

RBCAA Technical Feedback – September 2025

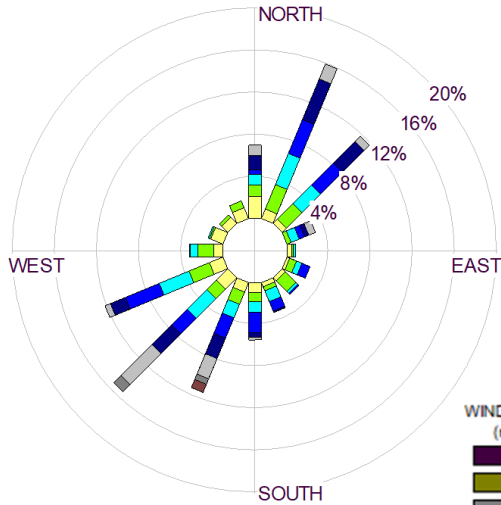


Meteorology

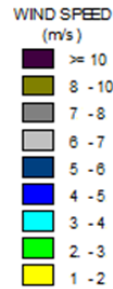
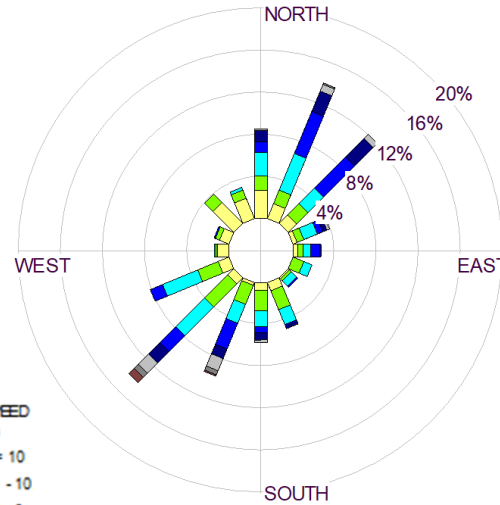
WIND



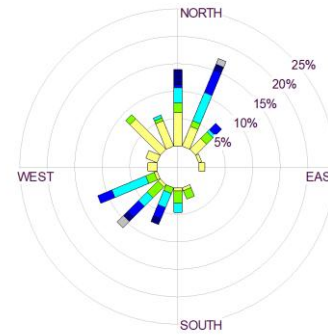
September 2024 Wind Rose



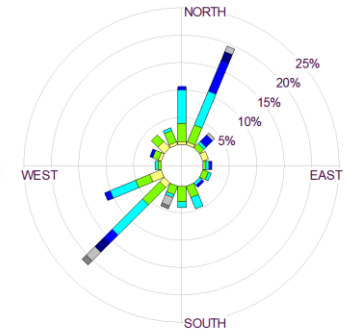
September 2025 Wind Rose



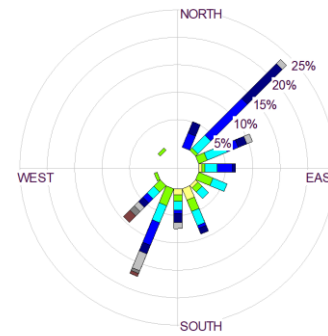
00:00 – 05:59



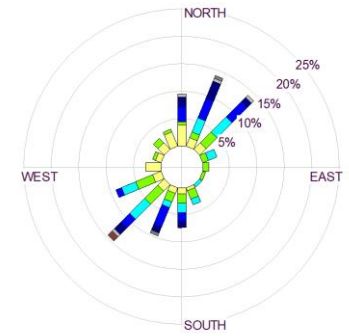
06:00 – 11:59



12:00 – 17:59



18:00 – 23:59

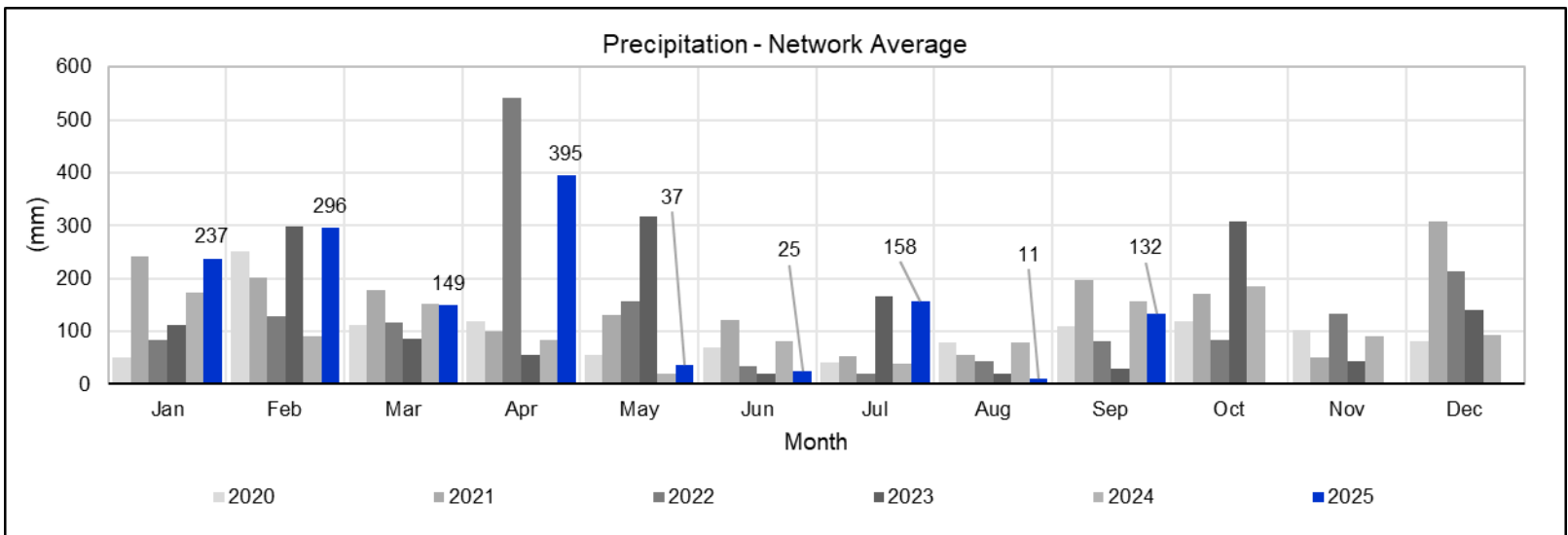
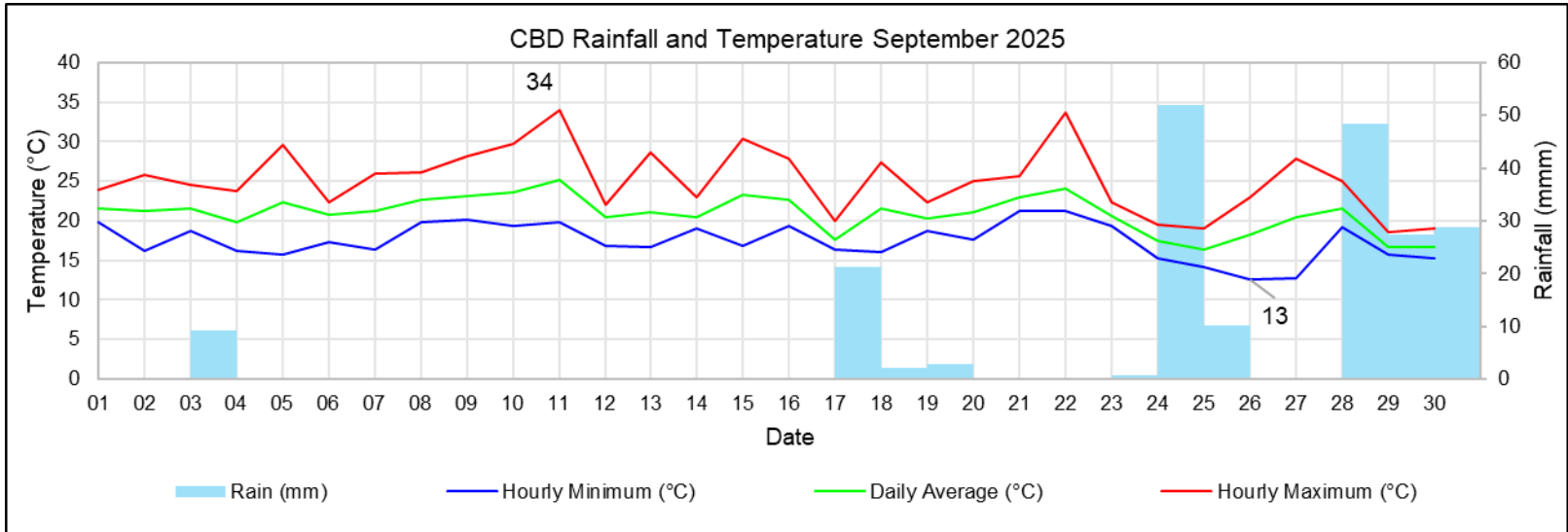


Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
August 2024	3.8 m/s	N-NE	45%	SSW-WSW	26%	0%	97%
August 2025	3.8 m/s	N-NE	50%	SW-WSW	22%	0%	99%
00:00-05:59	3.4 m/s	N-NE	54%	SW-WSW	31%	0%	98%
06:00-11:59	3.5 m/s	N-NE	53%	SSW-SW	22%	0%	99%
12:00-17:59	4.5 m/s	NNE-E	70%	SSW-SW	19%	0%	99%
18:00-23:59	3.7 m/s	NNW-NE	61%	SW-WSW	29%	0%	99%

Meteorology

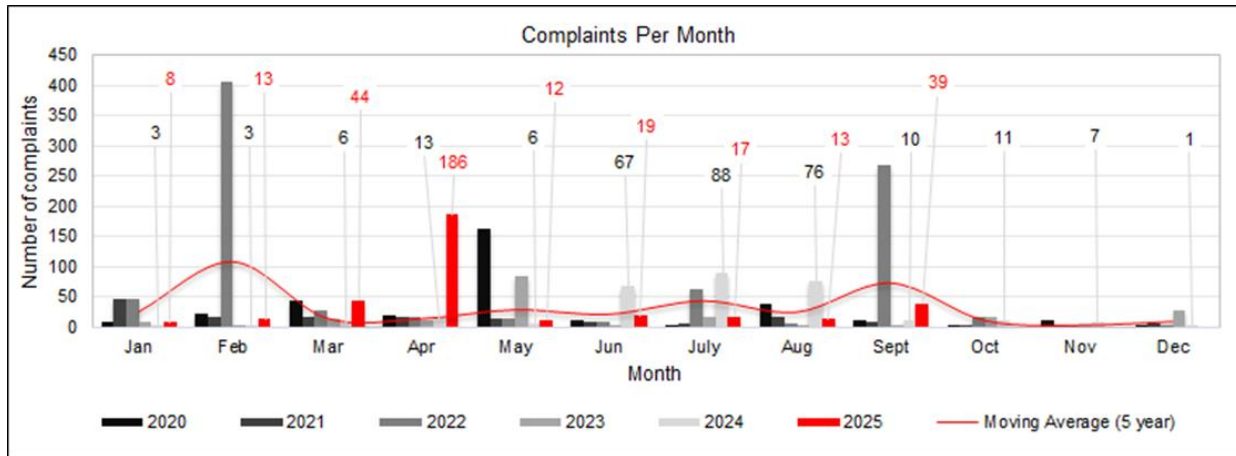
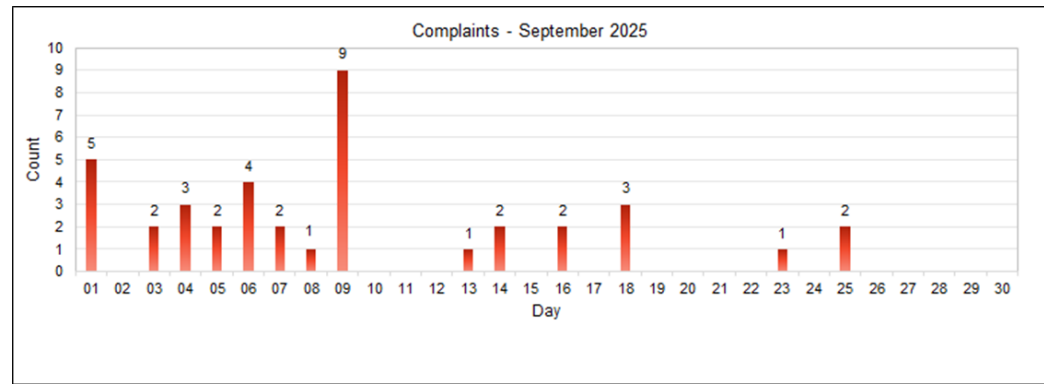
Month	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	South32 (mm)	Average (mm)
September 2025	203	127	164	35	132

RAINFALL AND TEMPERATURE

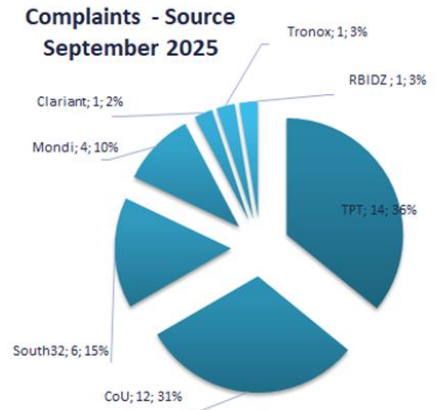
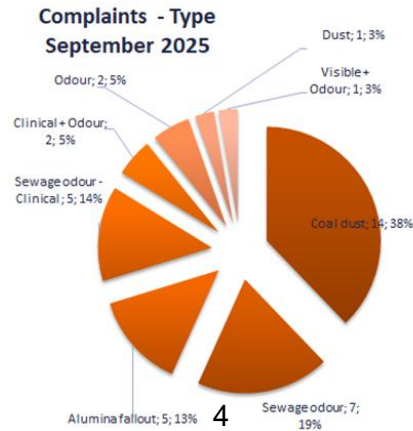
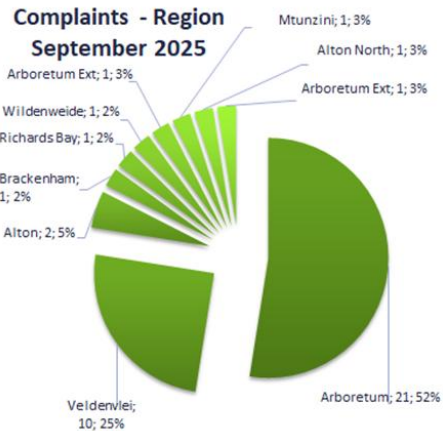
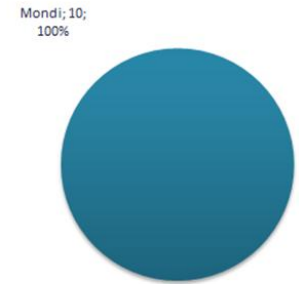


Complaints

DISTRIBUTION

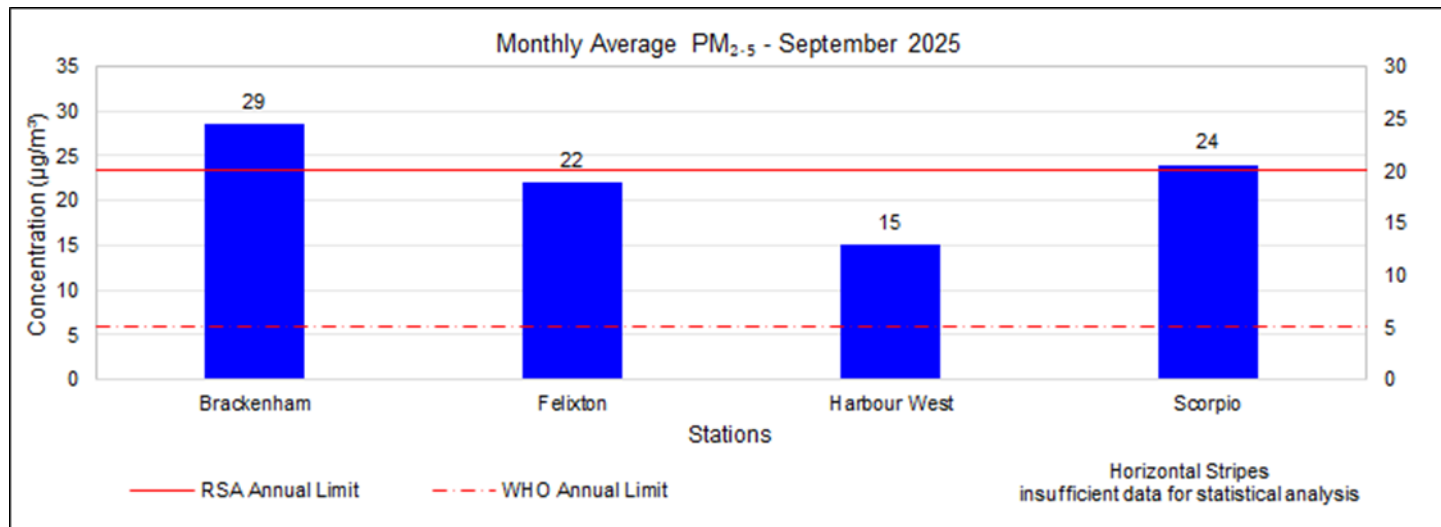
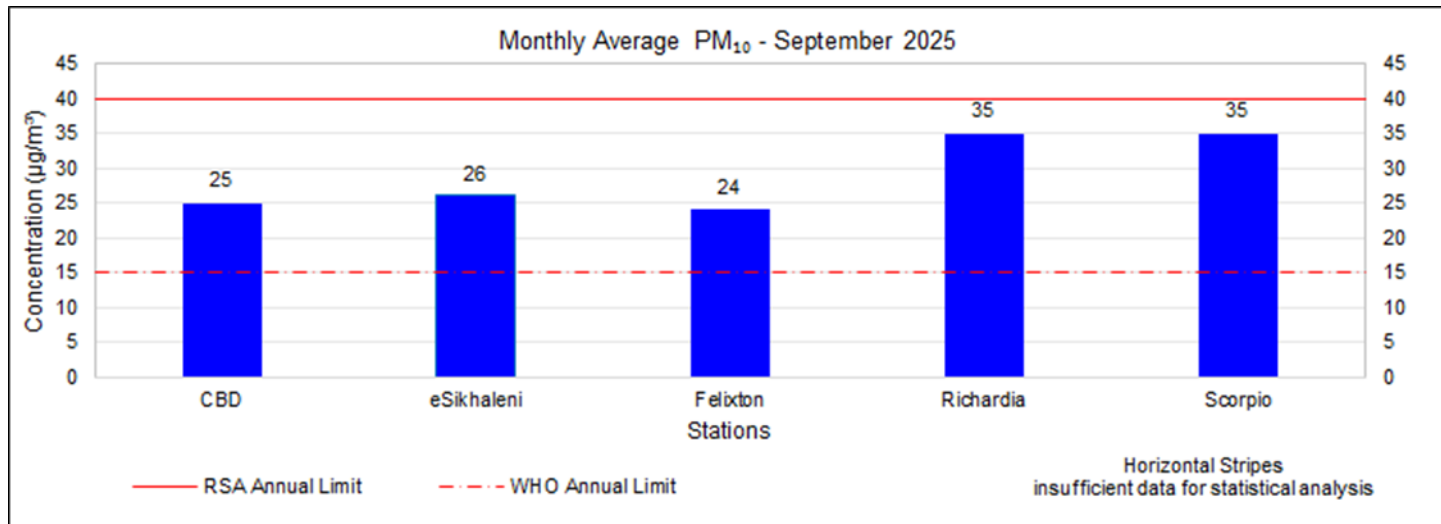


Complaints - Source September 2024



PM

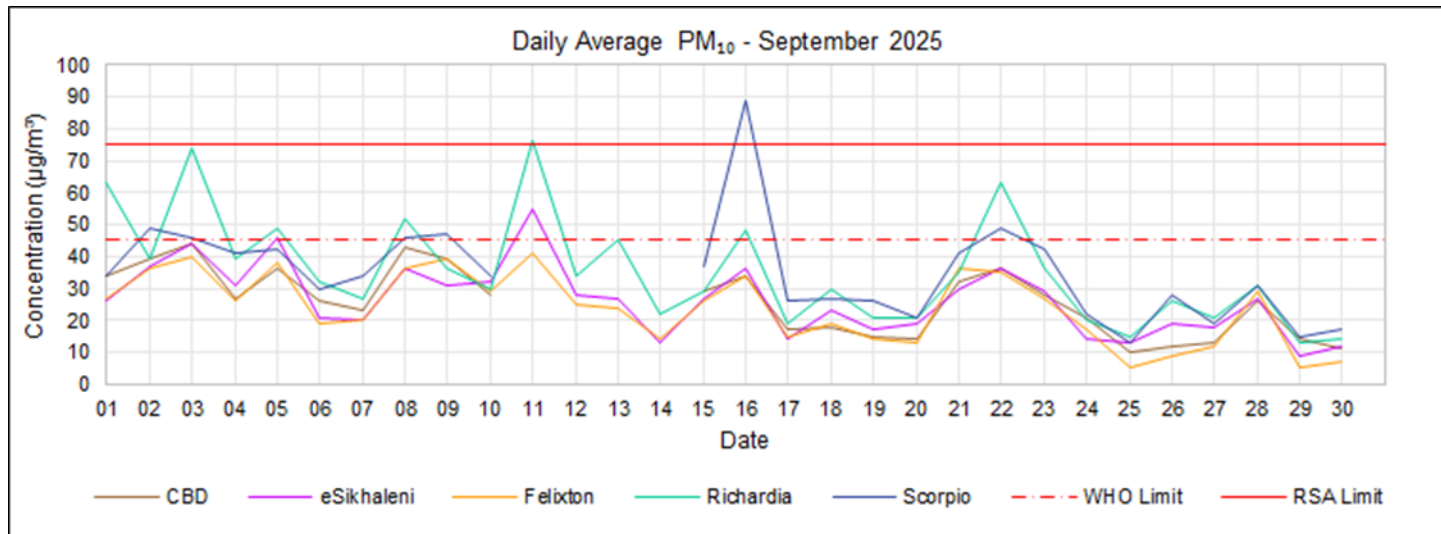
MONTHLY



PM₁₀

24-HOUR

PM ₁₀ Daily RSA Limit (75 µg/m ³)	2
Regional Fires	1
Richardia	1
RBCAA allocation	1
South32	1
Scorpio	1
Planned maintenance. Furnaces venting.	1
PM ₁₀ Daily WHO Limit (45 µg/m ³)	16

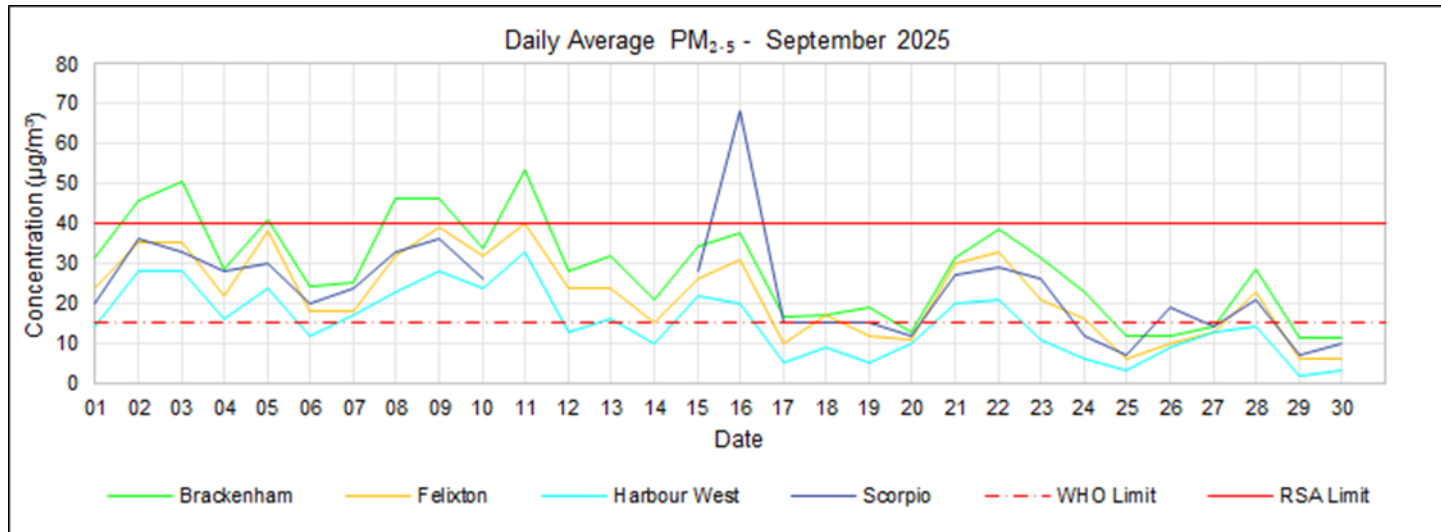


Missing Data (PM₁₀)

- CBD – Power outage plus issue with inverter auto start (4 day/s with <80% data capture, 11-14 September 2025).
- Scorpio – Earth leakage trip associated with station alarm power supply (3 day/s with <80% data capture, 11, 13-14 September 2025).

PM_{2.5} 24-HOUR

PM_{2.5} Daily RSA Limit (40 µg/m³)	8
Fires	4
Brackenhams	4
RBCAA allocation	4
Regional Fires	1
Scorpio	1
RBCAA allocation	1
RBIDZ	2
Brackenhams	2
RBCAA allocation	2
South32	1
Scorpio	1
Planned maintenance. Furnaces venting.	1
PM_{2.5} Daily WHO Limit (15 µg/m³)	75



Missing Data (PM_{2.5}):

- Scorpio – Earth leakage trip associated with station alarm power supply (3 day/s with <80% data capture, 11, 13-14 September 2025).

PM₁₀

EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM₁₀ Daily RSA Limit (75 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	1	-	-	1	-	-	-	2
Scorpio	-	-	-	-	-	-	-	1	1	-	-	-	2
PM₁₀ Daily WHO Limit (45 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	1	-	-	-	-	-	-	3	-	-	-	-	4
eSikhaleni	-	-	-	-	3	2	3	3	2	-	-	-	13
Felixton	-	-	-	-	-	-	1	5	-	-	-	-	6
Richardia	-	1	1	2	6	9	1	9	7	-	-	-	36
Scorpio	1	1	1	-	4	5	4	5	7	-	-	-	28

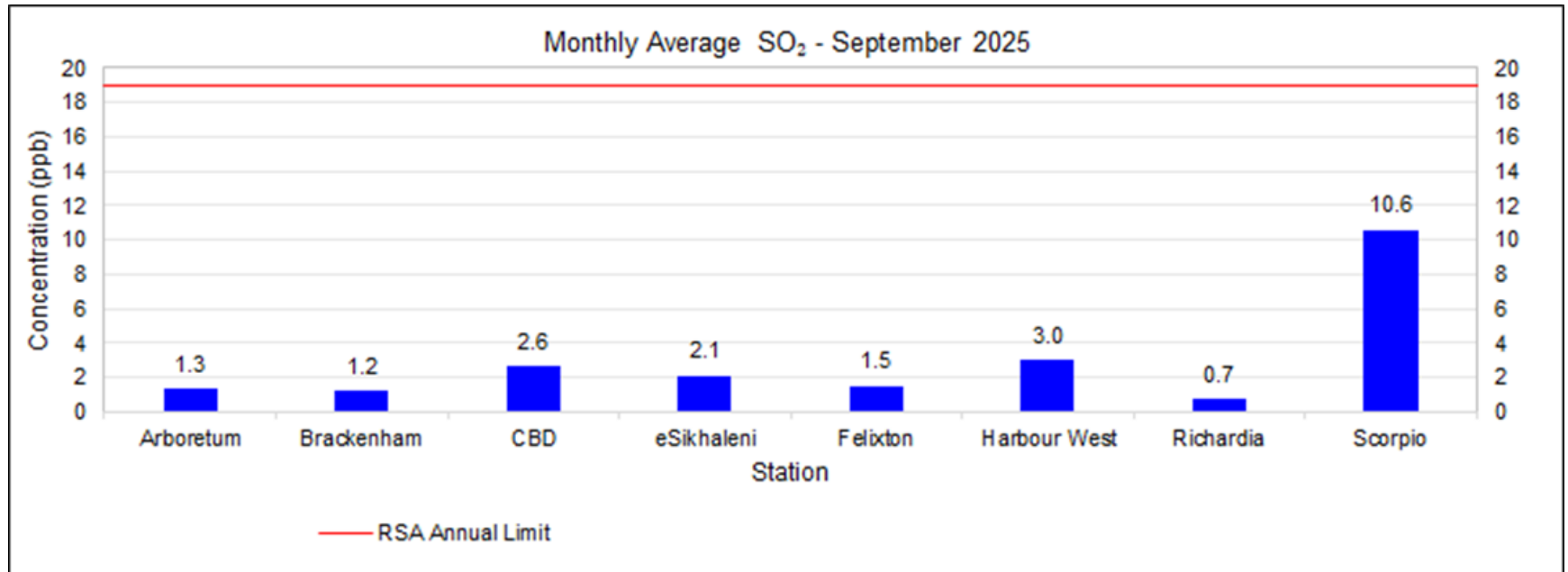
PM_{2.5}

EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM_{2.5} Daily RSA Limit (40 µg/m³)													
Brackenhams	-	-	-	-	2	-	3	5	6	-	-	-	16
Felixton	-	-	-	-	-	-	1	5	-	-	-	-	6
Harbour West	-	-	-	-	-	-	-	3	-	-	-	-	3
Scorpio	-	-	-	-	-	-	1	5	2	-	-	-	8
PM_{2.5} Daily WHO Limit (15 µg/m³)													
Brackenhams	-	6	8	10	25	25	18	22	23	-	-	-	137
Felixton	2	3	2	2	18	19	14	20	20	-	-	-	100
Harbour West	1	2	4	1	11	3	8	11	13	-	-	-	54
Scorpio	1	4	1	-	11	14	14	22	19	-	-	-	86

SO₂

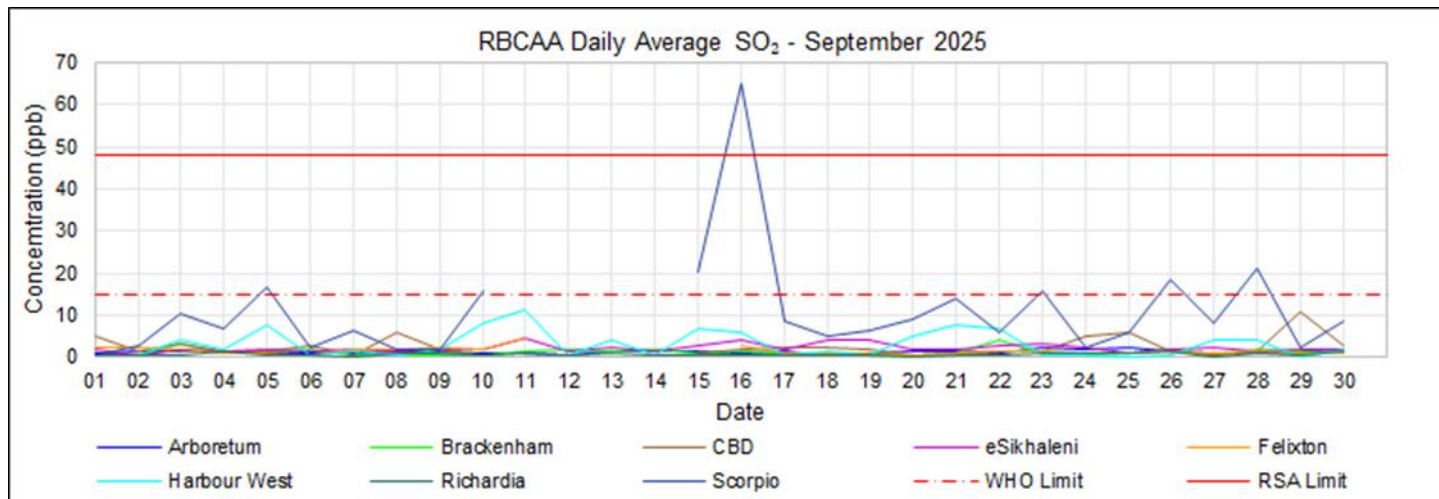
MONTHLY



SO₂

24-HOUR

SO ₂ Daily RSA Limit (48 ppb)	1
South32	1
Scorpio	1
Planned maintenance.	1
SO ₂ Daily WHO Limit (15 ppb)	7



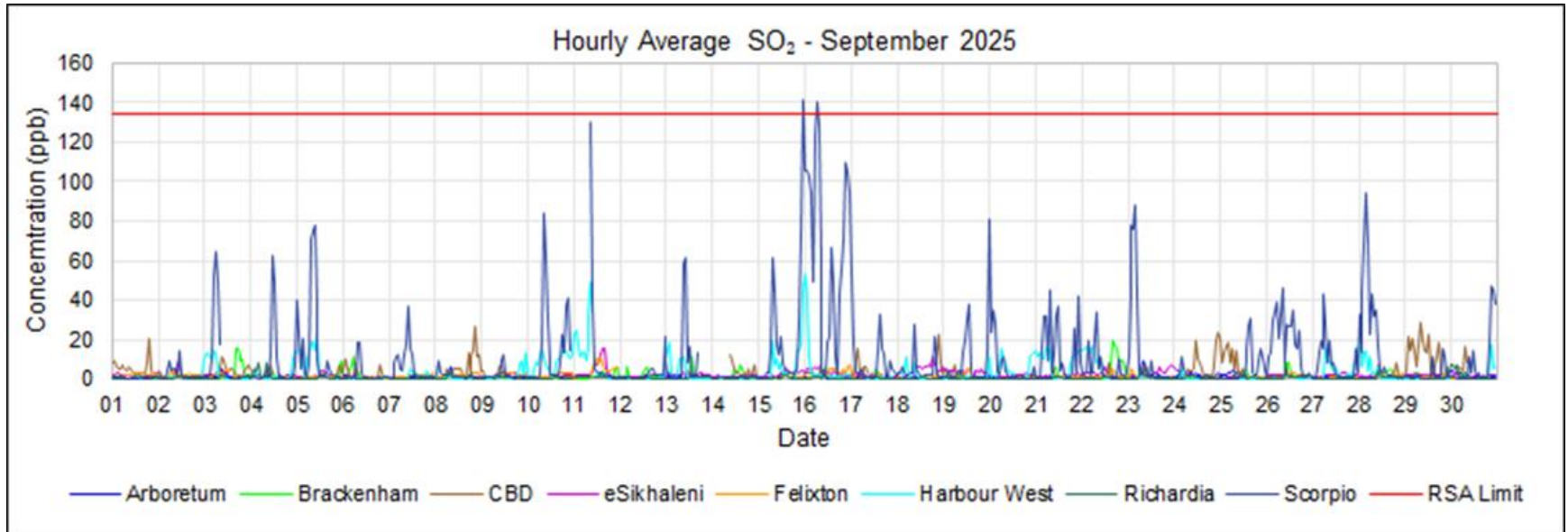
Missing Data (SO₂):

- CBD – Power outage plus issue with inverter auto start (4 day/s with <80% data capture, 11-14 September 2025).
- Felixton – Baseline drift, analyser swapped, data invalidated (4 day/s with <80% data capture, 12-15 September 2025).
- Scorpio – Earth leakage trip associated with station alarm power supply (3 day/s with <80% data capture, 11, 13-14 September 2025).

SO₂

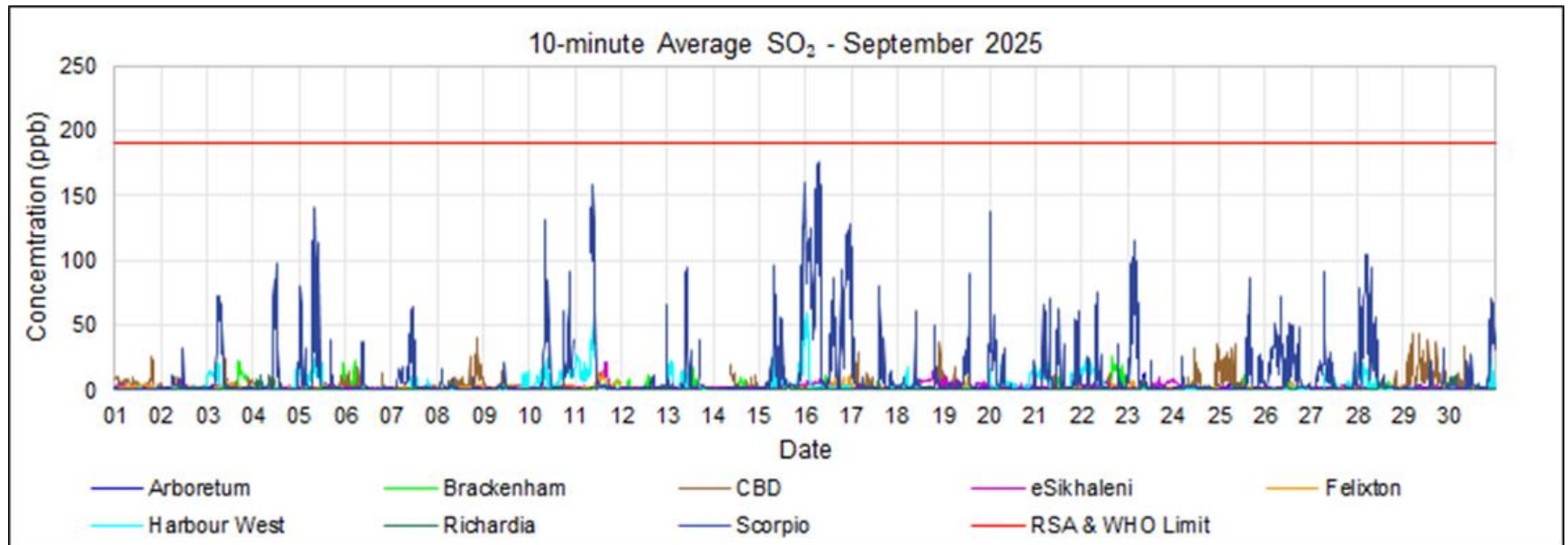
1-HOUR

SO ₂ Hourly RSA Limit (134 ppb)	2
South32	2
Scorpio	2
Planned maintenance.	2



SO₂

10-MINUTE



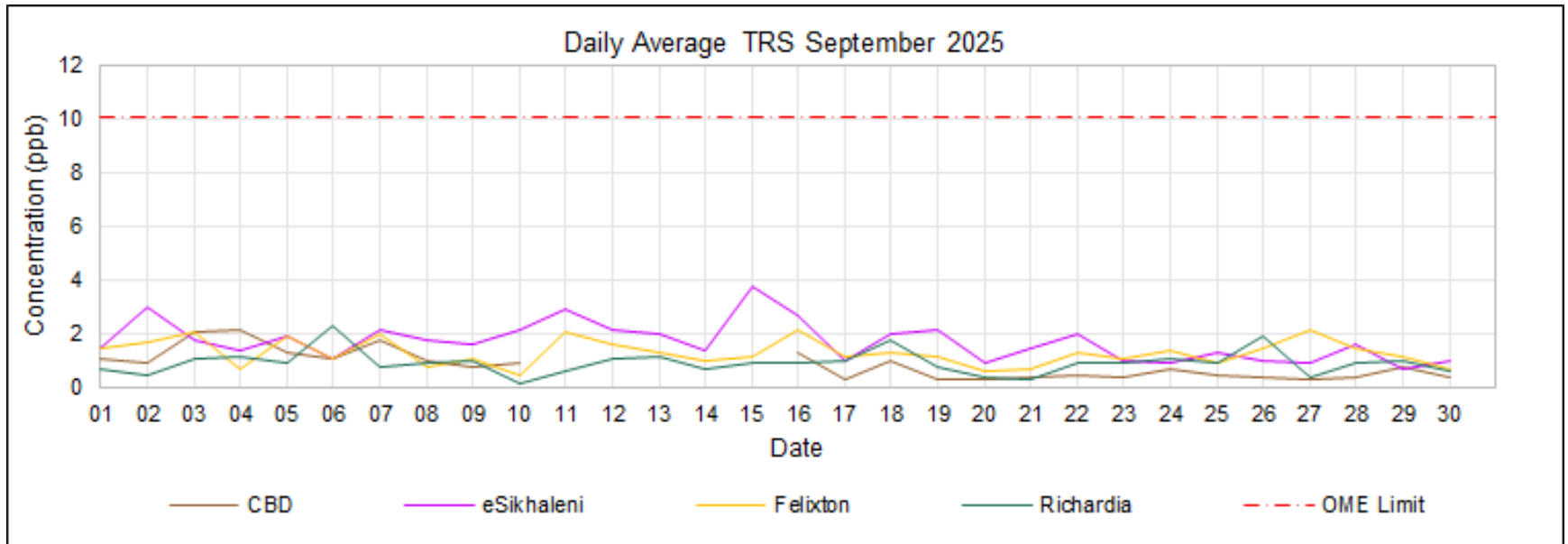
SO₂

EXCEEDANCE SUMMARY

2025	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	1	-	-	-	2	2	1	-	1	-	-	-	7
SO₂ Daily WHO Limit (15 ppb)													
CBD	1	1	3	-	-	-	-	2	-	-	-	-	7
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	4	1	7	6	11	5	-	-	-	-	34
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	3	-	1	1	12	11	15	6	7	-	-	-	56
SO₂ Hourly RSA Limit (134 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	1	-	-	-	-	-	-	-	-	-	-	-	1
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	4	-	3	-	1	-	2	2	-	-	-	-	12
SO₂ 10-minute RSA & WHO Limit (191 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	18	1	-	-	-	3	3	-	-	-	-	-	25

TRS

24-HOUR



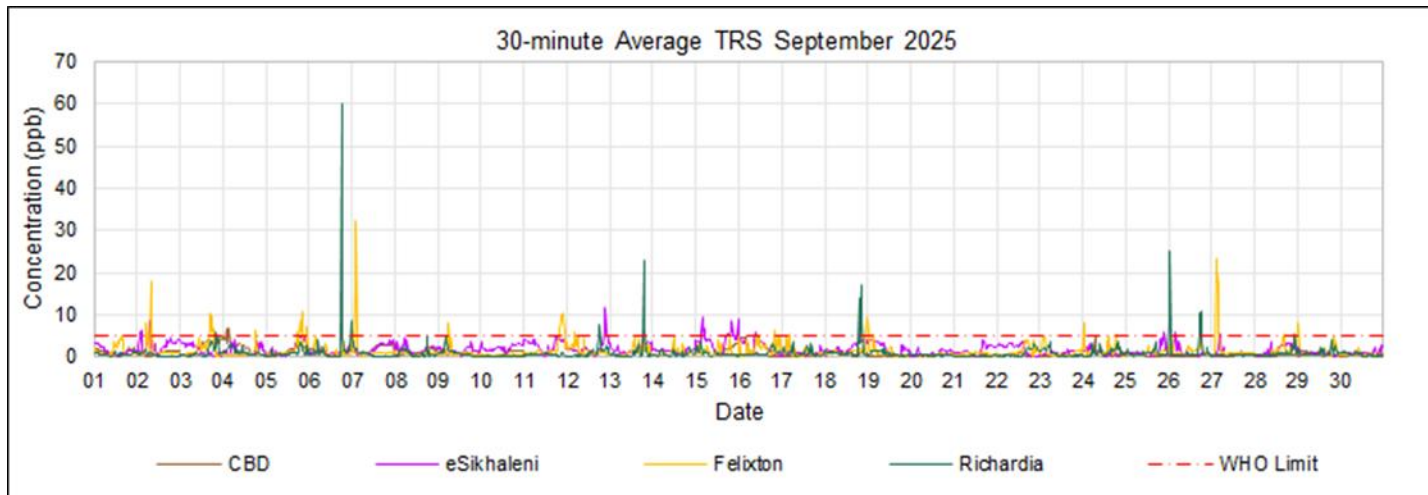
Missing Data (TRS):

- CBD – Power outage plus issue with inverter auto start (4 day/s with <80% data capture, 11-14 September 2025).

TRS

30-MINUTE

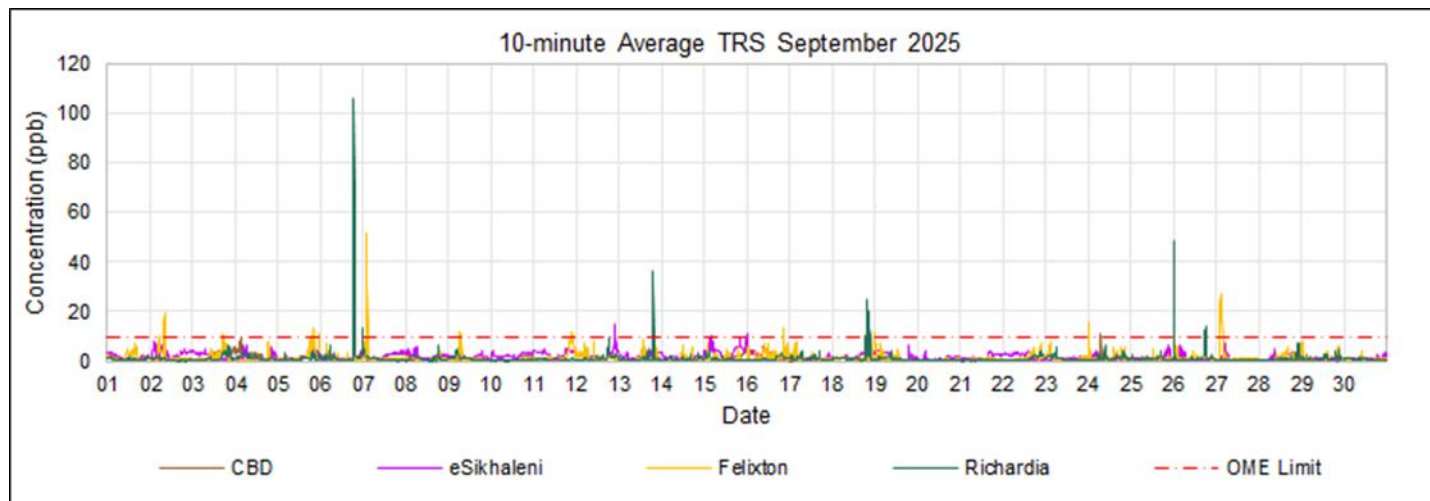
TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	102
CoU	18
Richardia	18
RBCAA allocation - sewage discharge	18
Mondi	23
CBD	3
NCG system	1
STP & Condensable gas	2
eSikhaleni	20
SETP	20
THS	55
eSikhaleni	5
Smuts systems	5
Felixton	50
Boilers-coal operated.	7
RBCAA allocation	3
Smuts systems	40
THS & Mondi	6
eSikhaleni	4
Smuts Plant + Mondi NCG system	4
Felixton	1
Smuts Plant + Mondi STP and condensable gases	1
Richardia	1
Smuts systems + Mondi unidentified cause	1



TRS

10-MINUTE

TRS 10-minute OME Limit (9.3 ppb)	82
CoJ	24
Richardia	24
RBCAA allocation - sewage discharge	24
Mondi	9
CBD	2
NCG system	1
STP & Condensable gas	1
eSikhaleni	7
SETP	7
THS	46
Felixton	46
Boilers-coal operated.	9
RBCAA allocation	5
Smuts systems	32
THS & Mondi	3
eSikhaleni	3
Smuts Plant + Mondi NCG system	3



TRS

EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TRS 24-hr-OME Limit (10.1 ppb)													
CBD	1	-	-	-	-	-	-	-	-	-	-	-	1
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
TRS 30-minute WHO H₂S Limit (5.0 ppb)													
CBD	34	25	15	10	2	41	3	10	3	-	-	-	143
eSikhaleni	-	-	-	-	4	19	11	4	29	-	-	-	67
Felixton	1	-	8	7	11	31	51	20	51	-	-	-	180
Richardia	5	7	3	7	3	16	3	9	19	-	-	-	72
TRS 10-minute OME Limit (9.3 ppb)													
CBD	53	10	8	7	-	27	-	-	2	-	-	-	107
eSikhaleni	-	-	-	-	4	11	8	1	10	-	-	-	34
Felixton	2	-	4	10	10	43	66	13	46	-	-	-	194
Richardia	3	1	-	9	-	13	-	19	24	-	-	-	69

Air Quality

SUMMARY

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

AIMS concludes that during September 2025, based on the following:

- ▶ Measured long-term average concentrations (chronic exposure) and WHO health guidelines of concern are:
 - PM₁₀ at CBD, eSikhaleni, Felixton, Richardia and Scorpio - all points monitored.
 - PM_{2.5} at Brackenham, Felixton, Harbour West and Scorpio - all points monitored.

- ▶ Measured short-term average concentrations (acute exposure) and the WHO health guidelines, ambient air quality was compromised by:
 - PM₁₀ at eSikhaleni, Richardia and Scorpio.
 - PM_{2.5} at Brackenham, Felixton, Harbour West and Scorpio - all points monitored.
 - SO₂ at Scorpio; and
 - TRS at CBD, eSikhaleni, Felixton and Richardia - all points monitored.

Thank you

- Lance Coetzee
- lance@airimpact.co.za

- Francois Nel
- francois@airimpact.co.za

- Alicia Garnica
- alicia@airimpact.co.za

