

RBCAA Technical Feedback – May 2024

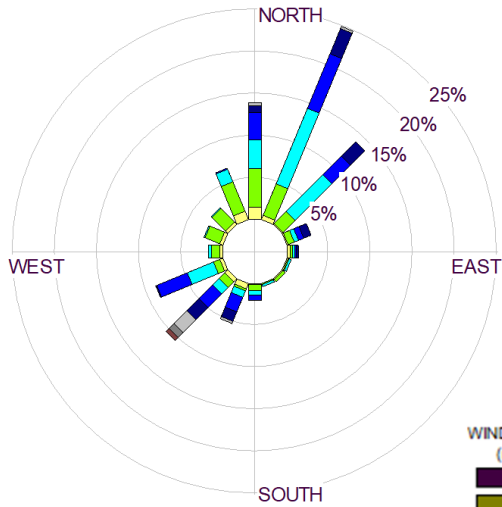


Meteorology

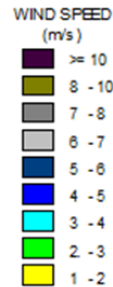
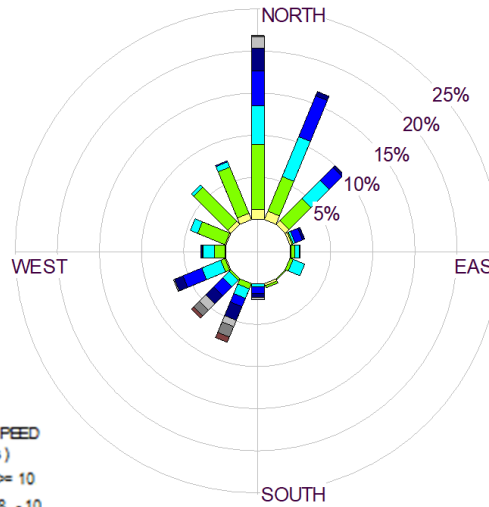
WIND



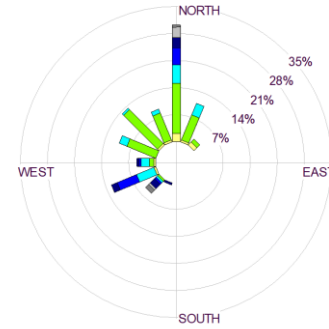
May 2024 Wind Rose



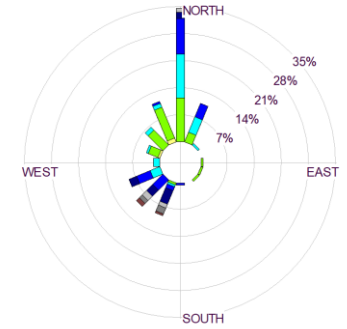
May 2025 Wind Rose



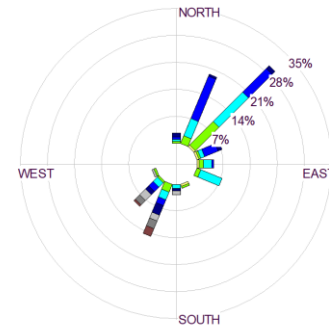
00:00 – 05:59



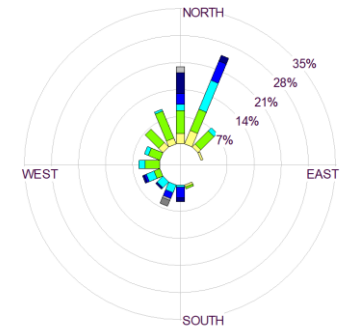
06:00 – 11:59



12:00 – 17:59



18:00 – 23:59

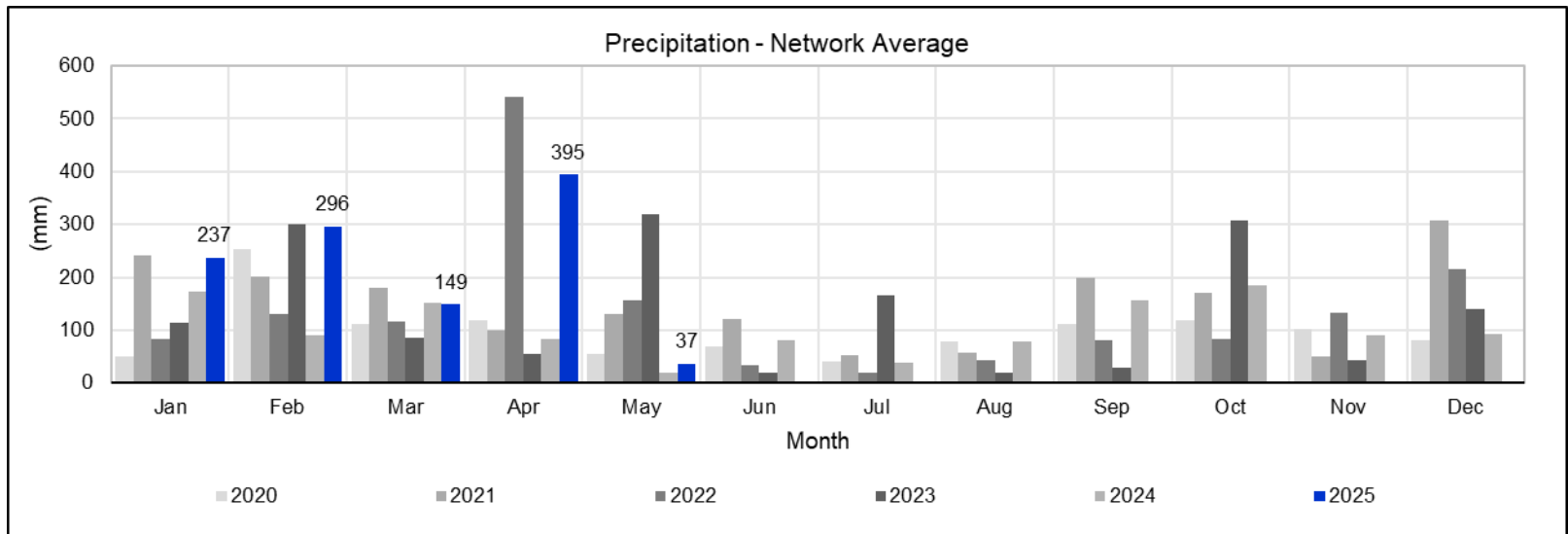
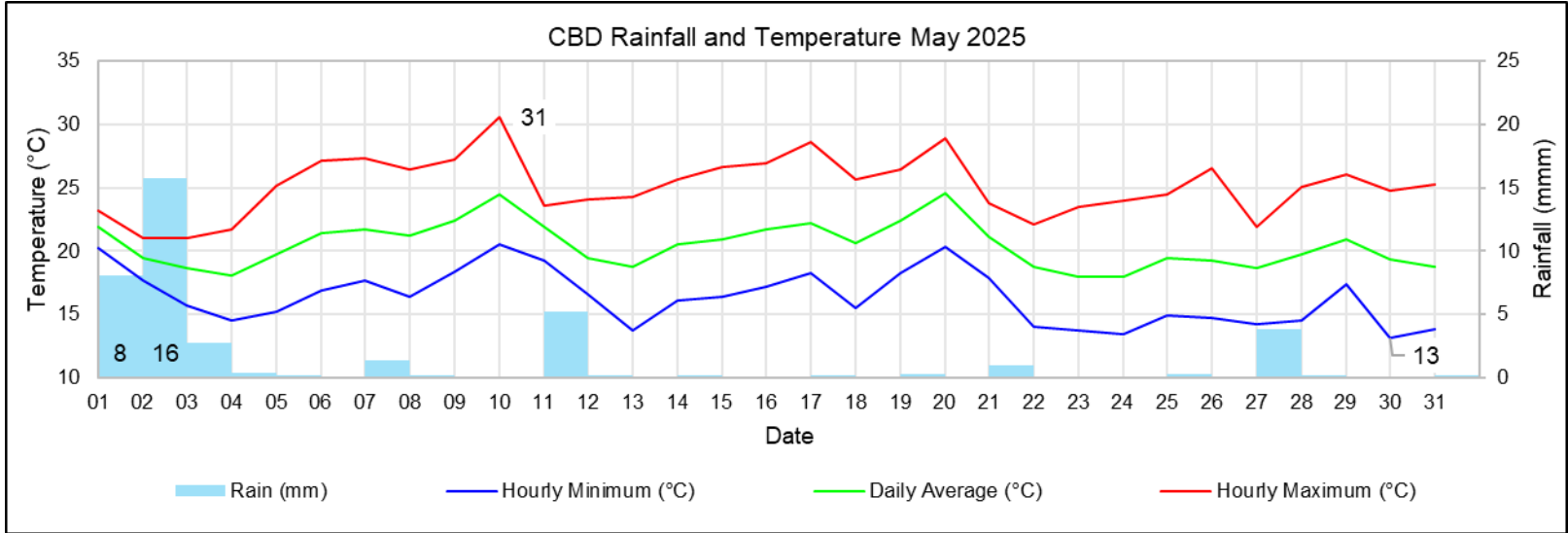


Period	Wind Speed	Dominant Sector 1		Dominant Sector 2		Calms	Valid Data
May 2024	3.2 m/s	NNW-NE	60%	SW-WSW	19%	0%	98%
May 2025	3.2 m/s	NW-NE	63%	SSW-WSW	21%	0%	98%
00:00-05:59	2.8 m/s	WNW-NNE	75%	WSW	13%	0%	98%
06:00-11:59	3.4 m/s	NW-NNE	64%	SSW-WSW	28%	0%	98%
12:00-17:59	3.7 m/s	NNE-ESE & ESE	64%	SSW-SW	24%	0%	98%
18:00-23:59	2.8 m/s	NW-NE	70%	-	-	0%	97%

Meteorology

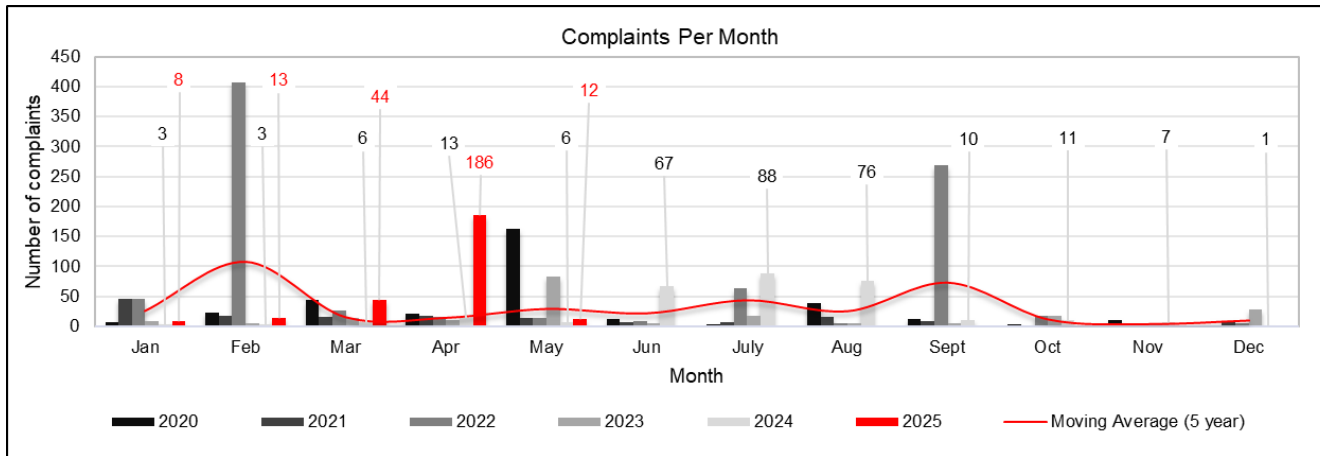
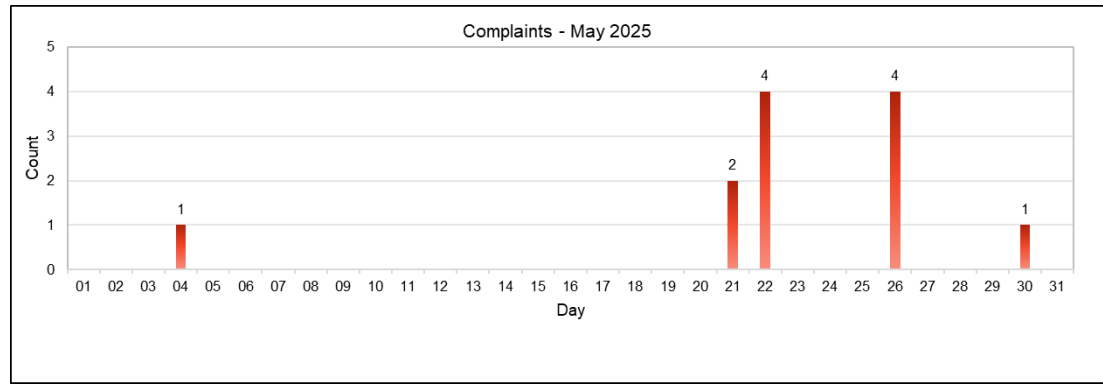
Month	Richards Bay (mm)	Felixton (mm)	RBCT (mm)	South32 (mm)	Average (mm)
May 2025	41	16	66	23	37

RAINFALL AND TEMPERATURE

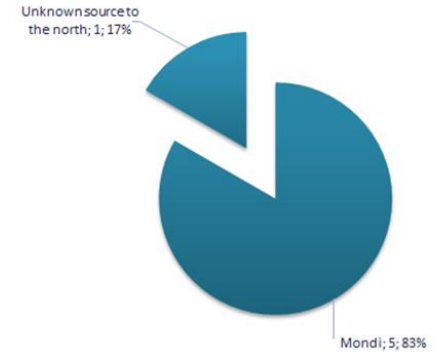


Complaints

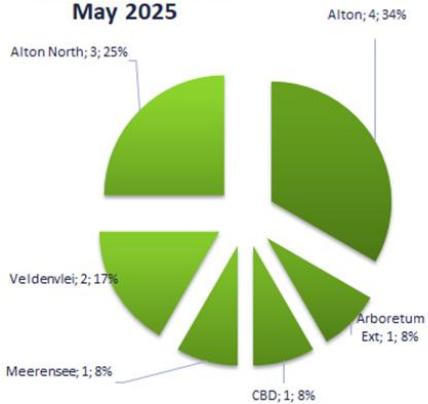
DISTRIBUTION



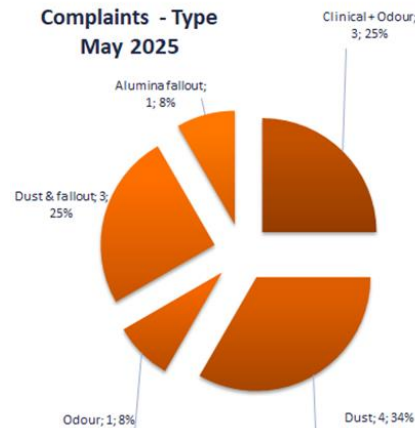
Complaints - Source May 2024



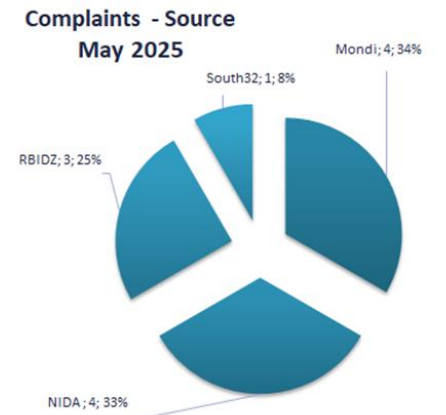
Complaints - Region May 2025



Complaints - Type May 2025

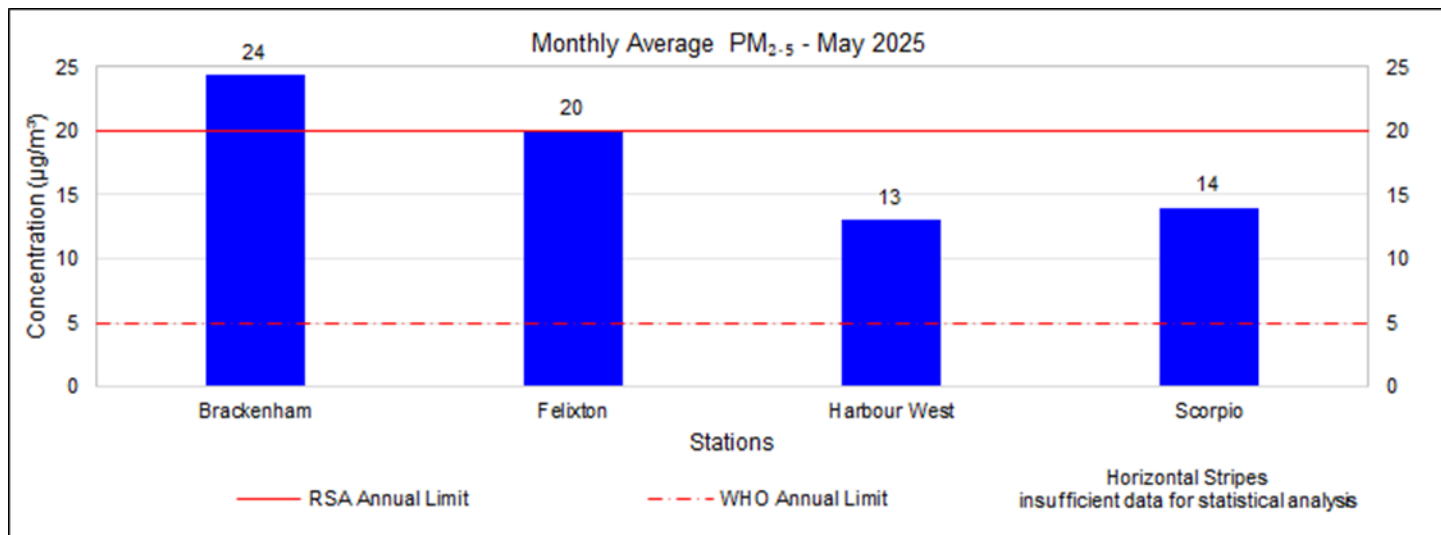
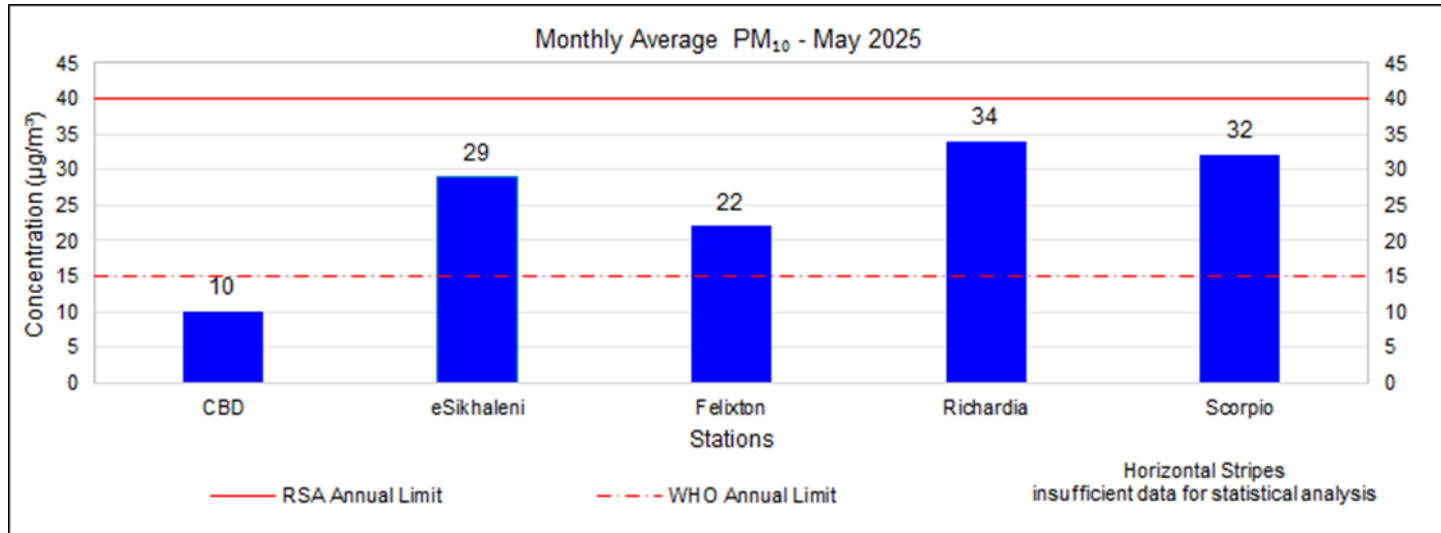


Complaints - Source May 2025



PM

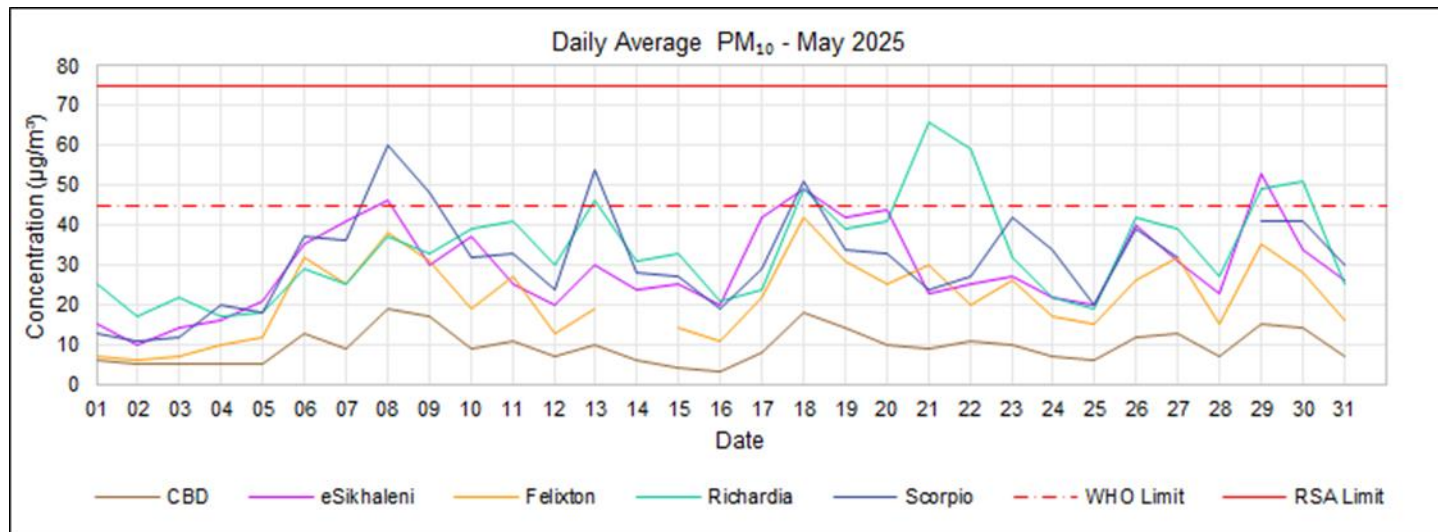
MONTHLY



PM₁₀

24-HOUR

PM ₁₀ Daily WHO Limit (45 µg/m ³)		13
No response required		13
eSikhaleni		3
No comments		3
Richardia		6
No comments		6
Scorpio		4
No comments		4



Missing Data (PM₁₀)

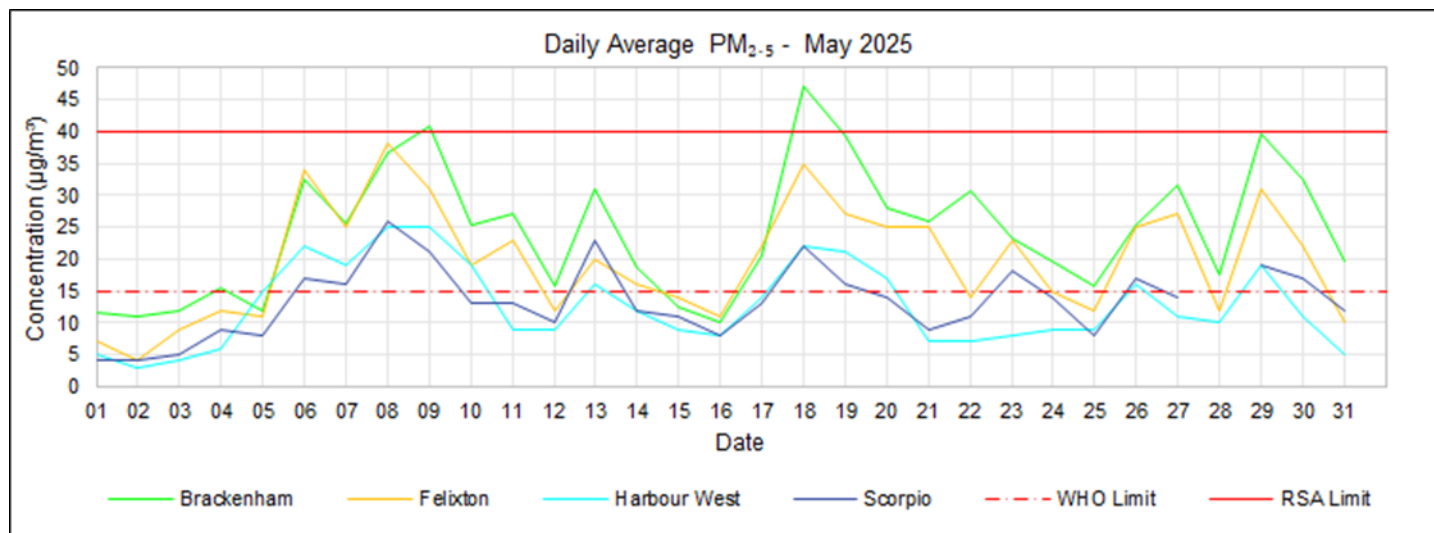
- Felixton – power outages, data invalidation (1 day with <80% data capture 15 May 2025).
- Scorpio – power outages, data invalidation (1 day with <80% data capture 28 May 2025).

PM_{2.5}

24-HOUR

PM_{2.5} Daily RSA Limit (40 µg/m³)	2
Industry response required	2
Brackenham	2
Responded: Mondi	2

PM_{2.5} Daily WHO Limit (15 µg/m³)	63
No response required	63
Brackenham	24
No comments	24
Felixton	17
No comments	17
Scorpio	11
No comments	11
Harbour West	11
No comments	11



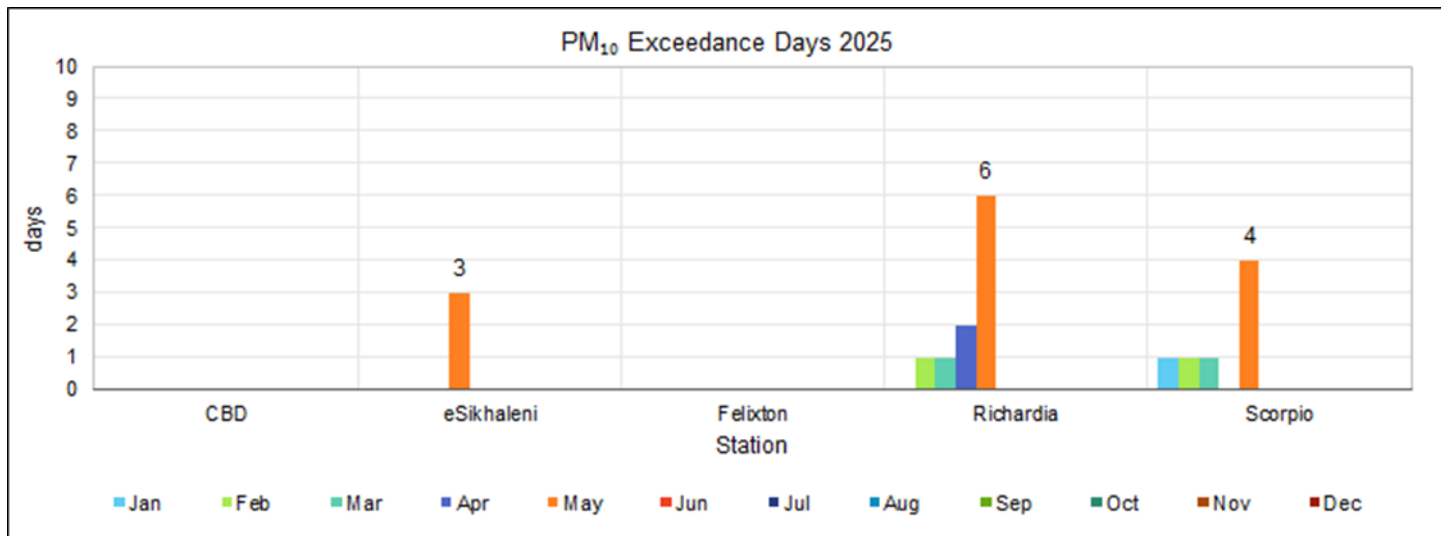
Missing Data (PM_{2.5}):

- Scorpio – power outages, data invalidation (1 day with <80% data capture 28 May 2025).

PM₁₀

EXCEEDANCE SUMMARY

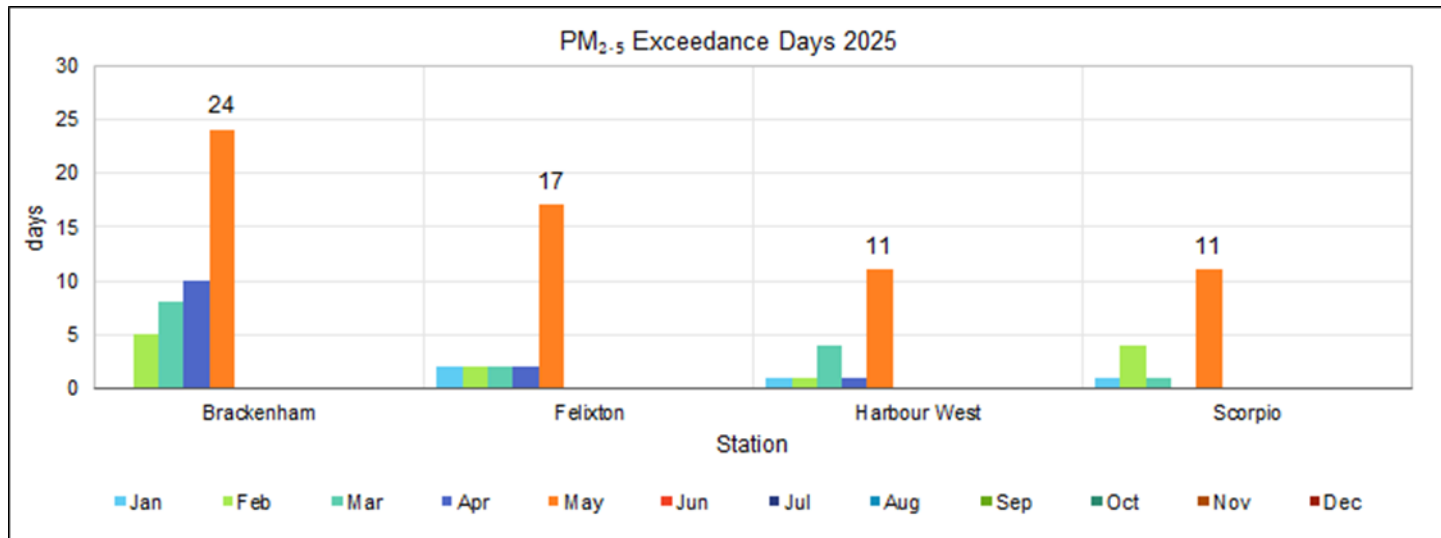
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PM₁₀ Daily RSA Limit (75 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	0
PM₁₀ Daily WHO Limit (45 µg/m³)													
Brackenhams	-	-	-	-	-	-	-	-	-	-	-	-	0
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	3	-	-	-	-	-	-	-	3
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	1	1	2	6	-	-	-	-	-	-	-	10
Scorpio	1	1	1	-	4	-	-	-	-	-	-	-	7



PM_{2.5}

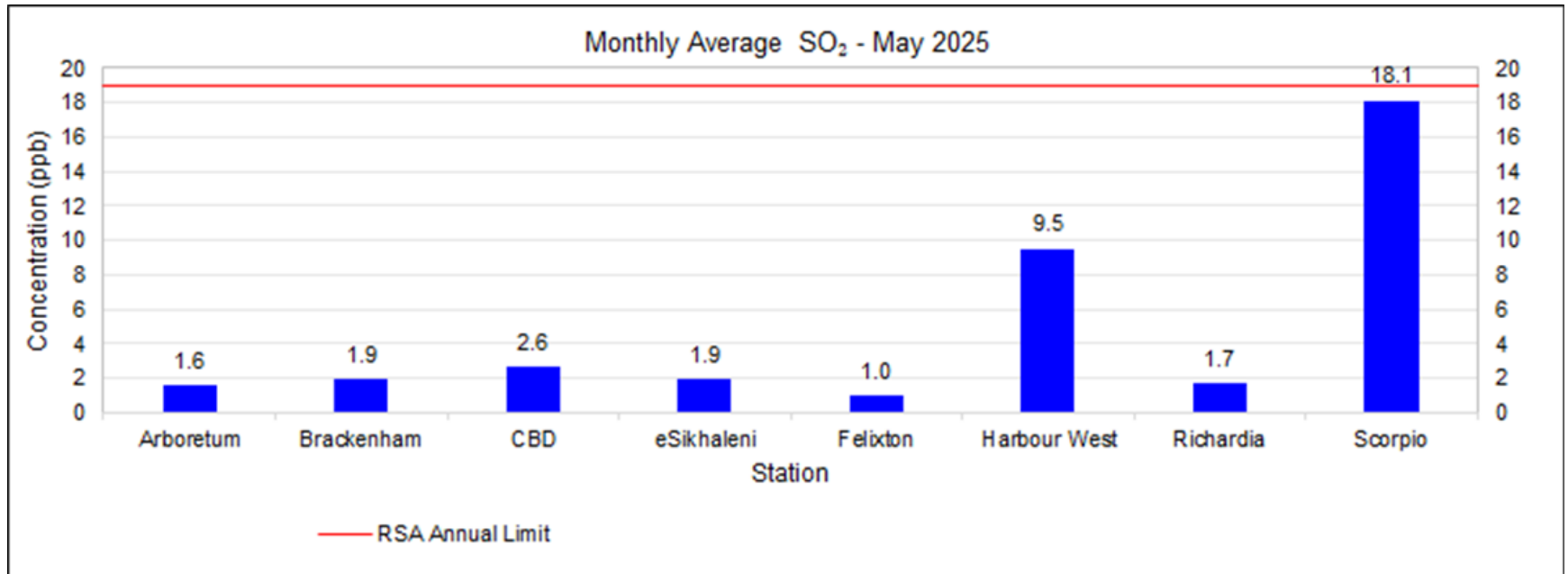
EXCEEDANCE SUMMARY

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	-	-	-	-	-	-	-	2
Felixton	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	-	-	-	-	-	-	-	-	-	-	-	-	0
PM_{2.5} Daily WHO Limit (15 µg/m³)													
Brackenhams	-	5	8	10	24	-	-	-	-	-	-	-	47
Felixton	2	2	2	2	17	-	-	-	-	-	-	-	25
Harbour West	1	1	4	1	11	-	-	-	-	-	-	-	18
Scorpio	1	4	1	-	11	-	-	-	-	-	-	-	17



SO₂

MONTHLY

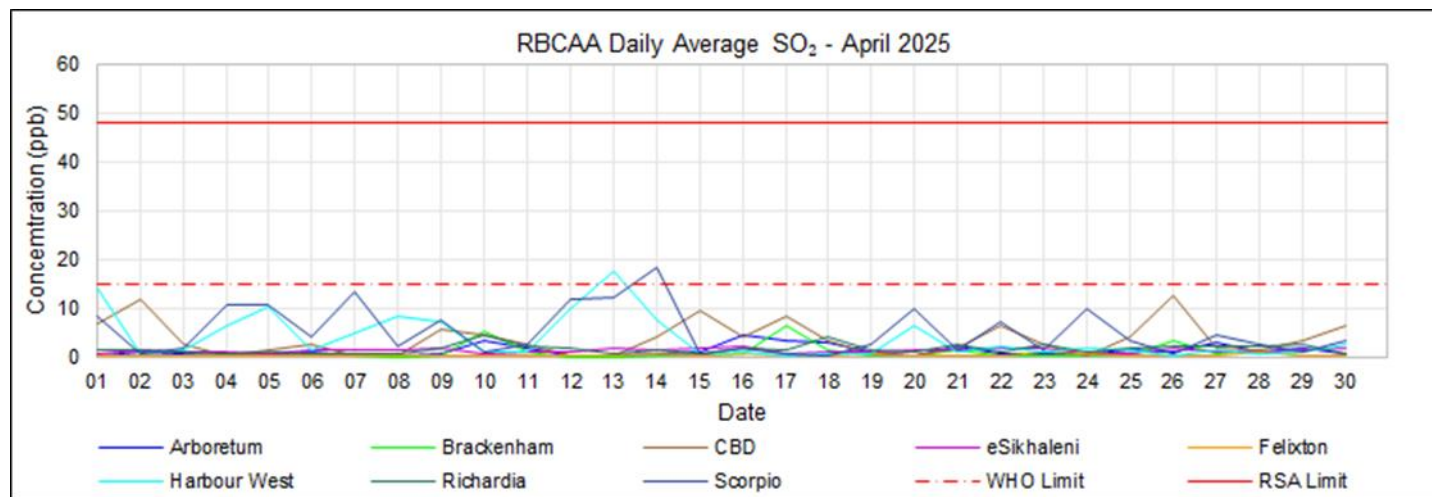


SO₂

24-HOUR

SO₂ Daily RSA Limit (48 ppb)	2
Industry response required	2
Scorpio	2
Responded: Foskor, South32, Mondi	1
Responded: Mondi, Foskor	1

SO₂ Daily WHO Limit (15 ppb)	19
No response required	19
Harbour West	7
No comments	7
Scorpio	12
No comments	12

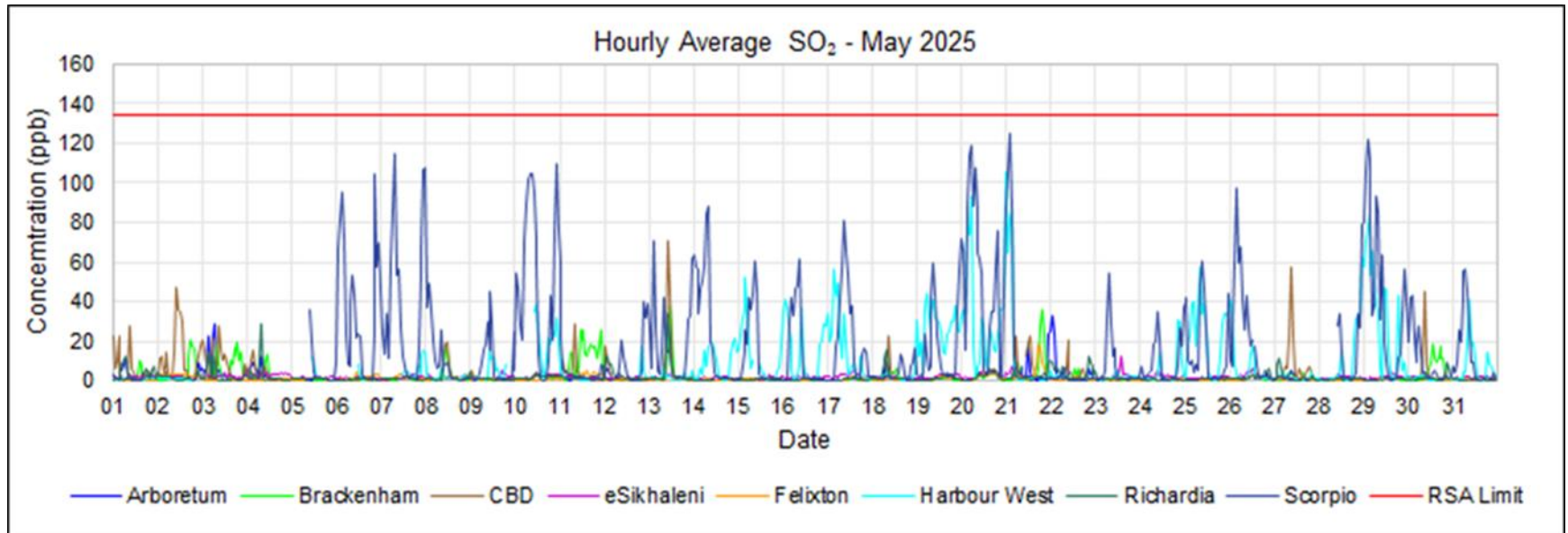


Missing Data (SO₂):

- CBD – power outages, data invalidation (1 day with <80% data capture 5 May 2025).
- Harbour West – power outages, faulty analyser, data invalidation (7 days with <80% data capture 4-7, 10, 12 May 2025).
- Richardia - power outages, data invalidation (1 day with <80% data capture 8 May 2025).
- Scorpio – power outages, datalogger database corrupted, data invalidation (7 days with <80% data capture 1-5, 27-28 May 2025).

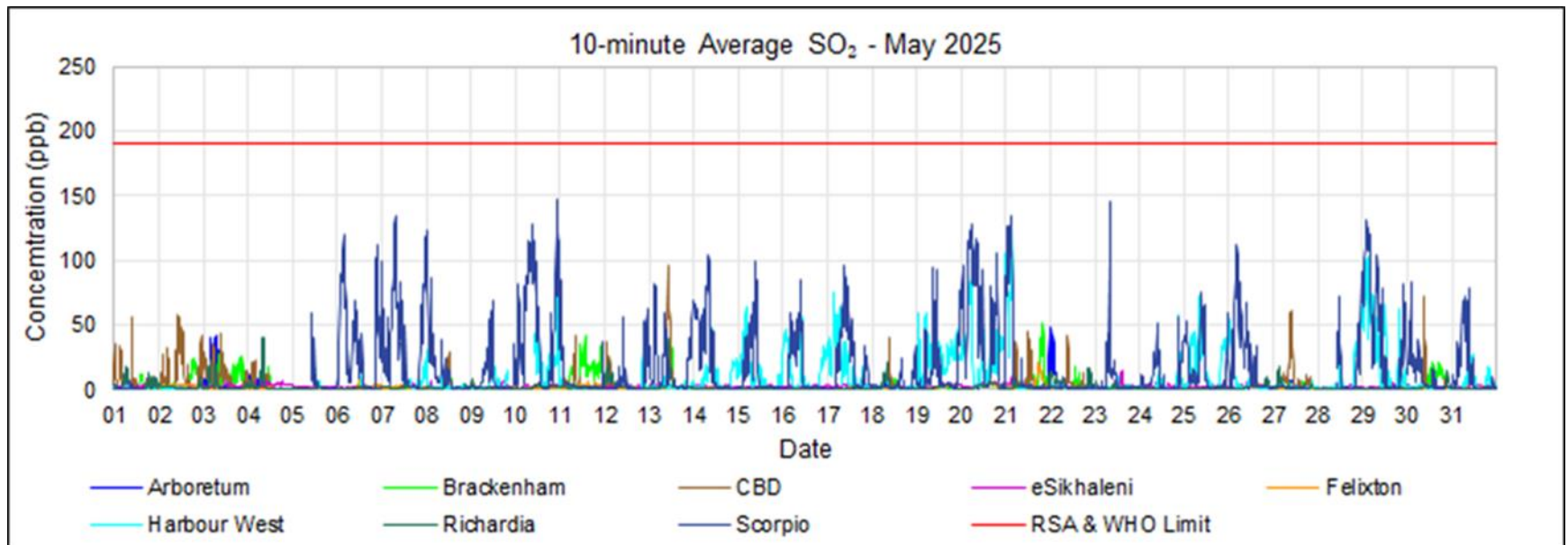
SO₂

1-HOUR



SO₂

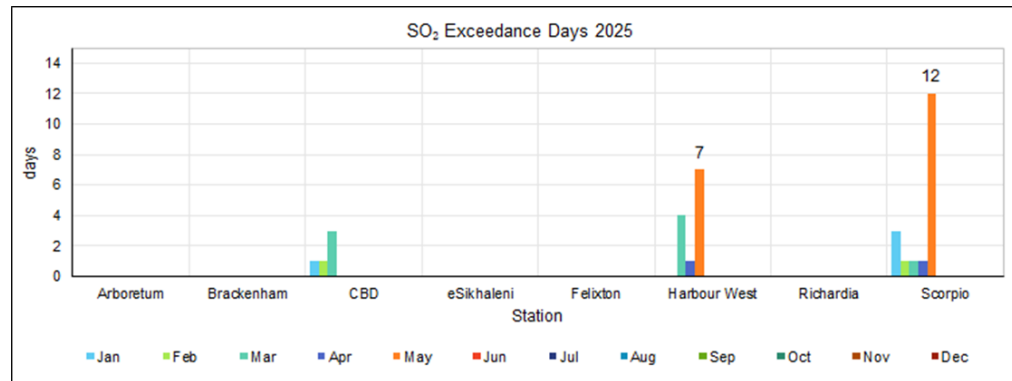
10-MINUTE



SO₂

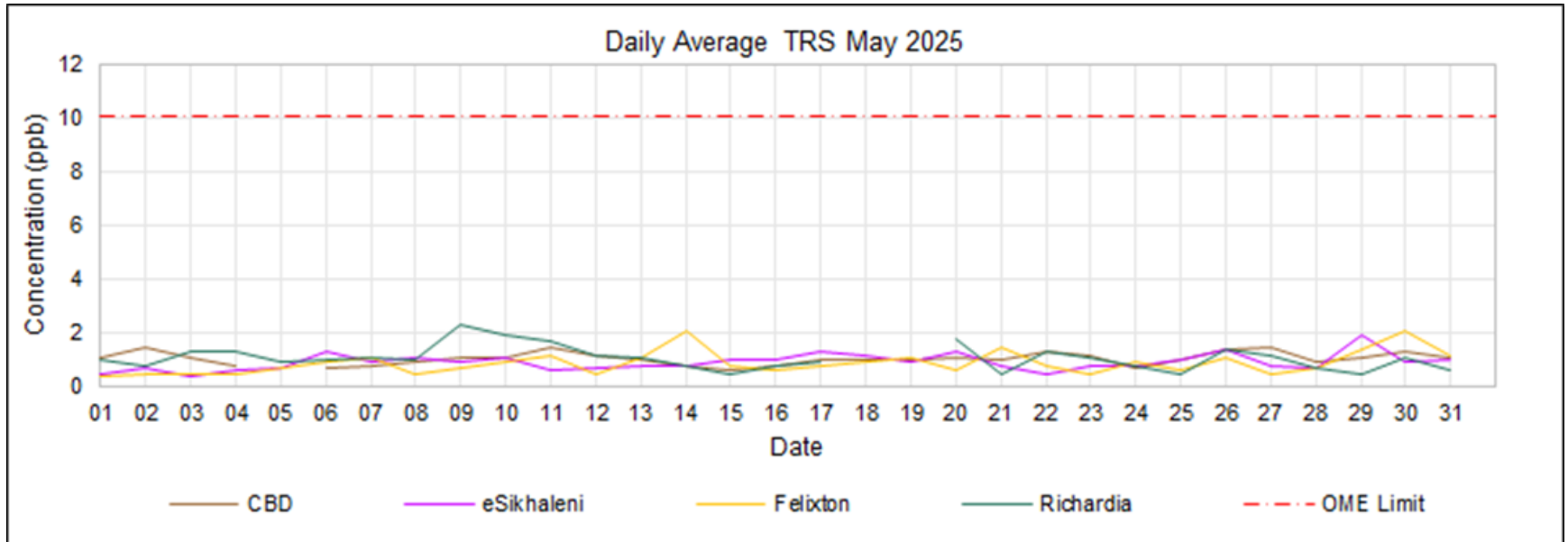
EXCEEDANCE SUMMARY

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SO₂ Daily WHO Limit (15 ppb)													
CBD	1	1	3	-	-	-	-	-	-	-	-	-	5
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	4	1	7	-	-	-	-	-	-	-	12
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	3	-	1	1	12	-	-	-	-	-	-	-	17
SO₂ Hourly RSA Limit (134 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	4	-	-	-	-	-	-	-	-	-	-	-	4
SO₂ 10-minute RSA & WHO Limit (191 ppb)													
CBD	-	-	-	-	-	-	-	-	-	-	-	-	0
eSikhaleni	-	-	-	-	-	-	-	-	-	-	-	-	0
Harbour West	-	-	-	-	-	-	-	-	-	-	-	-	0
Richardia	-	-	-	-	-	-	-	-	-	-	-	-	0
Scorpio	18	1	-	-	-	-	-	-	-	-	-	-	19



TRS

24-HOUR



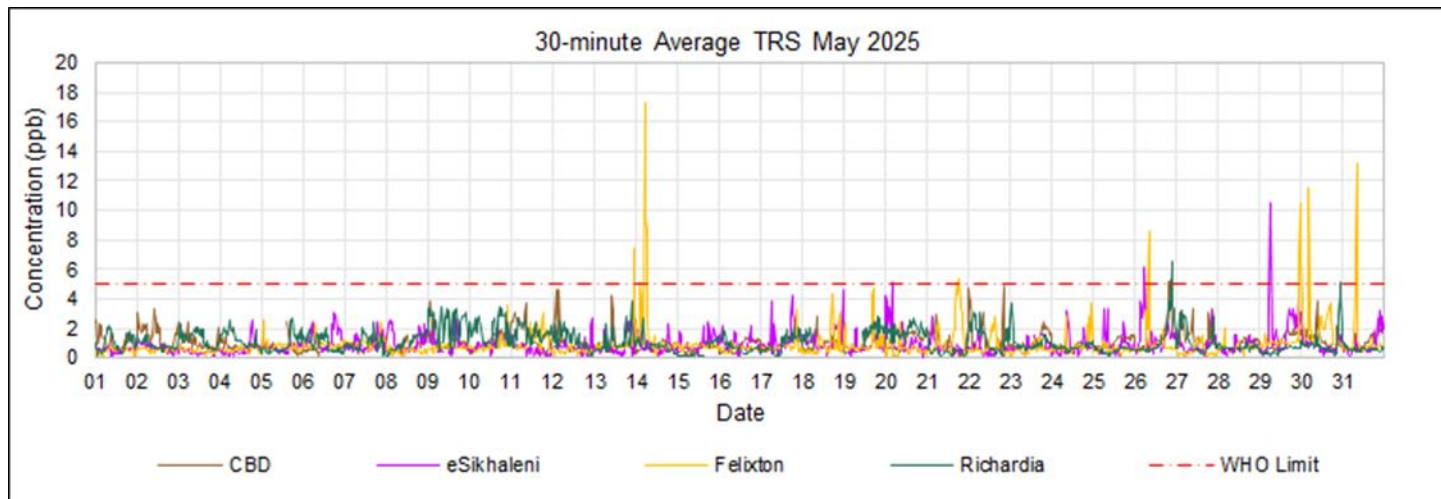
Missing Data (TRS):

- CBD – power outages, data invalidation (1 day with <80% data capture 5 May 2025).
- Richardia - power outages, data invalidation (2 days with <80% data capture 18-19 May 2025).

TRS

30-MINUTE

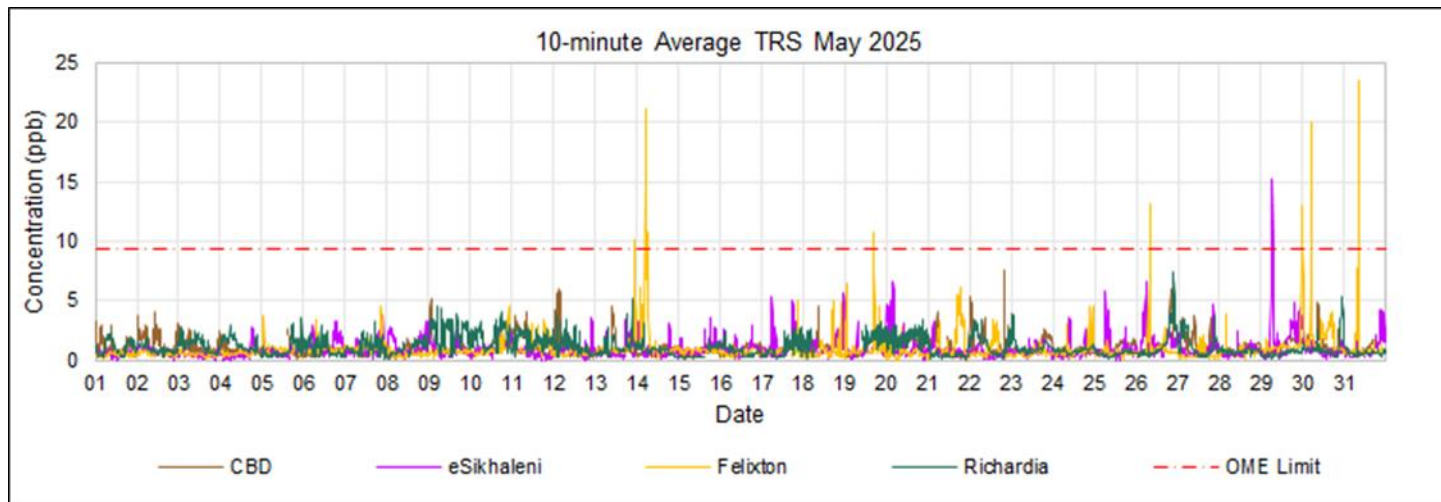
TRS 30-minute WHO H ₂ S Limit (5.0 ppb)	20
Industry response required	12
eSikhaleni	1
Responded: Mpact	1
Felixton	11
Responded: Mpact, Mondi	9
Responded: Mpact and Mondi	2
Mondi	8
CBD	2
The root cause has not yet been confirmed	2
eSikhaleni	3
Secondary Effluent Treatment Plant	1
Mondi - meteorology	2
Richardia	3
The root cause has not yet been confirmed	3



TRS

10-MINUTE

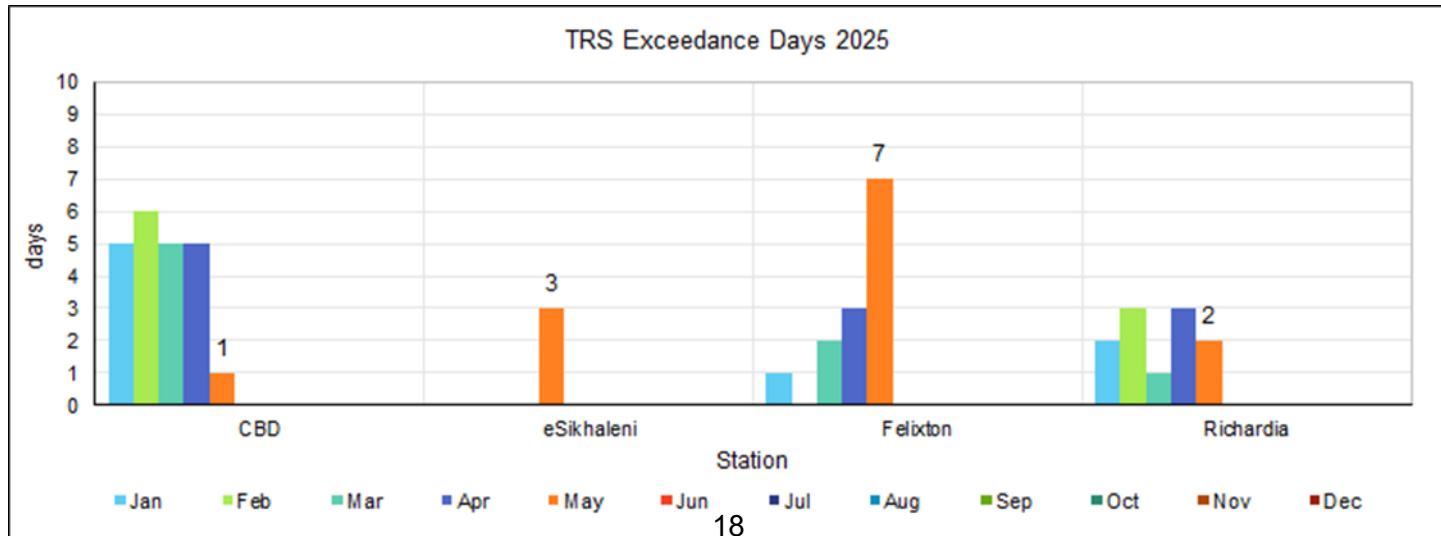
TRS 10-minute OME Limit (9.3 ppb)		14
Industry response required		9
Felixton		9
Responded: Mpact		1
Responded: Mpact, Mondi		8
Mondi		5
eSikhaleni		4
Mondi - meteorology		4
Felixton		1
NCGs vented through the carbon filter		1



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	-	-	-	-	-	-	-	86
eSikhaleni	-	-	-	-	4	-	-	-	-	-	-	-	4
Felixton	1	-	8	7	11	-	-	-	-	-	-	-	27
Richardia	5	7	3	7	3	-	-	-	-	-	-	-	25
TRS 10-minute OME Limit (9.3 ppb)													
CBD	53	10	8	7	-	-	-	-	-	-	-	-	78
eSikhaleni	-	-	-	-	4	-	-	-	-	-	-	-	4
Felixton	2	-	4	10	10	-	-	-	-	-	-	-	26
Richardia	3	1	-	9	-	-	-	-	-	-	-	-	13



Air Quality

SUMMARY

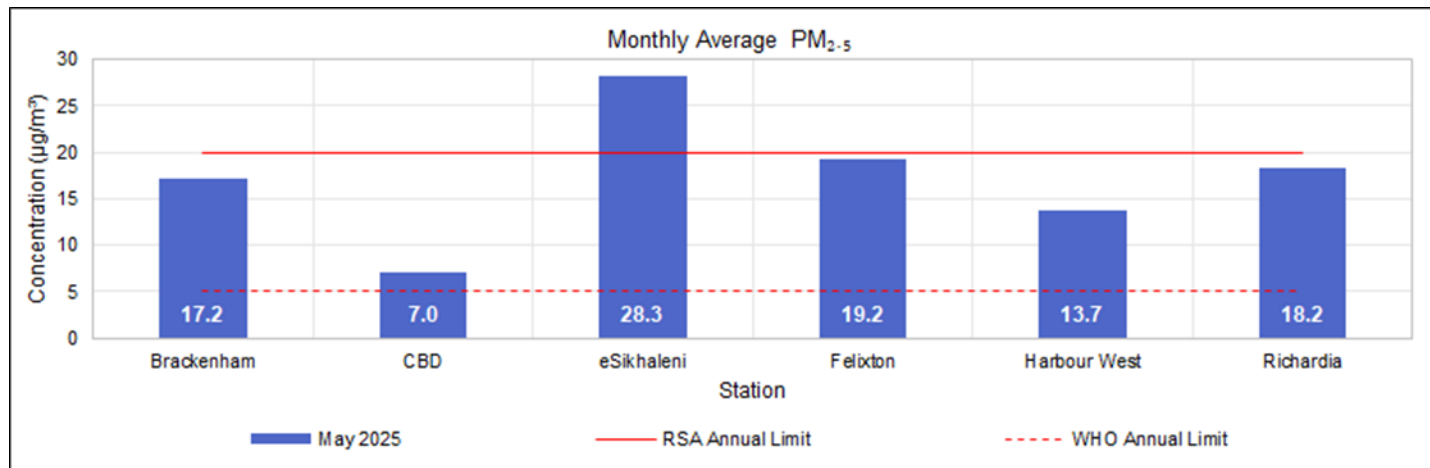
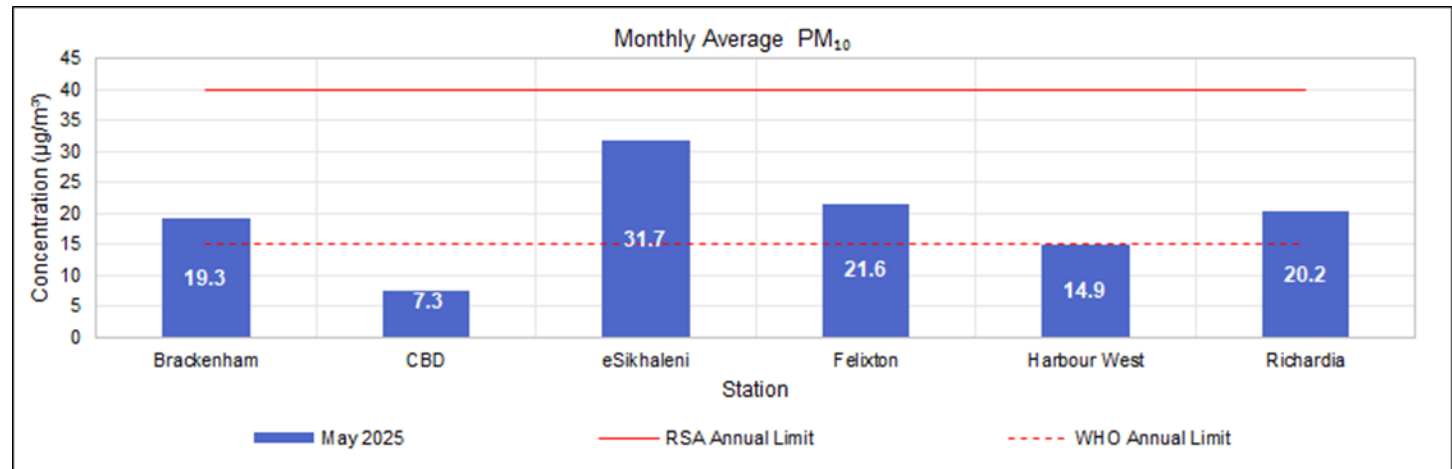
AIMS concludes that during April 2025, based on the following:

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

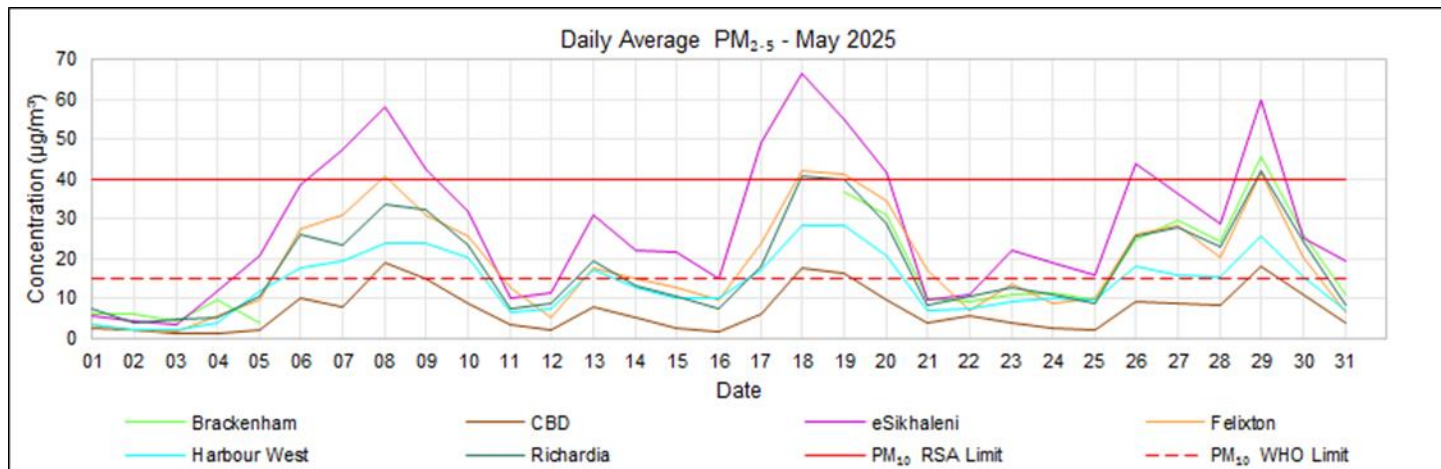
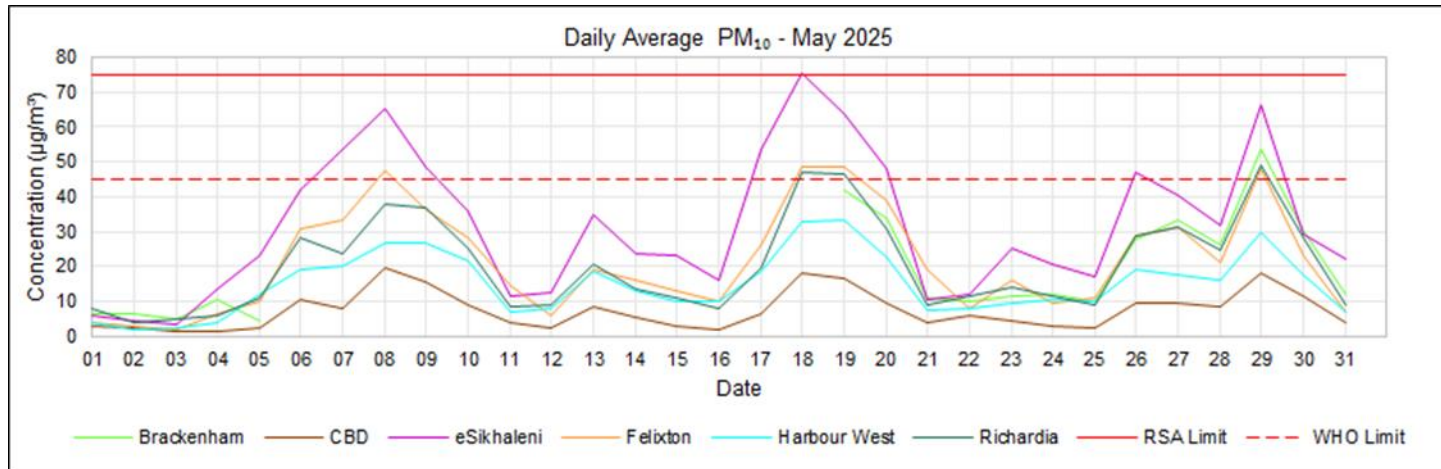
- ▶ Measured short-term average concentrations (acute exposure) and WHO health guidelines ambient air quality was compromised by:
 - PM₁₀ at eSikhaleni, Richardia and Scorpio;
 - PM_{2.5} at Brackenham, Felixton, Scorpio and Harbour West (all points monitored).;
 - SO₂ at Harbour West and Scorpio; and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

AirGradient PM

MONTHLY

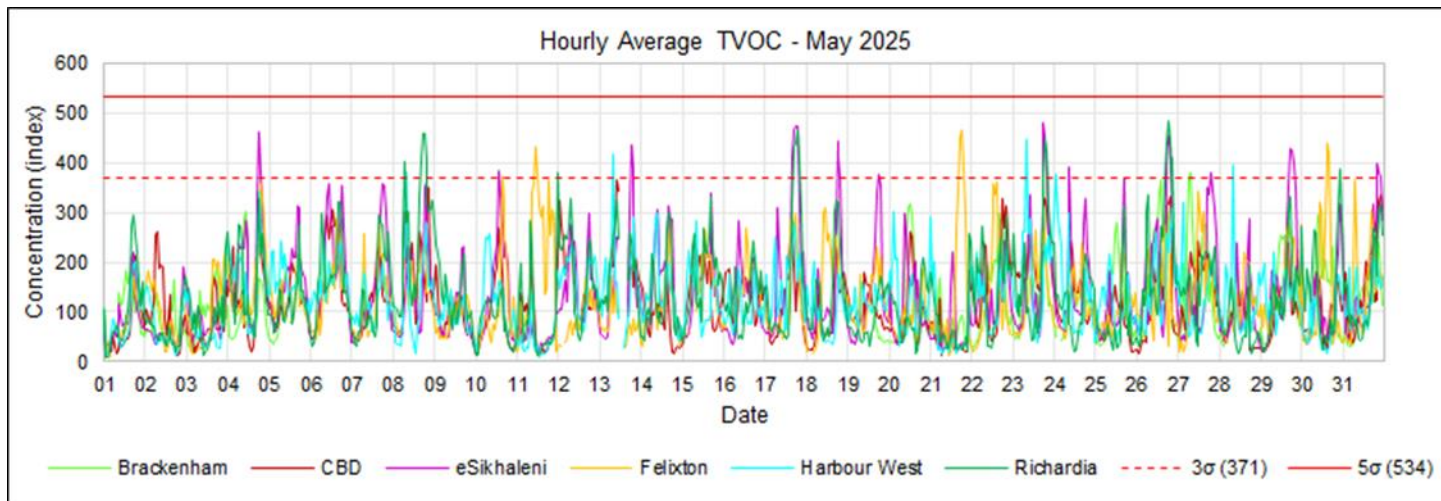
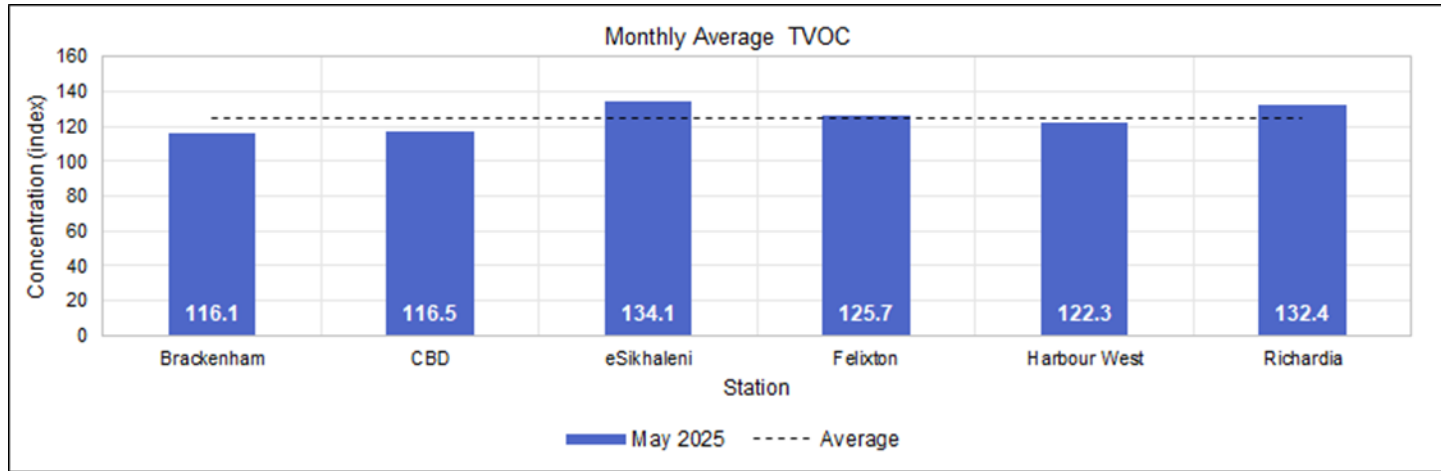


AirGradient PM DAILY



AirGradient TVOC

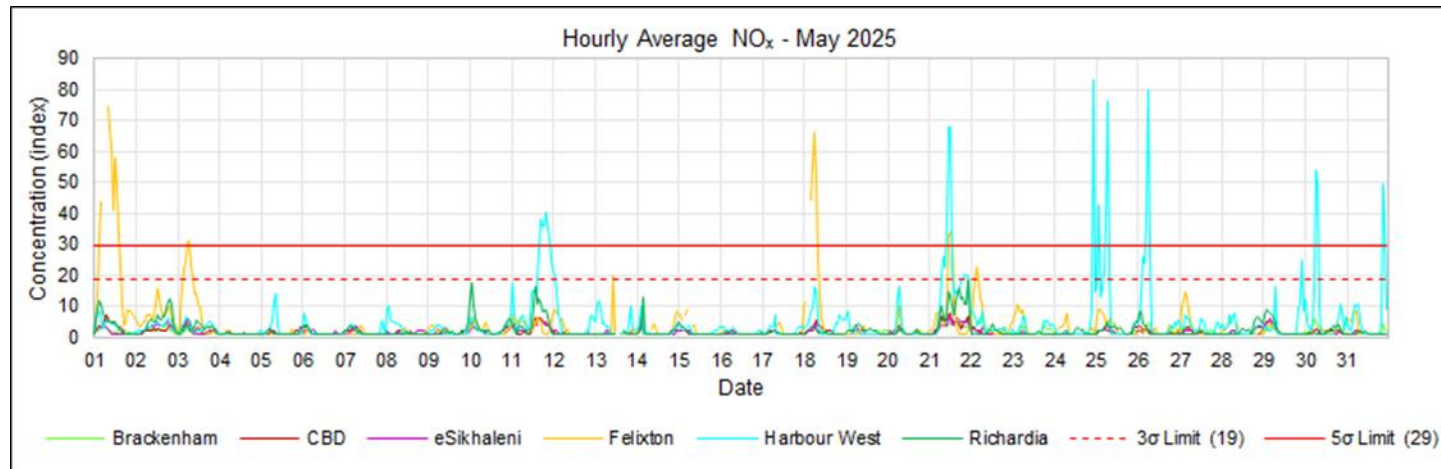
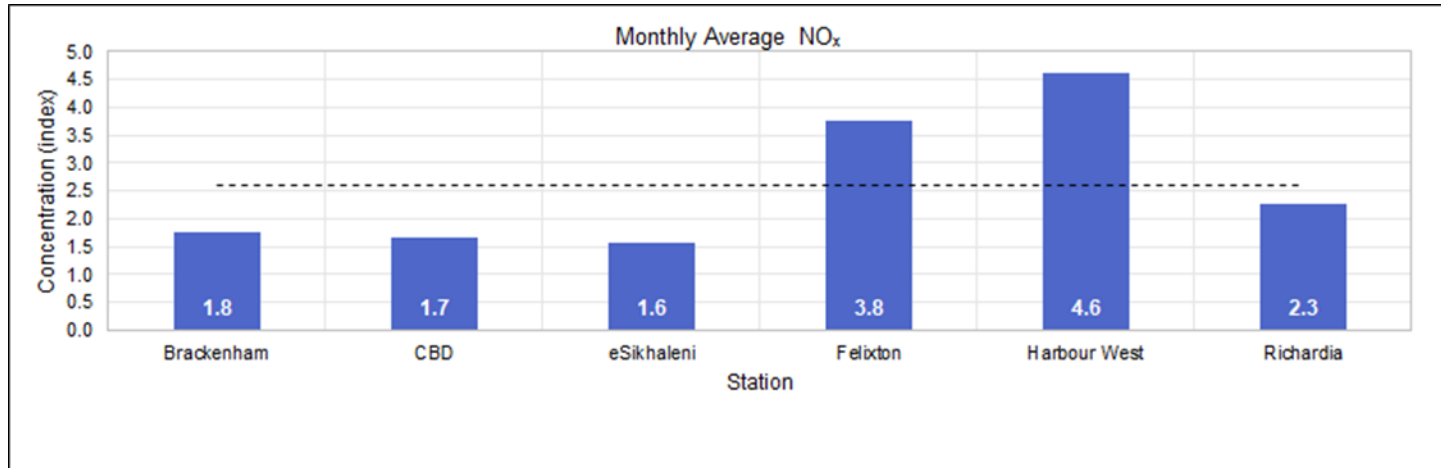
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia	Total
3σ	2	0	26	9	5	18	60
5σ	0	0	0	0	0	0	0

AirGradient NO_x

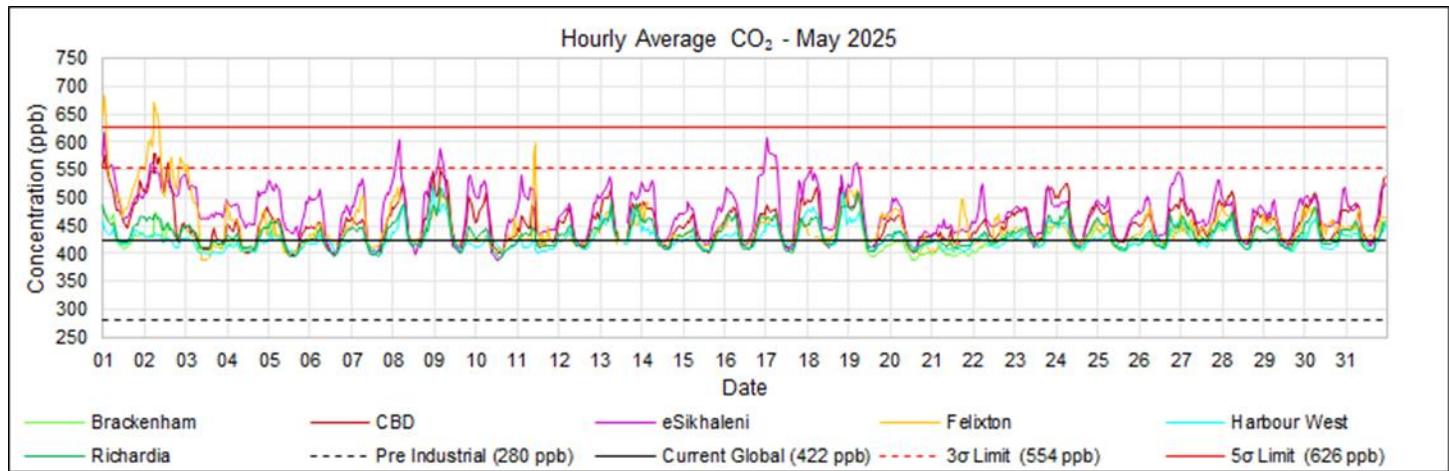
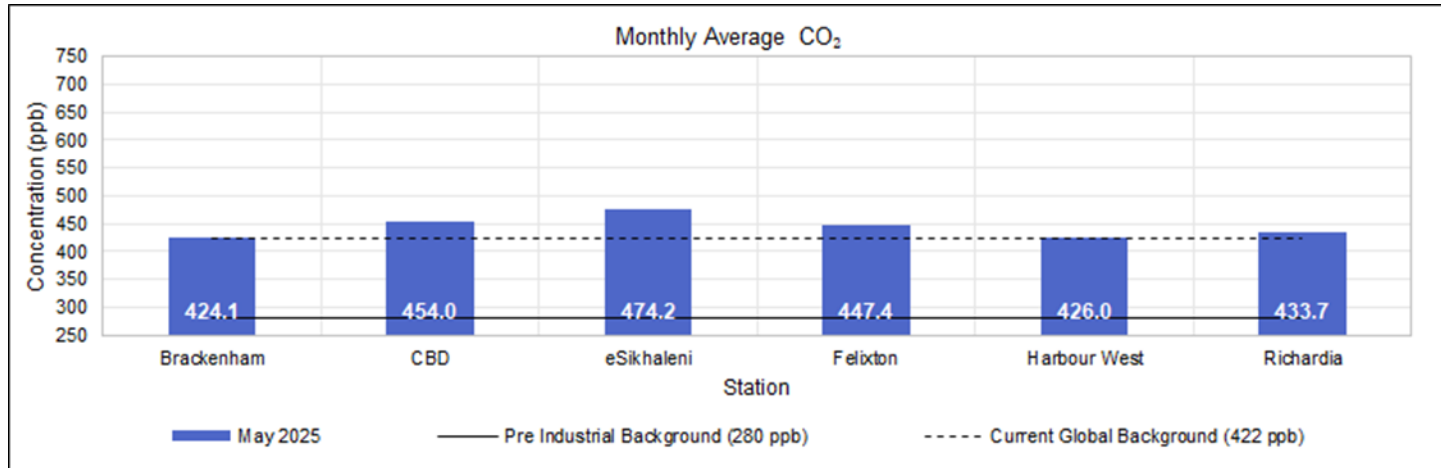
MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia	Total
3σ	0	0	0	26	36	0	62
5σ	0	0	0	18	19	0	37

AirGradient CO₂

MONTHLY & HOURLY



Limit	Brackenham	CBD	eSikhaleni	Felixton	Harbour West	Richardia	Total
3σ	0	8	27	23	0	0	58
5σ	0	0	0	8	0	0	8

Thank you

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