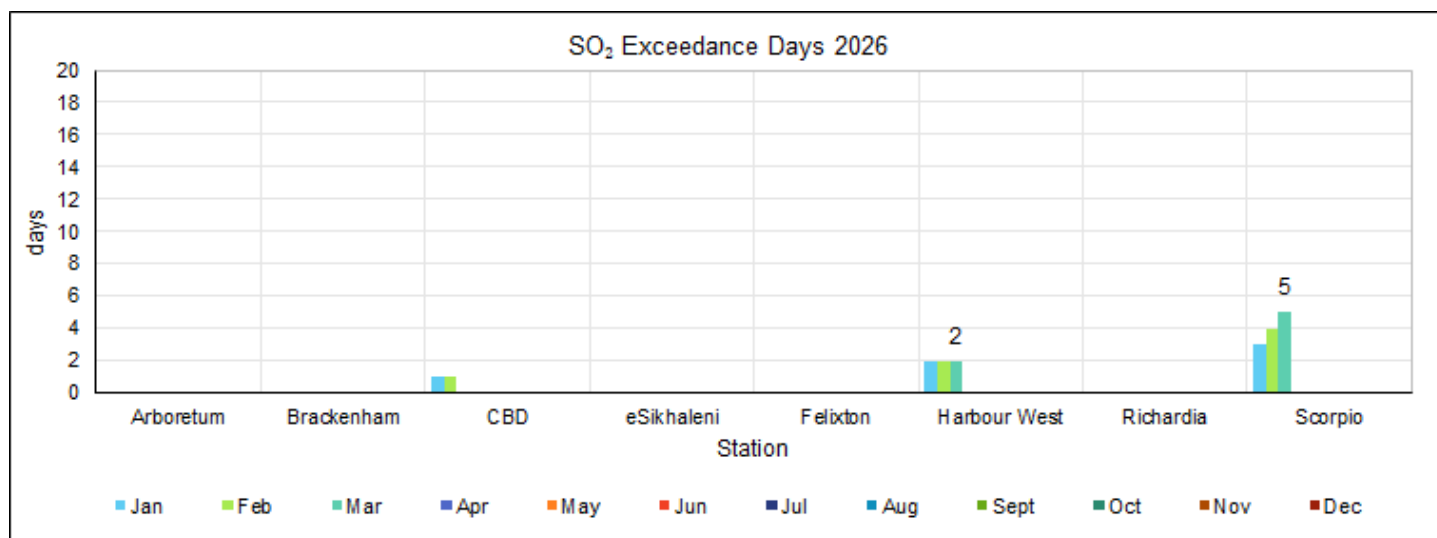


Figure 5.6: SO₂ 10-minute average concentrations.

5.8. Exceedances

SO₂ exceedance days, together with comparisons to previous months, are shown in Figure 5.7. A summary of SO₂ exceedances by station is presented in Table 5.6. SO₂ exceedances may be associated with emissions resulting from process upsets (e.g., planned maintenance, plant shutdowns, or start-ups), equipment leaks, fugitive emissions, fires, or emergency shutdowns. For stations and averaging periods with no measured exceedance, results remained below the applicable criterion for the assessed period.

Figure 5.7: SO₂ exceedance days.Table 5.6: SO₂ exceedance summary.

2026	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SO₂ Daily RSA Limit (48 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	2	-	-	-	-	-	-	-	-	-	2
SO₂ Daily WHO Limit (15 ppb)													
CBD	1	1	-	-	-	-	-	-	-	-	-	-	2
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	2	2	2	-	-	-	-	-	-	-	-	-	6
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	3	4	5	-	-	-	-	-	-	-	-	-	12
SO₂ Hourly RSA Limit (134 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	1	-	-	-	-	-	-	-	-	-	1
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	2	-	-	-	-	-	-	-	-	-	2
SO₂ 10-minute RSA & WHO Limit (191 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	6	-	-	-	-	-	-	-	-	-	6

5.9. Conclusion

5.9.1. Monthly air quality (March 2026)

- ▶ Data completeness (March 2026): SO₂ data capture ranged from 98-100% across the monitoring network. Richardia achieved 98% SO₂ capture, with one day below 80% data capture due to a power outage and data invalidation on 25 March 2026.
- ▶ Regulatory (RSA NAAQS): SO₂ exceedances were recorded at Scorpio for the 24-hour (2 exceedance-days; 48 ppb), 1-hour (3 exceedances; 134 ppb; Harbour West 1 and Scorpio 2), and 10-minute (6 exceedances; 191 ppb) averaging periods.
- ▶ Health guidance (WHO): 7 exceedance-days of the WHO 24-hour guideline (15 ppb) were recorded across Harbour West (2) and Scorpio (5).

5.9.2. Year-to-date (2026 calendar year)

- ▶ Regulatory (RSA NAAQS): SO₂ remained within the annual allowable exceedance frequencies year-to-date at all reporting stations. Scorpio recorded two (2) 24-hour exceedance-days against the annual allowance of four (4), three (3) 1-hour exceedances (Harbour West 1; Scorpio 2) against the annual allowance of 88, and six (6) 10-minute exceedances against the annual allowance of 526.
- ▶ Health guidance (WHO): WHO 24-hour guideline exceedance-days totalled CBD (2), Harbour West (6), and Scorpio (12); all other stations recorded 0 exceedance-days year-to-date.

6. TOTAL REDUCED SULPHUR MONITORING

Total reduced sulphur compounds (TRS), often associated with rotten egg or cooked cabbage odour, comprise a gaseous mixture consisting mainly of hydrogen sulphide (H_2S), methyl mercaptan ($\text{CH}_3\text{S-H}$), dimethyl sulphide ($\text{CH}_3\text{-S-CH}_3$) and dimethyl disulphide ($\text{CH}_3\text{-S-S-CH}_3$). While there are other ambient TRS compounds, these four are the most common, abundant, and generally referred to in TRS discussions. Once released into the atmosphere, oxidation products of TRS compounds, such as sulphuric acid, contribute to environmental acidity. The most commonly reported health concerns related to TRS substances are nausea and headaches, although each component has its own characteristics and effects.

6.1. Ambient Air Quality Standards

There are no South African standards for TRS; however, the World Health Organisation (WHO) and the Ontario Ministry of the Environment (OME) have derived guidance values (Table 6.1).

Table 6.1: TRS ambient air quality limits.

Organisation	Limit	10-min Average	30-minute Average	24-hour Average	Annual Average
WHO	Guideline	-	7 $\mu\text{g}/\text{m}^3$ [a]	-	-
		-	5 ppb [a]	-	-
OME	Standard (pulp and paper)	13 $\mu\text{g}/\text{m}^3$ [b]	10 $\mu\text{g}/\text{m}^3$ [c]	14 $\mu\text{g}/\text{m}^3$ [d]	-
		9.3 ppb [b]	7.2 ppb [c]	10.1 ppb [d]	-
OME	Standard (other industries)	13 $\mu\text{g}/\text{m}^3$ [b]	10 $\mu\text{g}/\text{m}^3$ [c]	7 $\mu\text{g}/\text{m}^3$ [d]	-
		9.3 ppb [b]	7.2 ppb [c]	5.0 ppb [d]	-

Notes:

- a) World Health Organisation 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).

RBCAA applies the following criteria:

- ▶ 30-minute WHO H_2S guideline; and
- ▶ daily and 10-minute OME standards for the pulp and paper sector.

6.2. Data Completeness

The percentage of valid data received from the TRS analysers for March 2026 is shown in Table 6.2.

Table 6.2: TRS data capture.

Station	Availability (%)	TRS (%)
Brackenham	100	66
CBD	100	99
eSikhaleni	100	100
Felixton	99	99
Richardia	98	98

Notes:

- Red - Not acceptable for statistical purposes (<80%)
- Orange – Does not meet SANAS data capture requirements (<90%)
- Yellow - Below RBCAA operational target (<95%)

Missing Data (TRS):

- Brackenham – Analyser commissioned on 12 March 2026 (11 days with <80% data capture, 1–11 March 2026).

6.3. Monthly

Monthly average TRS concentrations are shown in Figure 6.1. Comparisons with previous months are also provided in Figure 6.2.

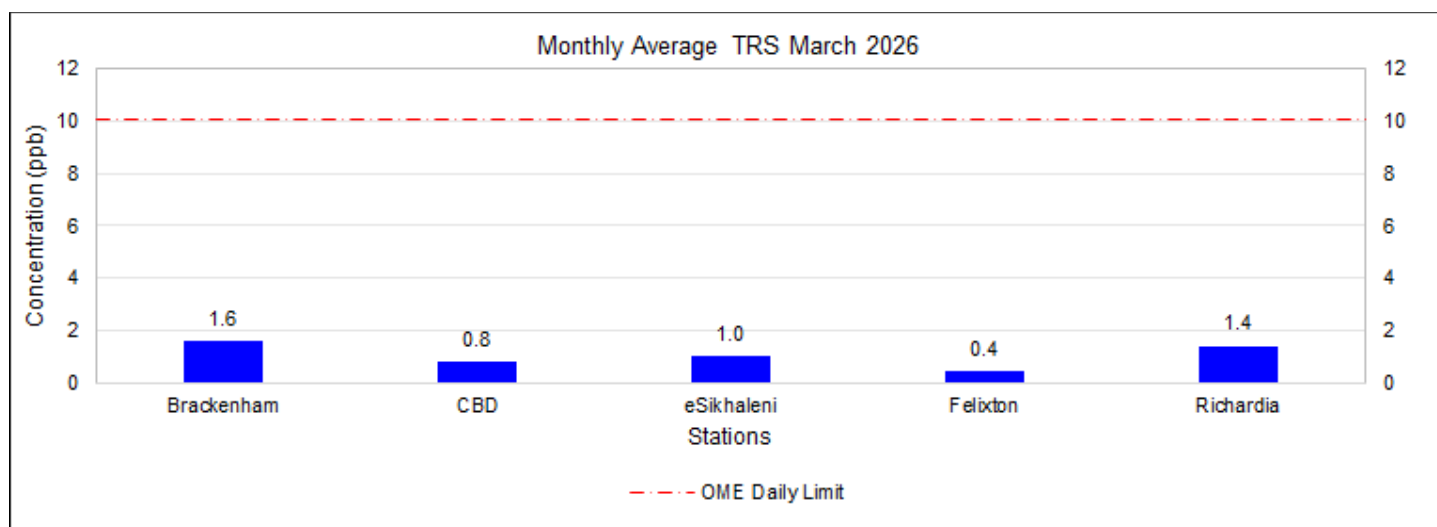


Figure 6.1: TRS monthly concentrations.

Note: Brackenham – Analyser commissioned on 12 March 2026 (11 days with <80% data capture, 1–11 March 2026)

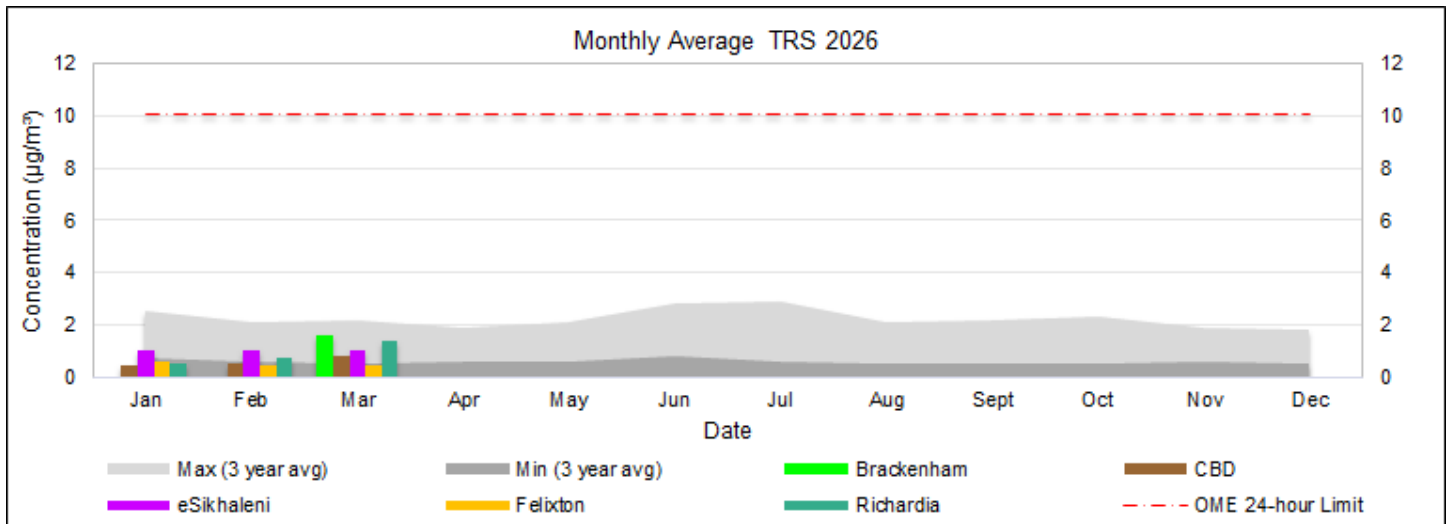


Figure 6.2: TRS monthly comparison.

Note: Brackenham – Analyser commissioned on 12 March 2026 (11 days with <80% data capture, 1–11 March 2026)

6.4. Diurnal

The diurnal TRS concentrations are shown below (Figure 6.3). For visual reference, the diurnal TRS profile is plotted against the OME 24-hour reference value (10.1 ppb) and remained below this value.

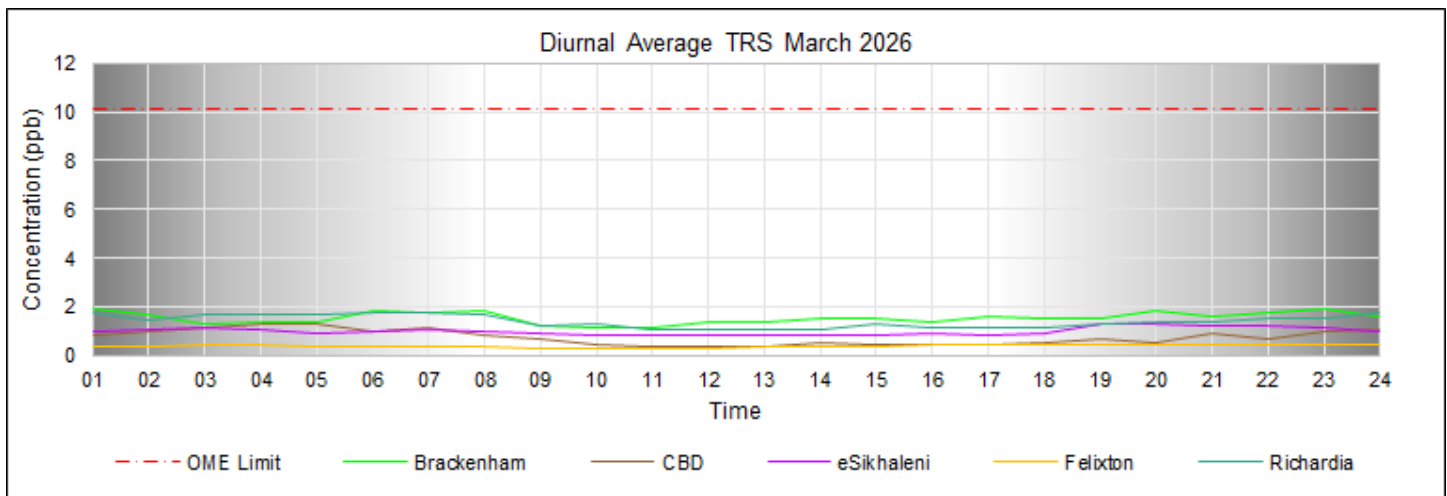


Figure 6.3: TRS diurnal concentrations.

Note: Brackenham – Analyser commissioned on 12 March 2026 (11 days with <80% data capture, 1–11 March 2026)

6.5. Daily

The TRS daily average concentrations are shown in Figure 6.4. No (0) exceedances of the OME 24-hour criterion (10.1 ppb) were measured.

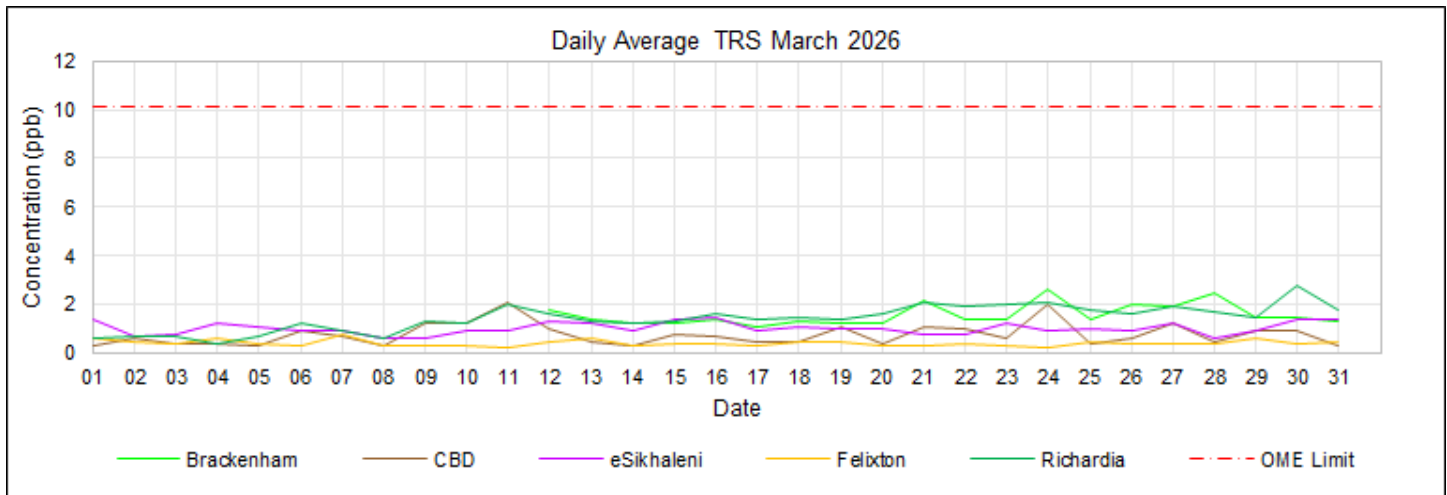


Figure 6.4: TRS daily average concentration.

Missing Data (TRS):

- Brackenham – Analyser commissioned on 12 March 2026 (11 days with <80% data capture, 1–11 March 2026).

6.6. 30-minute

TRS 30-minute average concentrations are shown in Figure 6.5. Sixty-five (65) exceedances of the WHO 30-minute guideline (5.0 ppb) were measured (Table 6.3).

Table 6.3: TRS 30-minute average exceedances (WHO).

TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	65
Fire next to the monitoring station	1
RBCAA allocation	1
eSikhaleni	1
Mondi	64
Root cause under investigation	19
CBD	11
Richardia	4
Brackenhams	4
SETP	36
CBD	13
Richardia	2
Brackenhams	21
Declining quality of the mill's A-Condensate	9
CBD	1
Richardia	7
Brackenhams	1

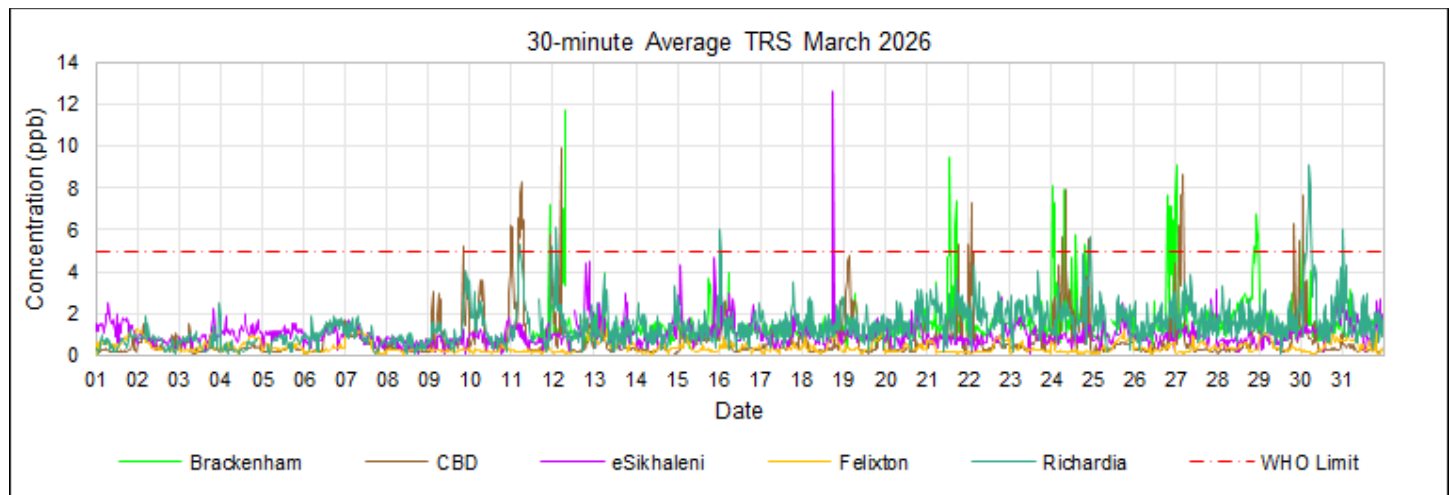


Figure 6.5: TRS 30-minute average concentration.

6.7. 10-minute

TRS 10-minute average concentrations are shown in Figure 6.6. Twenty-five (25) exceedances of the OME 10-minute criterion (9.3 ppb) were measured (Table 6.4).

Table 6.4: TRS 10-minute average exceedances (OME).

TRS 10-minute OME Limit (9.3 ppb)	25
Fire next to the monitoring station	1
RBCAA allocation	1
eSikhaleni	1
Mondi	24
Root cause under investigation	6
CBD	2
Brackenham	4
SETP	17
CBD	6
Brackenham	11
Declining quality of the mill's A-Condensate	1
Brackenham	1

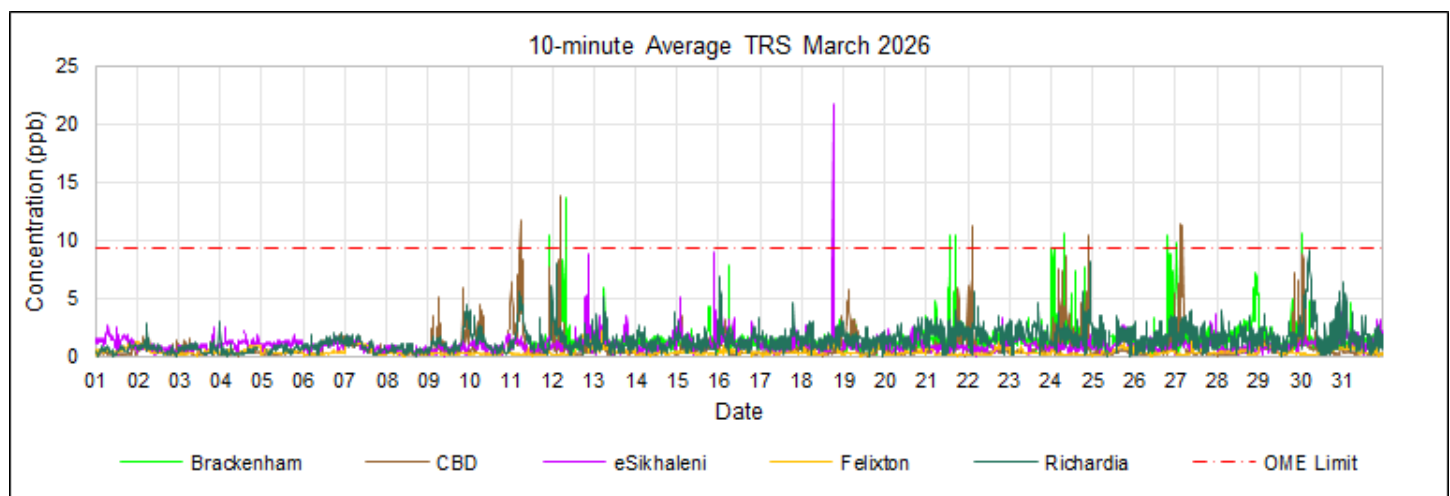


Figure 6.6: TRS 10-minute average concentrations.

6.8. Exceedances

TRS exceedance days, together with comparisons to previous months, are shown in Figure 6.7. A summary of TRS exceedances by station is presented in Table 6.5. TRS exceedances may be associated with emissions resulting from process upsets (e.g., planned maintenance, plant shutdowns, or start-ups), equipment leaks, fugitive emissions, fires, or emergency shutdowns. For stations and averaging periods with no measured exceedance, results remained below the applicable criterion for the assessed period.

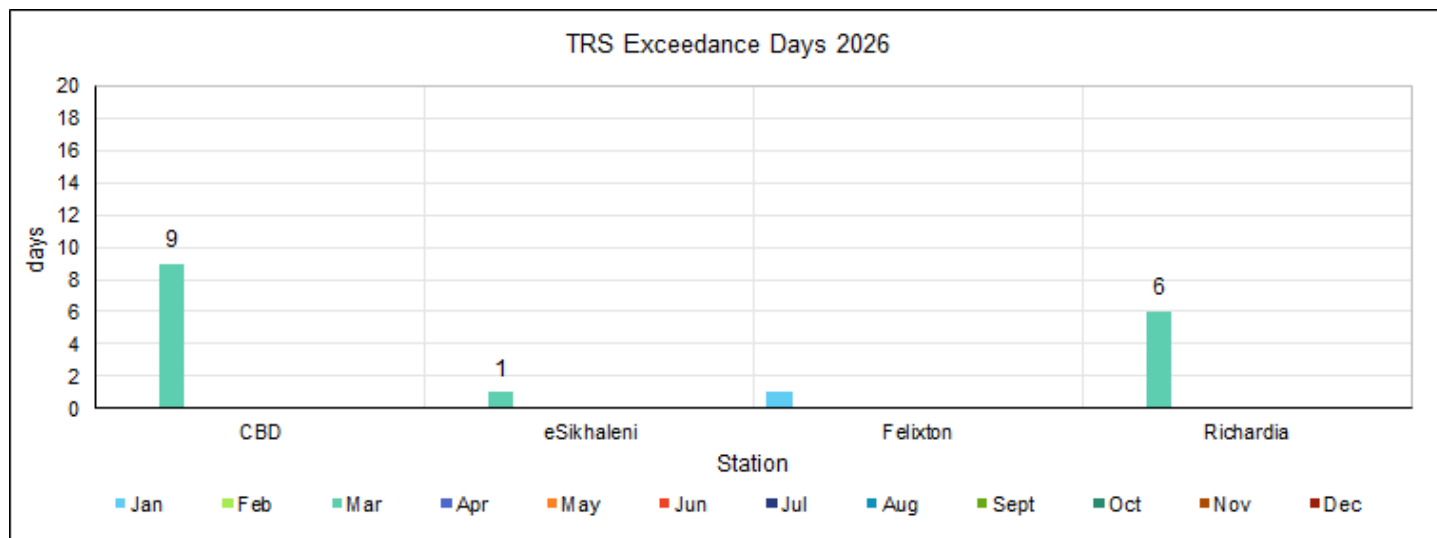


Figure 6.7: TRS exceedance days.

Table 6.5: TRS exceedance summary.

2026	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TRS 24-hour OME Limit (10.1 ppb)													
Brackenham	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
TRS 30-minute WHO H₂S Limit (5.0 ppb)													
Brackenham	-	-	26	-	-	-	-	-	-	-	-	-	26
CBD	-	-	25	-	-	-	-	-	-	-	-	-	25
eSikhaleni	-	-	1	-	-	-	-	-	-	-	-	-	1
Felixton	1	-	-	-	-	-	-	-	-	-	-	-	1
Richardia	-	-	13	-	-	-	-	-	-	-	-	-	13
TRS 10-minute OME Limit (9.3 ppb)													
Brackenham	-	-	16	-	-	-	-	-	-	-	-	-	16
CBD	-	-	8	-	-	-	-	-	-	-	-	-	8
eSikhaleni	-	-	1	-	-	-	-	-	-	-	-	-	1
Felixton	2	-	-	-	-	-	-	-	-	-	-	-	2
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0

6.9. Conclusion

6.9.1. Monthly air quality (March 2026)

- ▶ Data completeness (March 2026): TRS data capture was 98–100% at the established reporting stations, excluding Brackenham. Brackenham was commissioned on 12 March 2026; therefore, 1–11 March 2026 were below the full-month data-capture threshold for that analyser. Brackenham TRS averages and exceedance counts should therefore be interpreted as post-commissioning, partial-month results.
- ▶ No South African ambient air quality standard exists for TRS/H₂S; therefore, no regulatory compliance determination applies.
- ▶ Health/odour guidance (WHO + RBCAA-adopted OME criteria): No (0) exceedances of the OME 24-hour criterion (10.1 ppb) were recorded during March 2026. Sixty-five (65) exceedances of the WHO 30-minute guideline (5.0 ppb) were recorded across CBD (25), Brackenham (26), Richardia (13), and eSikhaleni (1). Twenty-five (25) exceedances of the OME 10-minute criterion (9.3 ppb) were recorded across CBD (8), Brackenham (16), and eSikhaleni (1).

6.9.2. Year-to-date (2026 calendar year)

- ▶ Regulatory (RSA NAAQS): No South African ambient air quality standard exists for TRS/H₂S.
- ▶ Health/odour guidance (2026): OME 24-hour exceedances were 0 at all stations year-to-date. WHO 30-minute exceedances totalled CBD (25), Brackenham (26), eSikhaleni (1), Felixton (1), and Richardia (13). OME 10-minute exceedances totalled CBD (8), Brackenham (16), eSikhaleni (1), and Felixton (2).

7. MONTHLY AIR QUALITY

Where possible, the RBCAA assesses data collected by its network against national standards, international guidelines, and local targets. WHO air quality guidelines (AQGs) are intended for global use and support actions to protect public health in different contexts. By contrast, air quality standards and local targets are set by individual countries or regions and are essential components of national risk management and environmental policy. They vary according to how health risks, technological feasibility, economic considerations, and political and social factors are balanced; these factors are influenced by the level of development and national air-quality management capability (WHO, 2005).

7.1. Conclusion

Regulatory assessment is based on comparison to the South African National Ambient Air Quality Standards (NAAQS). Health/odour assessment is based on WHO guidelines and RBCAA-adopted TRS/H₂S reference criteria; exceedances of these criteria do not constitute NAAQS non-compliance, but they indicate potential short-term exposure or odour-annoyance conditions requiring attention.

7.1.1. March 2026 – Monthly Conclusion

Regulatory (RSA NAAQS)

- ▶ No PM₁₀ 24-hour NAAQS exceedances (75 µg/m³) were recorded. One (1) PM_{2.5} 24-hour NAAQS exceedance (40 µg/m³) was recorded at Scorpio.
- ▶ SO₂ NAAQS exceedances were recorded at Scorpio for the 24-hour (2 exceedance-days; 48 ppb), 1-hour (3 exceedances; 134 ppb; Harbour West 1 and Scorpio 2), and 10-minute (6 exceedances; 191 ppb) averaging periods.
- ▶ TRS/H₂S has no South African NAAQS standard; therefore, no regulatory compliance determination applies for TRS/H₂S.

Health/odour guidance (WHO + RBCAA-adopted TRS/H₂S criteria)

- ▶ PM₁₀: one (1) exceedance of the WHO 24-hour guideline (45 µg/m³) was recorded at Scorpio. PM_{2.5}: 31 station-day exceedances of the WHO 24-hour guideline (15 µg/m³) were recorded across Brackenham (11), Felixton (4), Harbour West (2), and Scorpio (14).
- ▶ SO₂: 7 exceedance-days of the WHO 24-hour guideline (15 ppb) across Harbour West (2) and Scorpio (5).
- ▶ TRS/H₂S: 0 exceedances of the OME 24-hour criterion (10.1 ppb), 65 exceedances of the WHO 30-minute guideline (5.0 ppb), and 25 exceedances of the OME 10-minute criterion (9.3 ppb) were recorded during March 2026.

7.1.2. 2026 Calendar-Year Conclusion**Regulatory (RSA NAAQS)**

- ▶ PM₁₀ (24-hour NAAQS; max 4 exceedances/year): within the annual allowable exceedance frequency at all stations reporting PM₁₀.
- ▶ PM_{2.5} (24-hour NAAQS; max 4 exceedances/year): within the annual allowable exceedance frequency at all reporting stations year-to-date; one (1) exceedance has been recorded at Scorpio.
- ▶ SO₂ remained within the annual allowable exceedance frequencies year-to-date at all reporting stations: Scorpio recorded two (2) 24-hour exceedance-days against the annual allowance of four (4), three (3) hourly exceedances (Harbour West 1; Scorpio 2) against the annual allowance of 88, and six (6) 10-minute exceedances against the annual allowance of 526.

Health/odour guidance (WHO + RBCAA-adopted TRS/H₂S criteria)

- ▶ PM₁₀ (WHO 24-hour guideline: 45 µg/m³): one (1) exceedance was recorded at Scorpio year-to-date. PM_{2.5} (WHO 24-hour guideline: 15 µg/m³): station-day exceedances during 2026 year-to-date totalled Brackenham (30), Felixton (11), Harbour West (2), and Scorpio (39).
- ▶ SO₂ (WHO 24-hour guideline: 15 ppb): exceedance-days during 2026 year-to-date totalled CBD (2), Harbour West (6), and Scorpio (12); all other stations recorded 0 exceedance-days.
- ▶ TRS/H₂S: exceedances of RBCAA-adopted criteria during 2026 year-to-date comprised 0 OME 24-hour exceedances at all stations, WHO 30-minute exceedances at CBD (25), Brackenham (26), eSikhaleni (1), Felixton (1), and Richardia (13), and OME 10-minute exceedances at CBD (8), Brackenham (16), eSikhaleni (1), and Felixton (2).

8. ACKNOWLEDGEMENT

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Director

9. REFERENCES

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APPENDIX A
ABBREVIATIONS AND TERMS

List of Abbreviations and Terms	
Chemical Formulae	
CH ₃ -S-CH ₃	Dimethyl Sulphide
CH ₃ S-H	Methyl Mercaptan
CH ₃ -S-S-CH ₃	Dimethyl Disulphide
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
FPM	Fine Particulate Matter
H ₂ S	Hydrogen Sulphide
H ₂ SO ₃	Sulphurous Acid
H ₂ SO 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
TVOCs	Total Volatile Organic Compounds

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	Kilometres per hour
m	Metres
m/s	Metres per second
mg	Milligrams
mg/m²/day	Milligrams per meter squared per day
mg/m³	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 African 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	A mechanical-electrical-optical device used to measure the concentration of trace gas pollutants or particulate concentrations.
Calibration	Calibration is a procedure that compares sensor responses to known standards or reference values. Deviations between the expected and known concentrations are corrected and reported.
Database	The 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 monitoring station capable of monitoring wind speed, direction, and temperature.
Model	The model implements dispersion modelling mathematics software that calculates ambient pollution concentrations based on emission figures and meteorological data.
Network	The network comprises hardware (sensors, data loggers, telemetry, and computers) and software (data handling, storage programs, models, and databases).
Precision Check	The precision check is a procedure in which a sensor is challenged with a gas of 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 measuring pollutants, meteorological conditions, or consolidating data.
System	The system represents all network components, including the procedures for marshalling and reporting data.

APPENDIX B

QUALITY ASSURANCE

The SO₂ concentrations reported are determined by the United States Environmental Protection Agency (US EPA) equivalent method, EQSA-0193-092. SO₂ 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. Every effort is made to minimise the error. The minimum threshold for statistical analyses is at least 80% valid data to maintain reliability and minimise bias; the South African National Accreditation Standard requires 90%. (SANAS, 2012)

Table 1: Quality Assurance

Test	Range	Action
Zero	Zero 0 to 2 ppb	Leave it as is.
	Zero value -2 to 0 ppb	Set to zero.
	Zero value -5 to -2 ppb and 2 to 5 ppb	Adjust the data set to reset all data to zero.
	Zero value 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.
	Span value -10 to -3% and 3 to 10% deviation.	Scale the data set by the opposite, corresponding percentage.
	Span value 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 – 2026.*

Industry	Description	SO ₂ Emission 2025 (t)	SO ₂ Emission 2025 (t)	SO ₂ Contribution (%)
Foskor	Acid Plant	2390	2401	13%
	Boiler	11		
Tongaat Hulett	Boiler	185	185	1%
Mondi	Flume 1	1417	3080	17%
	Flume 2	836		
	Power Boiler	795		
	Incinerator	8		
	Bleach Plant	24		
Mpact	Babcock	281	805	5%
	JT Boiler	524		
	Oil Burner	0		
RBM	Char Plant	468	542	3%
	Miscellaneous	34		
	MSP (Drier)	38		
	Smokers	1		
South32	FTC	1885	10561	59%
	GTC 1	1955		
	GTC 2	1680		
	GTC 3	1579		
	GTC 4	1579		
	GTC 5	1630		
	Potrooms	254		
Tronox	Tank 1	251	251	1%
Total		17825	17825	100%
<i>Note: Tongaat Hullet shut down during the year's 1st quarter and last month.</i>				

APPENDIX D
OPERATIONAL REPORTTable 1: Maximum concentrations for PM₁₀ and PM_{2.5}.

RBCAA: Monthly Report						
PM ₁₀ daily averages						
Station	Concentration (µg/m ³)	% of the RSA Standard (75 µg/m ³)	% of WHO Guideline (45 µg/m ³)	Time	Wind Direction (°)	Wind Speed (m/s)
CBD ES1	29.0	39%	64%	2026/03/28 00:00	3.1	12
eSikhaleni	43.0	57%	96%	2026/03/28 00:00	4.0	27
Felixton ES1	25.0	33%	56%	2026/03/29 00:00	3.2	229
Richardia	46.0	61%	102%	2026/03/08 00:00	3.5	161
Scorpio ES1	29.0	39%	64%	2026/03/28 00:00	3.1	12
PM _{2.5} daily averages						
Station	Concentration (µg/m ³)	% of the RSA Standard (40 µg/m ³)	% of WHO Guideline (15 µg/m ³)	Time	Wind Direction (°)	Wind Speed (m/s)
Brackenhams ES2	26.0	65%	173%	2026/03/01 00:00	3.2	1
Felixton ES2	23.0	58%	153%	2026/03/29 00:00	3.2	229
Harbour West ES2	20.0	50%	133%	2026/03/01 00:00	3.0	330
Scorpio ES2	12.0	30%	80%	2026/03/03 00:00	3.2	353
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 the time beginning. Wind speeds of < 1 m/s are considered calm; wind directions measured under these conditions cannot be used for incident investigations. This report is an interim report regarding AIMS' quality system classification. The final data will be published in the system's monthly report.						
STATUS Meteorology Airport, Arboretum, Brackenhams, 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 SO₂.

RBCAA: Monthly Report						
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	18.1	9%		2026/03/11 08:10	3.5	243
Brackenham	78.8	41%		2026/03/13 05:30	1.8	8
CBD	100.8	53%		2026/03/13 05:20	0.2	24
eSikhaleni	25.7	13%		2026/03/18 18:10	2.0	74
Felixton	34.4	18%		2026/03/08 18:30	2.4	185
Harbour West	350.8	184%		2026/03/04 04:30	0.6	30
Richardia	39.9	21%		2026/03/13 04:10	1.4	320
Scorpio	571.6	299%		2026/03/08 15:30	4.0	174
SO ₂ hourly averages						
Station	Concentration (ppb)	% of the RSA Standard (350 µg/m³ / 134 ppb)	No WHO Guideline	Time	Wind Direction (°)	Wind Speed (m/s)
Arboretum	10.5	8%	-	2026/03/11 08:00	3.4	226
Brackenham	48.4	36%	-	2026/03/13 05:00	1.5	6
CBD	57.7	43%	-	2026/03/19 06:00	4.1	242
eSikhaleni	16.9	13%	-	2026/03/18 18:00	2.4	65
Felixton	22.5	17%	-	2026/03/08 18:00	1.9	184
Harbour West	155.7	116%	-	2026/03/04 04:00	1.1	13
Richardia	29.0	22%	-	2026/03/13 04:00	1.6	321
Scorpio	275.4	206%	-	2026/03/08 15:00	4.1	171
SO ₂ daily averages						
Station	Concentration (ppb)	% of the RSA Standard (125 µg/m³ / 48 ppb)	% of WHO Guideline (40 µg/m³ / 15 ppb)	Time	Wind Direction (°)	Wind Speed (m/s)
Arboretum	2.5	5%	17%	2026/03/11 00:00	2.8	198
Brackenham	4.4	9%	29%	2026/03/13 00:00	2.3	33
CBD	14.3	30%	95%	2026/03/24 00:00	2.1	249
eSikhaleni	4.4	9%	29%	2026/03/07 00:00	4.0	230
Felixton	3.9	8%	26%	2026/03/08 00:00	2.9	211
Harbour West	19.8	41%	132%	2026/03/01 00:00	3.0	330
Richardia	5.0	10%	33%	2026/03/13 00:00	2.5	13
Scorpio	55.7	116%	371%	2026/03/01 00:00	3.0	330

Table 3: Maximum concentrations for TRS.

RBCAA: Monthly Report						
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	13.7	-	147%	2026/03/12 07:40	1.3	253
eSikhaleni	13.9	-	149%	2026/03/12 04:40	2.0	235
Felixton	21.7	-	233%	2026/03/18 18:10	2.0	74
Richardia	2.2	-	24%	2026/03/13 04:30	0.9	28
TRS 30-minute averages						
Station	Concentration (ppb)	No RSA Standard	% of WHO H ₂ S Guideline (7.0 µg/m³ / 5.0 ppb)	Time	Wind Direction (°)	Wind Speed (m/s)
CBD	11.7	-	234%	2026/03/12 07:30	1.2	254
eSikhaleni	9.9	-	198%	2026/03/12 04:30	2.1	245
Felixton	12.6	-	252%	2026/03/18 18:00	2.2	70
Richardia	1.8	-	36%	2026/03/12 18:00	1.2	64
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	2.6	-	26%	2026/03/24 00:00	1.6	259
eSikhaleni	2.1	-	21%	2026/03/11 00:00	2.0	215
Felixton	1.5	-	15%	2026/03/16 00:00	2.9	44
Richardia	0.8	-	8%	2026/03/07 00:00	4.0	232

APPENDIX E
RAINFALL*Table 1: Daily Rainfall*

Date	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	Meerensee (mm)	South32 (mm)
2026/03/01	0	24	21	0	0
2026/03/02	66	19	28	34	56
2026/03/03	2	0	0	1	0
2026/03/04	0	0	0	0	0
2026/03/05	0	15	0	0	0
2026/03/06	30	15	6	-	8
2026/03/07	23	0	16	11	14
2026/03/08	0	0	0	0	0
2026/03/09	1	1	4	0	1
2026/03/10	0	0	0	0	0
2026/03/11	0	0	3	0	1
2026/03/12	2	0	0	1	0
2026/03/13	0	0	0	0	0
2026/03/14	0	0	12	0	0
2026/03/15	3	4	2	2	2
2026/03/16	1	0	0	0	0
2026/03/17	0	0	0	0	0
2026/03/18	27	0	1	4	3
2026/03/19	1	0	0	0	0
2026/03/20	0	0	0	0	0
2026/03/21	20	7	12	11	7
2026/03/22	2	6	1	2	1
2026/03/23	16	21	12	12	9
2026/03/24	3	0	1	2	3
2026/03/25	0	0	0	0	0
2026/03/26	0	0	0	0	0
2026/03/27	0	0	0	0	0
2026/03/28	0	2	1	0	0
2026/03/29	5	0	0	0	0
2026/03/30	0	0	0	0	0
2026/03/31	0	0	0		0
Total	202	112	118	80	105

Table 2: Monthly Rainfall, Richards Bay

Month	Richards Bay (mm)							
	2019	2020	2021	2022	2023	2024	2025	2026
Jan	182	47	305	127	167	271	371	138
Feb	195	377	229	193	410	118	390	36
Mar	78	139	217	62	141	192	165	202
Apr	214	141	96	647	87	101	479	
May	9	53	165	130	356	22	41	
Jun	78	114	140	60	33	89	27	
Jul	16	48	57	20	196	57	220	
Aug	160	107	59	77	20	97	17	
Sep	43	144	216	93	23	186	203	
Oct	260	171	214	101	345	250	96	
Nov	296	122	72	131	61	103	176	
Dec	320	77	464	253	195	145	211	
Minimum	9	47	57	20	20	22	17	36
Average	154	128	186	158	169	136	200	125
Maximum	320	377	464	647	410	271	479	202
Total	1850	1540	2234	1893	2034	1630	2396	376

Table 3: Monthly Felixton

Month	Felixton (mm)							
	2019	2020	2021	2022	2023	2024	2025	2026
Jan	138	71	207	68	57	146	117	81
Feb	138	214	231	78	188	82	303	65
Mar	70	89	126	95	80	113	148	112
Apr	143	106	135	368	58	49	287	
May	9	42	57	120	245	17	16	
Jun	53	44	98	20	14	53	29	
Jul	17	37	39	15	146	2.5	157	
Aug	39	67	55	37	18	54	3	
Sep	79	84	191	51	43	137	127	
Oct	144	67	145	98	318	187	79	
Nov	121	106	35	174	34	78	131	
Dec	311	64	212	163	146	74	193	
Minimum	9	37	35	15	14	3	3	65
Average	105	82	127	107	112	83	133	86
Maximum	311	214	231	368	318	187	303	112
Total	1261	987	1530	1288	1347	992	1590	258

Table 4: RBCT

Month	RBCT (mm)							
	2019	2020	2021	2022	2023	2024	2025	2026
Jan	110	33	215	54	136	154	229	130
Feb	124	166	146	131	344	72	249	53
Mar	172	109	194	161	69	161	145	118
Apr	174	111	69	642	30	98	450	
May	14	69	171	268	442	23	66	
Jun	24	52	124	30	34	104	27	
Jul	5	39	64	30	162	56	155	
Aug	68	64	56	25	30	86	17	
Sep	59	104	187	115	30	177	164	
Oct	164	121	156	71	293	121	65	
Nov	186	77	43	129	42	89	166	
Dec	216	104	245	279	127	65	178	
Minimum	5	33	43	25	30	23	17	53
Average	110	87	139	161	145	100	159	100
Maximum	216	166	245	642	442	177	450	130
Total	1317	1049	1669	1934	1740	1205	1911	301

Table 5: South32

Month	South32 (mm)							
	2019	2020	2021	2022	2023	2024	2025	2026
Jan	-	-	-	-	91	120	232	117
Feb	-	-	-	115	256	-	241	30
Mar	-	-	-	149	51	144	137	105
Apr	-	-	-	505	43	-	363	
May	-	-	-	106	230	-	23	
Jun	-	-	-	25	11	-	16	
Jul	-	-	-	12	165	-	98	
Aug	-	-	-	30	13	-	8	
Sep	-	-	-	64	18	129	35	
Oct	-	-	-	64	271	-	30	
Nov	-	-	-	101	36	-	112	
Dec	-	-	-	163	95	92	132	
Minimum	-	-	-	12	11	92	8	30
Average	-	-	-	121	107	121	119	84
Maximum	-	-	-	505	271	144	363	117
Total	-	-	-	1336	1280	485	1427	252

Please note that the South32 missing rain data for 2024 was due to a faulty rain gauge.

Table 6: Meerensee

Month	Meerensee (mm)							
	2019	2020	2021	2022	2023	2024	2025	2026
Jan	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	31
Mar	-	-	-	-	-	-	-	80
Apr	-	-	-	-	-	-	-	
May	-	-	-	-	-	-	-	
Jun	-	-	-	-	-	-	-	
Jul	-	-	-	-	-	-	-	
Aug	-	-	-	-	-	-	-	
Sep	-	-	-	-	-	-	-	
Oct	-	-	-	-	-	-	-	
Nov	-	-	-	-	-	-	-	
Dec	-	-	-	-	-	-	-	
Minimum	-	-	-	-	-	-	-	31
Average	-	-	-	-	-	-	-	56
Maximum	-	-	-	-	-	-	-	80
Total	-	-	-	-	-	-	-	111

APPENDIX F COMPLAINTS LOG

Table 1: Complaints

No	Date	Region	Type	Source	Description	Response
1	2026/03/02 06:07	Arboretum	Sewage odour	CoU	"The sewer smell this morning is so bad ! Can't even keep my doors open."	360
2	2026/03/02 10:00	Wildenweide	White Dust Fallout	South32	"White Dust settling on vehicle since Friday 27 February."	354
3	2026/03/05 11:20	Meerensee	Sewage odour + visible	CoU	"Sewer drain blocked overflowing into street storm water drain. Terrible smell."	360
4	2026/03/09 08:56	Richards Bay	Sulphur spillage	CoU	Dumped Sulphur	359
5	2026/03/09 14:20	Arboretum	Sewage odour	CoU	"Sewage smell coming from drain."	360
6	2026/03/10 14:20	Arboretum	Sewage odour	CoU	"Strong smell of sewage."	360
7	2026/03/11 06:12	Veldenvlei	Clinical + Odour	Mondi (investigations into root cause ongoing)	A bad smell that smells like Mondi." Later described as a "cat urine" odour causing sinus congestion.	353
8	2026/03/14 17:20	Meerensee	Sewage odour + visible	CoU	"5 Perlemoen sewage overflowing once again."	360
9	2026/03/16 16:53	Richards Bay	Black Dust Fallout	TPT	Black Dust on everything. Child is covered in black dust from playing in the house and outdoors on play equipment. Complainant stated that "My son is struggling with his health since November. My floors are always dirty even though they are cleaned every day."	355, 358, 363
10	2026/03/19 12:30	Veldenvlei	Sewage odour	CoU	"Terrible sewage smell."	360
11	2026/03/19 12:30	Veldenvlei	Sewage odour	CoU	"Unbearable sewage odour"	360
12	2026/03/20 09:15	Richards Bay	Sewage odour + visible	CoU	"Horrible sewer leak behind BP in Dollar Drive. The stench can now be smelled in offices across the road. Am sure it is a health risk by now."	360
13	2026/03/20 17:08	Richards Bay	Black Dust Fallout	TPT	Child covered in black dust after playing outside on play equipment which is standing on grass.	357, 358, 363
14	2026/03/21 17:00	Veldenvlei	Odour	Mondi	"Very strong smell. Does not smell like anything I have smelt before. A very strange smell"	356 , 1
15	2026/03/21 17:00	Veldenvlei	Clinical + Odour	Mondi	"There is a dense odour that I can taste causing sinus and eye irritation. . It is a strange smell, but I identify it as a Mondi odour."	356 , 1
16	2026/03/23 00:00	Richards Bay	Black Dust Fallout	TPT	Accumulation of black dust with magnetic properties causing damage to equipment.	1, 363

No	Date	Region	Type	Source	Description	Response
17	2026/03/23 07:43	Meerensee	Sewage odour + visible	CoU	"When will the sewage problem in Perlemoen and Krewelkring be sorted out, going on for months now especially Perlemoen."	360
18	2026/03/23 13:41	Richards Bay	Sewage odour + visible	CoU	"The stench from Dollar Drive sewer leak is becoming unbearable. It has not been attended to since reported."	360
19	2026/03/27 02:00	Veldenvlei	Odour	Mondi	"A strange smell that was thick in the air."	362
20	2026/03/27 08:12	Veldenvlei	White Dust Fallout	South32	"We are having a big problem in Veldenvlei regarding white dust. Particularly bad last night. Everything is covered."	361
21	2026/03/27 08:14	Veldenvlei	White Dust Fallout	South32	White dust. "Very bad, it's thick over my car and plants almost every morning."	361
22	2026/03/27 08:26	Veldenvlei	White Dust Fallout	South32	White dust every day. "They have to be closed until the problem is solved, Residents health is at risk."	361
23	2026/03/27 08:48	Veldenvlei	White Dust Fallout	South32	"Same issue with white dust."	361
24	2026/03/27 08:53	Veldenvlei	White Dust Fallout	South32	"White dust all over vehicles causing damage to paintwork when trying to clean the vehicle along with what other possible health issues it may cause."	361
25	2026/03/27 08:55	Veldenvlei	White Dust Fallout	South32	White dust. Ongoing issue.	361
26	2026/03/27 09:00	Veldenvlei	White Dust Fallout	South32	Alumina dust. This has been ongoing for months and is unacceptable.	361
27	2026/03/27 11:28	Veldenvlei	White Dust Fallout	South32	White dust. "It's horrible. Our vehicles were washed and the next day they were covered."	361
28	2026/03/27 11:46	Arboretum	White Dust Fallout	South32	"Clouds of white powder falling in Arboretum."	361
29	2026/03/27 12:18	Veldenvlei	White Dust Fallout + Clinical	South32	"White dust causing corrosion. You see it on car windows like it's causing damage, even the car feels rough to the touch, and I have an ongoing cough."	361
30	2026/03/29 11:45	Arboretum	Sewage odour	CoU	"smell is so bad today at Hadedda Park."	360
31	2026/03/29 11:49	Arboretum	Sewage odour	CoU	"Terrible sewage odour."	360
32	2026/03/29 12:19	Veldenvlei	Sewage odour + visible	CoU	"Terrible sewage odour. Water body below house is contaminated."	360
33	2026/03/30 09:50	Veldenvlei	White Dust Fallout	South32	I am retired and spend most of my day in my garden. Of huge concern is the amount of Alumina dust that has been settling in my yard, over some time. Excessive amounts on Friday 27th March 2026. Had a light rain over the weekend and it washed away. However busy in my garden today, and I have noted dust again	361
34	2026/03/30 14:22	Arboretum	Sewage odour	CoU	There is a terrible sewage smell in the air	1, 360
35	2026/03/30 16:56	Arboretum	Black Dust Fallout + Clinical	TPT	Black dust on play equipment, outdoor furniture, and indoor counter tops. Child cannot play outdoors without being covered in black dust, which is being breathed in. Complainant is	1, 363

No	Date	Region	Type	Source	Description	Response
					understandably angered and is of the opinion that this is affecting her family's health. (Photographs provided and video attached)	

Table 2: Responses

No.	Industry Feedback
1	Unresolved / No Response
353	Mondi - Candice Webb responded (2026/03/12 15:49): Source of Odour: Fugitive emissions from Mondi. Description of Incident: The Mondi Environmental Manager received notification of an odour complaint from the Richards Bay Clean Air (RBCAA) at 06:18. After which an investigation was initiated. As per procedure, area operators conducted plant-specific odour inspections and investigated potential sources of leakage. No elevated Total Reduced Sulphur (TRS) readings were recorded by the continuous monitoring analysers in the non-condensable gas (NCG) incineration areas, no switching of gases occurred, and no venting events were recorded from the NCG system. The Secondary Effluent Treatment Plant (SETP) was also inspected, with no deviations observed in effluent temperature, pH control, or overall effluent quality that could have related in a release of TRS. Process Engineers then undertook more detailed investigations. Two minor leaks on the CPX system were identified and repaired by 15:00 on the 11th of March 2026. However, ambient TRS at the RBCAA CBD and Richardia stations between 22:20 and 06:30 the following morning indicate that root cause has not been addressed. Investigations are ongoing. Focus area is currently the methanol and NCG system at the Evaporation Plant. 7. Corrective Actions 1) Will be communicated as soon as root cause is identified 2) Refresher training with Shift Manager on responding to ambient TRS alerts after hours.3 8. Preventative Measures Will be communicated as soon as root cause is identified
354	South 32 -Tshepang Phahla responded (2026/03/17 07:18): At GTC3, elevated dust emissions were recorded mainly from four filters located on the odd side that were identified as damaged and requiring replacement. However, the replacement activity could not be executed within the required time due to the unavailability of the maintenance crane. The crane experienced mechanical failures and was reported for repairs, preventing production personnel from accessing the affected filter to replace the bags. As a result, the damaged filters continued to operate beyond acceptable limits, leading to increased particulate emissions. The inability to promptly replace the faulty filters due to equipment unavailability was therefore identified as the primary contributor to the elevated dust emissions for the period of 26th of February to the 2nd of March 2026. Root Cause Several filter bags were identified to be damaged prematurely and have holes resulting in a stack emission from five filters. Note: Incident investigation report available.
355	RBCT - Thobile Nkosi (2026/03/23 16:47): RBCT received external complaints from Richards Bay Clean Air Association regarding coal dust emissions on 16 March 2026. RBCT initiated the investigation with an objective to establish whether RBCT operations contributed to the complaints and to confirm compliance with National Environmental Management : Air Quality Act and National Dust Regulations. The investigation covered detailed check air quality data from the 15-17 March 2026, meteorological conditions over the period, and effectiveness of RBCT dust mitigation measures applied during the period. NB: RBCT and the Richards Bay Area predominant winds are North easterlies and South Westerlies. The following slides covers the key findings. The following controls were operational before and after the incident reported. Two overhead water sprays are activated to wet the coal before it gets to a tippler cage. All tippler water sprays were operational, which automatically release pressurized water to capture dust particles before coming out of a tippler pit. The rain guns are activated three a day (morning ,afternoon and early evening) to suppress dust. RBCT conveyors are semi enclosed by wind guards to minimize the dispersion of coal dust from the conveyor by the wind. Water tankers spray the roads during high traffic movement and in areas where water sprays are not fitted. A road sweeper cleans affected roads and the quayside according to a planned schedule. RBCT mist canon was used in the process of cooling hot coal stockpiles. Conclusion: Based on the assessment of wind speed, direction, Particulate Matter (PM10) and

No.	Industry Feedback
	(PM2.5) monitoring results from 15-17 March 2026, it is concluded that RBCT is not responsible for the complaints. RBCT is concerned by the nature of these complaints and their potential impact on the community, the environment and is committed to ongoing efforts to mitigate dust levels.
356	Mondi - Candice Webb responded (2026/03/24 09:34): Source of Odour: Emissions associated with the Secondary Effluent Treatment Plant. Description of Incident At 17:04, the Mondi Environmental Manager and Shift Manager received two TRS alerts from the newly installed TRS analyser at the Brakenham Station. Following the alerts, the Environmental Manager contacted the Shift Manager to discuss any potential operational issues that might be contributing to odour emissions from the site. It3 was agreed that the Shift Manager would instruct the Plant Supervisors to initiate odour checklists. By 18:00, the plant-specific checklists indicated no abnormalities. While the Shift Manager and Environmental Manager were considering the possibility that the odour may be originating from the Secondary Effluent Treatment Plant (SETP), the Environmental Manager received two odour complaints from the RBCAA at 18:04. The reported time of the odour (17:00) corresponded with the Brakenham TRS alerts. As a result, a decision was taken to switch off the SETP to determine whether this would improve ambient TRS levels. The SETP was shut down at 18:13, and ambient TRS readings showed improvement from 19:00 onwards. Further investigations by the Process Engineering team were conducted on 22 and 23 March. These investigations identified a prolonged period of elevated acidic effluent flow from the Bleach Plant, averaging 151 L/s compared to the normal rate of 143 L/s. This, combined with a suspected decline in A-condensate quality, has been identified as the likely root cause of the odour event. The automated effluent caustic dosing system designed to maintain stable effluent pH was found to be fully operational, with valves fully open during the period of reduced effluent pH. However, despite functioning as intended, the system was unable to compensate adequately for the abnormal effluent conditions.
357	RBCT - Thobile Nkosi (2026/03/24 16:19): RBCT received external complaints from Richards Bay Clean Air Association regarding coal dust emissions on 20 March 2026. • RBCT initiated the investigation with an objective to establish whether RBCT operations contributed to the complaints and to confirm compliance with National Environmental Management : Air Quality Act and National Dust Regulations. • The investigation covered detailed check air quality data from the 19-20 March 2026, meteorological conditions over the period, and effectiveness of RBCT dust mitigation measures applied during the period. • NB: RBCT and the Richards Bay Area predominant winds are North easterlies and South Westerlies. • The following slides covers the key findings. (Note: concentrations tables and Wind roses added to the incident investigation report) The following controls were operational before and after the incident reported: Two overhead water sprays are activated to wet the coal before it gets to a tippler cage. All tippler water sprays were operational, which automatically release pressurized water to capture dust particles before coming out of a tippler pit. The rain guns are activated three a day (morning ,afternoon and early evening) to suppress dust. RBCT conveyors are semi enclosed by wind guards to minimize the dispersion of coal dust from the conveyor by the wind. Water tankers spray the roads during high traffic movement and in areas where water sprays are not fitted. A road sweeper cleans affected roads and the quayside according to a planned schedule. RBCT mist canon was used in the process of cooling hot coal stockpiles. Conclusion: Based on the assessment of wind speed, direction, Particulate Matter (PM10) and (PM2.5) monitoring results from 19-20 March 2026, it is concluded that RBCT is not responsible for the complaints.
358	Grindrod- Sibahle Dladla responded (2026/03/24 17:27): Meteorological conditions sourced from Scorpio station on the date and time of the complaint did not support the movement of dust from either Kusasa or Navitrade towards the complainant's residence. The wind direction during the reported period was North-easterly on the 16th of March and North North-easterly on the 20th of March. It was not southerly or south-westerly meaning there was no pathway for dust to travel from the terminals to Shady Syringa. b) Particulate matter monitoring showed no exceedances during the complaint window. PM10 and PM2.s levels remained within allowable limits, indicating the terminals were not releasing dust at levels capable of causing community impact. On the 16th of March the wind was blowing 2.2 m/s North-easterly. No exceedances. On the 20th of March the wind was blowing 3.4 m/s North Northeast. No exceedances. Conclusion: Upon conducting investigation, it is unlikely that the coal dust came from the Grindrod coal handling terminals.
359	RBCAA Allocation- Sandy Camminga (2026/03/29 12:47): "...reported to the Authorities on 9 March @08h56 via the WhatsApp Group; ...No response from Authorities. Please allocate to CoU."
360	RBCAA Allocation- Sandy Camminga (2026/03/29 14:15): Reported to the authorities. A formal response is outstanding.

No.	Industry Feedback
361	South 32 -Londiwe Molebale responded (2026/03/31 07:18 & 2026/04/16 14:58): Root Cause Several filter bags were identified to be damaged prematurely and have holes resulting in a stack emission from all gas treatment centers. Note: Complete Incident investigation report available.
362	Mondi - Kira Cobbold responded, (2026/03/31 09:55): Source of Odour: Emissions associated with the Secondary Effluent Treatment Plant. Note: Complete Incident investigation report available.
363	RBCAA Allocation- Sandy Camminga (2026/04/06 23:12): 1. Black dust allocate to TPT in an absence of a response from them. 2. White dust allocate to S32. Use the same response as for the other group of complaints. 3. Sewage allocate to CoU.

APPENDIX G
PM₁₀ EXCEEDANCE LOG*Table 1: PM₁₀ exceedances.*

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
1	PM ₁₀ Daily WHO Limit (45 µg/m³)	Scorpio	2026/03/08 0:00	46.0	161	3.5	No response required	None	2

Table 2: PM₁₀ responses.

Response	Industry Feedback
2	No response required

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
1	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/01 00:00	26.0	0	3.2	No response required	None	2
2	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/07 00:00	20.0	251	4.6	No response required	None	2
3	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/08 00:00	18.0	202	4.3	No response required	None	2
4	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/12 00:00	16.0	247	1.6	No response required	None	2
5	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/19 00:00	20.0	243	1.8	No response required	None	2
6	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/20 00:00	18.0	30	3.2	No response required	None	2
7	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/21 00:00	17.0	247	3.2	No response required	None	2
8	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/26 00:00	25.0	303	2.8	No response required	None	2
9	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/27 00:00	23.0	44	2.3	No response required	None	2
10	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/28 00:00	18.0	27	3	No response required	None	2
11	PM _{2.5} Daily WHO Limit (15 µg/m³)	Brackenham	2026/03/29 00:00	24	230	3.5	No response required	None	2
12	PM _{2.5} Daily WHO Limit (15 µg/m³)	Felixton	2026/03/01 00:00	20.0	329	2.5	No response required	None	2
13	PM _{2.5} Daily WHO Limit (15 µg/m³)	Felixton	2026/03/26 00:00	16.0	300	2.9	No response required	None	2
14	PM _{2.5} Daily WHO Limit (15 µg/m³)	Felixton	2026/03/27 00:00	19.0	29	2.9	No response required	None	2
15	PM _{2.5} Daily WHO Limit (15 µg/m³)	Felixton	2026/03/29 00:00	24	229	3.2	No response required	None	2
16	PM _{2.5} Daily WHO Limit (15 µg/m³)	Harbour West	2026/03/01 00:00	20.0	330	3	No response required	None	2
17	PM _{2.5} Daily WHO Limit (15 µg/m³)	Harbour West	2026/03/26 00:00	17.0	281	2.6	No response required	None	2
18	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/01 00:00	20.0	330	3	No response required	None	2
19	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/07 00:00	19.0	207	3.5	No response required	None	2
20	PM_{2.5} Daily RSA Limit (40 µg/m³)	Scorpio	2026/03/08 00:00	51.0	161	3.5	Grindrod & TPT - Meteorology	RBCAA allocation	72, 78, 1
21	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/08 00:00	51.0	161	3.5	No response required	None	2
22	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/09 00:00	18.0	229	1.7	No response required	None	2
23	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/10 00:00	22.0	197	1.4	No response required	None	2
24	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/11 00:00	19.0	210	1.6	No response required	None	2
25	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/13 00:00	19.0	15	1.9	No response required	None	2
26	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/19 00:00	21.0	200	1.6	No response required	None	2
27	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/20 00:00	19.0	27	3.4	No response required	None	2
28	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/26 00:00	22.0	281	2.6	No response required	None	2
29	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/27 00:00	28.0	27	2	No response required	None	2
30	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/28 00:00	21.0	16	3.4	No response required	None	2
31	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/29 00:00	23.0	204	2.8	No response required	None	2
32	PM _{2.5} Daily WHO Limit (15 µg/m³)	Scorpio	2026/03/30 00:00	16.0	26	1.5	No response required	None	2

Table 2: PM_{2.5}

Responses

Response	Industry Feedback
2	No response required
72	Mondi - Kira Cobbold responded, (2026/03/10 08:51): Mondi has investigated the PM2.5 exceedance at Scorpio on 08/03/26 and based on moderate wind speeds and a south easterly wind direction, Mondi is unlikely to be the source.
78	RBCAA Allocation -Sandy Camminga (2026/06/05 21:35): 1. 8 March SCORPIO: Based on WD, allocate to Grindrod & TPT. 2. 12 May SCORPIO: This was the day of the CoU landfill fire (aligns with complaints). South32 reported a trip at FTC. Time will be confirmed. Allocate to Landfill Fire and South32 FTC trip. 3. 27, 28 & 29 May SCORPIO and BRACKENHAM: Based on the trends over the 3 days, likely related to forestry burns or wildfires, allocate as such. Information requested; awaiting response.

APPENDIX I

SO₂ EXCEEDANCE LOG

Table 1: SO₂ Exceedances.

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	2026/03/01 00:00	19.8	330	3	No response required	None	2
2	SO ₂ Hourly RSA Limit (134 ppb)	Harbour West	2026/03/04 04:00	155.7	13	1.1	South32	Valve not opened as per procedure	201, 204, 1
3	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2026/03/04 04:20	236.9	30	1.9	South32	Valve not opened as per procedure	202, 204, 1
4	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2026/03/04 04:30	350.8	30	0.6	South32	Valve not opened as per procedure	202, 204, 1
5	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Harbour West	2026/03/04 04:40	265.3	332	0.1	South32	Valve not opened as per procedure	202, 204, 1
6	SO ₂ Daily WHO Limit (15 ppb)	Harbour West	2026/03/20 00:00	17.9	27	3.4	No response required	None	2
7	SO ₂ Daily RSA Limit (48 ppb)	Scorpio	2026/03/01 00:00	55.7	330	3	South32 - meteorology	South32 - meteorology	185, 186, 189
8	SO ₂ Daily WHO Limit (15 ppb)	Scorpio	2026/03/01 00:00	55.7	330	3	No response required	None	2
9	SO ₂ Daily RSA Limit (48 ppb)	Scorpio	2026/03/08 00:00	55.1	161	3.5	Foskor - meteorology	Foskor - meteorology	187, 193
10	SO ₂ Daily WHO Limit (15 ppb)	Scorpio	2026/03/08 00:00	55.1	161	3.5	No response required	None	2
11	SO ₂ Hourly RSA Limit (134 ppb)	Scorpio	2026/03/08 15:00	275.4	171	4.1	Foskor - meteorology	Foskor - meteorology	187, 193
12	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/08 15:20	432.5	173	4.4	Foskor - meteorology	Foskor - meteorology	187, 192
13	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/08 15:30	571.6	174	4	Foskor - meteorology	Foskor - meteorology	187, 192
14	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/08 15:40	407.3	170	3.8	Foskor - meteorology	Foskor - meteorology	187, 192
15	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/08 15:50	226.5	176	4.3	Foskor - meteorology	Foskor - meteorology	187, 192
16	SO ₂ Daily WHO Limit (15 ppb)	Scorpio	2026/03/10 00:00	15.6	197	1.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
17	SO ₂ Hourly RSA Limit (134 ppb)	Scorpio	2026/03/13 00:00	150.3	306	0.1	South32	High SO ₂ emissions at FTC stack	188, 190, 207, 1
18	SO ₂ Daily WHO Limit (15 ppb)	Scorpio	2026/03/13 00:00	24.8	15	1.9	No response required	None	2
19	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/13 00:20	234.2	305	0.1	South32	High SO ₂ emissions at FTC stack	188, 191, 207, 1
20	SO ₂ 10-minute RSA & WHO Limit (191 ppb)	Scorpio	2026/03/13 00:30	194.6	312	0.1	South32	High SO ₂ emissions at FTC stack	188, 191, 207, 1
21	SO ₂ Daily WHO Limit (15 ppb)	Scorpio	2026/03/20 00:00	27.3	27	3.4	No response required	None	2

Table 2: SO₂ Responses.

Response	Industry Feedback
1	Unresolved / No Response
2	No response required
185	Mondi - Kira Cobbold responded, (2026/03/05 11:28): Mondi has investigated the SO ₂ exceedance recorded at the Scorpio station on 01 March 2026. Based on the prevailing NNE wind direction at the time, Mondi is considered unlikely to have been the source. Mondi did record an SO ₂ exceedance on the Power Boiler stack (510.4 mg/Nm ³ compared to the limit of 500 mg/Nm ³), however, the wind direction at the time was blowing away from the Scorpio station and can therefore considered unrelated to the ambient exceedance.
186	Foskor - Silungile Msane responded (2026/03/09 09:30): Immediate Actions Taken: The Sulphuric Acid Plant engineers were informed and an investigation was conducted thereafter. Meteorological records further indicate that the wind direction at the time in question, as displayed below in Figure 1& Figure 2, was predominantly blowing from the North at an average speed ranging from 4-6 m/s (Arboretum) and 2-6 m/s (Harbour West). Additional Information. Sulphuric Acid Plants were functioning within the SO ₂ permitted emissions limit (350 mg/Nm ³). Considering the emissions during the time and the prevailing wind direction, Foskor concludes that it did not contribute to the reported SO ₂ exceedance. Please refer to Figure 1below for more information on Foskor's SO ₂ emissions for 01 March 2026. Incident Root cause: There was no root cause identified as there were no abnormalities in the Plant. Corrective/Preventative Actions No corrective actions required since there were no abnormalities.
187	Mondi - Kira Cobbold responded, (2026/03/10 08:56): Mondi has investigated the SO ₂ exceedances (10-min, 1-hr & 24-hr) at Scorpio on 08/03/26 and based on moderate wind speeds and a predominantly south easterly wind direction Mondi is unlikely to be the source.
188	Mondi - Kira Cobbold responded, (2026/03/18 11:56): Mondi has investigated the SO ₂ exceedances (10-min & 1-hr) on 13/03/26 at Scorpio and based on normal operating conditions with stack emissions well within their compliance limits, as well as a wind direction that does not favour Mondi as source, Mondi is unlikely to be the root cause of the observed exceedances.
189	South32 - Tshepang Phahla, (2026/03/10 10:51): Investigation: On 01 March 2026 the abatement equipment's online analysers were within the AEL license limits. However, given the wind direction on the day was Northerly as depicted in the Windrose. Hillside may have contributed to the SO ₂ exceedance. Conclusion: Hillside remains committed in ensuring that its operation have no or minimal impact on the environment, based on the investigation conducted on the SO ₂ trends and shifts reports, South32 did not attribute to the SO ₂ exceedance. However, since wind direction is Northerly/North easterly South32 may have attributed to the cumulative impact.
190	Foskor - Kirona Harrypersad responded (2026/04/15 10:31): Immediate Actions Taken: The Sulphuric Acid Plant engineers were informed and an investigation was conducted thereafter. Meteorological records further indicate that the wind direction at the time in question, as displayed below in Figure 1& Figure 2, was predominantly blowing from the North North West at an average speed ranging from 0.5- 2 m/s for Arboretum and the CBD. Sulphuric Acid Plants were functioning within the permitted emissions limit, and no abnormal or upset conditions were present at the time of the exceedance. Considering the conditions of the Plant during the time and the prevailing wind direction, Foskor concludes that it did not contribute to the reported SO ₂ exceedance. Incident Root cause: There was no root cause identified as there were no abnormalities in the Plant. Corrective/Preventative Actions: No corrective actions required since there were no abnormalities.
191	Foskor - Kirona Harrypersad responded (2026/04/15 10:32): Immediate Actions Taken: The Sulphuric Acid Plant engineers were informed and an investigation was conducted thereafter. Meteorological records further indicate that the wind direction at the time in question, as displayed below in Figure 1& Figure 2, was predominantly blowing from the North North West at an average speed ranging from 0.5- 2 m/s for Arboretum and the CDB. Additional Information: Sulphuric Acid Plants were functioning within the permitted emissions limit, and no abnormal or upset conditions were present at the time of the exceedance. Considering the conditions of the Plant during the time and the prevailing wind direction, Foskor concludes that it did not contribute to the reported SO ₂ exceedance. Incident Root cause: There was no root cause identified as there were no abnormalities in the Plant. Corrective/Preventative Actions: No corrective actions required since there were no abnormalities.

Response	Industry Feedback
192	Foskor - Kirona Harrypersad responded (2026/04/17 09:47): Immediate Actions Taken: The Sulphuric Acid Plant engineers were informed and an investigation was conducted thereafter. Plant was physically inspected for source of SO ₂ gas of which none was detected. The plant operating parameters and emission rates were reviewed and found to be within specification. Additional Information: Upon investigation, it was identified that no abnormal operating conditions were experienced at Foskor during the reporting period, however, the prevailing wind direction at the time suggests that Foskor may have influenced the recorded exceedance at the monitoring point. Incident Root cause: There was no root cause identified during the investigation.
193	Foskor - Kirona Harrypersad responded (2026/04/17 09:47 & 09:48): Immediate Actions Taken: The Sulphuric Acid Plant engineers were informed and an investigation was conducted thereafter. Plant was physically inspected for source of SO ₂ gas of which none was detected. The plant operating parameters and emission rates were reviewed and found to be within specification. Additional Information: Upon investigation, it was identified that no abnormal operating conditions were experienced at Foskor during the reporting period, however, the prevailing wind direction at the time suggests that Foskor may have influenced the recorded exceedance at the monitoring point. Incident Root cause: There was no root cause identified during the investigation.
201	Foskor - Kirona Harrypersad responded (2026/05/18 16:23): Immediate Actions Taken: Following receipt of the notification on 13 May 2026, the team reviewed the SO ₂ stack trends as well as the fugitive emission inspection reports issued on the day of the exceedance to identify any activities that may have contributed to the exceedance. However, due to the delay in the distribution of the exceedance notification, Foskor was unable to conduct a comprehensive investigation. Upon review, the Sulphuric Acid B and C Plants were functioning within the SO ₂ permitted emissions limit (350 mg/Nm ³). Please refer to Figure 1 below for more information on Foskor's SO ₂ emissions during the time of the exceedance. In addition, the team reviewed the job cards issued on the day of the exceedance and verified that no activities associated with fugitive emissions were recorded. Meteorological records on the day of the exceedance indicate that the wind direction at the time in question, as displayed below in Figure 2 & Figure 3, was predominantly blowing from the North North East at an average speed ranging from 2 – 4 m/s for Arboretum and 0.5 – 2 m/s for Harbour West. Additional Information: None. Incident Root cause: No root cause identified, as no abnormalities were detected from the SO ₂ trends review or the fugitive emission inspection reports issued on the day of the exceedance. Corrective/Preventative Actions: No corrective actions were required, as no abnormalities were identified from the SO ₂ trends review or the fugitive emission inspection reports issued on the day of the exceedance.
204	South32 - Molebale, Londiwe responded (2026/06/03 16:06): Investigation: SO ₂ Levels at the GTC's: 3- 4 March 2026 1) Fresh alumina feed was stopped for a planned task to conduct 324 fluorinated alumina airlift cleaning, and SO ₂ emission increased to 258mg/Nm ³ during the stoppage. 2) Post the completion of the task, a valve under the 324-expansion bin was not opened as per procedure prior to the start-up. SO ₂ emission increased to 311mg/Nm ³ during this period. Corrective Action: Coach and embed the use of start-up checklist post execution of 324 airlift cleaning Task- Completed
207	RBCAA Allocation -Sandy Camminga (2026/06/04 20:43): Please allocate SO ₂ exceedances as follows; • 13 March to South32, High SO₂ emissions at FTC stack. • 10 & 19 May to South32 based on WD (Directly from Hillside) and the fact all plants at Foskor are on shut due to unavailability of raw materials.

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
1	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/11 22:00	10.5	310	0.4	Mondi	Root cause under investigation	873, 1
2	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/11 22:00	7.2	288	0.5	Mondi	Root cause under investigation	873, 1
3	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/12 05:30	5.7	246	1.7	Mondi	Root cause under investigation	875, 1
4	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/12 06:00	7.0	257	1.4	Mondi	Root cause under investigation	875, 1
5	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/12 07:30	11.7	254	1.2	Mondi	Root cause under investigation	875, 1
6	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/12 07:40	13.7	253	1.3	Mondi	Root cause under investigation	875, 1
7	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/12 07:50	12.5	252	1.2	Mondi	Root cause under investigation	875, 1
8	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/12 08:00	11.3	241	1.8	Mondi	Root cause under investigation	875, 1
9	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/21 13:30	9.5	248	2.1	Mondi	SETP	880, 1
10	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/21 13:40	10.5	247	2.1	Mondi	SETP	880, 1
11	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/21 16:30	6.2	253	1.7	Mondi	SETP	880, 1
12	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/21 16:50	10.4	253	1.6	Mondi	SETP	880, 1
13	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/21 17:00	7.4	256	1.9	Mondi	SETP	880, 1
14	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/21 17:10	10.3	256	1.8	Mondi	SETP	880, 1
15	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/24 00:30	8.1	254	2.2	Mondi	SETP	882, 1
16	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/24 00:40	9.4	255	2.2	Mondi	SETP	882, 1
17	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/24 01:30	7.3	252	2.1	Mondi	SETP	882, 1
18	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/24 01:50	9.4	253	2.1	Mondi	SETP	882, 1
19	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/24 07:30	10.3	251	1.8	Mondi	SETP	882, 1
20	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/24 07:30	7.9	257	1.7	Mondi	SETP	882, 1
21	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/24 07:40	10.7	259	1.7	Mondi	SETP	882, 1
22	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/24 14:00	5.8	233	1.5	Mondi	SETP	882, 1
23	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/24 19:30	5.3	248	0.2	Mondi	SETP	882, 1
24	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/26 19:00	7.5	255	1.3	Mondi	SETP	883, 1
25	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/26 19:10	9.7	254	1.3	Mondi	SETP	883, 1
26	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/26 19:30	7.7	260	1.0	Mondi	SETP	883, 1
27	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/26 19:40	10.5	255	0.9	Mondi	SETP	883, 1
28	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/26 20:30	7.1	255	1.2	Mondi	SETP	883, 1
29	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/26 21:00	7.1	255	1.3	Mondi	SETP	883, 1
30	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/26 22:30	6.5	252	1.2	Mondi	SETP	883, 1
31	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/27 00:00	7.7	252	1.2	Mondi	SETP	884, 1
32	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/27 00:20	9.8	253	1.2	Mondi	SETP	884, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
33	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/27 00:30	9.7	251	1.1	Mondi	SETP	884, 1
34	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/27 00:30	9.1	255	1.1	Mondi	SETP	884, 1
35	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/27 01:00	6.6	264	0.8	Mondi	SETP	884, 1
36	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/28 21:00	5.2	249	2.7	Mondi	SETP	886, 1
37	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/28 22:00	5.2	249	3.0	Mondi	SETP	886, 1
38	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/28 22:30	6.8	253	2.8	Mondi	SETP	886, 1
39	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/28 23:00	5.5	250	2.9	Mondi	SETP	886, 1
40	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/28 23:30	5.9	250	3.3	Mondi	SETP	886, 1
41	TRS 10-minute OME Limit (9.3 ppb)	Brackenham	2026/03/30 01:00	10.6	263	0.5	Mondi	Declining quality of the mill's A-Condensate	887, 1
42	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Brackenham	2026/03/30 01:00	6.0	297	0.4	Mondi	Declining quality of the mill's A-Condensate	887, 1
43	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/09 20:00	5.2	273	0.5	Mondi	SETP	874, 1
44	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 00:00	6.2	313	0.2	Mondi	Root cause under investigation	873, 1
45	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 00:30	6.1	312	0.2	Mondi	Root cause under investigation	873, 1
46	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 04:00	6.6	268	1.5	Mondi	Root cause under investigation	873, 1
47	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 04:30	5.5	264	2.3	Mondi	Root cause under investigation	873, 1
48	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 05:00	5.7	260	2.6	Mondi	Root cause under investigation	873, 1
49	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/11 05:30	11.8	259	2.3	Mondi	Root cause under investigation	873, 1
50	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 05:30	7.8	260	2.3	Mondi	Root cause under investigation	873, 1
51	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 06:00	8.3	259	2.5	Mondi	Root cause under investigation	873, 1
52	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 06:30	6.0	264	3.5	Mondi	Root cause under investigation	873, 1
53	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 07:00	6.5	261	2.9	Mondi	Root cause under investigation	873, 1
54	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/11 22:30	5.8	315	0.8	Mondi	Root cause under investigation	873, 1
55	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/12 04:30	9.9	245	2.1	Mondi	Root cause under investigation	875, 1
56	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/12 04:40	13.9	235	2.0	Mondi	Root cause under investigation	875, 1
57	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/21 18:30	5.3	268	4.1	Mondi	SETP	880, 1
58	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/22 00:00	5.3	264	4.2	Mondi	SETP	881, 1
59	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/22 02:00	7.3	269	3.0	Mondi	SETP	881, 1
60	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/22 02:20	9.4	273	3.5	Mondi	SETP	881, 1
61	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/22 03:00	11.3	281	2.6	Mondi	SETP	881, 1
62	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/24 06:30	5.7	252	2.7	Mondi	SETP	882, 1
63	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/24 08:30	7.9	267	2.8	Mondi	SETP	882, 1
64	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/24 22:00	10.5	286	0.8	Mondi	SETP	882, 1
65	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/24 22:00	5.6	298	0.7	Mondi	SETP	882, 1
66	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/27 02:00	6.2	263	1.6	Mondi	SETP	884, 1
67	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/27 03:00	7.7	270	1.0	Mondi	SETP	884, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
68	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/27 03:20	11.4	266	1.0	Mondi	SETP	884, 1
69	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/27 03:30	11.2	264	1.5	Mondi	SETP	884, 1
70	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/27 03:30	7.8	263	1.4	Mondi	SETP	884, 1
71	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/27 04:00	8.7	271	1.1	Mondi	SETP	884, 1
72	TRS 10-minute OME Limit (9.3 ppb)	CBD	2026/03/27 04:20	10.1	282	1.4	Mondi	SETP	884, 1
73	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/29 20:30	6.3	262	2.8	Mondi	SETP	885, 1
74	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/29 23:00	5.5	254	1.1	Mondi	SETP	885, 1
75	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	CBD	2026/03/30 01:30	7.7	296	0.3	Mondi	Declining quality of the mill's A-Condensate	887, 1
76	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	eSikhaleni	2026/03/18 18:00	12.6	70	2.2	Fire next to the monitoring station	RBCAA Allocation	877, 878, 879, 1
77	TRS 10-minute OME Limit (9.3 ppb)	eSikhaleni	2026/03/18 18:10	21.7	74	2.0	Fire next to the monitoring station	RBCAA Allocation	877, 878, 879, 1
78	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/11 05:00	5.3	247	2.6	Mondi	Root cause under investigation	873, 1
79	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/11 05:30	5.1	239	3.1	Mondi	Root cause under investigation	873, 1
80	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/11 23:30	5.2	286	1.9	Mondi	Root cause under investigation	873, 1
81	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/12 02:00	6.1	285	2.0	Mondi	Root cause under investigation	875, 1
82	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/16 00:30	6.0	12	1.1	Mondi	SETP	876, 1
83	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/24 22:30	5.7	300	1.6	Mondi	SETP	882, 1
84	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 03:30	5.1	255	1.3	Mondi	Declining quality of the mill's A-Condensate	887, 1
85	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 04:00	5.8	284	0.9	Mondi	Declining quality of the mill's A-Condensate	887, 1
86	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 04:30	7.3	295	0.2	Mondi	Declining quality of the mill's A-Condensate	887, 1
87	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 05:00	9.1	299	1.1	Mondi	Declining quality of the mill's A-Condensate	887, 1
88	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 05:30	8.0	294	1.2	Mondi	Declining quality of the mill's A-Condensate	887, 1
89	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/30 06:00	6.3	297	1.1	Mondi	Declining quality of the mill's A-Condensate	887, 1
90	TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	Richardia	2026/03/31 00:30	6.0	26	1.4	Mondi	Declining quality of the mill's A-Condensate	888, 1

Table 2: TRS Responses

No	Industry Feedback
1	Unresolved / No Response
873	Mondi - Kira Cobbold responded, (2026/03/13 08:44 & 2026/03/13 08:47): Mondi has investigated the TRS exceedances on 11/03/26 which closely align with an odour complaint received via the RBCAA at 06:12 on the same morning. Wind direction and speed, as well as elevated TRS at Mondi monitoring stations confirm Mondi as the source. Regretfully, after initial investigations Mondi has not yet identified root cause. Two minor leaks on the CPX system were identified and repaired by 15:00 on the 11th of March 2026. However, ambient TRS at the RBCAA CBD, Brackenham and Richardia stations between 22:20 and 06:30 the following morning (12/03/26) indicate that root cause has not been addressed. Investigations are ongoing with the current focus area being the methanol and NCG system at the Evaporation Plant. Mondi will continue to update the RBCAA on any new findings.
874	Mondi - Kira Cobbold responded, (2026/03/13 09:33): Mondi has investigated the TRS exceedance at CBD on 09/03/2026 and based on very low wind speeds and south westerly wind direction, Mondi can be considered a potential source. All point source emissions were well within their compliance limits, with gases stable for incineration in the Lime Kiln as per standing OMP. Slightly elevated H₂S was observed at the effluent plant stack, which, with the very low wind speeds and shift in wind direction to favour Mondi as source, may have contributed to the observed exceedance. Release of TRS from the SETP can therefore be considered the most likely root cause in this case, however, Mondi is still currently investigating TRS exceedances and odour complaints from later on this week and will provide feedback if there are any new findings.
875	Mondi - Kira Cobbold responded, (2026/03/13 12:21): Mondi has investigated the TRS exceedances on 12/03/26 which are likely linked to odour complaint received via the RBCAA at 06:12 on 11/03/26. Wind direction and speed, as well as elevated TRS at Mondi monitoring stations confirm Mondi as the source. Regretfully, after initial investigations Mondi has not yet identified root cause. Two minor leaks on the CPX system were identified and repaired by 15:00 on the 11th of March 2026. However, the ambient TRS exceedances in question, at RBCAA CBD, Brackenham and Richardia stations between 22:20 and 06:30 the following morning (12/03/26) indicate that root cause has not been addressed. Investigations are ongoing with the current focus area being the methanol and NCG system at the Evaporation Plant. Mondi will continue to update the RBCAA on any new findings.
876	Mondi - Kira Cobbold responded, (2026/03/18 14:31): Mondi has investigated the TRS exceedance recorded on 16/03/2026 and, based on very low wind speeds (<1 m/s) and an H₂S peak observed at 20:25 on 15/03/2026 at the effluent plant stack, Mondi can be considered a potential source. Mondi monitoring stations remained at low levels, however, this may be attributed to the variable wind directions and very low wind speeds observed during the period. The H₂S peak at the effluent plant stack and elevated drain conductivities suggests that lower quality effluent may have resulted in the additional release of TRS from the Secondary Effluent Treatment Plant (SETP). Mondi can therefore be considered the most likely source to the TRS exceedance observed.
877	Mondi - Candice Webb responded, (2026/03/19 14:56): Mondi has investigated the exceedance and confirmed that Mondi is the most likely source. At the time of the incident, non-condensable gases were in the Recovery Boiler 1 flare for incineration. The TRS analyser in the flare increased above alarm level of 15mg/Nm³, in response the operator switched the gases to the back-up incineration system and TRS stabilised. Root cause of the high TRS on the Recovery Boiler 1 flare has been attributed to insufficient combustion air supply which is impacting combustion efficiency. The Recovery Boiler 1 flare has been taken out of operation while trouble shooting by the process engineering team identifies the necessary repair and mitigation measures. Mondi still has 2 alternative back up incineration options while the flare is out of operation.
878	RBCAA Allocation - Sandy Camminga (2026/03/19 15:55): While Mondi may have experienced a process upset at the time, the RBCAA is of the opinion that this did not contribute to the TRS exceedance recorded at eSikhaleni for the following reasons; 1. Wind Direction 2. TRS exceedance occurred during a PM₁₀ exceedance attributed to a fire right next to the station.
879	Mpact -Traven Chetty responded, (2026/03/20 11:03): Mpact operations was on an emergency shut down on the 18th of March 2026. There were no operations active at the paper machine and boiler house during this time period. The effluent treatment plant was still in partial operation however, no abnormal activities took place during this time that could have caused this exceedance. The wind direction is also not in favour of emissions from Mpact. It is therefore unlikely that Mpact is the source of this exceedance.

No	Industry Feedback
880	Mondi - Candice Webb responded, (2026/03/24 10:25): Mondi first received a notification of elevated TRS at Brakenham at 13:44 and again at 17:04. Following the alerts received at 17:04 the Environmental Manager contacted the Shift Manager to discuss any potential operational issues that might be contributing to odour emissions from the site. It was agreed that the Shift Manager would instruct the Plant Supervisors to initiate odour checklists. By 18:00, the plant-specific checklists indicated no abnormalities. While the Shift Manager and Environmental Manager were considering the possibility that the odour may be originating from the Secondary Effluent Treatment Plant (SETP), the Environmental Manager received two odour complaints from the RBCAA at 18:04. The reported time of the odour (17:00) corresponded with the Brakenham TRS alerts. As a result, a decision was taken to switch off the SETP to determine whether this would improve ambient TRS levels. The SETP was shut down at 18:13, and ambient TRS readings showed improvement from 19:00 onwards. Further investigations by the Process Engineering team were conducted on 22 and 23 March. These investigations identified a prolonged period of elevated acidic effluent flow from the Bleach Plant, averaging 151 L/s compared to the normal rate of 143 L/s. This, combined with a suspected decline in A condensate quality, has been identified as the likely root cause of the odour event. The automated effluent caustic dosing system designed to maintain stable effluent pH was found to be fully operational, with valves fully open during the period of reduced effluent pH. However, despite functioning as intended, the system was unable to compensate adequately for the abnormal effluent conditions.
881	Mondi - Candice Webb responded, (2026/03/24 12:42): Both the Mondi Environmental Manager and Shift Manager received the TRS alerts for the exceedances below. As per exceedance TRS alerts received the evening of 21 March 2026, a decision was taken to switch off the SETP to determine whether this would improve ambient TRS levels. The SETP was shut down at 18:13, and ambient TRS readings showed improvement from 19:00 onwards. Investigations by the Process Engineering team were conducted on 22 and 23 March. These investigations identified a prolonged period of elevated acidic effluent flow from the Bleach Plant, averaging 151 L/s compared to the normal rate of 143 L/s. This, combined with a suspected decline in A condensate quality, has been identified as the likely root cause of the odour event. The automated effluent caustic dosing system designed to maintain stable effluent pH was found to be fully operational, with valves fully open during the period of reduced effluent pH. However, despite functioning as intended, the system was unable to compensate adequately for the abnormal effluent conditions. However, despite switching off the SETP between 18:13 of the 21st March until 02:00 on the 22nd of March, it is possible based on the temperature inversion, wet weather conditions and shift in wind direction from Brakenham towards CBD that odour from the SETP continued to hang in the community.
882	Mondi - Kira Cobbold responded, (2026/03/26 13:20): Mondi has investigated the TRS exceedances recorded on 24/03/2026 and based on low wind speeds and a south-westerly wind direction, Mondi is considered a likely source. Elevated TRS levels were observed at the Mondi portable monitoring station located near the effluent plant, indicating that the exceedances were likely due to additional TRS releases from the Secondary Effluent Treatment Plant (SETP). The SETP was taken offline multiple times throughout the day (04:05–07:02, 08:35–13:35, and 18:52–21:23) in response to TRS alerts received by the shift manager and environmental coordinator. A reduction in ambient TRS levels was observed each time the SETP was shut down, however, due to the low wind speeds and wet weather conditions, TRS may have continued to linger within the surrounding community. The Odour Reduction Task Team continues to focus on improving effluent quality and reducing odour emissions from the SETP.
883	Mondi - Kira Cobbold responded, (2026/03/31 10:24): Mondi has investigated the TRS exceedances recorded at the Brackenham station, which are likely associated with the odour complaint received at 02:00 on 27 March relating to emissions from the Secondary Effluent Treatment Plant (SETP). A full investigation report has been submitted to the RBCAA. Based on the odour description—which aligned with observations made by the standby Environmental Manager—and the prevailing calm wind conditions, the SETP was identified as the likely source of the odour. Following the shutdown of the SETP at 04:20, ambient TRS levels decreased and returned below the WHO guideline limit by 05:10. The Odour Task Team will continue to focus on emissions from the SETP, particularly those associated with lower effluent quality and resulting odour release.
884	Mondi - Kira Cobbold responded, (2026/03/31 10:27): Based on the odour description—which aligned with observations made by the standby Environmental Manager—and the prevailing calm wind conditions, the SETP was identified as the likely source of the odour. Following the shutdown of the SETP at 04:20, ambient TRS levels decreased and returned below the WHO guideline limit by 05:10. The Odour Task Team will continue to focus on emissions from the SETP, particularly those associated with lower effluent quality and resulting odour release.
885	Mondi - Kira Cobbold responded, (2026/03/31 11:03): Mondi has investigated the TRS exceedances (10-min & 30-min) recorded at the CBD station on 29/03/2026 and, based on the south-westerly wind direction and elevated TRS levels observed at the Mondi portable monitoring station, can be considered a potential source. Given the close proximity of the portable station to the effluent plant and slightly elevated TRS levels at the effluent plant stack, it is likely that the exceedances were attributable to

No	Industry Feedback
	emissions from the Secondary Effluent Treatment Plant (SETP). The Odour Task Team continues to focus on emissions from the SETP, particularly those associated with lower effluent quality and resulting odour release.
886	Mondi - Kira Cobbold responded, (2026/03/31 11:06): Mondi has investigated the TRS exceedances recorded at the Brackenham station on 28/03/2026 and, based on the wind shift to a south-westerly wind direction and elevated TRS levels observed at the Mondi portable monitoring station, can be considered a potential source. Given the close proximity of the portable station to the effluent plant and elevated TRS levels at the effluent plant stack, it is likely that the exceedances were attributable to emissions from the Secondary Effluent Treatment Plant (SETP). The Odour Task Team continues to focus on emissions from the SETP, particularly those associated with lower effluent quality and resulting odour release.
887	Mondi - Kira Cobbold responded, (2026/04/08 13:54): Root cause has been identified as declining quality of the mill's A-Condensate which is overflowed to effluent plant by design during periods of low condensate consumption by other plants. Mondi will take the next opportunity to open up the Evaporation plant stripper system for inspection. In the meantime, a SETP odour management plan has been put into place to stop the SETP in the evenings and early hours of the morning when temperature inversion is at its lowest, as well as during wet weather conditions. In addition, condensate volumes will be monitored closely to ensure no unnecessary overflows to effluent plant.
888	Mondi - Kira Cobbold responded, (2026/04/08 13:54): Root cause has been identified as declining quality of the mill's A-Condensate which is overflowed to effluent plant by design during periods of low condensate consumption by other plants. Mondi will take the next opportunity to open up the Evaporation plant stripper system for inspection. In the meantime, a SETP odour management plan has been put into place to stop the SETP in the evenings and early hours of the morning when temperature inversion is at its lowest, as well as during wet weather conditions. In addition, condensate volumes will be monitored closely to ensure no unnecessary overflows to effluent plant.

