

Annual Air Quality – 2021

Richards Bay Clean Air Association (RBCAA)

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Note

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

List of Abbreviations and Terms

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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
H ₂ S	Hydrogen Sulphide
H ₂ SO ₃	Sulphurous Acid
H ₂ SO ₄	Sulphuric Acid
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
Countries	
EU	European Union
RSA	Republic of South Africa
UK	United Kingdom
US	United States
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
g/s	Grams per second
K	Kelvin
km	Kilometre
km/h	Kilometre per hour
m	Metres
m/s	Metres per second
µg	Microgram
µg/m ³	Micrograms per cubic meter
mg	Milligrams
mg/m ³	Milligrams per cubic meter
mg/m ² /day	Milligrams per meter squared per day
ppb	Parts per billion
tpa	Tons per annum
t/day	Tons per day
t/hr	Tons per hour
Organisations	
AIMS	Air Impact Measurement Specialists
EA-NPI	Environment Australia - National Pollutant Inventory
EC	European Commission
EU-EA	European Union - Environmental Agency
IFC	International Finance Corporation
RBCAA	Richards Bay Clean Air Association
SANAS	South African National Accreditation System
UK-EA	United Kingdom - Environmental Agency
US-EPA	United States - Environmental Protection Agency
WHO	World Health Organisation

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Appendix B: Emission Inventory

Appendix C: Operational Report

Appendix D: Rainfall

Appendix E: Complaints Log

Appendix F: PM₁₀ Exceedance Log

Appendix G: PM_{2.5} Exceedance Log

Appendix H: SO₂ Exceedance Log

Appendix I: TRS Exceedance Log

1. INTRODUCTION

This 23rd annual air quality report summarises the fine particulate (PM₁₀ and PM_{2.5}), sulphur dioxide (SO₂), total reduced sulphur (TRS), and meteorological monitoring conducted by the Richards Bay Clean Air Association (RBCAA) during 2021. The RBCAA network consists of 9 stations (Figure 1 and Table 1). The report includes simulations and comparisons of SO₂ impacts based on the RBCAA's regional emission inventory and the Weather Research and Forecasting (WRF¹) Model meteorological data. The report highlights specific and predicted incidents and exceedances of the applicable national and international ambient air quality standards and guidelines.

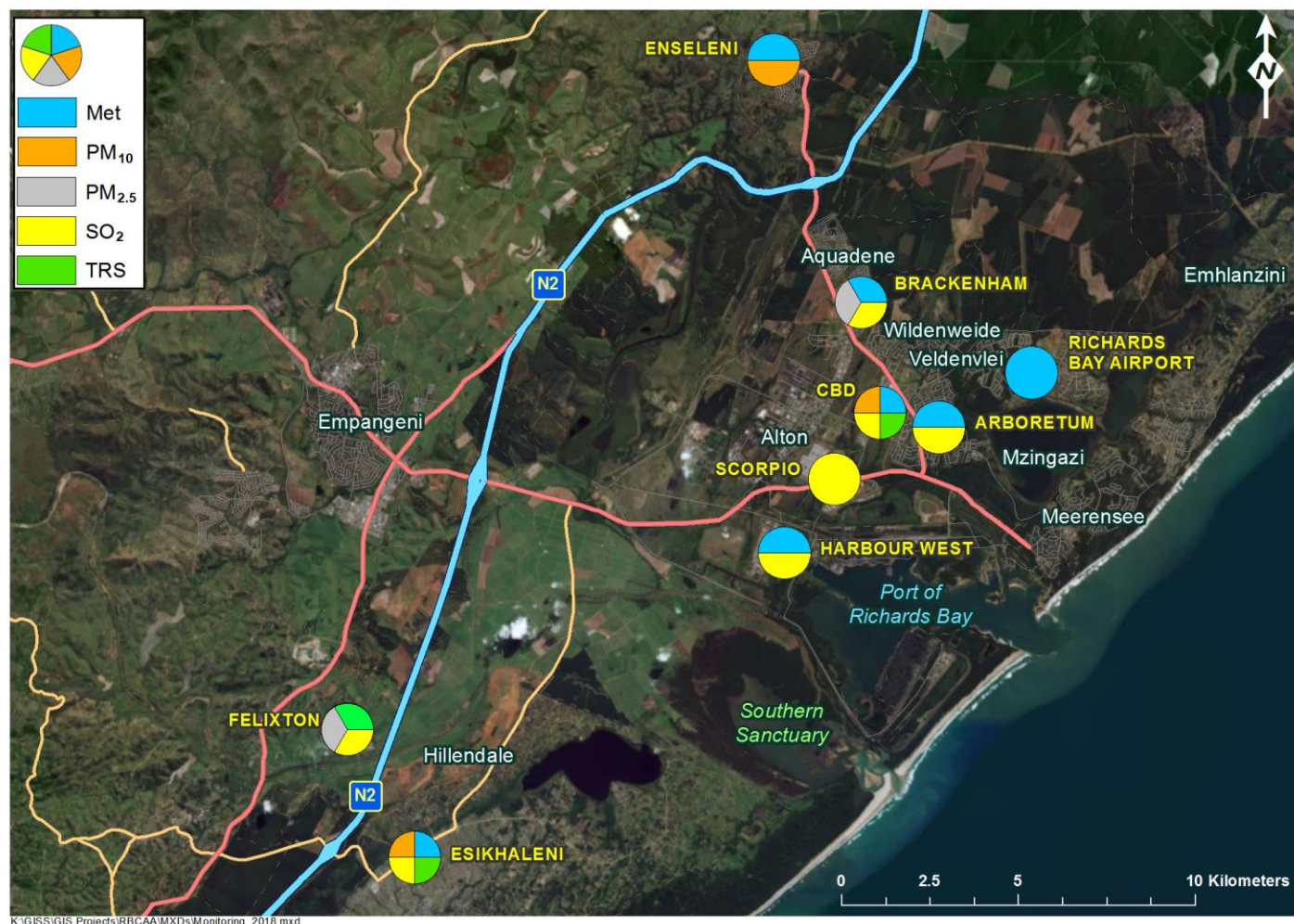


Figure 1: Map - local.

¹ The Weather Research and Forecasting (WRF) Model is a next-generation mesoscale numerical weather prediction system designed for both atmospheric research and operational forecasting applications.

Table 1: Station coordinates.

Station	Latitude (°)	Longitude (°)
Airport	-28.738138	32.093333
Arboretum	-28.752380	32.062786
Brackenham	-28.731359	32.039108
CBD	-28.744803	32.054844
eNseleni	-28.662944	32.017770
eSikhaleni	-28.865283	31.911679
Felixton	-28.829261	31.893636
Harbour West	-28.787300	32.027160
Scorpio	-28.769696	32.034291

1.1. Operational Feedback

2021 Events and Achievements:

- ▶ January – The EnviDAS software upgrade is completed.
- ▶ February – Electronic timers were installed to reboot station routers at regular intervals to prevent lockups.
- ▶ March – eSikhaleni station upgraded with a 5kVA inverter to protect the instruments from power outages
- ▶ April:
 - RBCAA network starts measuring PM_{2.5} in addition to PM₁₀.
 - An updated PC data logger with EnviDAS integrated software is installed at CBD.
- ▶ May – Switch over station communications to the SAICOM network.
- ▶ June – The new RBCAA website is set up.
- ▶ July – KZN riots.
- ▶ August:
 - Structural inspections, maintenance, and repairs to the station shelters were conducted.
 - TRS monitoring activated at Felixton
- ▶ September – A fire at the Scorpio substation forced several industries into emergency shutdowns; there was no power from the station for nine days. Emergency shutdowns can result in equipment damage and increased emissions.
- ▶ October – There were two fires in Port of Richards Bay, one on the Arcelor Mittal coal conveyor (6th), the other on the Foskor sulphur conveyor
- ▶ November - Due to concerns about security at the SmartPlan office, the RBCAA approves cloud hosting of the EnviDAS base station.
- ▶ December – The SmartPlan Offices are broken into for security; the servers were moved to a safe location (Smit and Associates).

The was no budgeted CAPEX expenditure in 2021 (no new analysers purchased).

Table 2: Calibration status

Item		Dates
Calibrations	Particulates	Apr 2021,
	Trace Gas	Jan 2021, May 2021, Sep 2021, Nov 2021
	Meteorology	Nov 2021

1.2. Data Capture

One of the significant causes of data loss and damage to instrumentation during 2021 was power outages, including load shedding; there were 48 load shedding days during 2021 (Figure 2). The percentage of valid data from the meteorological and pollutant network for 2021 is shown in Table 3 and Table 4.

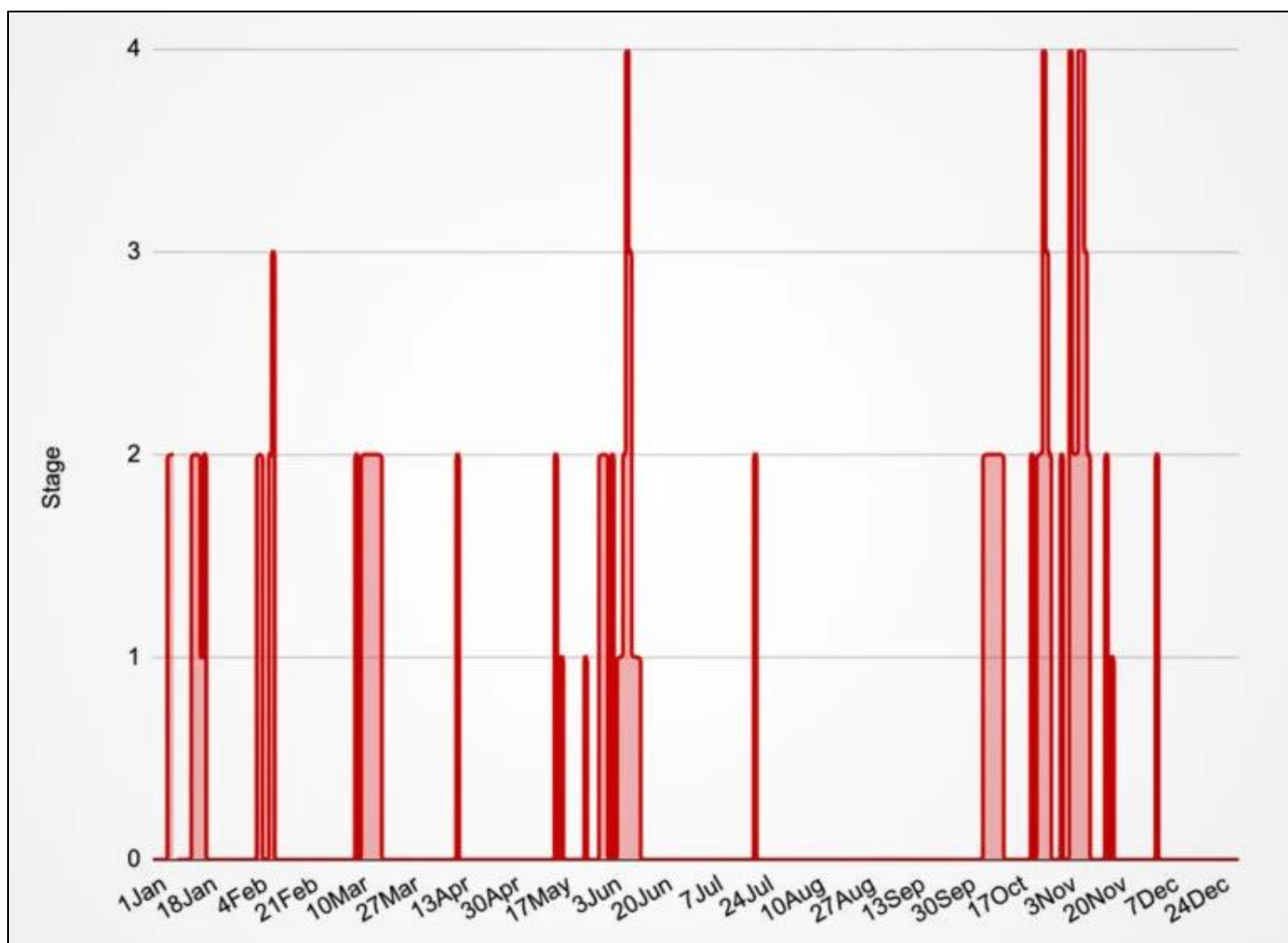


Figure 2: Load shedding stages during 2021.

Table 3: Meteorological data capture.

Station	Height (m)	Station Availability (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
Airport	2	94		93	94	94	94	
Airport	10	94	75					
Arboretum	3	93		93				
Arboretum	18	93	93					
Brackenhams	3	95		95				
Brackenhams	10	95	95					
CBD	2	97		97	97			97
CBD	10	97	97					
eNseleni	2	80		80	63			
eNseleni	9	80	80					
eSikheleni	2	98		98	98			
eSikheleni	9	99	98					
Harbour West	2	98		98				
Harbour West	10	98	98					

Notes:

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

Missing Meteorology:

- Airport (WD/WS) - anemometer struck by lightning twice (January & December)
- eNseleni (Station) – station shutdown because air conditioner stolen, electrical fault (January, February, July)
- eNseleni (RH) – instrument faulty, replaced (May, June)

Table 4: Pollutant data – percentage data capture.

Station	Station Availability (%)	PM (%)	SO ₂ (%)	TRS (%)
Arboretum	93		88	
Brackenham	95	94	85	
CBD	97	94	95	96
eNseleni	80	78	8	
eSikhaleni	98	94	97	96
Felixton	98	66	95	94
Harbour West	98		98	
Scorpio	85		85	

Notes:

Red - Not acceptable for statistical purposes (<80%)

Orange – Does not meet SANAS data capture requirements (<90%)

Yellow – Below the RBCAA reporting target (<=95%)

Missing Data:

- Arboretum (SO₂) - power issues (earth leakage trips) at the station (January – March)
- Brackenham (SO₂) – analyser struggled to recover from power outages.
- eNseleni (Station, PM) – station shut down because the air conditioner was stolen (January, February) and an electrical fault (July).
- eNseleni (SO₂) – The analyser was removed from the station in April.
- Felixton (PM) – analyser faulty, difficulty in linking the e-sampler to EnviDAS (January -April)
- Scorpio (Station, SO₂) - station shutdown because air conditioner stolen (January, February), substation fire (September, October)

2. METEOROLOGY

2.1. Wind Roses

Annual wind roses for 2021 and 2020 at Arboretum are presented in Figure 3. They indicate that the wind blew predominantly along the NE and SW axis. NE wind is generally associated with fair weather, while SW wind is usually associated with the passage of coastal lows, cold fronts, and inclement weather.

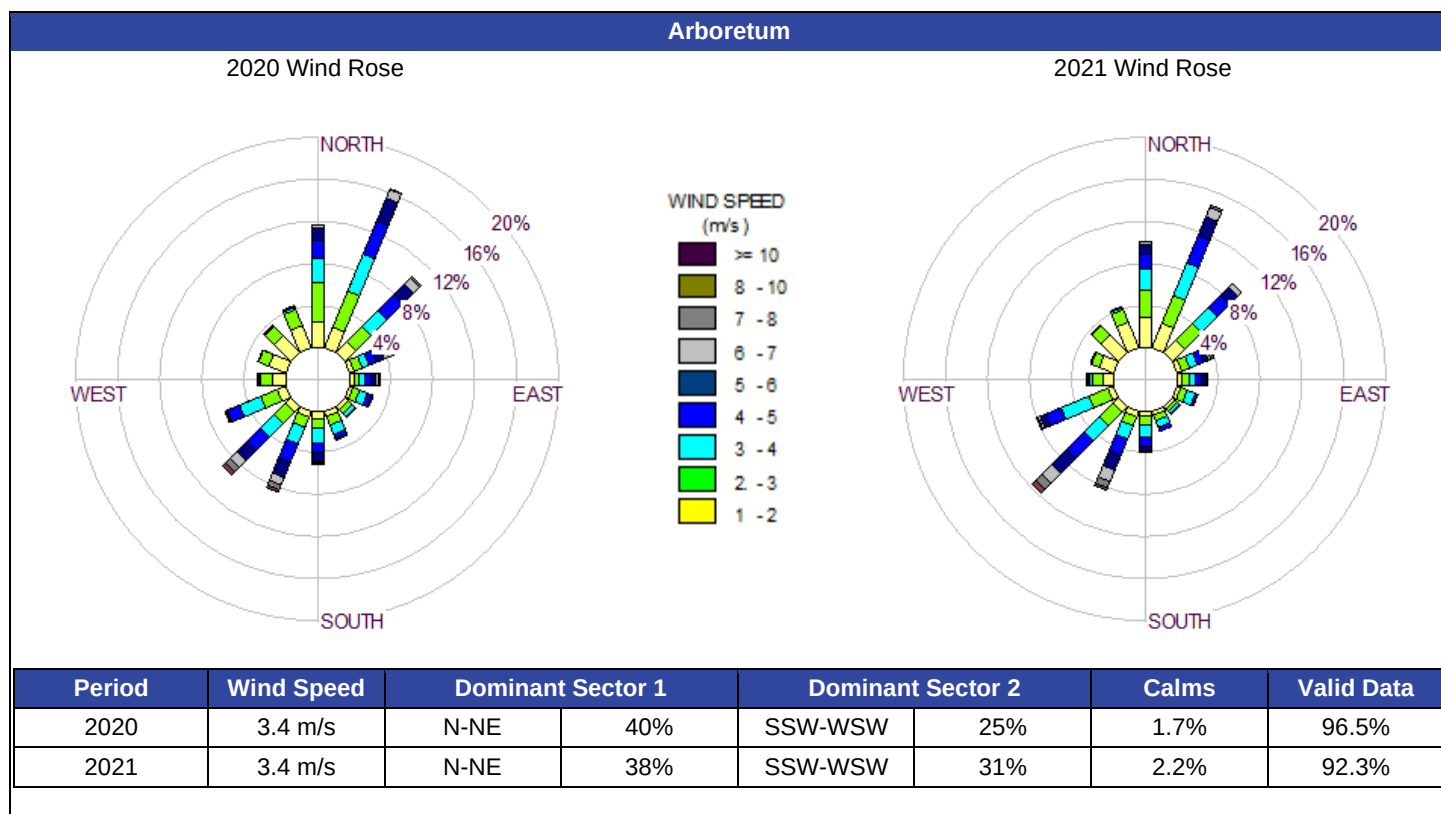


Figure 3: Wind roses - monthly.

Typically, there is an increase in light (1 to 3 m/s) to moderate (3 to 6 m/s) wind from the NNW during periods that include autumn and winter conditions and the seasonal increase in fresh (6 to 8 m/s) to strong (> 8 m/s) N to NE wind during periods that include spring and early summer. Strong southerly to SSW wind occurs throughout the year, typically associated with the arrival of coastal lows and cold fronts. Coastal lows occur more frequently during the summer, hence the slightly higher proportion of these winds (Figure 4).

Diurnal wind roses for 2021 are shown in Figure 5. ESE to SSE wind is primarily in the form 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 5).

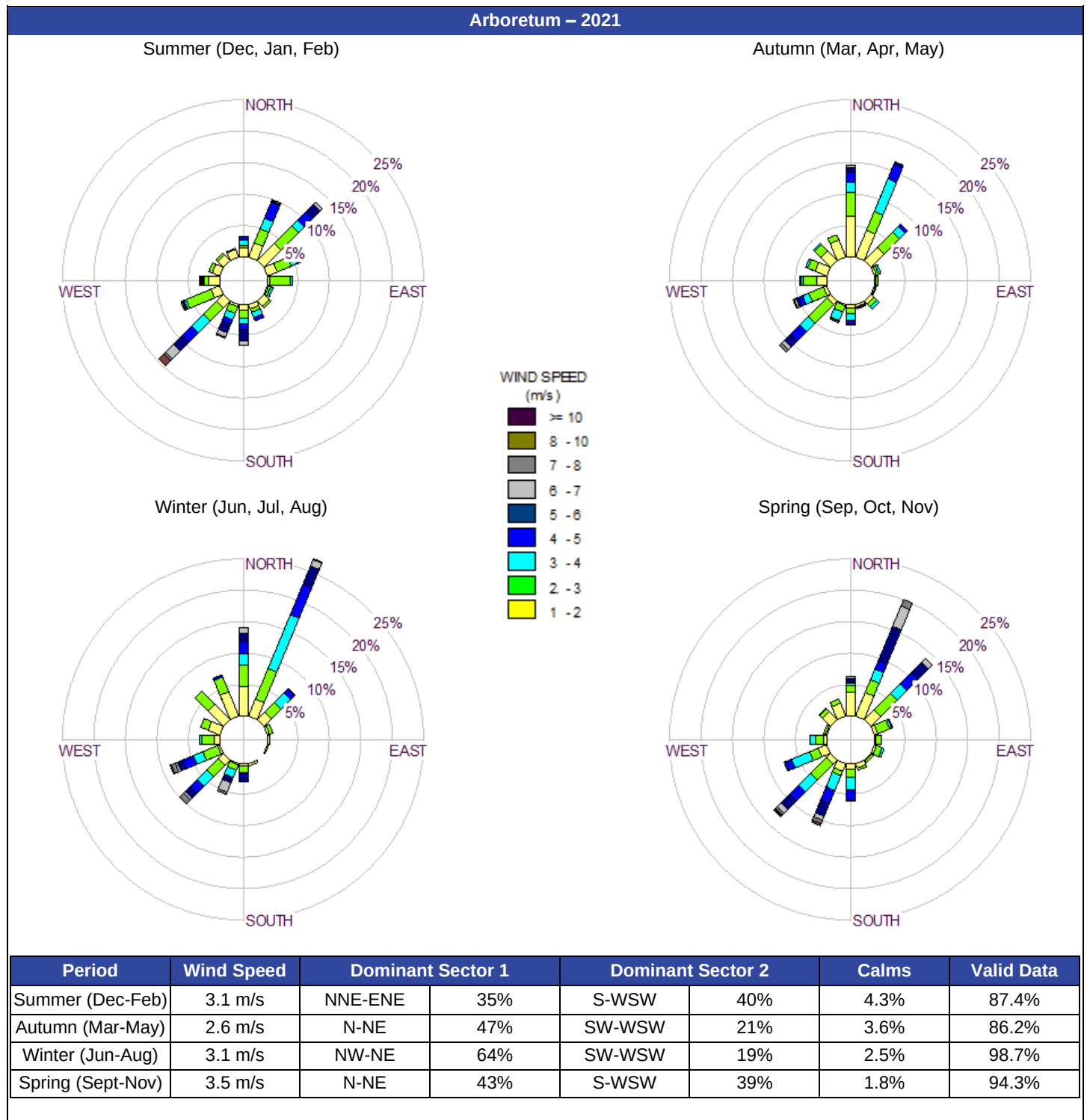


Figure 4: Wind roses - seasonal.

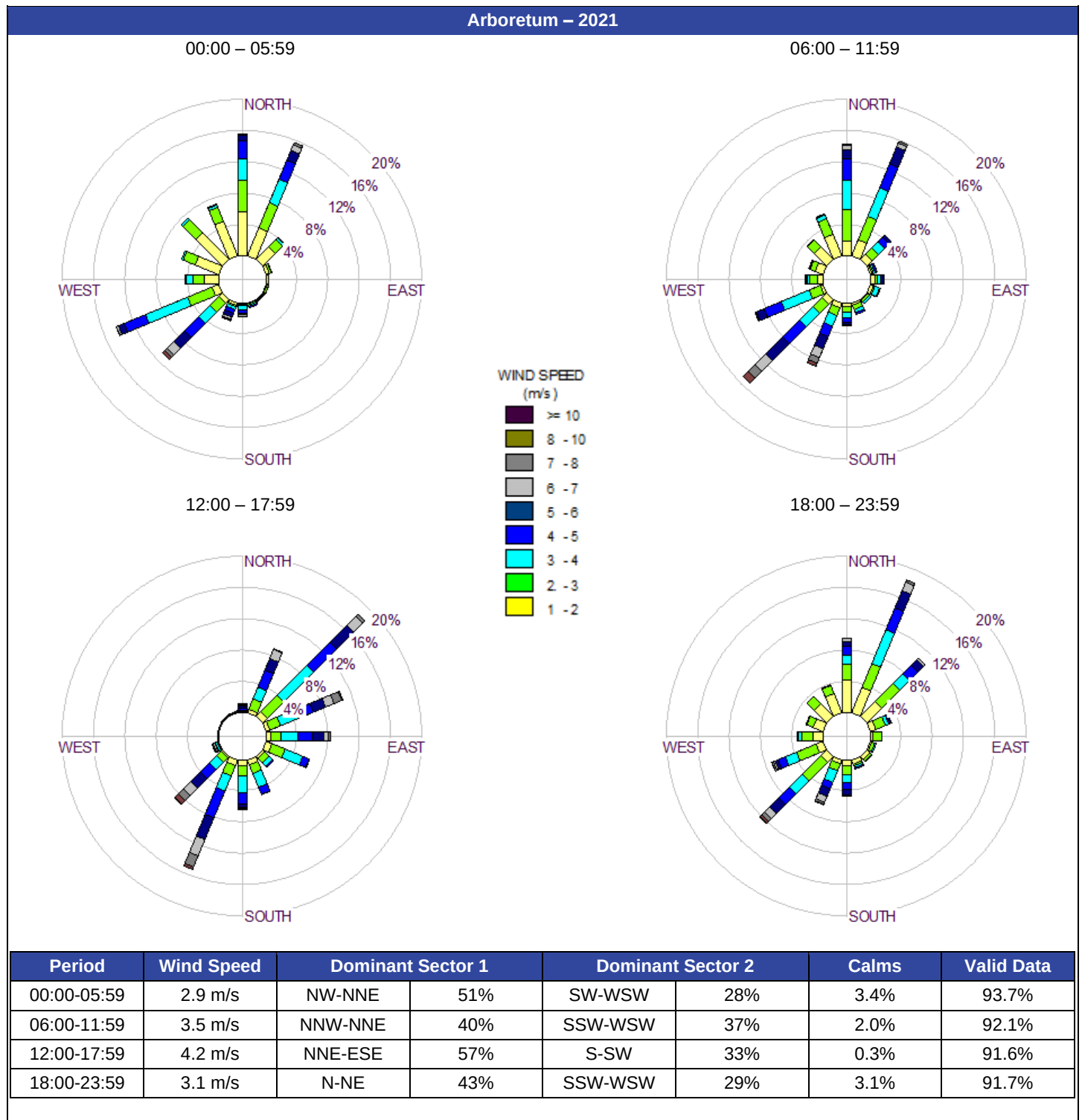


Figure 5: Wind roses - diurnal.

2.2. Rainfall

Precipitation is measured at three locations (Richards Bay, Felixton and RBCT). The average rainfall across the network during 2021 was 1811 mm, which is 34% higher than that received in 2020 and 23% higher than the network average for the previous 5 years (Figure 6, Figure 7, Figure 8, and, Figure 9 see APPENDIX C for tables).

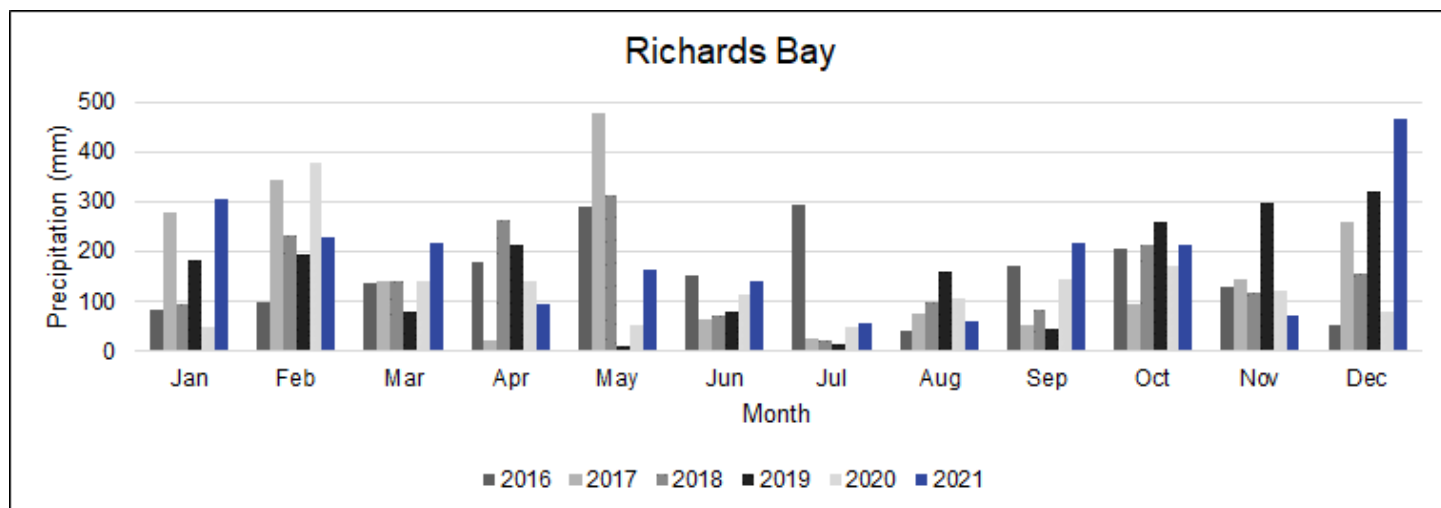


Figure 6: Rainfall –Richards Bay.

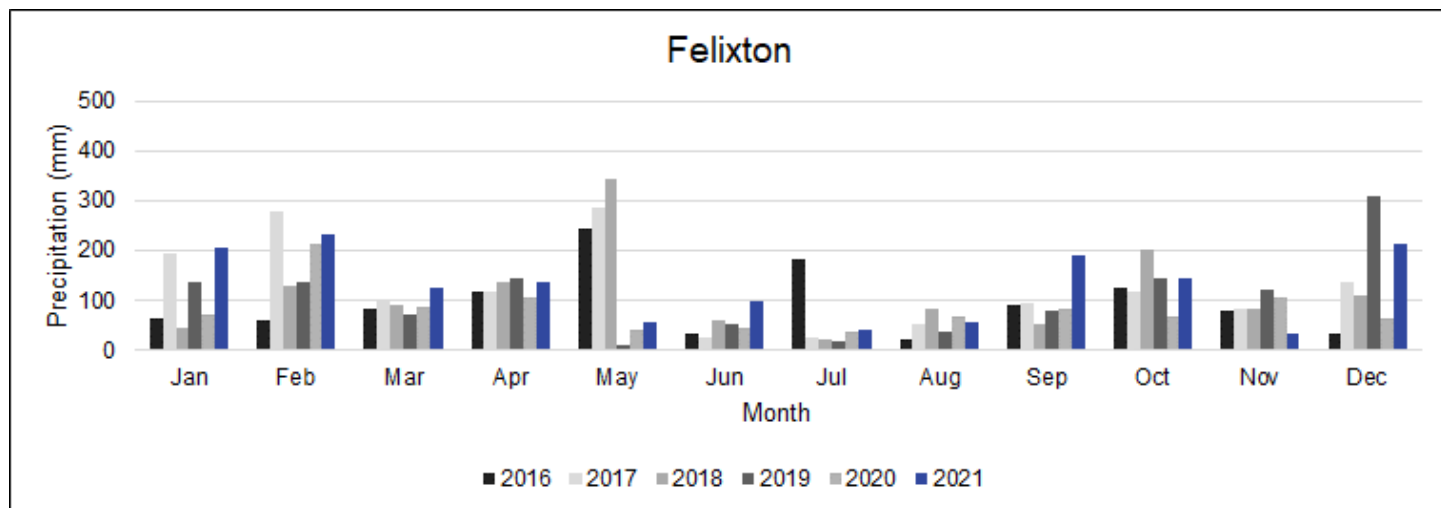


Figure 7: Rainfall – Felixton.

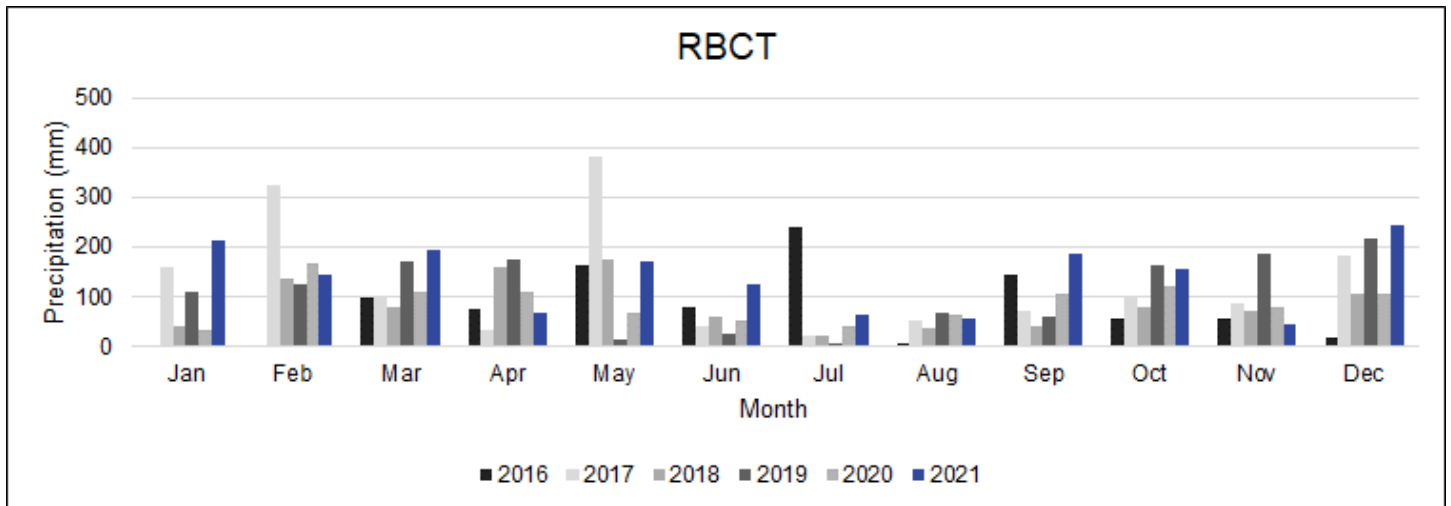


Figure 8: Rainfall – RBCT.

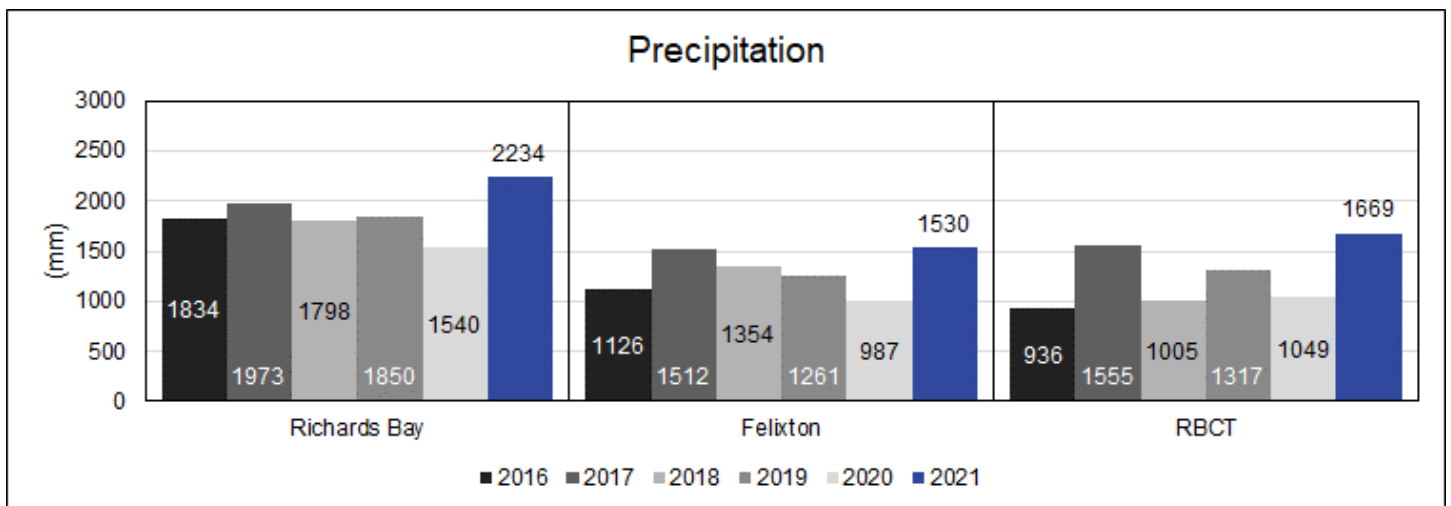


Figure 9: Precipitation - 2016 to 2021

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 2021. Please see APPENDIX E for the Complaints Log.

3.1. Complaints - Monthly

One hundred and fifty-six (156) air quality complaints were received during 2021; three hundred and thirty-six (336) complaints were logged in 2020. The historical count of monthly complaints is reflected below (Figure 10).

► 2021 Incident Summary:

- January:
 - Dust (alumina) fallout because of damaged bag filters on South32 and Gas Treatment Centre number 2 (GTC2) (26 complaints).
 - Emissions from Mondi (11 complaints).
- February:
 - Dust (alumina) fallout because of damaged bag filters on South32 and Gas Treatment Centre number 2 (GTC2) (11 complaints).
- May:
 - Emissions from Mondi (12 complaints).

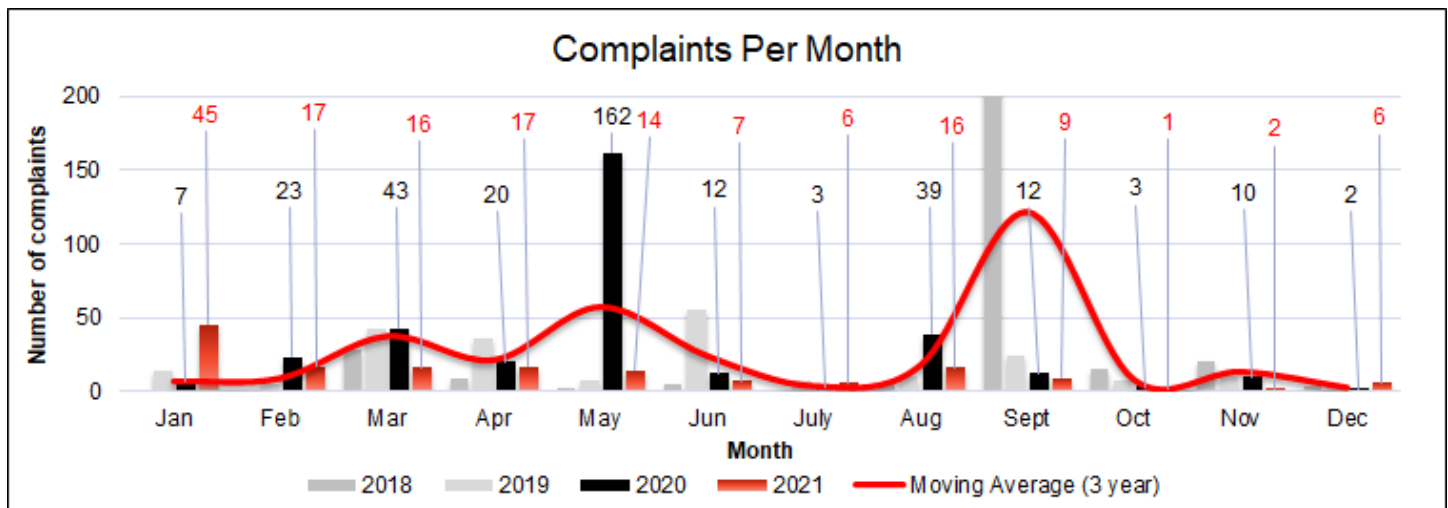


Figure 10: Complaints - historical monthly comparison.

3.2. Complaints - Annual

The annual distribution of complaints in 2021 and 2020 by region, source and type is presented below:

- ▶ Region (Figure 11) - Most complaints in 2021 were from the Veldenvlei (33%), eNseleni (24%) and Felixton (9%); and in 2020: Meerensee (32%), Arboretum (16%) and Veldenvlei (10%).
- ▶ Type (Figure 12) – Complaints in 2021 were described as odour and clinical (44%), fallout (38%), abnormal visible emissions (11%), excessive emissions (2%) and other (5%); and in 2020, odour and clinical (94%), abnormal visible emissions, and other (2%).
- ▶ Allocation (Figure 13) - In 2021 the complaints received were allocated as follows South32 (38%), Mondi (37%) Foskor 11 (%) THS (8%) and Other (6%) and in 2020: Mondi Richards Bay (92%); Foskor (4%), THS (1%) and Other (3%)

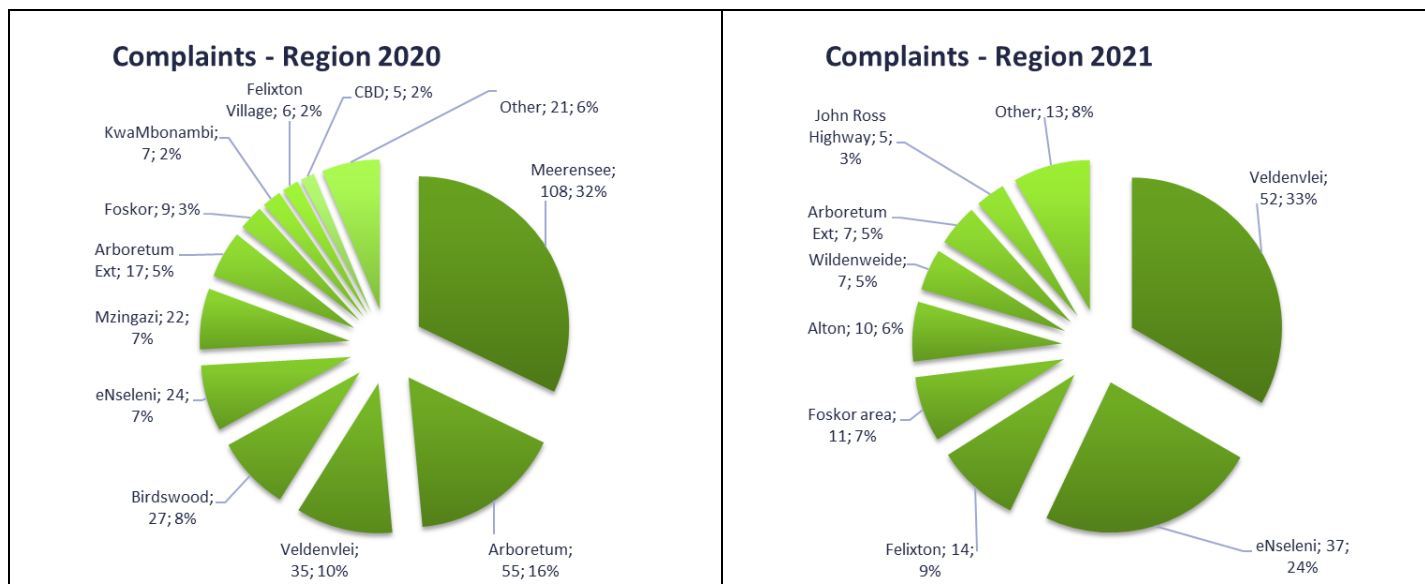


Figure 11: Complaints - region.

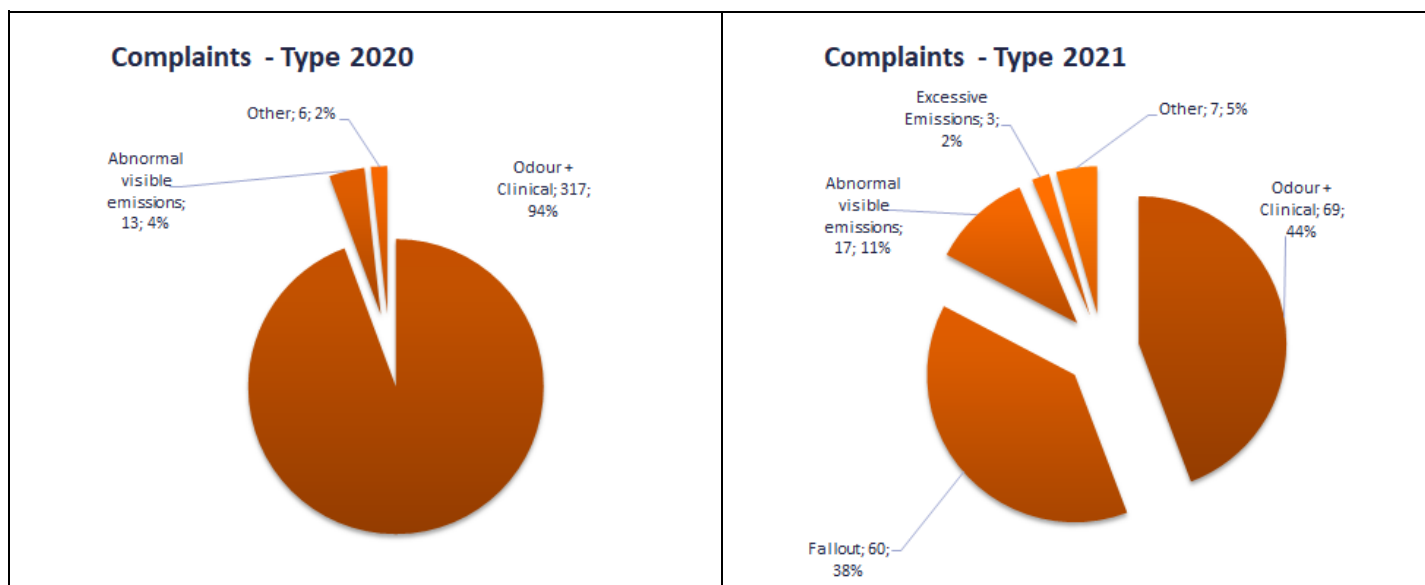


Figure 12: Complaints - type.

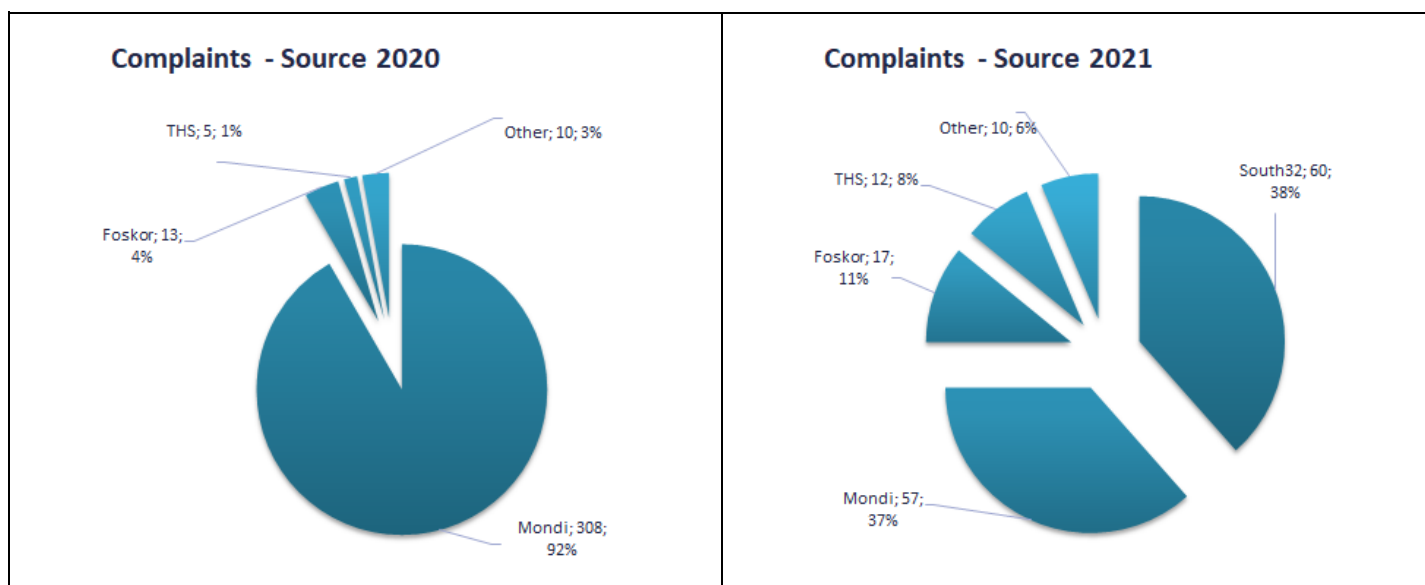


Figure 13: Complaints - source.

The historical count of complaints per year since 2000 is reflected in Figure 14. From 2005 to 2017, there has been a downward trend; this has, however, reversed. The reversal is attributed to specific incidents that occurred in 2018 and 2020.

- ▶ 2018 (September) – A process fault at Mondi in September resulted in the production of H₂S, which could not be managed (converted) by flaring (318 complaints).
- ▶ 2020 (May) - The emergency/backup power to the Mondi non-condensable gas system failed, which resulted in odorous emissions from venting points (159 complaints).

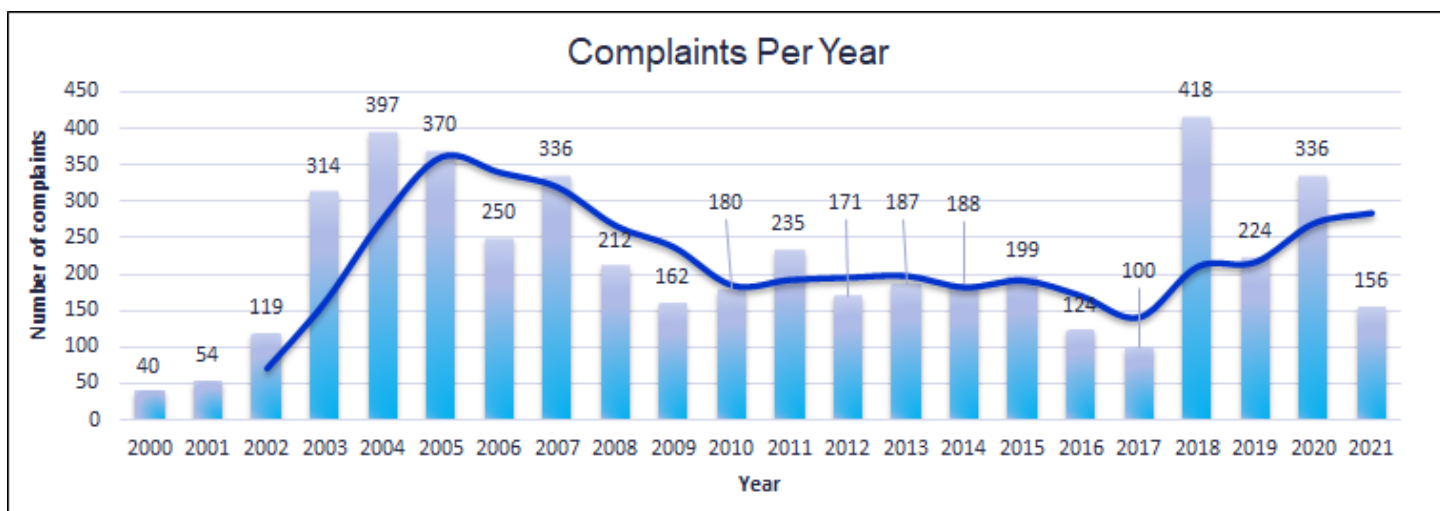


Figure 14: Complaints – annual comparison.

4. FINE PARTICULATE MONITORING

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

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

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

TEOMs (particulate analysers) at Brackenham, CBD and eSikhaleni stations measure PM data continuously. PM monitoring at Felixton is conducted using an E-sampler, an alternative sampling methodology to the other stations.

4.1. PM Ambient Air Quality Standards

Ambient air quality standards for particulates are listed below (Table 5).

Table 5: Particulate ambient air quality limits.

Variable	Organisation	Daily average	Annual average
PM ₁₀	RSA [a]	75 µg/m ³ [b]	40 µg/m ³ [c]
	WHO [d]	50 µg/m ³ [c]	20 µg/m ³ [c]
PM _{2.5}	RSA [e]	40 µg/m ³ [b]	20 µg/m ³ [c]
	WHO [d]	25 µg/m ³ [c]	10 µg/m ³ [c]

Notes:

- Government Gazette 32816 (the 24th of December 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015 (RSA-NEMAQA, 2009)
- Not to be exceeded more than four (4) times in one year
- Not to be exceeded
- World Health Organisation / International Finance Corporation (WHO, 2015) (IFC, 2007)
- Government Gazette 35463 (the 29th of June 2009) in terms of the National Environmental Management: Air Quality Act No. 39 of 2004, effective from 2015 (RSA-NEMAQA, 2009) (RSA-NEMAQA, 2012)

4.2. PM Daily Concentrations

Daily average PM₁₀ concentrations are shown in Figure 15; there were:

- ▶ Three (3) measured exceedances of the PM₁₀ Daily RSA Limit (75 µg/m³) (Table 6), the PM₁₀ Daily RSA Standard, which allows four (4) exceedances of the limit per year, was therefore not exceeded; and,
- ▶ Nine (9) measured exceedances of the PM₁₀ Daily WHO Guideline (50 µg/m³) (Table 7).

The exceedances in June, July and October can be linked to the service delivery riots and unrest.

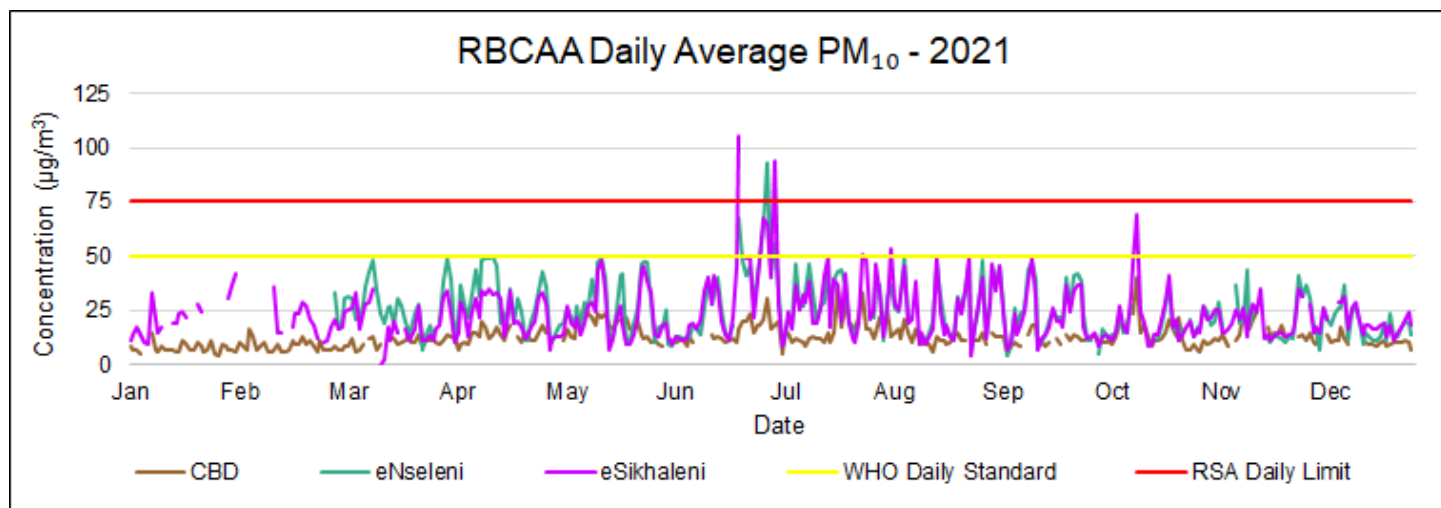


Figure 15: PM₁₀ daily average concentrations.

Table 6: PM₁₀ daily average exceedance allocations (RSA).

PM ₁₀ Daily RSA Limit (75 µg/m ³)	3
eNseleni	1
Fire	1
eSikhaleni	2
Fire	2

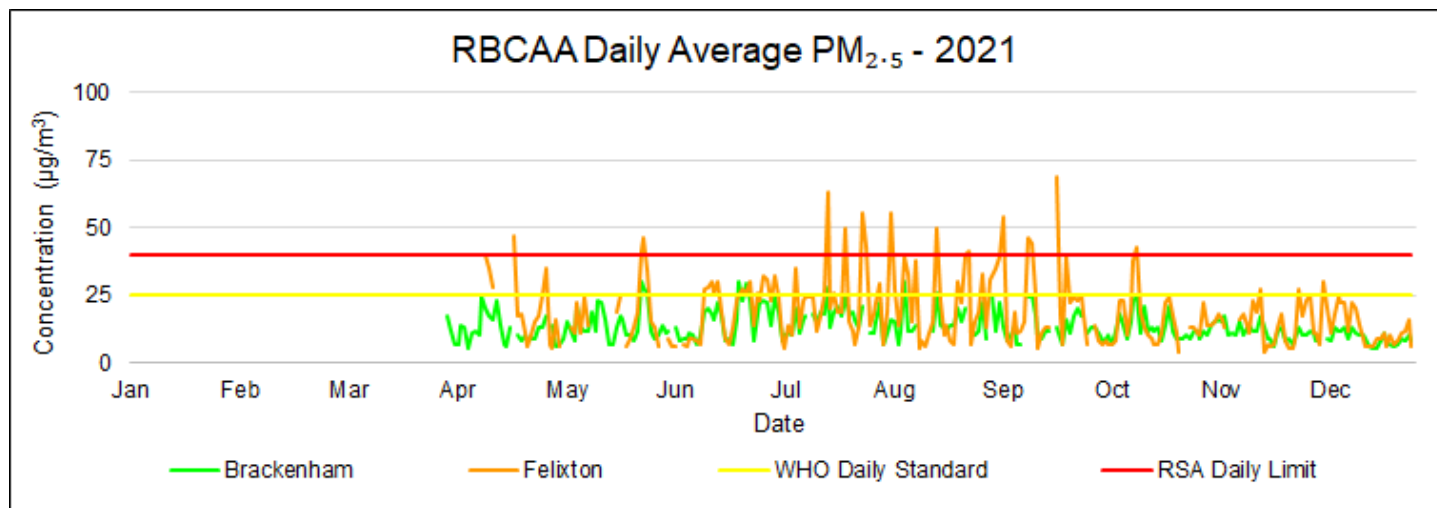
Table 7: PM₁₀ daily average exceedance allocations (WHO).

PM ₁₀ Daily WHO Guideline (50 µg/m ³)	9
Brackenham	1
No response required	1
eNseleni	3
Fire	2
No response required	1
eSikhaleni	5
Fire	2
No response required	3

Daily average PM_{2.5} concentrations are shown in Figure 16; there were:

- ▶ Fifteen (15) measured exceedances of the PM_{2.5} Daily RSA Limit (40 µg/m³) (Table 8); the PM_{2.5} Daily RSA Standard, which allows four (4) exceedances per year, was therefore exceeded at Felixton, and,
- ▶ Fifty-nine (59) measured exceedances of the PM_{2.5} Daily WHO Guideline (25 µg/m³) (Table 9).

The exceedances between July and October are associated with sugar cane burning and fires.

Figure 16: PM_{2.5} daily average concentrations.

Note: Brackenham and Felixton were converted from PM₁₀ to PM_{2.5} in April 2021.

Table 8: PM_{2.5} daily average exceedance allocations (RSA).

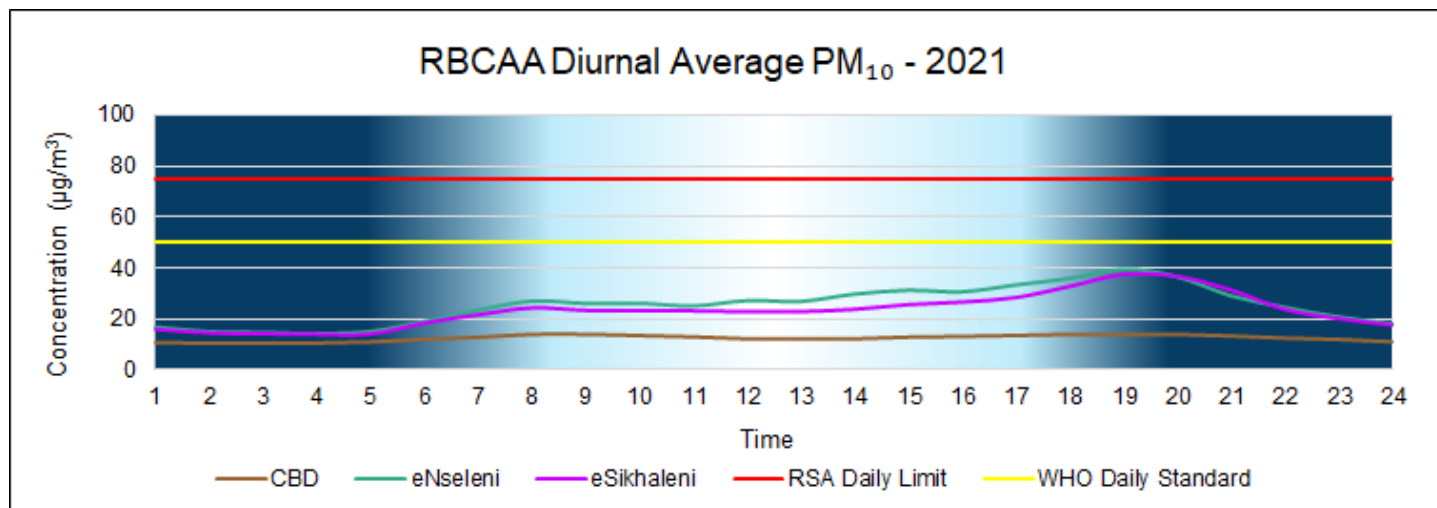
PM _{2.5} Daily RSA Limit (40 µg/m³)	15
Felixton	15
Tongaat Hullet	5
Agricultural	8
Tongaat Hullet (Meteorology)	2

Table 9: PM_{2.5} daily average exceedance allocations (WHO).

PM _{2.5} Daily WHO Guideline (25 µg/m³)	59
Brackenham	8
No response required	7
Tongaat Hullet (Meteorology)	1
Felixton	51
No response required	49
Tongaat Hullet	1
Tongaat Hullet (Meteorology)	1

4.3. PM Diurnal Concentrations

Diurnal PM concentrations are shown below (Figure 17 and Figure 18).

Figure 17: PM₁₀ diurnal concentrations.

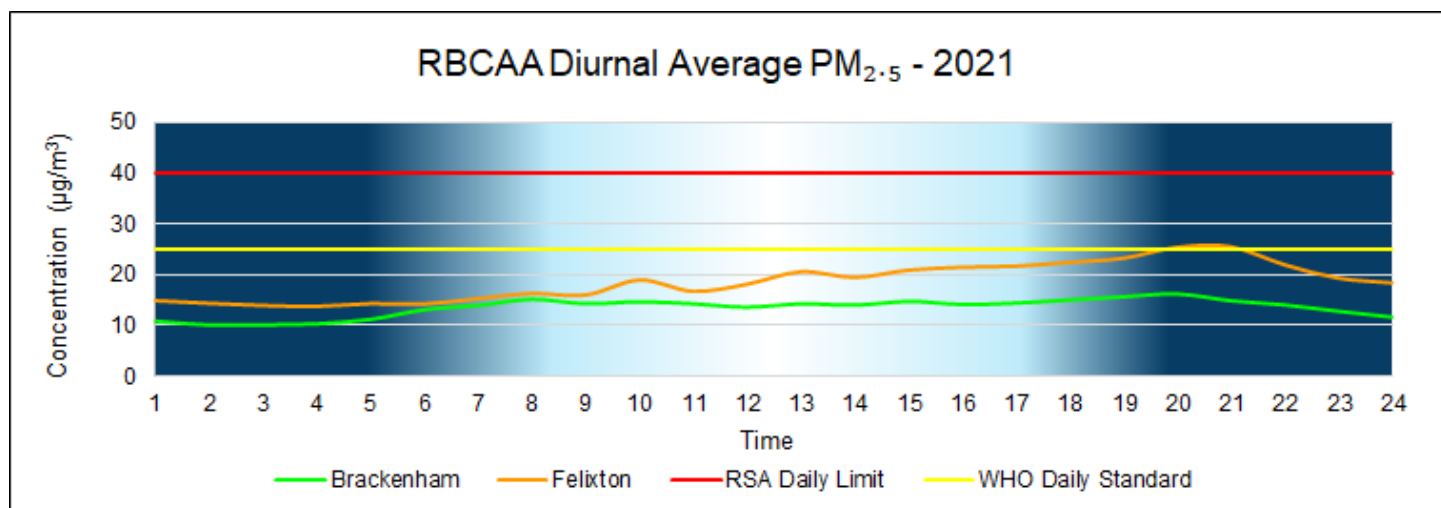


Figure 18: PM_{2.5} diurnal concentrations.

4.4. PM Monthly Concentrations

Monthly comparisons are provided in Figure 19 and Figure 20.

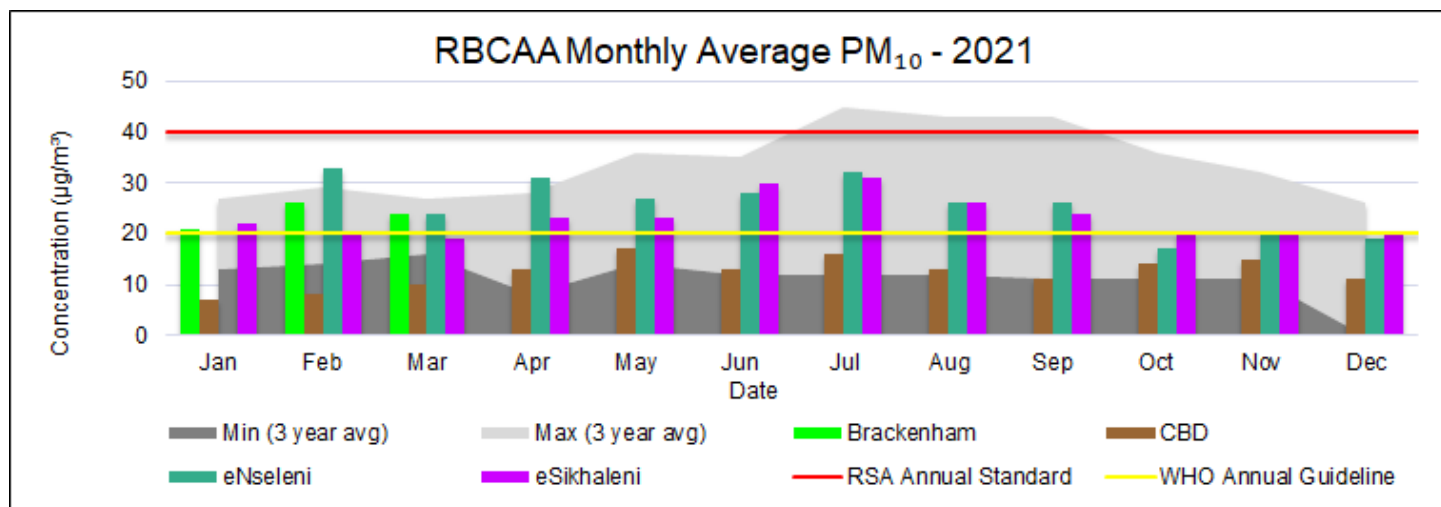


Figure 19: PM₁₀ monthly concentrations.

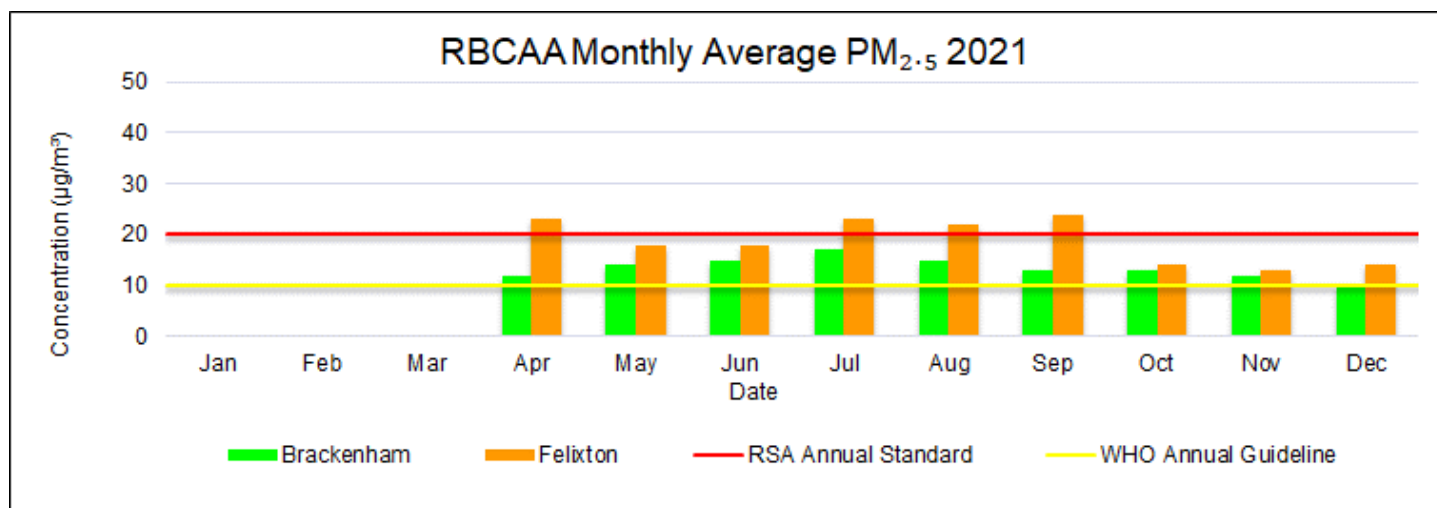


Figure 20: PM_{2.5} monthly concentrations.

Note: Brackenham and Felixton were converted from PM₁₀ to PM_{2.5} in April 2021.

4.5. PM Annual Concentrations

Annual average PM₁₀ concentrations did not exceed the RSA Annual Standard; the WHO Annual Guideline was exceeded at Brackenham, eNseleni and eSikhaleni (Figure 21).

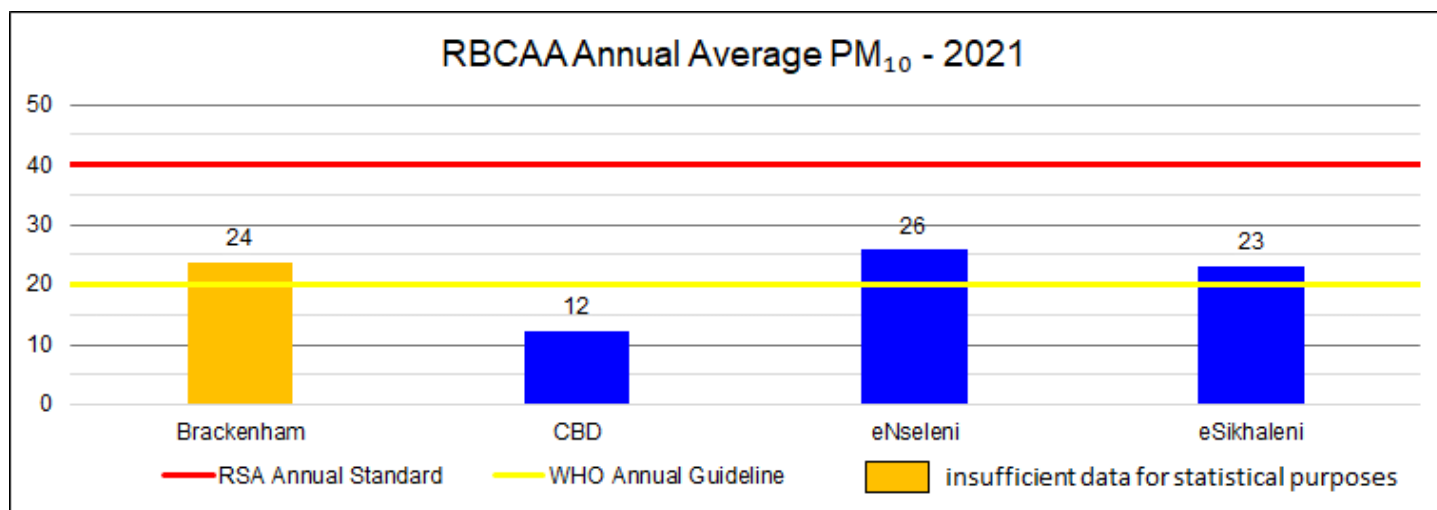


Figure 21: PM₁₀ annual average concentration.

Annual average PM_{2.5} concentrations did not exceed the RSA Annual Standard; the WHO Annual Guideline was exceeded at Brackenham and Felixton (Figure 22). The Brackenham station particulate analyser was converted to measure PM_{2.5} in April; the RBCAA network now measures PM₁₀ at three and PM_{2.5} at two locations.

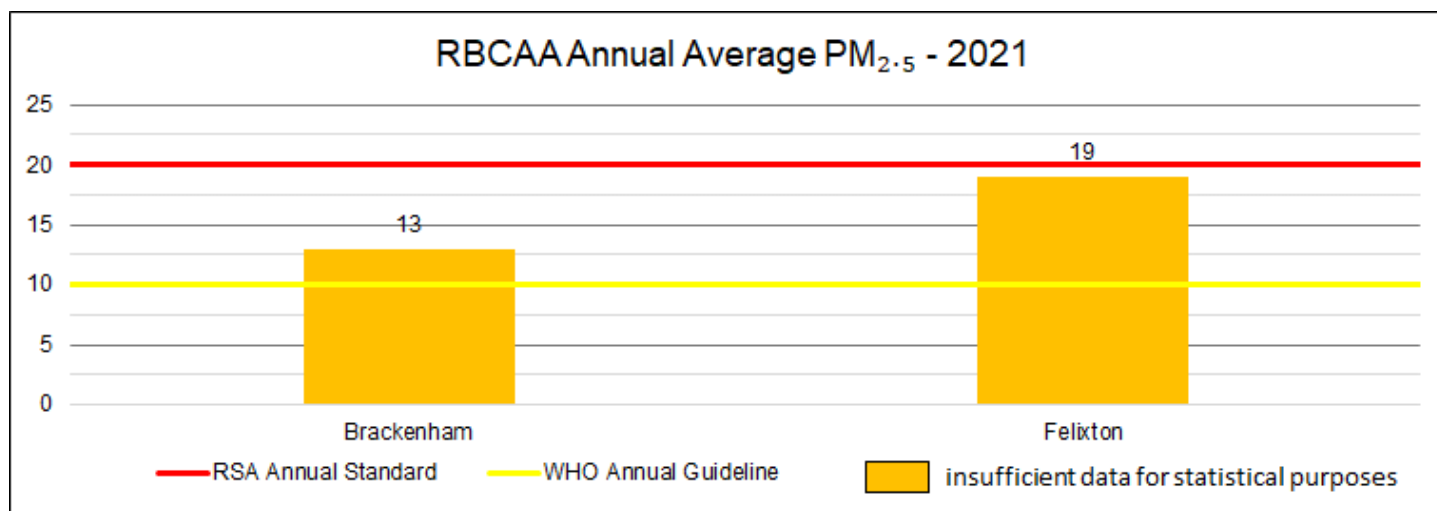


Figure 22: PM_{2.5} annual average concentration.

Note: Brackenham and Felixton started collecting PM_{2.5} data in April; annual average data for these stations are provided for information purposes only.

Compared to 2020, the 2021 annual average PM₁₀ concentrations at eNseleni, eSikhaleni and Felixton were similar (differed by 10% or less from the limit) (Figure 23).

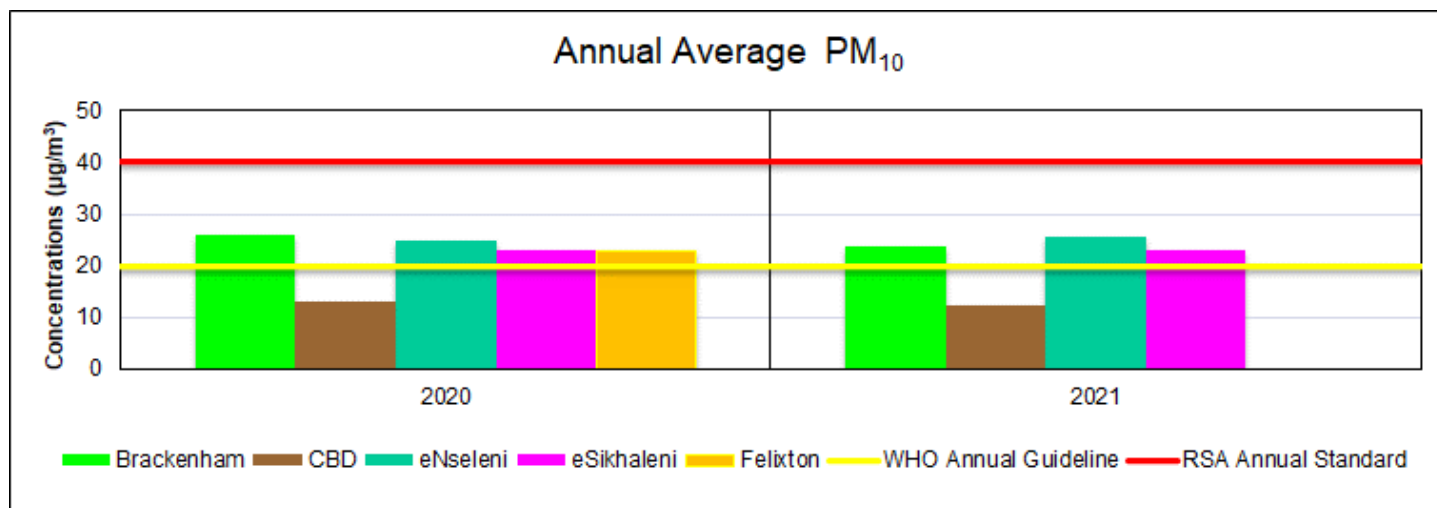


Figure 23: PM₁₀ annual average concentration (2020 to 2021).

Note: Felixton did not collect PM₁₀ data in 2021, and both Brackenham and Felixton were converted from PM₁₀ to PM_{2.5} in April 2021.

Annual average concentrations dating back to 2004 are illustrated in Figure 24. The 5-year Mann Kendall Trend² for Brackenham and CBD is decreasing; Felixton is stable, and eNseleni and eSikhaleni have no observable trend. The lower particulate concentrations in 2020 and 2021 could be; an effect of the decreased commercial activity during the pandemic lockdown in those years.

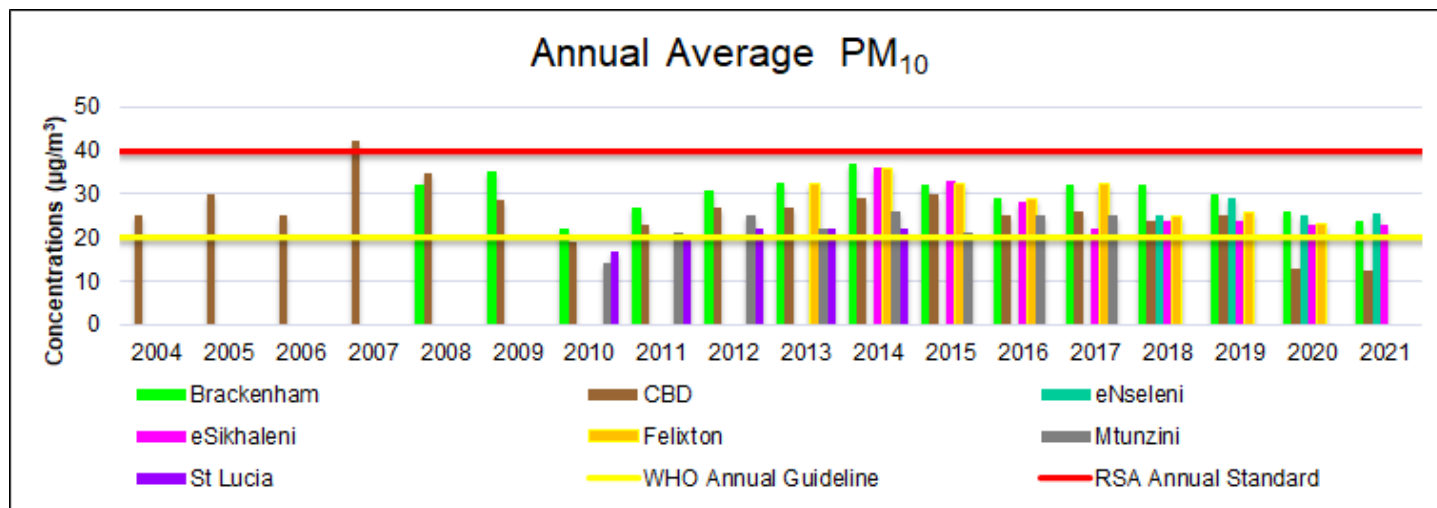


Figure 24: PM₁₀ annual average concentrations (2004 to 2021)

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

4.6. PM Exceedances

The number of days on which PM₁₀ exceedances occurred during the month plus comparisons to the previous years is shown in Figure 25 and Figure 26. Brackenham had fewer exceedances in 2021 than 2020 and eNseleni and eSikhaleni more. According to the relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to PM₁₀.

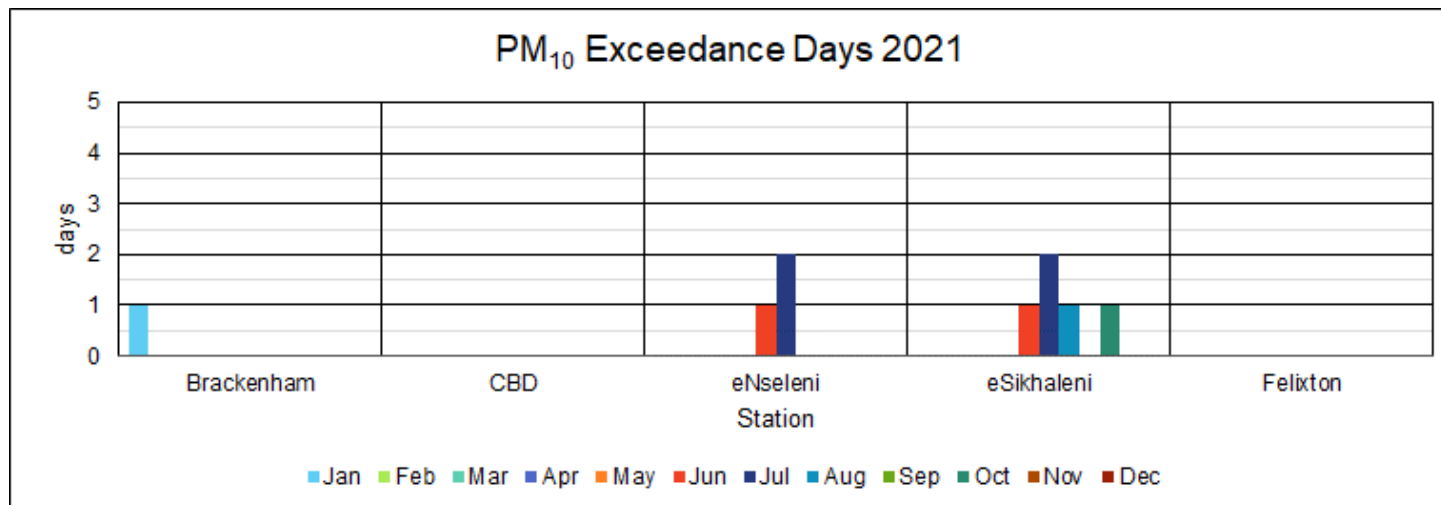


Figure 25: PM₁₀ exceedance days per month 2021.

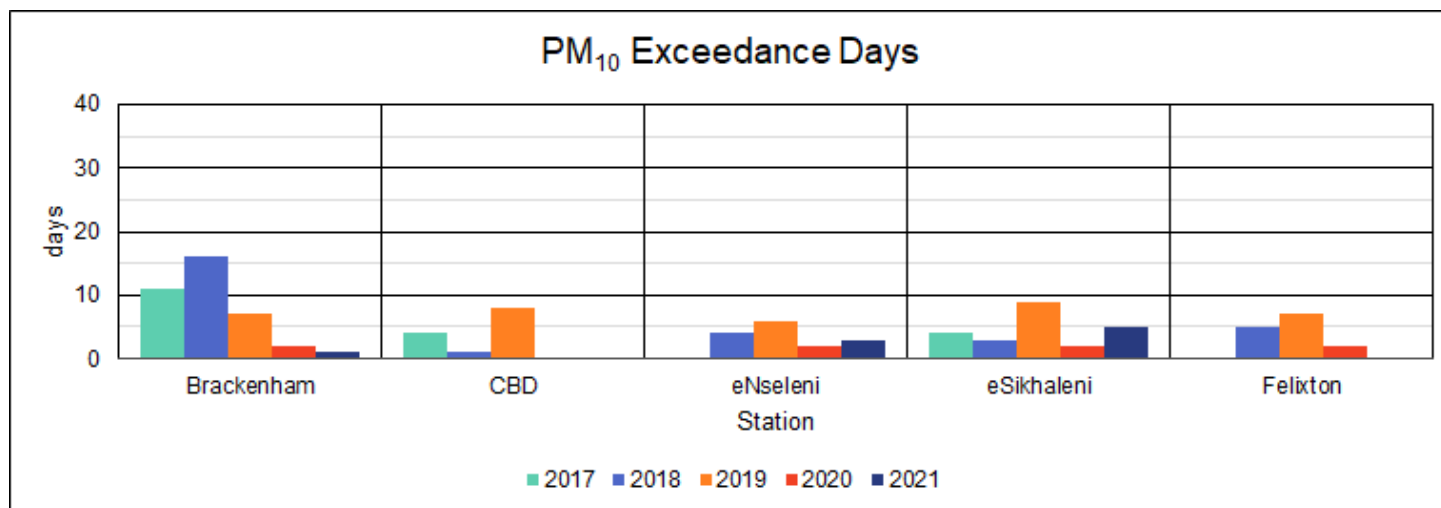


Figure 26: PM₁₀ exceedance days (2017 to 2021)

The number of days on which PM_{2.5} exceedances occurred during the month and year is shown in Figure 27 and Figure 28. According to the relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to PM_{2.5}.

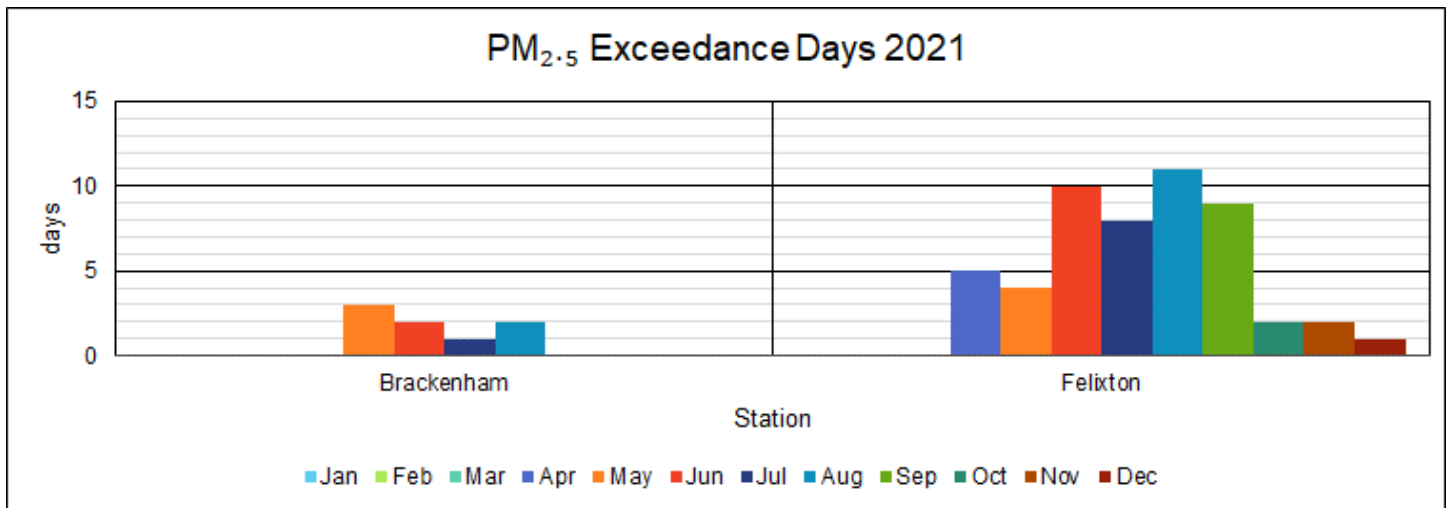


Figure 27: PM_{2.5} exceedance days per month 2021.

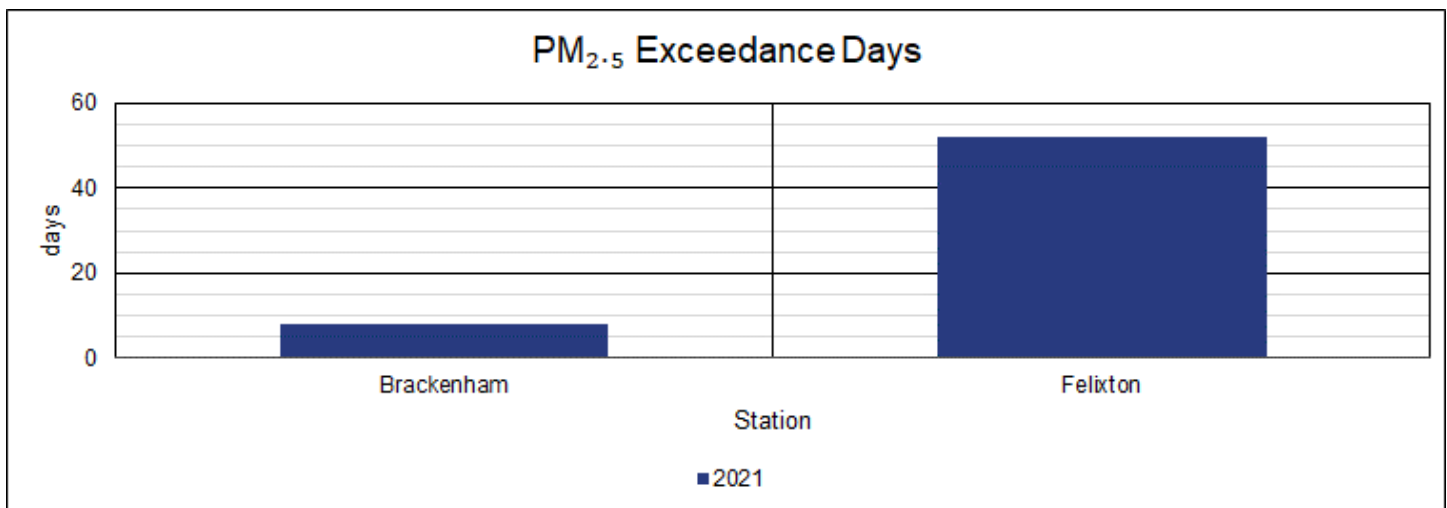


Figure 28: PM_{2.5} exceedance days 2021

5. SULPHUR DIOXIDE MONITORING

Sulphur dioxide (SO₂) is one gas of a group of highly reactive gasses known as "oxides of sulphur." Anthropogenic sources include fossil fuel combustion (particularly coal-burning power plants), industrial processes such as wood pulping, paper manufacture, petroleum and metal refining, and metal smelting (particularly from sulphide-containing ores, e.g., lead, silver, and zinc ores) and vehicle tailpipe emissions. Natural sources of 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 linked with several adverse effects on the respiratory system as it is highly soluble and thus readily absorbed by the mucous membranes of the nose and upper respiratory tract. Exposure to high concentrations may result in:

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

5.1. SO₂ Ambient Air Quality Standards

South African ambient air quality standards for SO₂ are listed below (Table 10).

Table 10: SO₂ ambient air quality limits.

Variable	Organisation	10-min average	Hourly average	Daily average	Annual average
SO ₂ Standard	RSA ^[a]	500 µg/m ³ ^[b]	350 µg/m ³ ^[c]	125 µg/m ³ ^[d]	50 µg/m ³ ^[e]
		191ppb ^[b]	134 ppb ^[c]	48 ppb ^[d]	19 ppb ^[e]
SO ₂ Interim Target 1	WHO ^[f]	-	-	125 µg/m ³	-
		-	-	48 ppb	-
SO ₂ Interim Target 2	WHO ^[f]	-	-	50 µg/m ³	-
		-	-	19 ppb	-
SO ₂ Guideline	WHO ^[f]	500 µg/m ³	-	20 µg/m ³	-
		191ppb	-	8 ppb	-

Notes:

- SA Government Gazette 32816 (published the 24th of December 2009) in terms of the National Environmental Management: Air Quality Act 39 of 2004 (RSA-NEMAQA, 2009)
- Not to be exceeded more than five hundred and twenty-six (526) times in one year
- Not to be exceeded more than eighty-eight (88) times in one year
- Not to be exceeded more than four (4) times in one year
- Not to be exceeded
- World Health Organisation / International Finance Corporation (WHO, 2015) (IFC, 2007)

5.2. SO₂ 10-minute Average Concentrations

10-minute average SO₂ concentrations are shown in Figure 29; there were three hundred and ninety-one (391) measured exceedances of the RSA and WHO 10-minute Limit (191 ppb). The RSA 10-minute Standard, which allows five hundred and twenty-six (526) exceedances of the limit per year, was therefore not exceeded (Table 11). Most exceedances can be associated with operational issues on Foskor's sulphuric acid plants. Foskor reported that the Scorpio substation fire in September forced them into an emergency shutdown which caused damage to their sulphuric acid plant ducting; this is most likely the reason for the increase in the frequency and concentration of SO₂ exceedances after that.

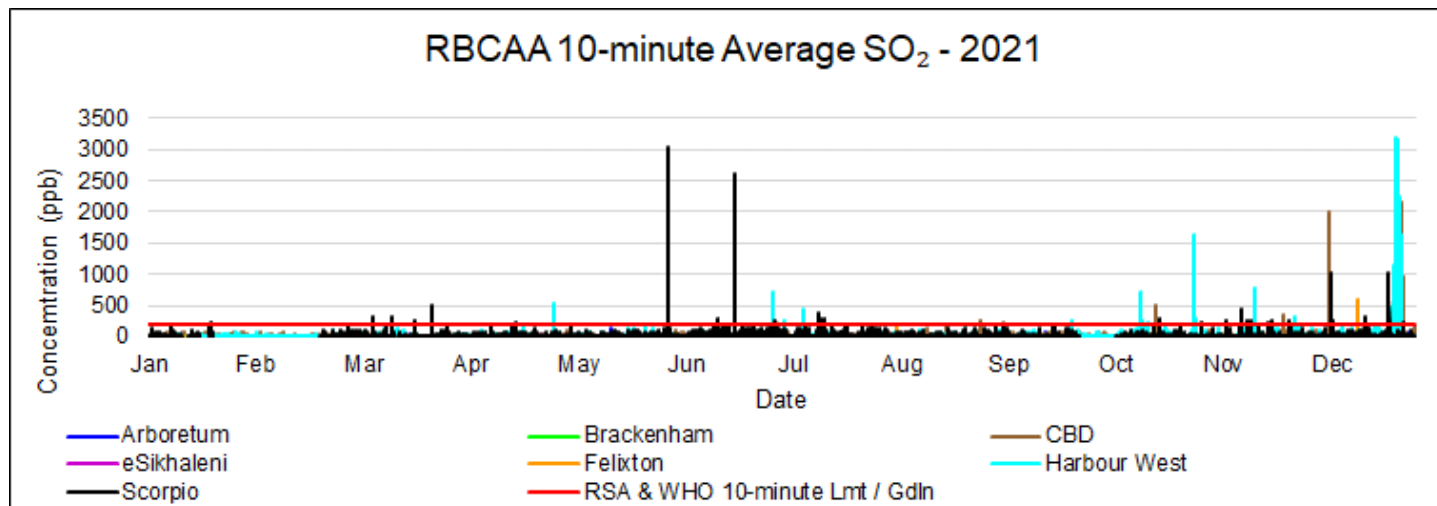


Figure 29: SO₂ 10-minute average concentrations.

Table 11: SO₂ 10-minute average exceedances (RSA)

SO ₂ 10-minute RSA Limit & WHO Guideline (191 ppb)	391
Arboretum	2
Foskor	2
CBD	37
Foskor	37
Harbour West	213
Foskor	179
Foskor & South32 (meteorology)	23
Foskor & TPT	11
Scorpio	139
Foskor	81
Foskor (meteorology)	46
South32 (meteorology)	12

5.3. SO₂ Hourly Average Concentrations

Hourly average SO₂ concentrations are shown in Figure 30; one hundred (100) exceedances of the RSA Hourly Limit (134 ppb) were measured. The RSA 1-hour Standard, which allows eighty-eight (88) exceedances of the limit per year, was therefore not exceeded (Table 12). Most exceedances can be associated with operational issues on Foskor's sulphuric acid plants. Foskor reported that the Scorpio substation fire in September forced them into an emergency shutdown which caused damage to their sulphuric acid plant ducting; this is most likely the reason for the increase in the frequency and concentration of SO₂ exceedances after that.

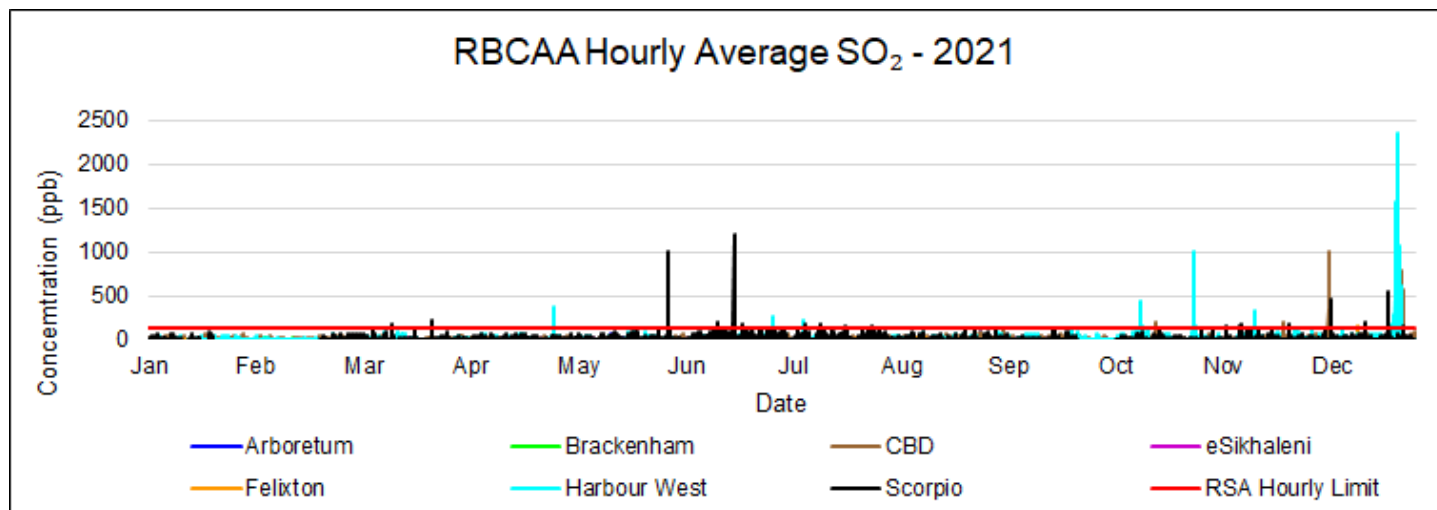


Figure 30: SO₂ hourly average concentrations.

Table 12: SO₂ 1-hour average exceedances (RSA)

SO ₂ Hourly RSA Limit (134 ppb)		100
CBD		8
Foskor		8
Harbour West		53
Foskor		42
Foskor & South32 (meteorology)		7
Foskor & TPT		4
Scorpio		39
Foskor		18
Foskor (meteorology)		10
South32		2
South32 (meteorology)		9

5.4. SO₂ Daily Average Concentrations

Daily average SO₂ concentrations are shown in Figure 31; there were:

- ▶ Twelve (12) measured exceedances of the RSA and WHO Daily Standard / Interim-Target 1 (48 ppb), the RSA Daily Standard, which allows four (4) exceedances of the limit per year, was therefore exceeded at Scorpio; and,
- ▶ Three hundred and forty-seven (347) measured exceedances of the WHO Daily Guideline (8 ppb).

Most exceedances can be associated with operational issues on Foskor's sulphuric acid plants. Foskor reported that the Scorpio substation fire in September forced them into an emergency shutdown which caused damage to their sulphuric acid plant ducting; this is most likely the reason for the increase in the frequency and concentration of SO₂ exceedances after that.

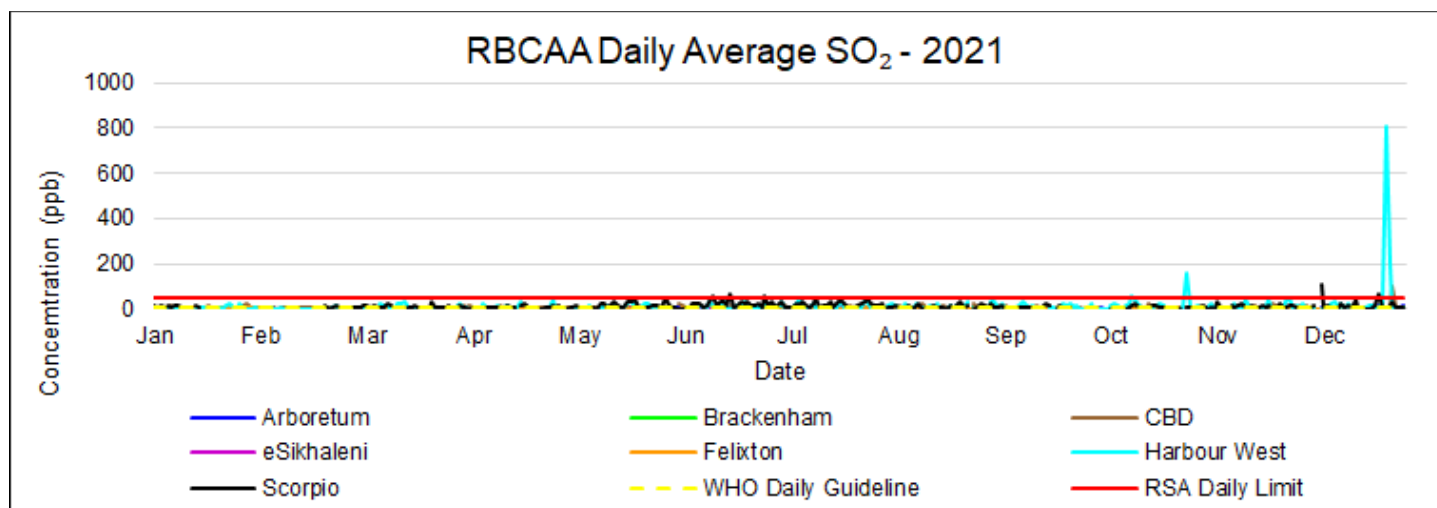


Figure 31: SO₂ daily average concentrations.

Table 13: SO₂ daily exceedances (RSA).

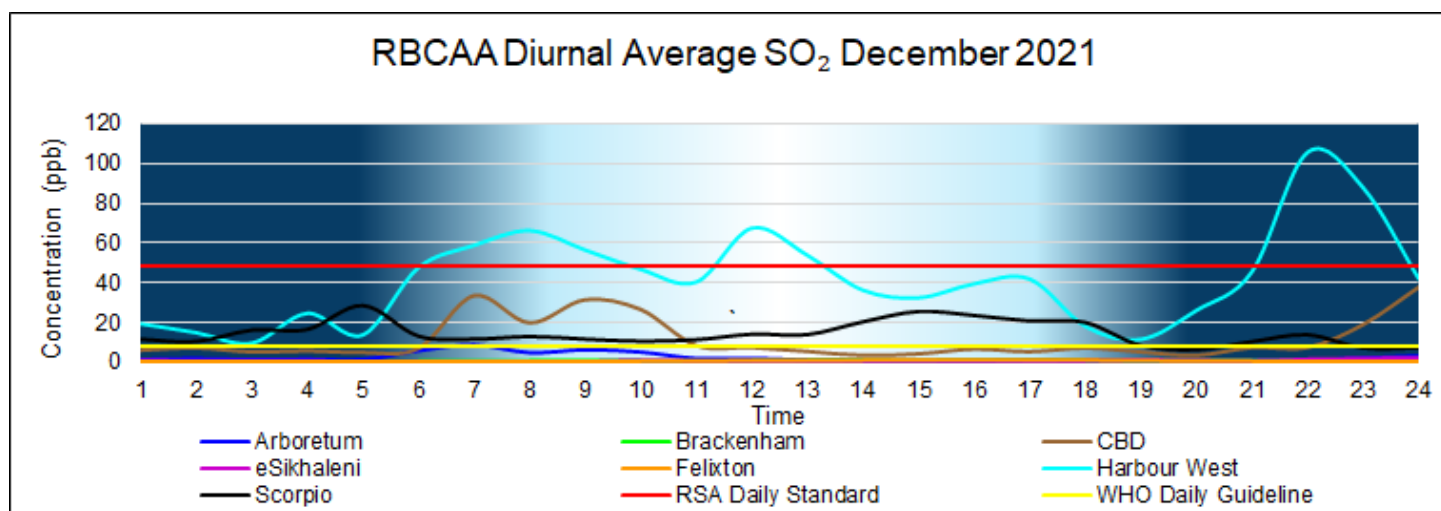
SO ₂ Daily RSA Limit & WHO Interim Target 1 (48 ppb)	12
CBD	2
Foskor	2
Harbour West	4
Foskor	3
Foskor & TPT	1
Scorpio	6
Foskor	2
Foskor (meteorology)	2
South32 (meteorology)	2

Table 14: SO₂ daily exceedances (WHO).

SO ₂ Daily WHO Standard (8 ppb)	347
Arboretum	5
Foskor	2
No response required	3
CBD	61
Foskor	1
No response required	60
Felixton	1
No response required	1
Harbour West	125
Foskor	3
No response required	117
South32	2
South32 (meteorology)	1
Foskor & TPT	2
Scorpio	155
Foskor	4
No response required	148
South32	2
South32 (meteorology)	1

5.5. SO₂ Diurnal Concentrations

Diurnal SO₂ concentrations are shown below (Figure 32).

Figure 32: SO₂ diurnal concentrations.

5.6. SO₂ Monthly Concentrations

Monthly comparisons are provided in Figure 33.

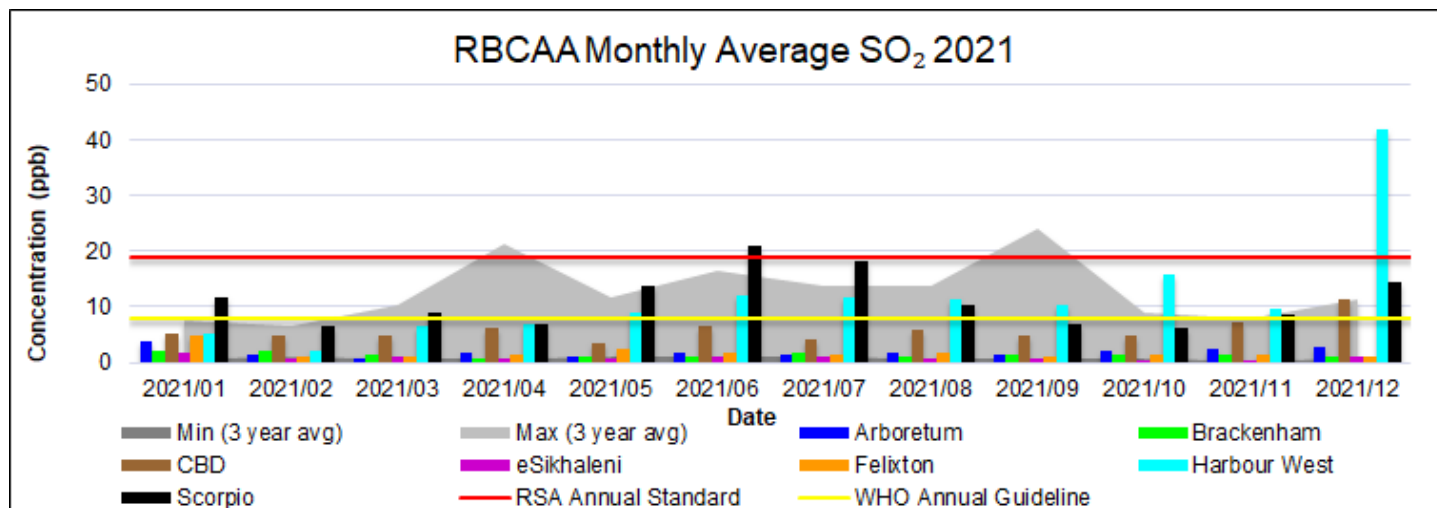


Figure 33: SO₂ monthly concentrations.

5.7. SO₂ Annual Concentrations

Annual average SO₂ concentrations did not exceed the RSA Annual Standard; the WHO Annual Guideline was exceeded at harbour West and Scorpio (Figure 34).

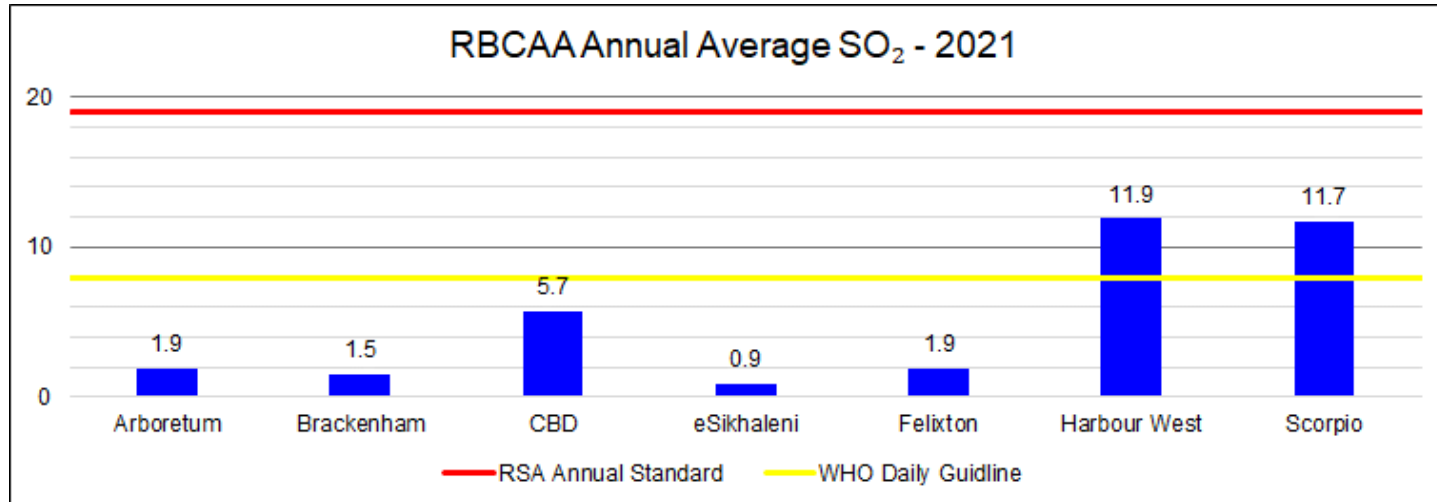


Figure 34: SO₂ annual average concentration.

Compared to 2020, the 2021 annual average SO₂ concentrations at most stations were similar (differed by 10% or less from the limit); however, concentrations at Harbour West increased by 23% (Figure 35).

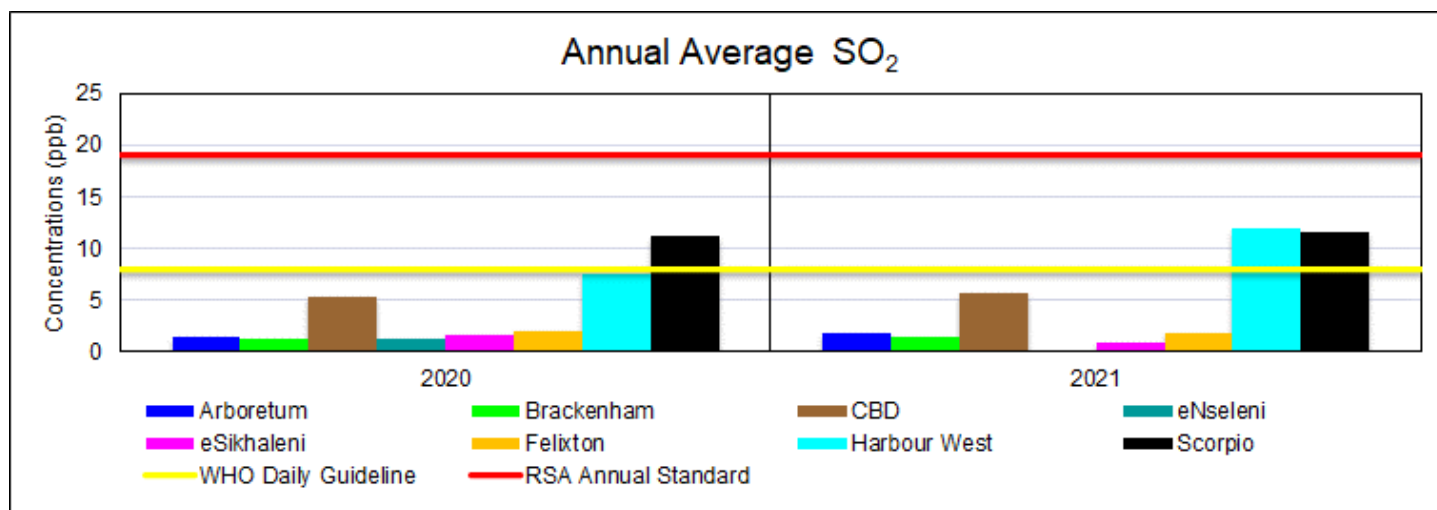


Figure 35: SO₂ annual average concentration (2020 to 2021).

Annual average concentrations dating back to 1997 are illustrated in Figure 36. The 5-year Mann Kendall Trend for Arboretum, eSikhaleni and Felixton is stable; Brackenham is probably increasing. No trend was observable for CBD, Harbour West, and Scorpio.

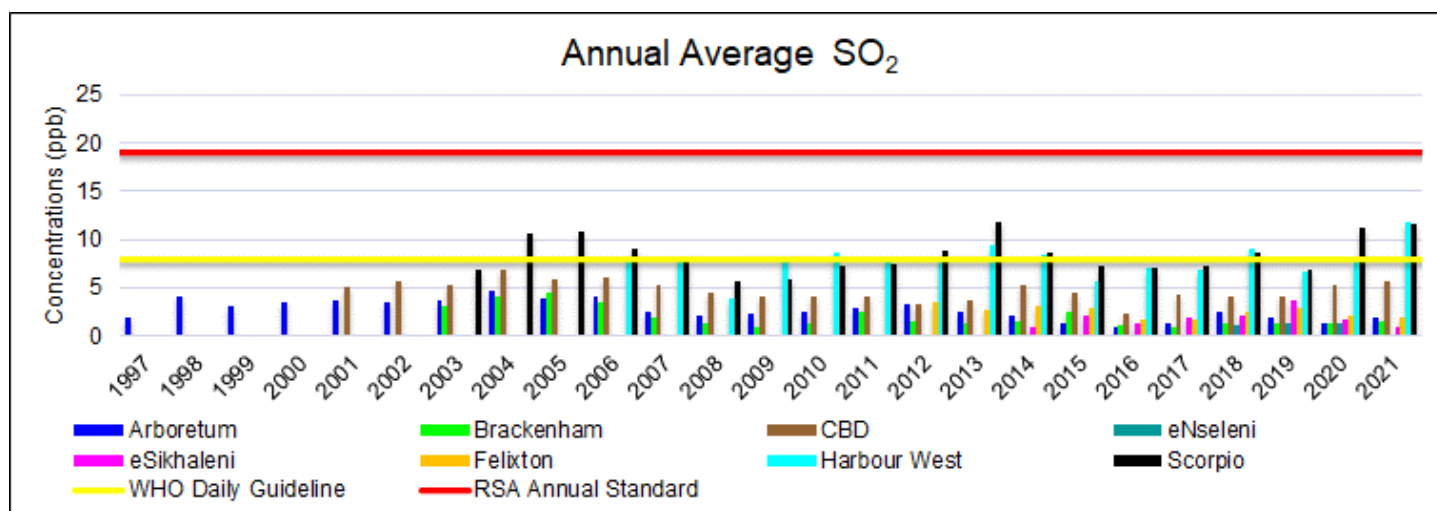


Figure 36: SO₂ annual average concentration (1997 to 2021).

5.8. SO₂ Exceedances

SO₂ exceedances can be, associated with emissions because of process upsets (i.e., planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or an event (e.g., fires or emergency shutdown). The number of days on which exceedances occurred during the month plus annual comparisons to the previous years are shown in Figure 37 and Figure 38. According to the relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality with respect to SO₂.

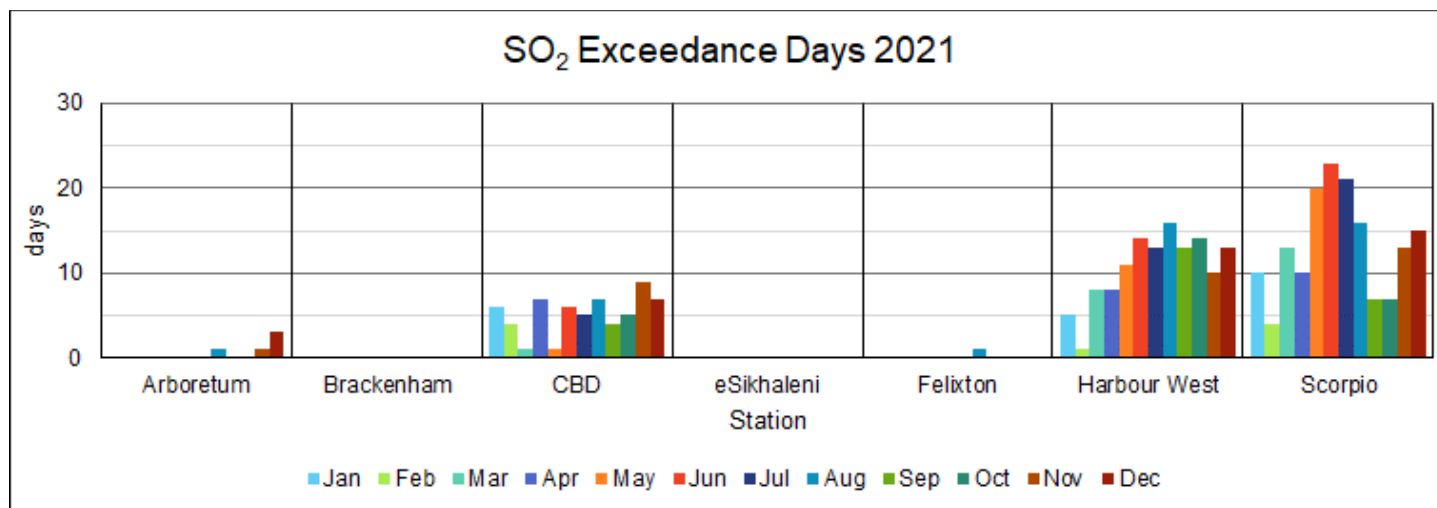


Figure 37: SO₂ exceedance days per month 2021.

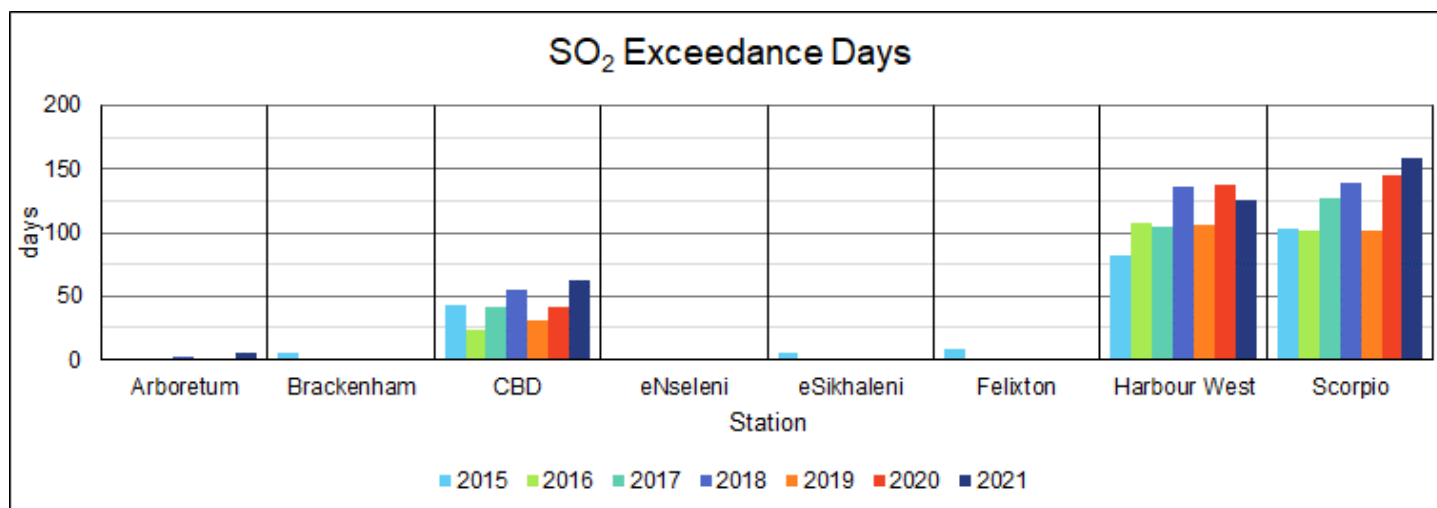


Figure 38: SO₂ exceedance days (2015 to 2021).

5.9. SO₂ Dispersion Simulations

SO₂ impacts are based on national standards and international guidelines; dispersion simulation outputs have been colour coded according to the Air Quality Indices (AQIs) shown in Table 15 and Table 16. The plots show the maximum predicted impacts for specific time intervals (10-minute average, 1-hour average, daily average, annual average) during 2021. Maximum predicted impacts for specific locations are provided in Table 17.

Table 15: Air quality index (percentage of RSA SO₂ limit value).

Air Quality Rating	Percentage of SO ₂ limit value	Impact
Good	0% - 25%	There are no known harmful effects on soil, water, vegetation, animals, visibility, or human health.
Fair	26% - 50%	There is adequate protection against harmful effects on; soil, water, vegetation, animals, visibility, or human health.
Poor	51% - 100%	Not all aspects of the environment are adequately protected from adverse effects. Depending on the measurement's frequency, duration, and circumstances, some long-term control action may be required.
Very Poor	>100%	Further deterioration of air quality and continued high readings could pose a risk to public health in this range.

Table 16: Air quality index (percentage of WHO SO₂ limit value).

Air Quality Rating	Percentage of WHO SO ₂ limit value
Good	0% - 25%
Fair	26% - 50%
Poor	51% - 100%
Very Poor	>100%

The following plots of SO₂ concentrations are provided:

- ▶ SO₂ 10-minute Predicted Maxima (RSA & WHO):
 - Regional (Figure 39)
 - Richards Bay (Figure 40)
- ▶ SO₂ Hourly Predicted Maxima (RSA):
 - Regional (Figure 41)
 - Richards Bay (Figure 42)
- ▶ SO₂ Daily Predicted Maxima (RSA):
 - Regional (Figure 43)
 - Richards Bay (Figure 44)
- ▶ SO₂ Daily Predicted Maxima (WHO):
 - Regional (Figure 45)
- ▶ SO₂ Annual Average Prediction (RSA):
 - Regional (Figure 46)
 - Richards Bay (Figure 47)
- ▶ SO₂ Annual Average Prediction (WHO):
 - Regional (Figure 48)
 - Richards Bay (Figure 49)

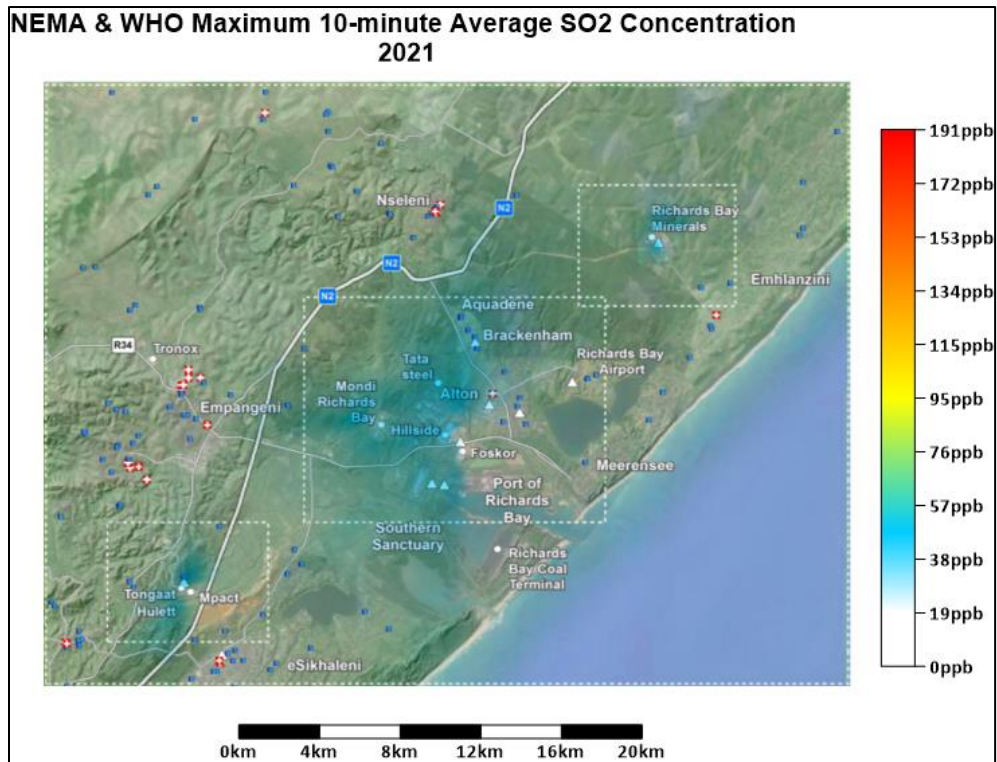


Figure 39: SO₂ maximum 10-minute average prediction (regional map).

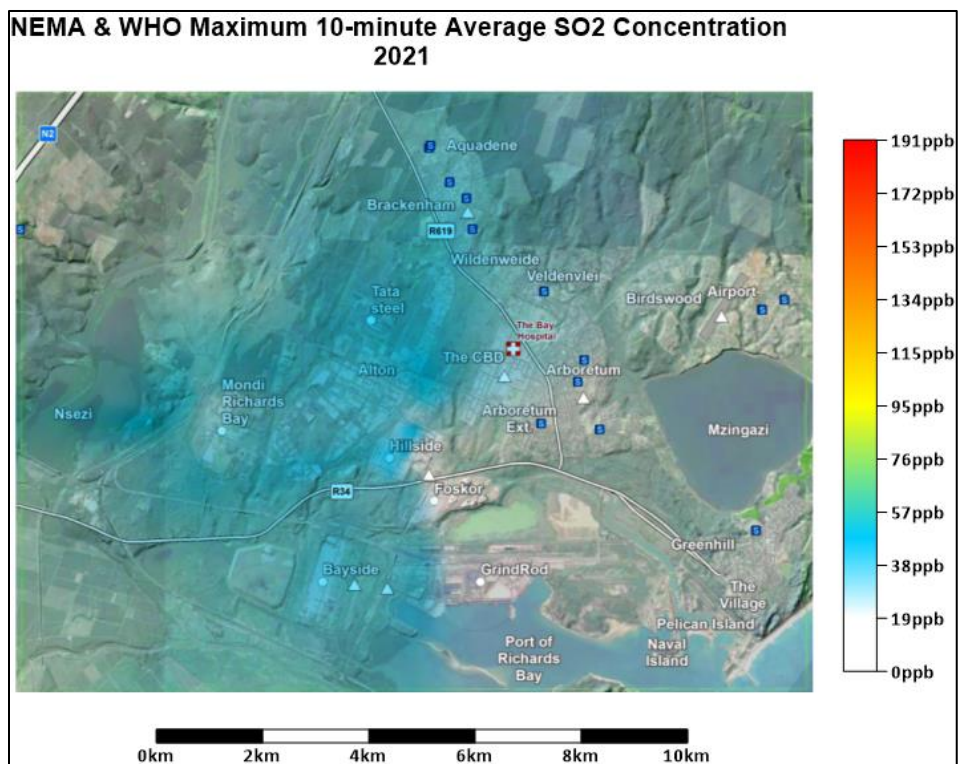


Figure 40: SO₂ maximum 10-minute average prediction (Richards Bay map).

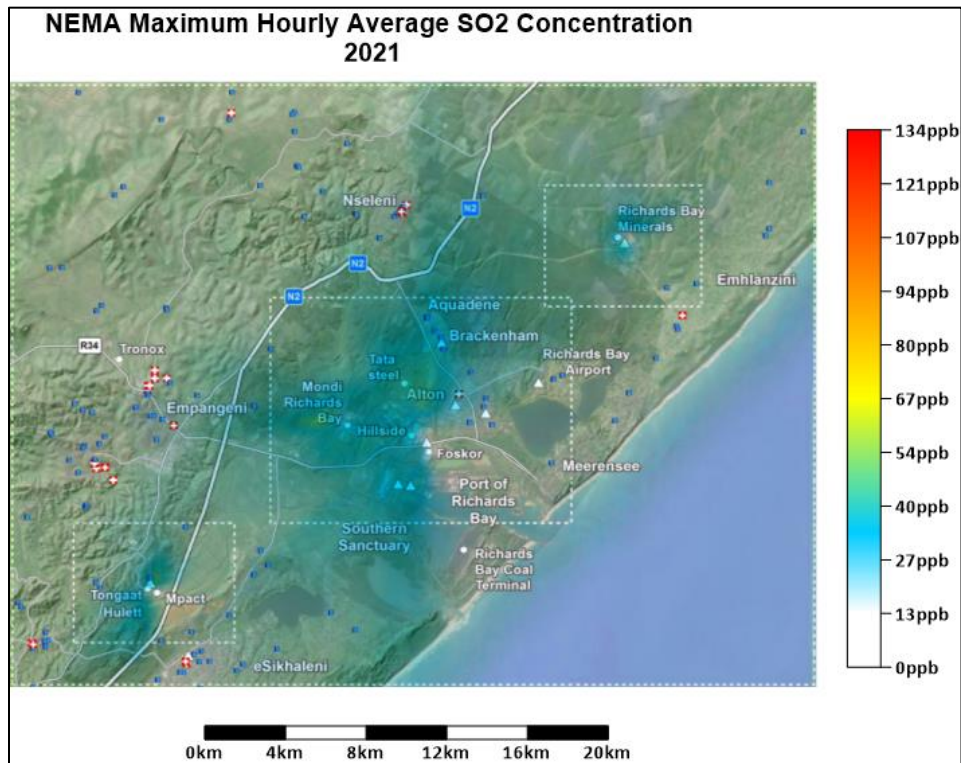


Figure 41: SO₂ maximum hourly average prediction (regional map).

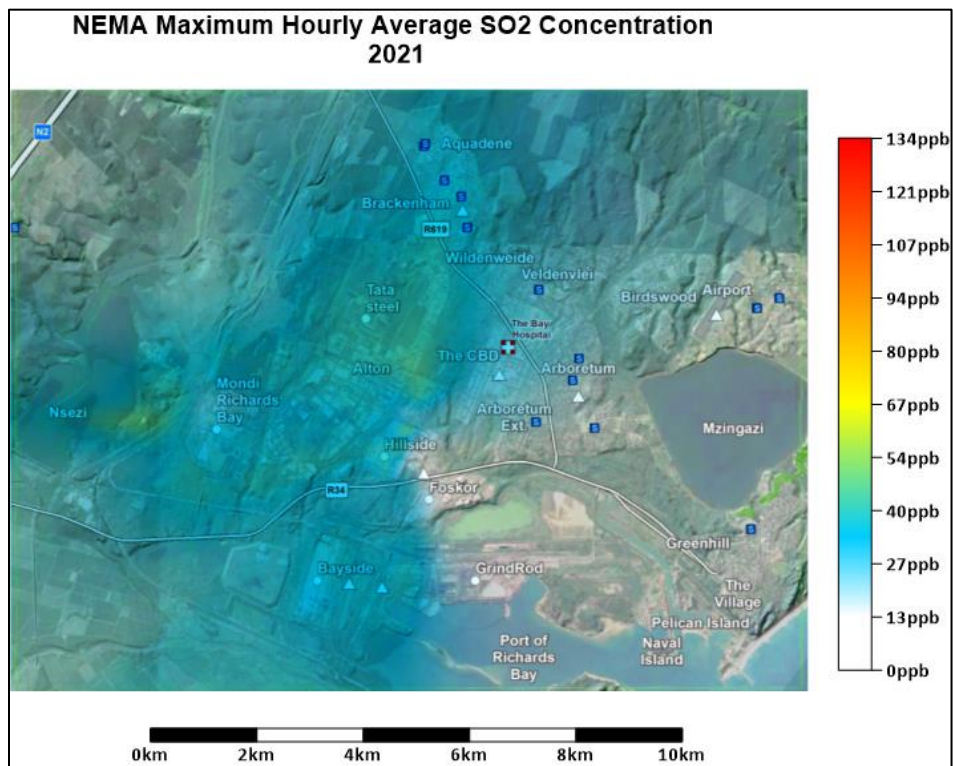


Figure 42: SO₂ maximum hourly average prediction (Richards Bay map).

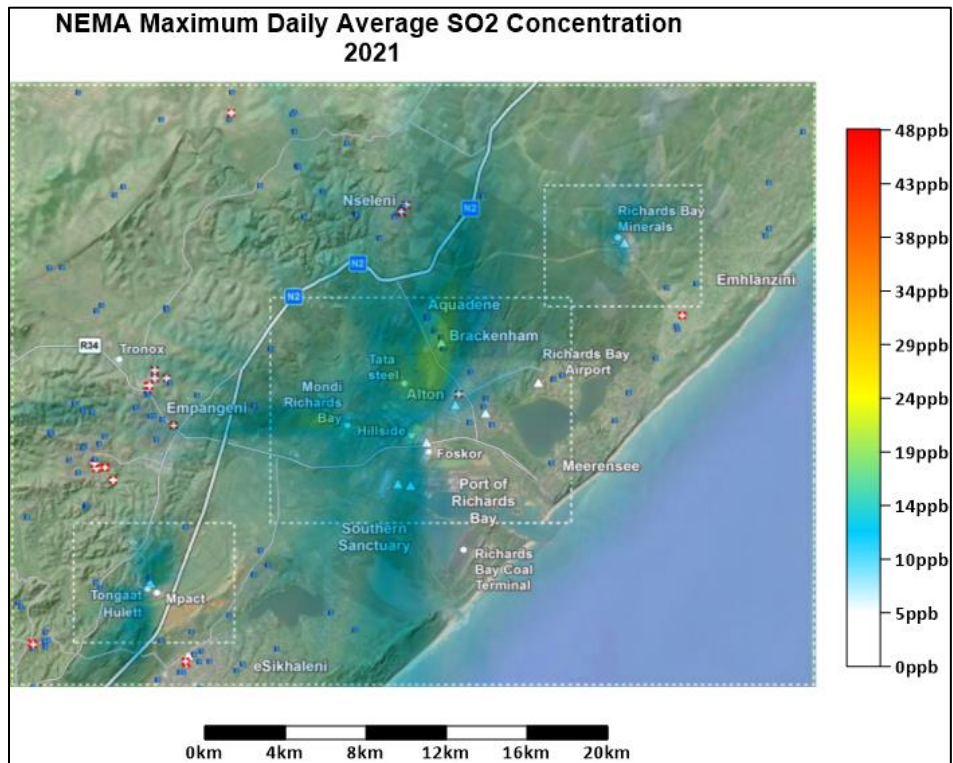


Figure 43: SO₂ maximum daily average prediction (regional map).

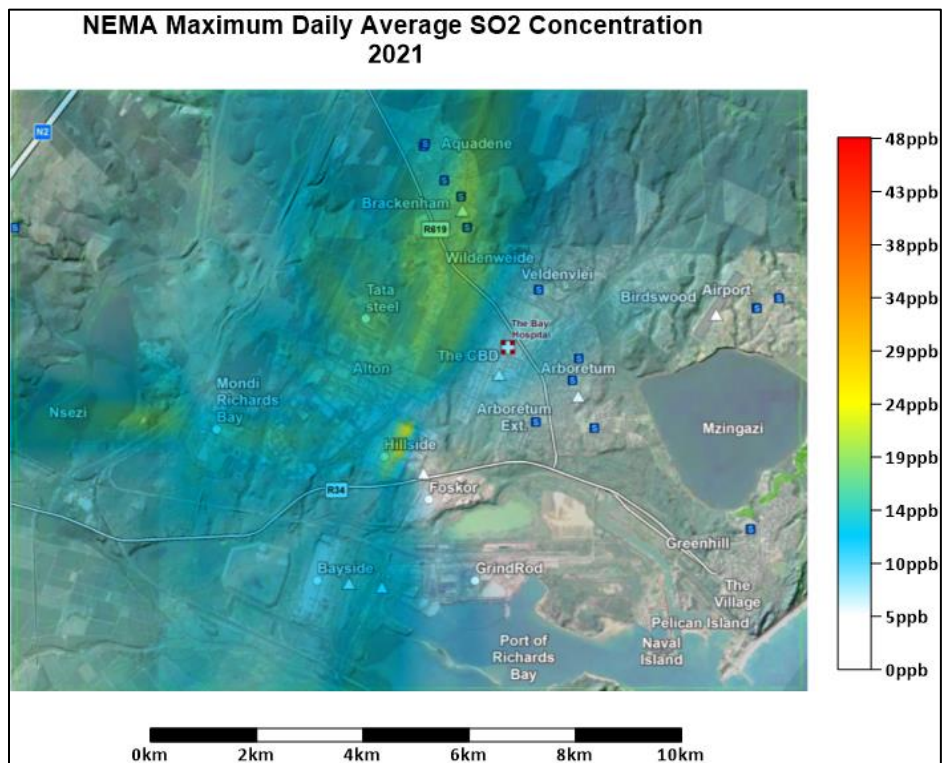


Figure 44: SO₂ maximum daily average prediction (Richards Bay map).

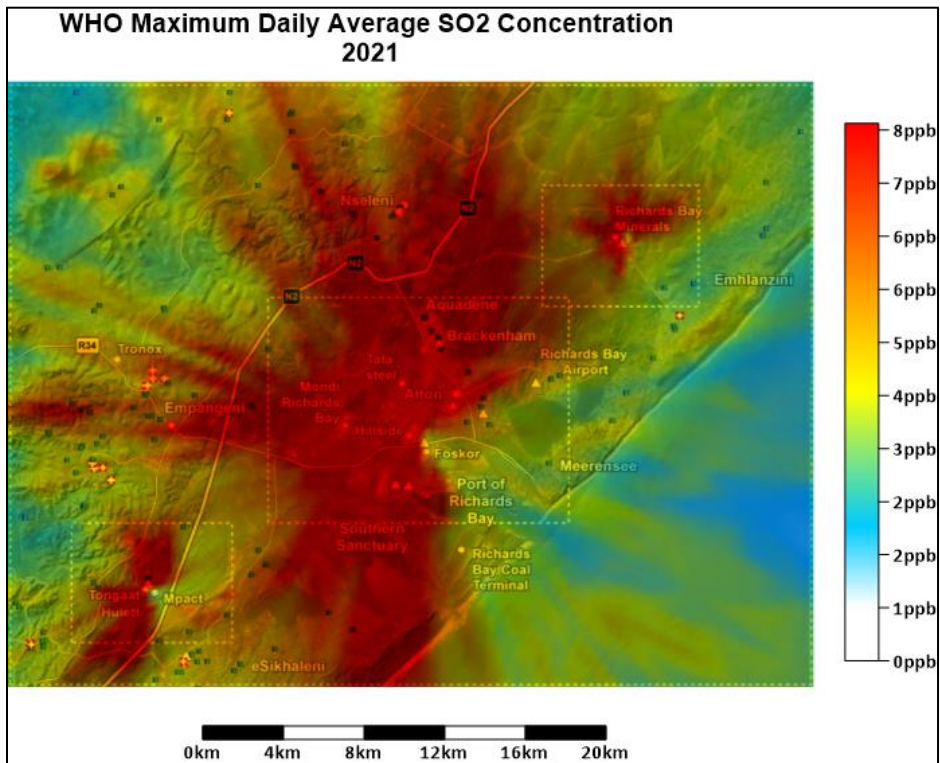


Figure 45: SO₂ maximum daily average prediction (regional map).

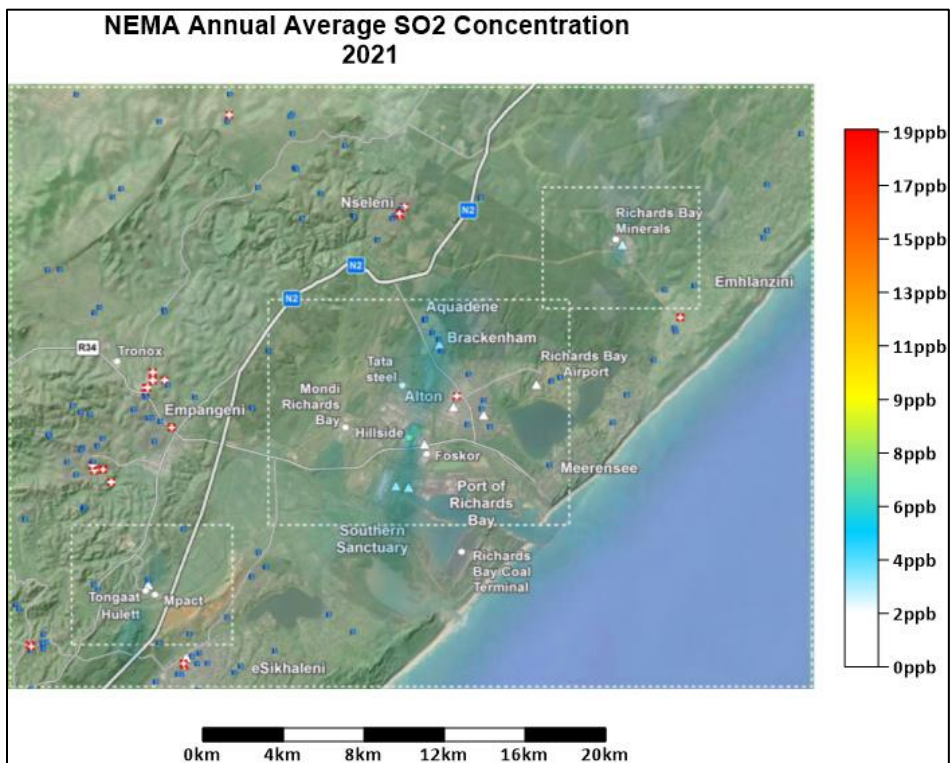
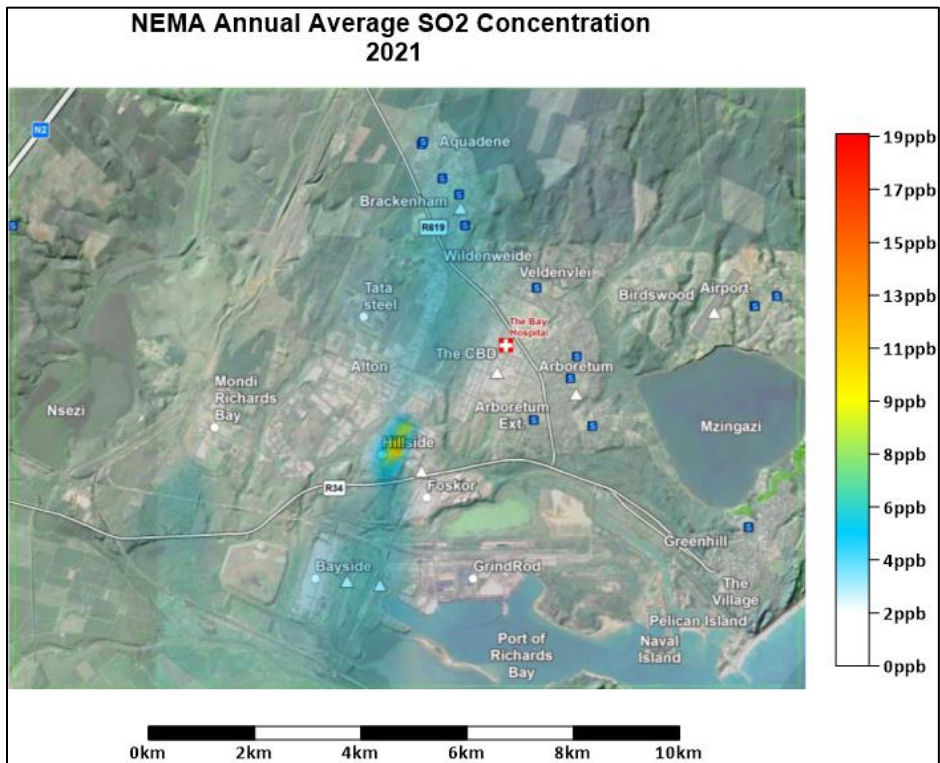
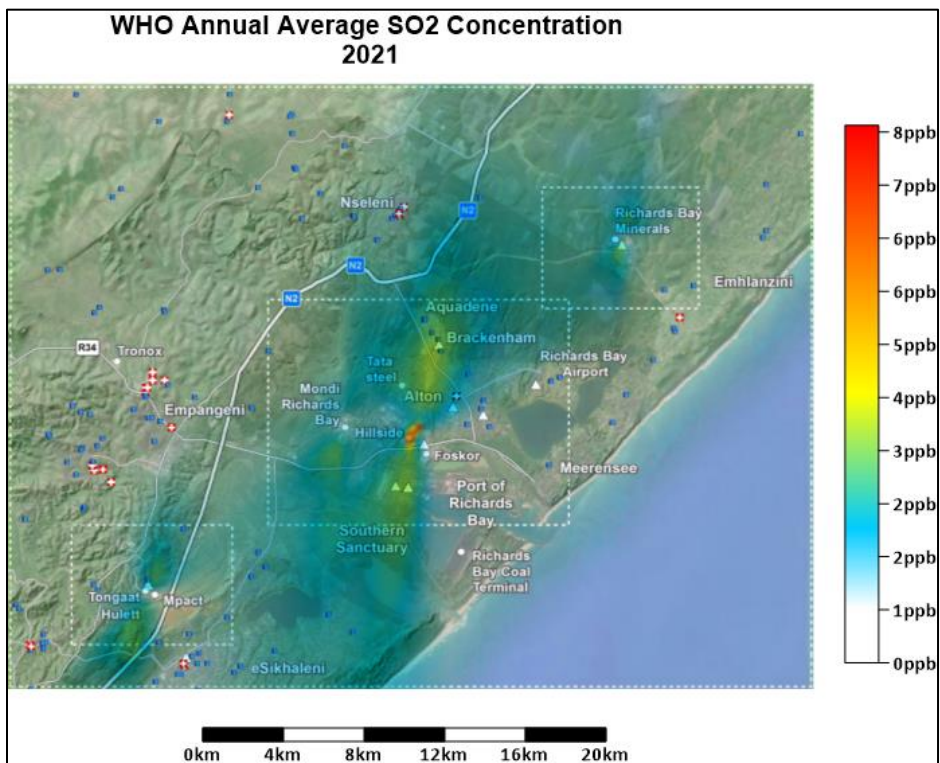


Figure 46: SO₂ annual average prediction (regional map).

Figure 47: SO₂ annual average prediction (Richards Bay map).Figure 48: SO₂ annual average prediction (regional map).

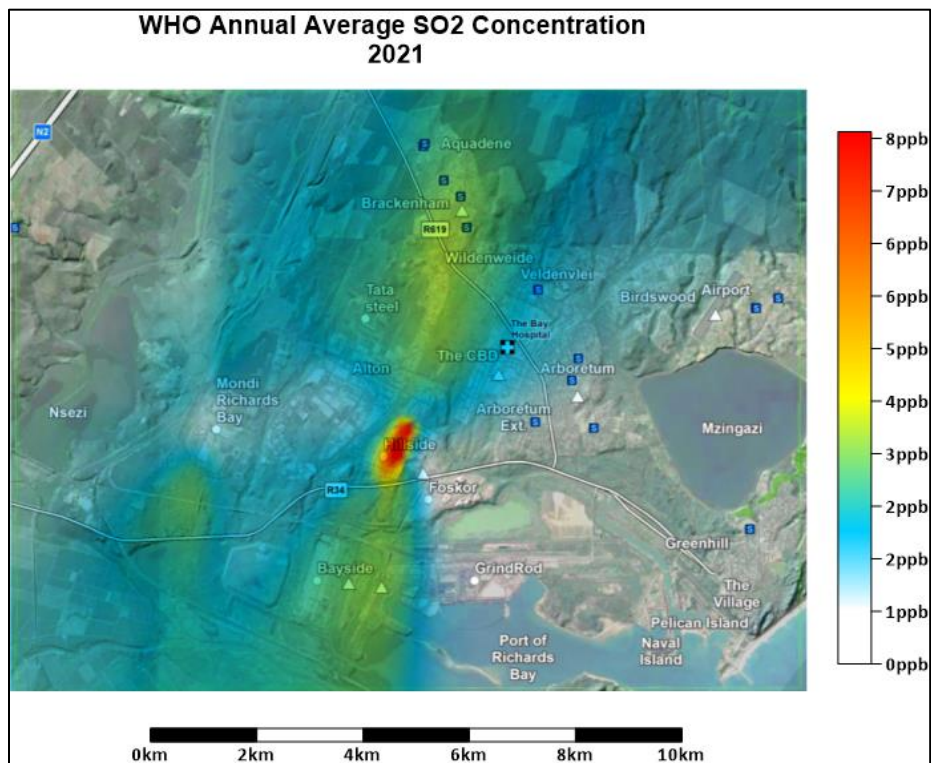


Figure 49: SO₂ annual average prediction (Richards Bay map).

Table 17: Summary of maximum predicted SO₂ impacts for various areas.

	Percentage of Standard / Guideline					Frequency of exceeding Standard / Guideline				
Organisation	RSA & WHO	RSA	RSA	RSA	WHO	RSA & WHO	RSA	RSA	RSA	WHO
Interval	10-minute	Hourly	Daily	Annual	Daily	10-minute	Hourly	Daily	Annual	Daily
Limit Value	191	134	48	19	8	None	None	None	None	None
Alton	21%	28%	31%	11%	186%	3	1	0	0	3
Aquadene	18%	24%	28%	14%	170%	0	0	0	0	3
Arboretum	9%	12%	12%	5%	74%	0	0	0	0	0
Arboretum Extension	8%	10%	12%	4%	70%	0	0	0	0	0
Birdswood	12%	15%	15%	6%	87%	1	0	0	0	0
Brackenham	18%	25%	36%	17%	216%	0	0	0	0	7
CBD	15%	19%	19%	10%	113%	5	1	0	0	0
Empangeni	9%	12%	14%	4%	83%	0	0	0	0	0
eSikhaleni	8%	10%	9%	5%	52%	0	0	0	0	0
Felixton	19%	23%	24%	10%	146%	0	0	0	0	2
Greenhill	4%	6%	7%	2%	42%	1	0	0	0	0
Mandlazini Agri-Village	7%	10%	10%	4%	61%	0	0	0	0	0
Meerensee	4%	6%	8%	3%	47%	0	0	0	0	0
Mzingazi Agri-Village	5%	6%	7%	3%	40%	0	0	0	0	0
eNseleni	10%	13%	15%	6%	88%	0	0	0	0	0
Southern Sanctuary	15%	20%	19%	12%	113%	0	0	0	0	0
Veldenvlei	13%	17%	15%	9%	91%	2	0	0	0	0
Vulindlela	8%	10%	8%	3%	50%	0	0	0	0	0
Wildenweide	17%	23%	30%	14%	181%	0	0	0	0	1
Bayside Aluminium	19%	26%	21%	14%	126%	0	0	0	0	0
Tronox	6%	8%	12%	2%	71%	0	0	0	0	0
Foskor	11%	14%	12%	6%	70%	0	0	0	0	0
Hillside Aluminium	19%	27%	34%	42%	203%	1	0	0	0	8
Mondi Richards Bay	17%	24%	27%	6%	160%	0	0	0	0	1
Port of Richards Bay	9%	13%	17%	5%	102%	0	0	0	0	0
Richards Bay Coal Terminal	8%	10%	10%	4%	58%	0	0	0	0	0
Richards Bay Minerals	11%	14%	14%	7%	84%	3	0	0	0	0
Richards Bay Alloys	22%	29%	36%	14%	214%	0	0	0	0	4

5.10. SO₂ Model Correlation

The annual average SO₂ concentration measured at each RBCAA station for 2020 and 2021, plus the CALPUFF prediction, is shown in Figure 50. The annual average for the same period as the previous year is also provided. Compared to the previous year, annual average SO₂ concentrations at most stations were similar (within 10% of the RSA annual standard); however, the concentration measured at Harbour West was 57% higher. The annual average prediction for Arboretum, Brackenheim, eSikhaleni and Felixton was within accepted dispersion modelling norms (-50% to 200%); CBD, Harbour West, and Scorpio were under-predicted. Underpredictions are most likely due; to local fugitive emissions unaccounted for in the model³ and the model's tendency to underpredict in the near field. Compared to the measurements, the predicted values for CBD, Harbour West, and Scorpio were lower, and at Arboretum, Brackenheim, eSikhaleni, and Felixton were similar (within 10% of the standard).

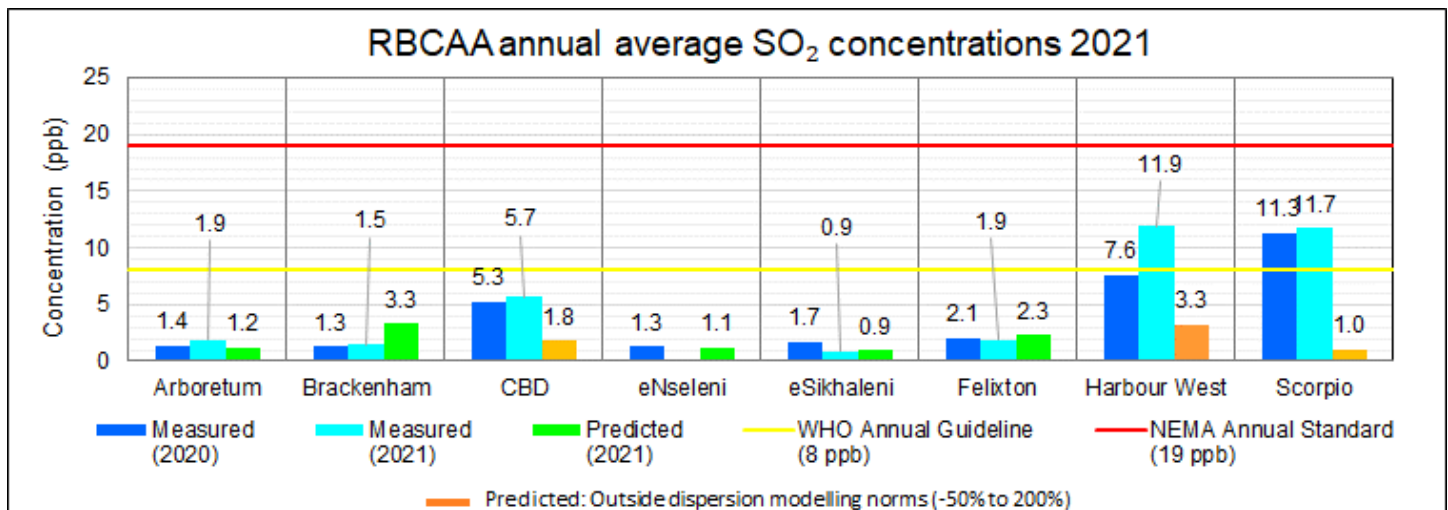


Figure 50: SO₂ annual average concentration and prediction.

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

6. TOTAL REDUCED SULPHUR MONITORING

Total reduced sulphur compounds (TRS), often associated with rotten egg or cooked cabbage odour, refer to a gaseous mixture of compounds consisting mainly of hydrogen sulphide (H_2S), methyl mercaptan ($\text{CH}_3\text{S-H}$), 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 the environment's acidity.

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

6.1. TRS Ambient Air Quality Standards

There are no South African standards for TRS.

The World Health Organization (WHO) recommends that to avoid substantial complaints about odour annoyance among the exposed population, hydrogen-sulphide concentrations should not be allowed to exceed $7\mu\text{g}/\text{m}^3$ (5 ppb), with a 30-minute averaging period (WHO, 2000).

The Ontario Ministry for the Environment (OME) has derived the following standards for TRS for the Pulp and Paper sector (OME, 1999):

- ▶ A 24-hour average Ambient Air Quality Criterion (AAQC) of $14\mu\text{g}/\text{m}^3$ (10.1 ppb) for TRS, based on the adverse effects on the respiratory system (nasal lesions) of this mixture
- ▶ A 10-minute average AAQC of $13\mu\text{g}/\text{m}^3$ (9.3 ppb) for TRS, based on odour effects
- ▶ A 30-minute standard of $10\mu\text{g}/\text{m}^3$ (7.2 ppb) for TRS; based on both odour and health effects of this mixture
- ▶ For all other sectors (including sectors such as Iron & Steel; Petroleum Refineries, and Municipal Sewage Treatment Plants):
- ▶ A 24-hour average AAQC of $7\mu\text{g}/\text{m}^3$ (5.0 ppb) for TRS based on the adverse effects on the respiratory system of this mixture
- ▶ A 10-minute average AAQC of $13\mu\text{g}/\text{m}^3$ (9.3 ppb) for TRS based on odour effects
- ▶ A 30-minute standard of $10\mu\text{g}/\text{m}^3$ (7.2 ppb) for TRS; based on both odour and health effects of this mixture

The RBCAA has decided to implement the:

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

6.2. TRS 10-minute Concentrations

The 10-minute average TRS concentrations are shown in Figure 51. There were six hundred and fifty-nine (659) measured exceedances of the OME 10-minute TRS Standard (9.3 ppb) (Table 18). Exceedances at CBD were associated with emissions from Mondi, eSikhaleni and Felixton from Mondi and Tongaat Hulett. Note that TRS monitoring was activated at Felixton in August.

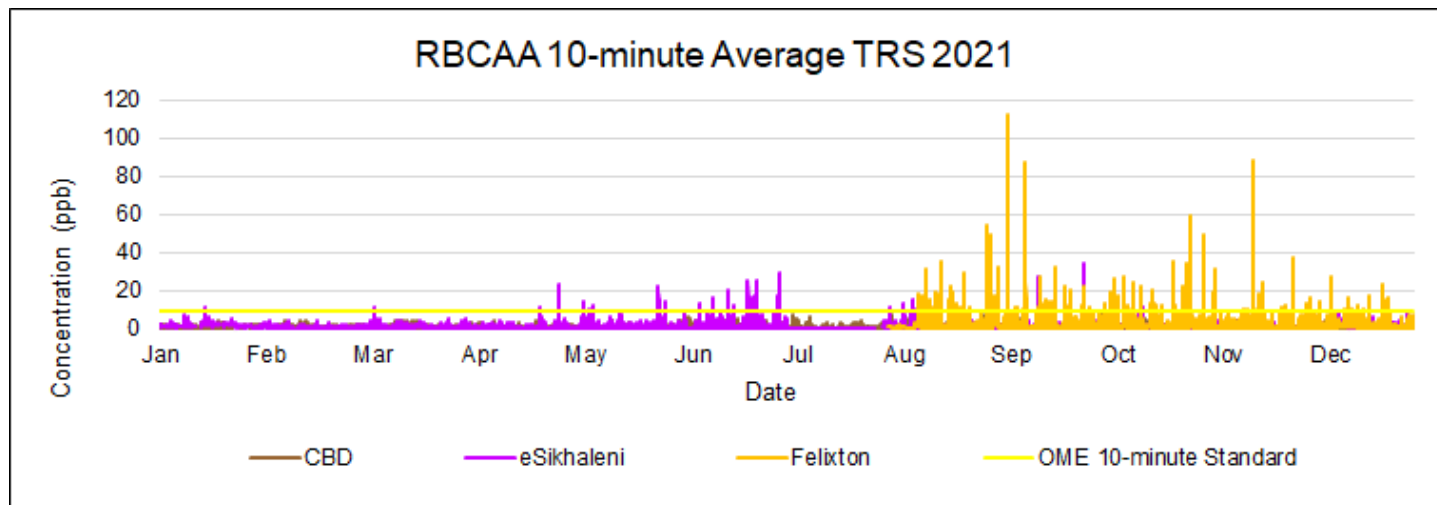


Figure 51: TRS 10-minute average concentrations.

Table 18: TRS 10-minute average exceedances.

TRS 10-minute OME Standard (9.3 ppb)		659
CBD		2
Mondi (meteorology)		2
eSikhaleni		169
Mondi		53
Mondi (meteorology)		71
Tongaathulett		1
Tongaathulett (meteorology)		44
Felixton		488
Mondi		14
Mondi (meteorology)		20
Tongaathulett		212
Tongaathulett (meteorology)		242

6.3. TRS 30-minute Concentrations

The 30-minute average TRS concentrations are shown in Figure 52. There were seven hundred and four (704) measured exceedances of the WHO 30-minute H₂S Guideline (5.0 ppb). Exceedances at CBD were associated with emissions from Mondi, eSikhaleni and Felixton from Mondi and Tongaat Hulett. . Note that TRS monitoring was activated at Felixton in August.

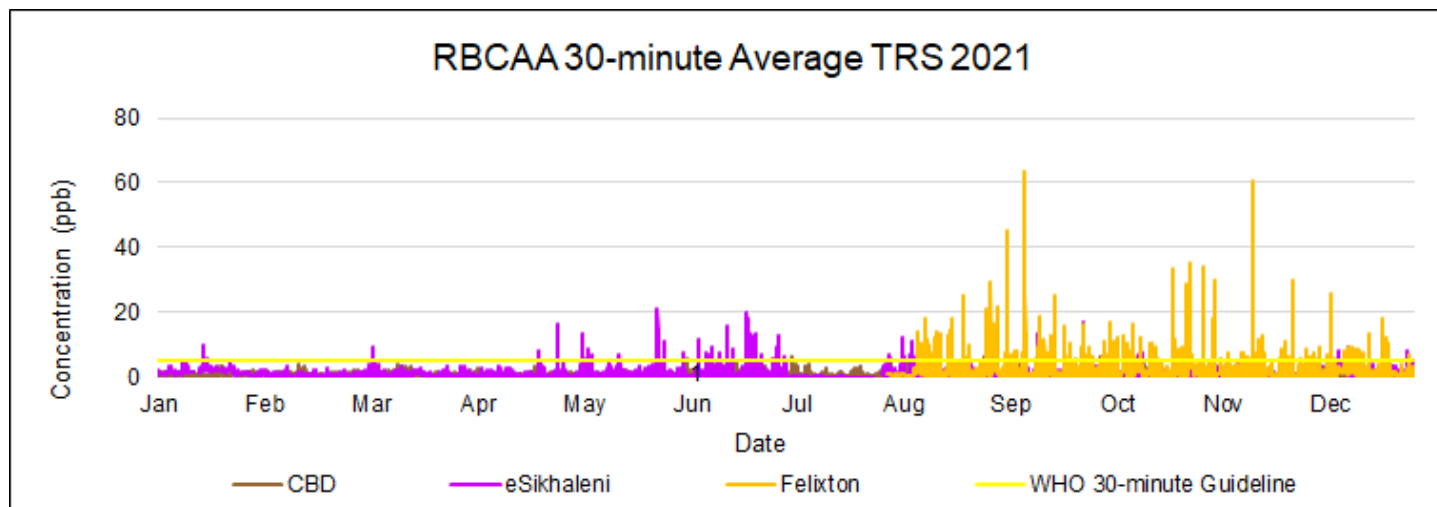


Figure 52: TRS 30-minute average concentration.

Table 19: TRS 30-minute average exceedances.

TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	704
CBD	24
Mondi	19
Mondi (meteorology)	5
eSikhaleni	192
Mondi	60
Mondi (meteorology)	80
Tongaat Hulett	1
Tongaat Hulett (meteorology)	51
Felixton	488
Mondi	6
Mondi (meteorology)	37
Tongaat Hulett	202
Tongaat Hulett (meteorology)	243

6.4. TRS Daily Concentrations

Daily average TRS concentrations are shown below (Figure 53). There were no; measured exceedances of the OME daily TRS Standard (9.3 ppb). Note that TRS monitoring was activated at Felixton in August.

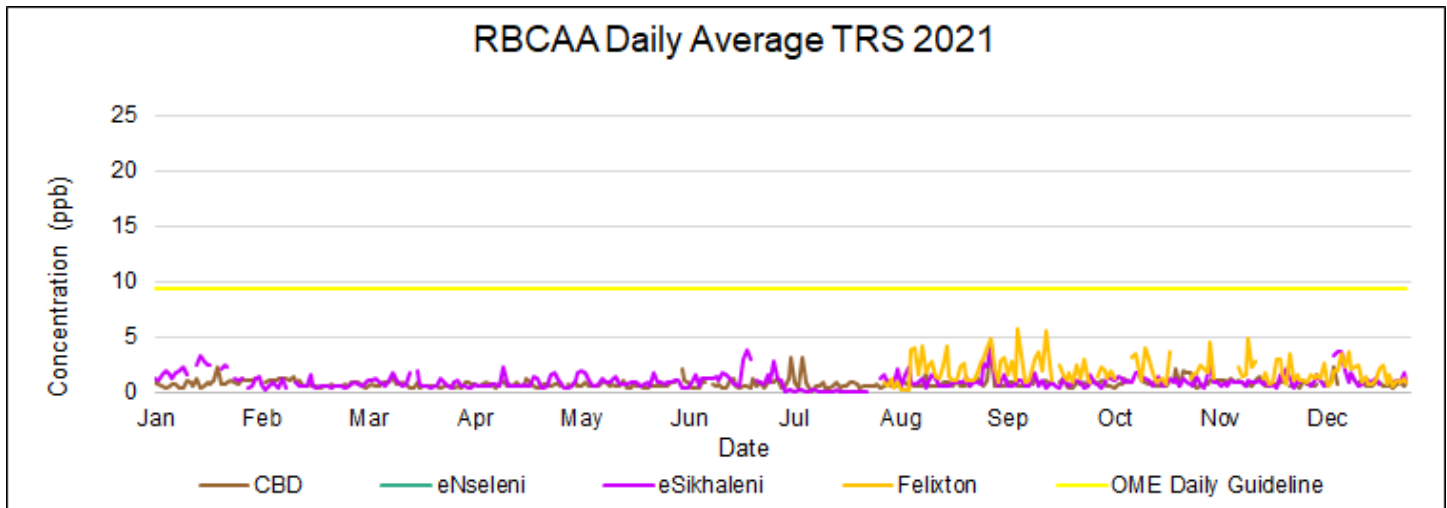


Figure 53: TRS daily average concentration.

6.5. TRS Diurnal Concentrations

The diurnal TRS concentrations are shown below (Figure 54).

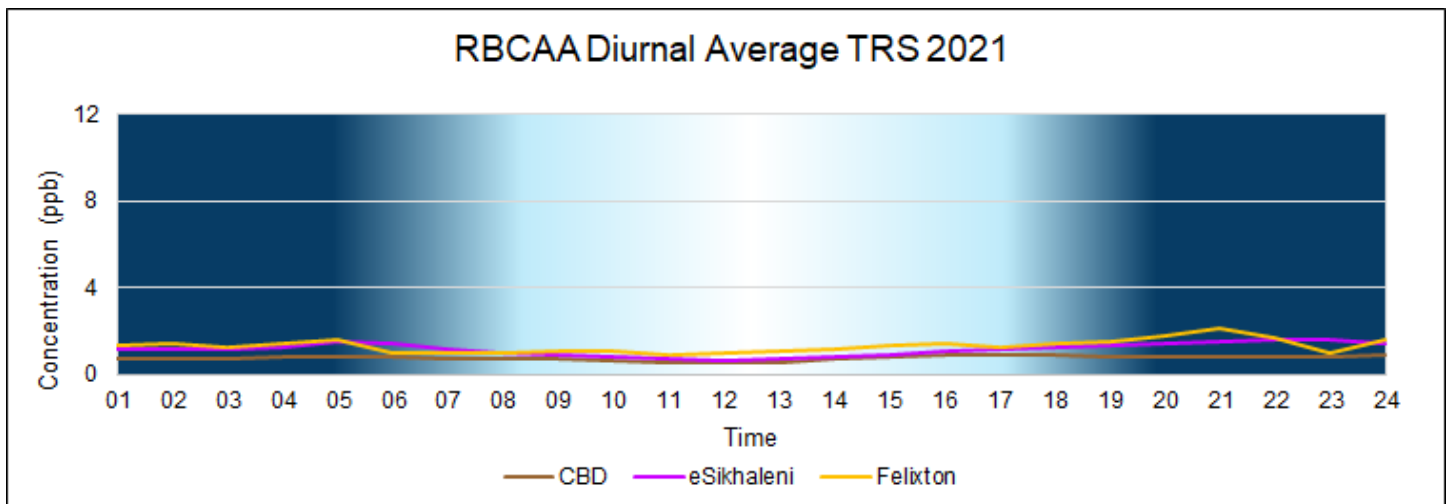


Figure 54: TRS diurnal concentrations.

6.6. TRS Monthly Concentrations

Monthly average TRS concentrations are shown in Figure 55. Comparisons to previous months are also provided (Figure 55). Note that TRS monitoring was activated at Felixton in August.

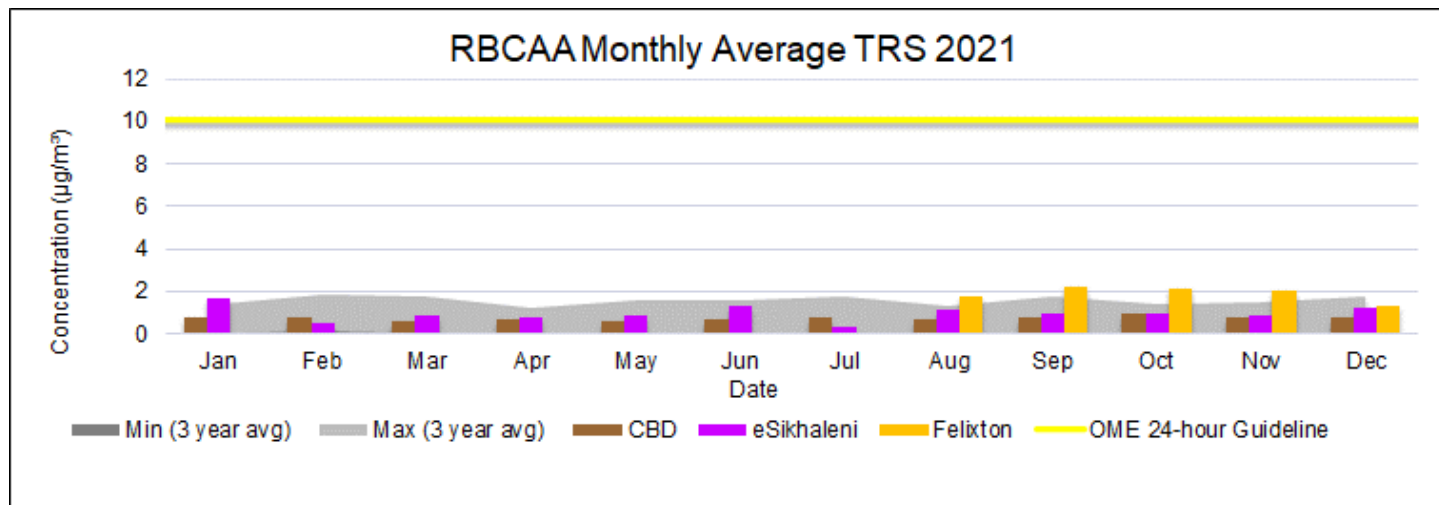


Figure 55: TRS monthly concentrations.

6.7. TRS Annual Concentrations

Annual average TRS concentrations are shown in Figure 56.

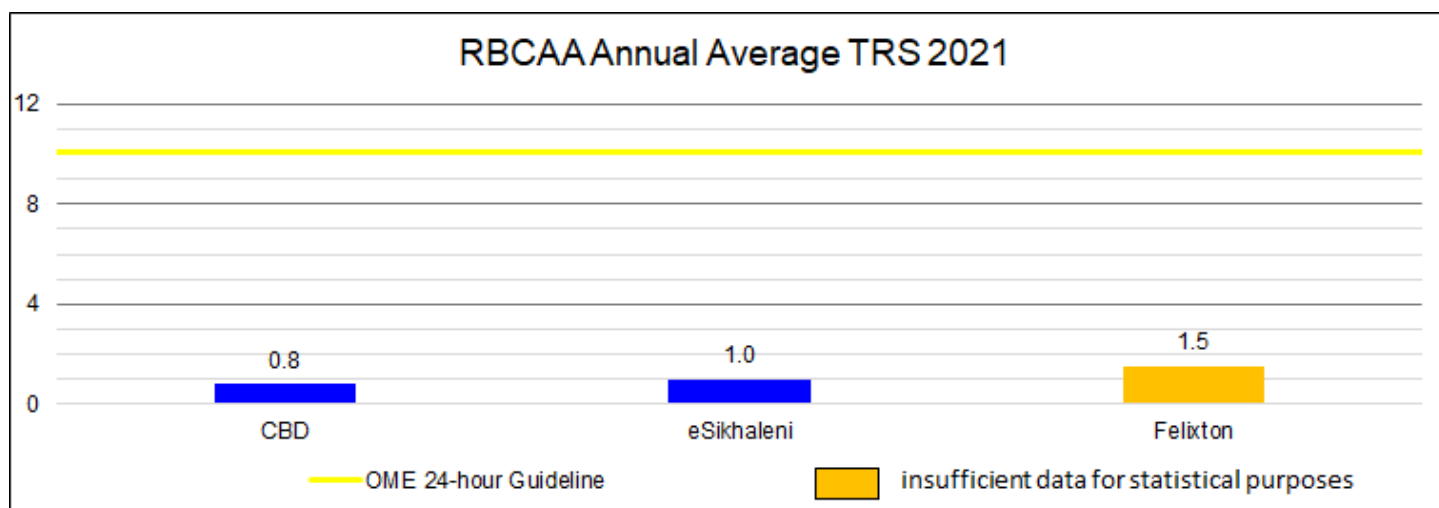


Figure 56: TRS annual average concentration.

Compared to 2020, the 2021 annual average TRS concentrations at CBD and eSikhaleni were similar (differed by 10% or less from the limit) (Figure 57).

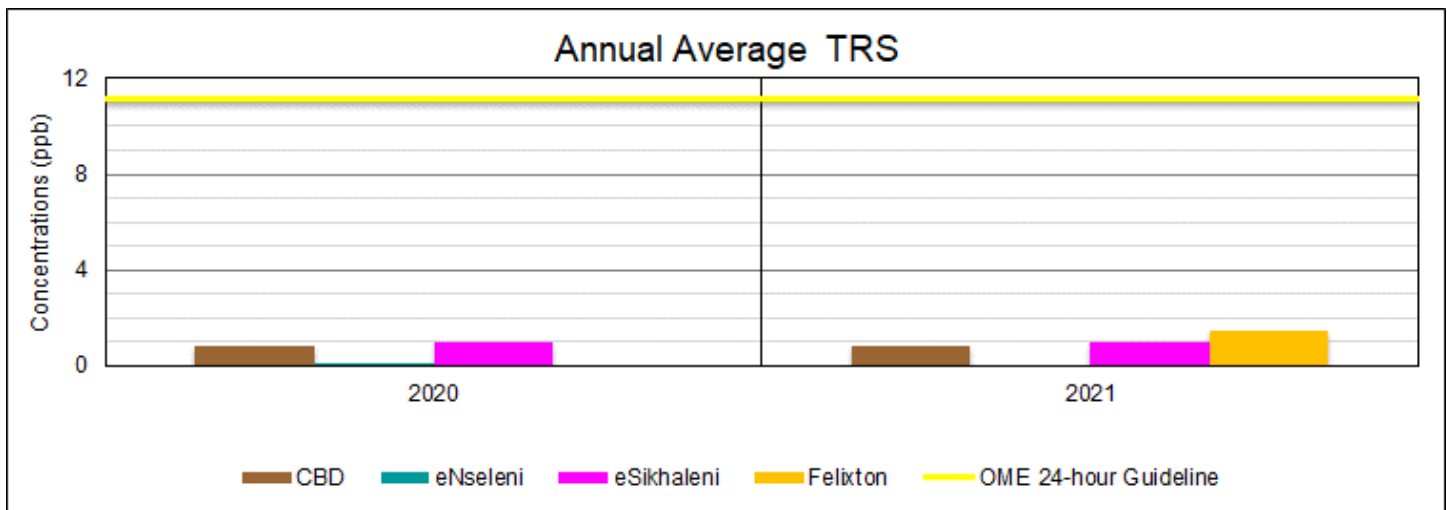


Figure 57: TRS annual average concentration (2020 to 2021).

Annual average concentrations dating back to 2006 are illustrated in Figure 58. The 5-year Mann Kendall Trend for CBD is stable. No trend was observed for eNseleni, eSikhaleni and Felixton.

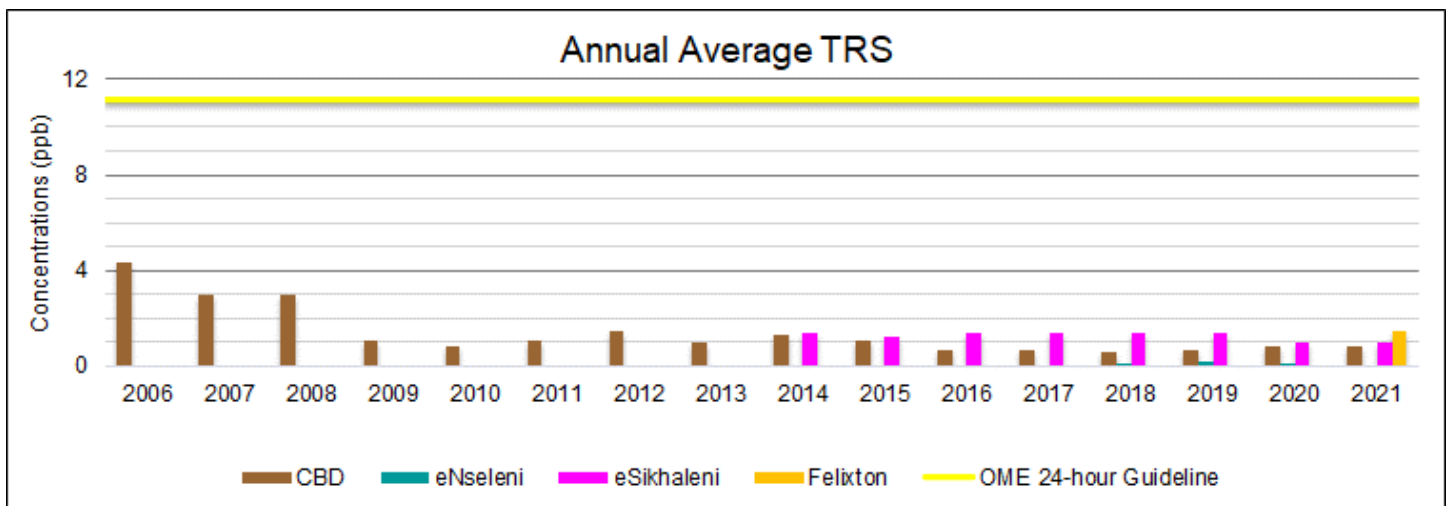


Figure 58: TRS annual average concentration (2006 to 2021).

6.8. TRS Exceedances

TRS exceedances can be, associated with emissions because of process upsets (i.e., planned maintenance, plant shutdowns or start-up), leaks in equipment, pipelines, seals, valves (fugitive emissions) or an event (e.g., fires or emergency shutdowns). The number of days on which exceedances occurred, plus comparisons to previous years, are shown in Figure 59 and Figure 60. According to the relative Air Quality Index (AQI), the areas where no exceedances were measured may be considered good air quality.

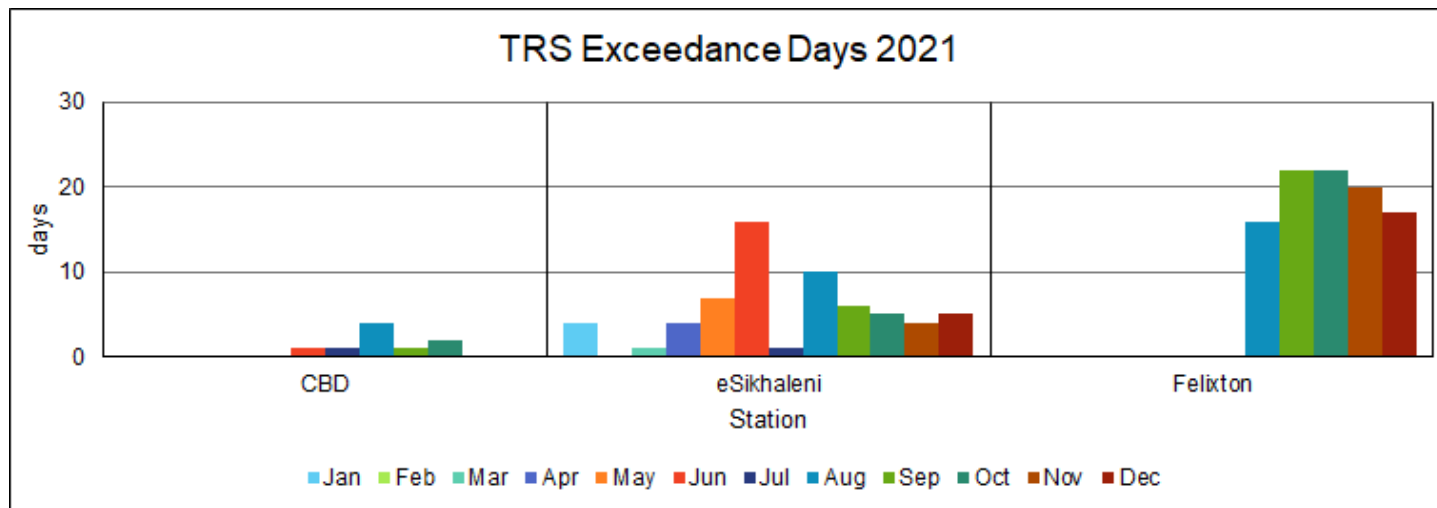


Figure 59: TRS exceedance days 2021.

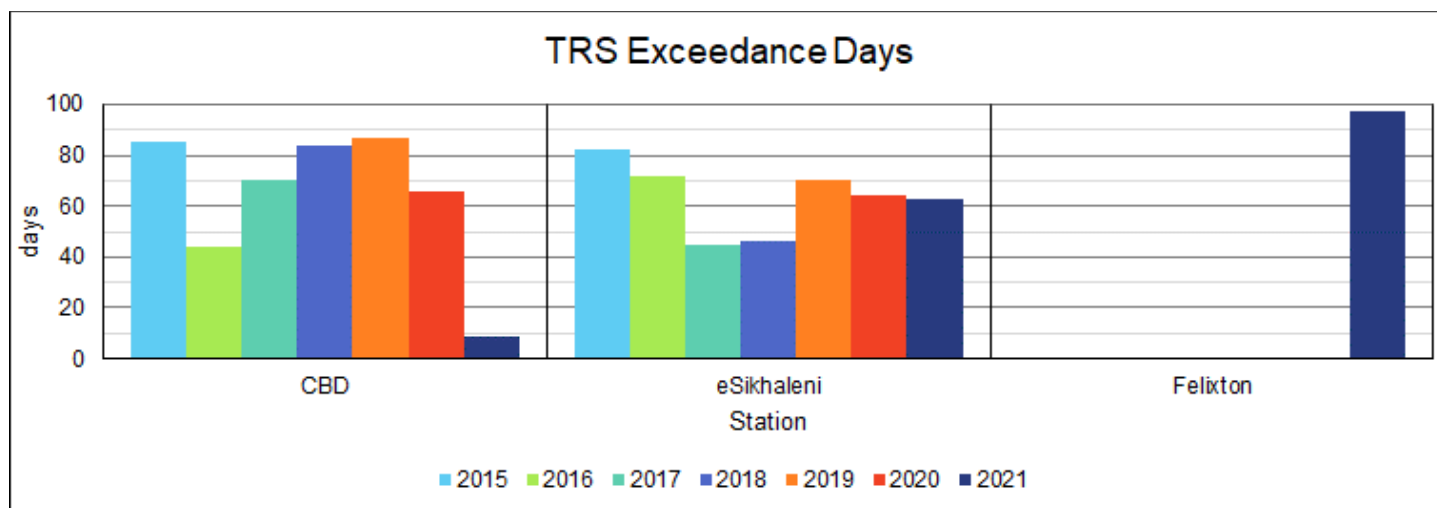


Figure 60: TRS exceedance days 2015 to 2021.

7. ANNUAL AIR QUALITY

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

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

AIMS concludes that during 2021, based on:

- ▶ Comparison of short-term average concentrations (acute exposure) to the WHO health standard; ambient air quality was compromised by:
 - PM at Brackenham, eNseleni, eSikhaleni and Felixton;
 - SO₂ at Arboretum, CBD, Felixton, Harbour West and Scorpio (it should be noted that although the frequency of SO₂ exceedances was similar to the previous year, the intensity has increased significantly); and,
 - TRS at CBD, eSikhaleni, and, Felixton.
- ▶ Comparison of long-term average concentrations (chronic exposure) to the WHO health standard; of concern are:
 - PM at Brackenham, eNseleni, eSikhaleni and Felixton; and
 - SO₂ at Harbour West and Scorpio.

8. ACKNOWLEDGEMENT

This report was compiled by Air Impact Measurement Specialists for the Richards Bay Clean Air Association; contributors include:

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Director

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APPENDIX A

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 for a maximum precision error of 10% of the reported value. A tolerance around the zero-point of plus or minus 5 ppb is permitted. All effort is, made to reduce the error to a minimum. Data collection must be above 90% for valid statistical analysis in terms of quality assurance standards.

Table A1: Quality Assurance

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

APPENDIX B OPERATIONAL REPORT

Table B1: Network status.

Serial	Purchased	Age	Type	Site	Status	Last Calibration
248970311	Jan 2004	18 years	PM	eSikhaleni	Ok	Nov 2021
274100812	Dec 2008	13 years	PM	eNseleni	OK	Nov 2021
273580810	Feb 2009	12 years	PM	CBD	OK	Nov 2021
206850912	Jan 2010	12 years	PM	Brackenham	OK	Nov 2021
E-sampler	Mar 2012	9 years	PM	Felixton	OK	Flow 31 March 2021
5499	May 2020	1 years	SO ₂	Arboretum	Installed at Arboretum as main analyser	Sep 2021
4848	Jun 2019	2 years	SO ₂	eSikhaleni	As TRS analyser 30 July 2021	Sep 2021
165 (T102)	Apr 2018	3 years	SO ₂	Felixton	OK	Sep 2021
3020	May 2017	4 years	TRS	CBD	OK	Sep 2021
2793	Jan 2017	5 years	SO ₂	Harbour West	OK	Sep 2021
92B	Mar 1997	24 years	SO ₂	Brackenham	OK, struggles to recover from outages	Sep 2021
1980	Jul 2008	13 years	SO ₂	Felixton	OK	Sep 2021
3055	May 2011	10 years	TRS	Office	C&M repaired Spare	Sep 2021
253	Mar 2012	9 years	SO ₂	Scorpio	OK	Sep 2021
593	Apr 2013	8 years	SO ₂	CBD	OK	Sep 2021
1049	Feb 2014	7 years	TRS	C&M	C&M repaired Spare	Sep 2021
1540	Mar 2015	6 years	SO ₂	eSikhaleni	OK	Sep 2021

Note: Red - Older than 10 years; Orange – Consider replacing if it fails (set aside a budget for this).

Table B2: PM₁₀ maximums.

Station		South Africa NEM: AQA Daily Standard (75 µg/m ³)	International WHO Daily Guideline (50 µg/m ³)	South Africa NEM: AQA Annual Standard (40 µg/m ³)	International WHO Annual Guideline (20 µg/m ³)
CBD	% of guideline	53%	80%	33%	65%
	µg/m ³ TEOM	40	40	13	13
	Date	2021/10/14	2021/10/14	2021/10	2021/10
eNseleni	% of guideline	124%	186%	63%	125%
	µg/m ³ TEOM	93	93	25	25
	Date	2021/07/01	2021/07/01	2021/07	2021/07
eSikhaleni	% of guideline	140%	210%	58%	115%
	µg/m ³ TEOM	105	105	23	23
	Date	2021/06/23	2021/06/23	2021/06	2021/06

Notes: The table is colour-coded according to the recorded concentration level. The colour scale ranges from blue (indicating a low concentration relative to the standard) to red (indicating an exceedance of the standard).

Table B3: PM_{2.5} maximums.

Station		South Africa NEM: AQA Daily Standard (40 µg/m ³)	International WHO Daily Guideline (25 µg/m ³)	South Africa NEM: AQA Annual Standard (20 µg/m ³)	International WHO Annual Guideline (10 µg/m ³)
Brackenham	% of guideline	75%	120%	65%	130%
	µg/m ³ TEOM	30	30	13	13
	Date	2021/05/26	2021/05/26	2021/05	2021/05
Felixton	% of guideline	173%	276%	95%	190%
	µg/m ³ E-sampler	69	69	19	19
	Date	2021/09/21	2021/09/21	2021/09	2021/09

Notes:

1) The table is colour-coded according to the recorded concentration level. The colour scale ranges from blue (indicating a low concentration relative to the standard) to red (indicating an exceedance of the standard).

Table B4: SO₂ maximums.

Station		National & International NEM: AQA & WHO 10-minute Standard 500 µg/m ³ 191 ppb	National NEM: AQA 1-hour Standard 350 µg/m ³ 134 ppb	National NEM: AQA 24-hour Standard 125 µg/m ³ 48 ppb	International WHO 24-hour Guideline 20 µg/m ³ 8 ppb	National NEM: AQA Annual Standard 50 µg/m ³ 19 ppb
Arboretum	% of guideline	131%	91%	25%	149%	10%
	(ppb)	250	122	12	12	2
	Date & time	2021/12/28 06:10	2021/12/28 06:00	2021/12/24	2021/12/24	2021/12
Brackenham	% of guideline	12%	15%	14%	83%	8%
	(ppb)	23	21	7	7	2
	Date & time	2021/12/28 06:10	2021/12/28 06:00	2021/12/24	2021/12/24	2021/12
CBD	% of guideline	1120%	747%	207%	1241%	30%
	(ppb)	2139	1001	99	99	6
	Date & time	2021/12/28 06:40	2021/12/06 23:00	2021/12/28	2021/12/28	2021/12
eSikhaleni	% of guideline	52%	41%	16%	94%	5%
	(ppb)	99	56	8	8	1
	Date & time	2021/12/25 23:10	2021/12/25 23:00	2021/12/26	2021/12/26	2021/12
Felixton	% of guideline	311%	116%	28%	169%	10%
	(ppb)	593	155	14	14	2
	Date & time	2021/12/15 14:20	2021/12/15 14:00	2021/12/15	2021/12/15	2021/12
Harbour West	% of guideline	1662%	1759%	1679%	10073%	63%
	(ppb)	3174	2357	806	806	12
	Date & time	2021/12/26 12:30	2021/12/26 22:00	2021/12/26	2021/12/26	2021/12
Scorpio	% of guideline	1589%	894%	218%	1309%	62%
	(ppb)	3036	1198	105	105	12
	Date & time	2021/05/30 21:40	2021/06/18 16:00	2021/12/07	2021/12/07	2021/05

Notes:

1) The table is colour-coded according to the recorded concentration level. The colour scale ranges from blue (indicating a low concentration relative to the standard) to red (indicating an exceedance of the standard).

Table B5: TRS maximums.

Station		Local RBCAA 10-minute Guideline 5.9 µg/m ³ 4.5ppb	Local OME 10-minute Guideline 13 µg/m ³ 9.3ppb	Local WHO 30-minute Guideline 7 µg/m ³ 5.0 ppb	Local OME Daily Guideline 14 µg/m ³ 10.1 ppb	Annual Average
CBD	% of guideline	271%	131%	172%	44%	-
	(ppb)	12.2	12.2	8.6	4.4	0.8
	Date & time	2021/10/13 21:30	2021/10/13 21:30	2021/10/13 21:00	2021/09/01	2021/10
eSikhaleni	% of guideline	764%	370%	326%	39%	-
	(ppb)	34.4	34.4	16.3	3.9	No Data
	Date & time	2021/09/26 23:10	2021/09/26 23:10	2021/05/26 04:00	2021/09/01	2021/02
Felixton	% of guideline	2502%	1211%	848%	56%	-
	(ppb)	112.6	112.6	42.4	5.7	No Data
	Date & time	2021/09/05 03:20	2021/09/05 03:20	2021/11/15 04:00	2021/09/09	2021/02

Notes:

1) The table is colour-coded according to the recorded concentration level. The colour scale ranges from blue (indicating a low concentration relative to the standard) to red (indicating an exceedance of the standard).

Table B6: Meteorological data – percentage data capture.

Station	Height (m)	Station Availability (%)	Wind Direction & Speed (%)	Temperature (%)	Relative Humidity (%)	Pressure (%)	Solar Radiation (%)	Rain (%)
Airport	2	94		93	94	94	94	
Airport	10	94	75					
Arboretum	3	93		93				
Arboretum	18	93	93					
Brackenham	3	95		95				
Brackenham	10	95	95					
CBD	2	97		97	97			97
CBD	10	97	97					
eNseleni	2	80		80	63			
eNseleni	9	80	80					
eSikhaleni	2	98		98	98			
eSikhaleni	9	99	98					
Harbour West	2	98		98				
Harbour West	10	98	98					

Notes:

Red - Not acceptable for statistical purposes (<80%)

Orange – Does not meet SANAS data capture requirements (<90%)

Yellow – Below RBCAA reporting target (<=95%)

Table B7: Meteorological data - missing data.

Missing Meteorology 2021
Missing Meteorology - January: Airport (Station) - station struck by lightning, datalogger damaged (5 - 19 January) Airport (WD/WS) - station struck by lightning, anemometer damaged (5 - 31 January) Brackenham (Station, Met) - load shedding (5, 6, 7, 14, 15, 16, 18, 21 - 26, 31 January) eNseleni (Station, Met) - AC stolen station shut down (23 December - 31 January) eSikhaleni (Station, Met) - load shedding, power outages (5, 6, 7, 11, 12, 16, 18, 19, 23, 27 January) Harbour West (Station & Met) - power outages analysers (10 - 12, 18 January)
Missing Meteorology - February: Airport (WD/WS) - station struck by lightning, anemometer damaged (5 January- 28 February) Arboretum (Station/SO₂) - frequent earth leakage trips, analyser unstable after power outages, data invalidated Brackenham (Station/SO₂/PM₁₀) - frequent earth leakage trips, analyser unstable after power outages, data invalidated eNseleni (Station) - AC stolen station shut down (23 December - 23 February) eNseleni (PM₁₀) - Analyser commissioned (26 February)
Missing meteorology - March: Airport (WD/WS) - station struck by lightning, anemometer damaged (5 January- 26 March) Arboretum (Station) - frequent earth leakage trips and load shedding (1 - 23 March)
Missing meteorology - April: Airport (Station) - power outages (4, 5, 19, 20, 30 April)
Missing meteorology - May: eNseleni (RH) - analyser faulty (1 - 31 May)
Missing meteorology - June: eNseleni (RH) - analyser faulty (1 - 30 June)
Missing meteorology - July: eNseleni (Station & Met) - power outages, electrical contactor faulty (27, 28 -30 July)
Missing meteorology - August: Brackenham (Station, PM₁₀, SO₂) - power outages (12 - 16, 27 August)
Missing meteorology - September: Brackenham (Station, Meteorology) - power outages (2, 3, 20, 22, 23, 26, 29 September)
Missing meteorology - October: eNseleni (Station & Meteorology) - load shedding, faulty 15A socket (1, 9-13, 19, 24-29 October)
Missing meteorology - November: CBD (Meteorology) - load shedding, power outage municipal maintenance (5-11, 17-19, 25, 26, 30 November) eNseleni (Station & Meteorology) - load shedding (2, 3, 5-12, 17-19, 21 November)
Missing meteorology - December: Airport (Station) - power outages (6, 9 December) Airport (WD/WS) - anemometer faulty (22 - 31 December) Arboretum (Station) - power outages, datalogger PC failure (5, 6, 9, 10-14 December) eSikhaleni (Station) - power outages (1, 8, 9, 12, 13, 24, 26 December)

Table B8: Pollutant data – percentage data capture.

Station	Station Availability (%)	PM (%)	SO ₂ (%)	TRS (%)
Arboretum	93		88	
Brackenham	95	94	85	
CBD	97	94	95	96
eNseleni	80	78	8	
eSikhaleni	98	94	97	96
Felixton	98	66	95	94
Harbour West	98		98	
Scorpio	85		85	

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

Table B9: Pollutant data – missing data.

Missing Data 2021:
Missing Data - January: Arboretum (Station & SO₂) - load shedding, power outages (5, 14, 15, 16, 17, 18 January) Brackenham (Station, PM₁₀, SO₂) - load shedding, analysers not recovering after load shedding (5, 6, 7, 14, 15, 16, 18, 21 - 26, 31 January) eNseleni (Station, PM₁₀, SO₂ & TRS) - AC stolen station shut down (23 December - 31 January) eSikhaleni (Station, PM₁₀, SO₂ & TRS) - load shedding, power outages analysers not recovering power (5, 6, 7, 11, 12, 16, 18, 19, 23, 27 January) Felixton (PM₁₀) - esampler faulty, sent for repair, data invalidated (1 December - 31 January) Harbour West (Station & SO₂) - power outages analysers (10 - 12, 18 January) Scorpio (Station & SO₂) - power outages, AC stolen station shut down (10 - 12, 15-18, 19 -31 January)
Missing Data – February: Arboretum (Station/SO₂) - frequent earth leakage trips, analyser unstable after power outages, data invalidated Brackenham (Station/SO₂/PM₁₀) - frequent earth leakage trips, analyser unstable after power outages, data invalidated eNseleni (Station) - AC stolen station shut down (23 December - 23 February) eNseleni (PM₁₀) - Analyser commissioned (26 February) eSikhaleni (Station, PM₁₀, SO₂ & TRS) - power outages analysers unstable after that, data invalidated (5, 6, 7, 9, 10 February) Felixton (PM₁₀) - esampler faulty, sent for repair, data invalidated (1 December - 28 February) Scorpio (Station & SO₂) - AC stolen station shut down (19 January - 19 February)
Missing data - March: Arboretum (Station) - frequent earth leakage trips and load shedding (1 - 23 March) Brackenham (PM and SO₂) - load shedding, power failures, data invalidation (9- 18 March) CBD (PM and SO₂) - load shedding, power failures, data invalidation (9- 18 March) eSikhaleni (PM and SO₂) - load shedding, power failures, data invalidation (10- 29 March) Felixton (PM₁₀) - esampler faulty, sent for repair, data invalidated (1 December - 31 March)
Missing data - April: Felixton (PM) - difficulty in linking e-sampler to EnviDAS (1 - 11, 15, 16, 19, 20 April)
Missing data - May: CBD (PM) - power outages, invalid data removed (17, 31 May) Felixton (PM) - power outages, invalid data removed (11 - 15 May)
Missing data - June: Brackenham (SO₂) - load shedding and power outage (2, 3, 4, 5, 9, 10, 11 June) CBD (PM & SO₂) - load shedding, power outages and faulty temperature cut off (1, 2, 3, 5 10 June) eNseleni (PM) - load shedding and power outages (1, 2, 3, 4, 5, 9, 10, 11, 13, 22, 24 June) Felixton (SO₂ & TRS) - load shedding, power outages, faulty aircon stuck on heat (2, 3, 6, 7, 9 10 - 14 June)
Missing data - July: Brackenham (SO₂) - unrest, power outages (13, 22, 29 July) eNseleni (Station & PM₁₀) - power outages, electrical contactor faulty (27, 28 -30 July) eSikhaleni (TRS) - analyser relay board faulty (28 -30 July)

Missing Data 2021:*Missing data - August:**Brackenham (Station, PM₁₀, SO₂) - power outages (12 - 16, 27 August)**Missing data - September:**Arboretum (SO₂) - power outages (12, 20, 23, 26 September)**Brackenham (Station, PM, SO₂) - power outages (2, 3, 20, 22, 23, 26, 29 September)**CBD (PM) - power outages (12, 13, 20, 22, 23, 26 September)**Scorpio (SO₂) - power outages, substation fire (20, 22, 23, 26 -30 September)**Missing data - October:**Arboretum (SO₂) - load shedding (9 -13, 24-29 October)**Brackenham (SO₂) - load shedding (12-13, 24-29 October)**CBD (PM & TRS) - load shedding (10-13, 24-29 October)**eNseleni (Station & PM) - load shedding, faulty 15A socket (1, 9-13, 19, 24-29 October)**Felixton (Station, PM, SO₂ & TRS) - load shedding (7-14, 24-29 October)**Scorpio (Station & SO₂) - load shedding, substation fire (1-6, 10, 15, 24, 28 October)**Missing data- November:**Arboretum (SO₂) - load shedding, power outage municipal maintenance (5-11, 17, 19, 25, 26, 30 November)**Brackenham (PM & SO₂) - load shedding, power outage municipal maintenance (2, 6-11, 17-19, 25, 26, 30 November)**CBD (PM, SO₂ & TRS) - load shedding, power outage municipal maintenance (5-11, 17-19, 25, 26, 30 November)**eNseleni (Station & PM) - load shedding (2, 3, 5-12, 17-19, 21 November)**Felixton (Station, PM, SO₂ & TRS) - load shedding (2, 5-11, 18, 19, 25 November)**Missing data - December:**Arboretum (Station) - power outages, datalogger PC failure (5, 6, 9, 10-14 December)**Brackenham (Station & SO₂) - power outages, analyser slow to stabilise (4, 6 December)**CBD (Station & SO₂) - power outages, analyser slow to stabilise (5, 6, 9, 12, 26 December)**eSikhaleni (Station) - power outages (1, 8, 9, 12, 13, 24, 26 December)**Felixton (PM) - frequent data packets lost.*

APPENDIX C
PRECIPITATION*Table C1: CBD monthly rainfall 2016 to 2021*

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

Table C2: Felixton monthly rainfall 2016 to 2021

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

Table C3: RBCT monthly rainfall 2016 to 2021

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

**APPENDIX D
COMPLAINTS LOG**

No	Region	Type	Source	Date	Description	Response
				January 2021		
1	Arboretum Ext	Odour + Clinical	Mondi	2021/01/02 05:30	Bad odour.	2
2	Veldenvlei	Odour + Clinical	Mondi	2021/01/02 07:44	Nauseating Mondi “guava” odour.	2
3	Veldenvlei	Odour + Clinical	Mondi	2021/01/02 09:00	“Woke up to a “guava” smell in the air”.	2
4	eNseleni	Odour + Clinical	Mondi	2021/01/02 11:57	“Rotten cabbage odour, causing scratchy throat, slight headache and stuffy nose.”	2
5	Arboretum Ext	Odour + Clinical	Foskor	2021/01/02 15:12	“Terrible odour causing burning nose” Based on wind direction, FOSKOR was notified.	1
6	eNseleni	Odour + Clinical	Mondi	2021/01/06 11:40	Mondi “cabbage” odour causing headache.	10
7	eNseleni	Odour + Clinical	Mondi	2021/01/10 11:14	Mondi “cabbage” odour.	10
8	eNseleni	Odour + Clinical	Mondi	2021/01/10 21:44	Mondi “cabbage” odour.	10
9	John Ross Highway	Excessive Emissions	Foskor	2021/01/11 11:05	Excessive emissions were emanating from Foskor’s A\B Stack – dense and falling to the ground.	4
10	John Ross Highway	Excessive Emissions	South32	2021/01/11 11:06	Excessive emissions were emanating from what appeared to be one of the potline stacks.	36
11	Hillside	Dust	South32	2021/01/12 12:10	Alumina dust emanating from the conveyor/transfer station adjacent to the Ed Village.	7
12	John Ross Highway	Excessive Emissions	Enviro Mzingazi Gypsum	2021/01/16 12:00	Significant dust being generated from activities on the Gypsum Dam.	3
13	eNseleni	Odour + Clinical	Mondi	2021/01/16 20:18	Strong Mondi “Cabbage” odour.	10
14	Felixton	Odour + Clinical	City of uMhlathuze	2021/01/18 10:35	Very strong sewage type odour. (On follow-up, complainant indicated odour has been present since Friday.)	11
15	Veldenvlei	Fallout	South32	2021/01/19 00:00	White powder fallout on vehicle and property. (Complainant reports that this has been occurring for a couple of weeks.)	8
16	eNseleni	Odour + Clinical	Mondi	2021/01/20 07:13	Strong Mondi “Cabbage” odour causing headache.	19

No	Region	Type	Source	Date	Description	Response
17	Brackenham	Odour + Clinical	City of uMhlathuze	2021/01/20 08:00	"Sewer overflowing at the corner of 61 Grandiceps Brackenham for the past three days causing such an unbearable stench that we can't breathe" complainant says they have reported the matter to the Municipality. The latter has been on site but have done nothing to resolve the problem.	11
18	eNseleni	Odour + Clinical	Mondi	2021/01/20 19:40	Very strong "cabbage" odour. "Mondi smell has been going all day, but is very strong now. I've had a constant headache and its starting to burn my nose."	19
19	eNseleni	Odour + Clinical	Mondi	2021/01/21 07:30	Strong Mondi "Cabbage" odour.	20
20	eNseleni	Odour + Clinical	Mondi	2021/01/22 16:20	Mondi "Cabbage" odour causing headache and burning nose.	21
21	Veldenvlei	Fallout	South32	2021/01/24 06:35	The complainant woke to find the same white "granular" fallout as previously reported. Not as bad. A friend of the complainant informed him that there was the same fallout at his home in Disa Dives.	8
22	Arboretum Ext	Fallout	TPT	2021/01/24 20:00	Black dust deposition in complainants home. Complainant reports having mopped her floors earlier in the day, and in the evening, her baby was covered in black dust from walking and crawling on the floor. Aside from the obvious nuisance impact, the complainant is concerned about health issues associated with breathing in the dust.	9
23	Alton	Fallout	South32	2021/01/25 06:30	"My car was parked outside my office, 52 Dollar Drive Alton, and after work today 25 January 2021, from about 06h30 – 11h30 and then from 12h20 – 19h00, I noticed this white-ish paste all over my car. It looked like my windows were frozen up, but when I touched it, it felt granular, and even after rinsing my car with clean water, it formed little white spots all over, and I had to wash it off with a degreaser."	8
24	Alton	Fallout	South32	2021/01/26 06:30	Significant white fallout on-premises and vehicles.	8
25	Arboretum Ext	Fallout	South32	2021/01/26 07:48	Complainant woke to find white "Granular" fallout on their vehicles and their neighbour's vehicle.	8
26	Alton	Fallout	South32	2021/01/27 00:00	White dust inside the workshop.	8
27	Felixton	Odour + Clinical	City of uMhlathuze	2021/01/27 00:00	Sewage spilling causing a bad odour.	11
28	Wildenweide	Fallout	South32	2021/01/27 00:00	White dust fallout around the home. The attached photos were taken this morning. However, the fallout has been noticed for the last few days.	8
29	Wildenweide	Fallout	South32	2021/01/27 00:00	White dust fallout around home.	8
30	Veldenvlei	Fallout	South32	2021/01/27 12:40	White dust fallout on the vehicle.	8
31	Wildenweide	Fallout	South32	2021/01/28 00:00	Morning and late afternoon, White dust fallout.	8
32	Veldenvlei	Fallout	South32	2021/01/28 09:00	Significant white dust on vehicles.	8
33	Veldenvlei	Fallout	South32	2021/01/28 14:50	Significant white dust fallout, which can be visibly seen falling.	8

No	Region	Type	Source	Date	Description	Response
34	Veldenvlei	Fallout	South32	2021/01/28 15:00	Significant white dust.	8
35	Veldenvlei	Fallout	South32	2021/01/28 15:50	White dust fallout. While outdoors, my eyes became irritated and scratchy.	8
36	Veldenvlei	Fallout	South32	2021/01/28 15:58	White dust on the vehicle windscreen. I have been suffering from severe and unexplained eye and sinus irritation for the past week.	8
37	Alton	Fallout	South32	2021/01/28 16:48	Excessive amounts of white dust covering premises and cars.	8
38	Alton	Fallout	South32	2021/01/28 16:50	Significant white dust on vehicles and premises. Comment: "If this is corrosive, I will be submitting claims."	8
39	CBD	Fallout	South32	2021/01/29 12:00	White dust on cars and property	8
40	ZCBF	Fallout	South32	2021/01/29 13:00	Significant white dust on the premises.	8
41	Veldenvlei	Fallout	South32	2021/01/29 15:30	White dust on cars and property. Comment: "I have had to use an asthma pump since last week."	8
42	Alton	Fallout	South32	2021/01/30 00:00	White dust fallout on-premises and vehicles.	8
43	Veldenvlei	Fallout	South32	2021/01/30 00:00	Significant white dust on vehicles started noticing it on the 28th.	8
44	Veldenvlei	Fallout	South32	2021/01/30 11:30	White dust on plants, paving, a water feature (Basically everywhere)	8
45	Veldenvlei	Fallout	South32	2021/01/30 15:58	White dust on vehicle windscreen (windscreen was washed earlier in the morning)	8
				February 2021		
1	eNseleni	Odour + Clinical	Mondi	2021/02/01 13:35	Mondi odour which started at around 11h00, very strong by 13h35. More pungent than the normal "Cabbage" odour.	18
2	Alton	Fallout	South32	2021/02/01 14:59	Washed car and its covered in white dust again.	8
3	CBD	Fallout	South32	2021/02/01 15:00	White dust on premises causing eye irritation for workers outdoors.	8
4	Veldenvlei	Fallout	South32	2021/02/01 15:00	White powder on car again.	8
5	Alton	Fallout	South32	2021/02/03 10:10	Corrosive spots on garage doors which complainant believes is a result of the alumina dust fallout on his premises over the 10 days.	8
6	Veldenvlei	Fallout	South32	2021/02/08 00:00	Alumina fallout on vehicles.	8
7	Alton	Fallout	South32	2021/02/08 06:00	Alumina fallout on premises.	8

No	Region	Type	Source	Date	Description	Response
8	Wildenweide	Fallout	South32	2021/02/08 06:44	Alumina fallout.	8
9	Veldenvlei	Fallout	South32	2021/02/08 07:55	Alumina fallout on car	8
10	Veldenvlei	Fallout	South32	2021/02/08 08:05	Alumina fallout on vehicle. I wish to place on record that I have suffered severe eye irritation on a regular basis over the past 2 weeks.	8
11	Wildenweide	Fallout	South32	2021/02/09 08:00	Alumina fallout on property.	8
12	Veldenvlei	Fallout	South32	2021/02/11 08:00	Alumina fallout on vehicle.	8
13	Meerensee	Odour + Clinical	Mondi	2021/02/12 01:45	Very Strong "Cat urine" odour.	15
14	Veldenvlei	Odour + Clinical	Mondi	2021/02/12 01:45	Lingering Mondi odour.	15
15	eNseleni	Odour + Clinical	Mondi	2021/02/12 16:55	Strong Mondi "Cabbage" odour.	16
16	eNseleni	Odour + Clinical	Mondi	2021/02/19 12:01	Strong Mondi "Cabbage" odour.	17
17	Foskor area	Odour + Clinical	Foskor	2021/02/27 11:20	Visible acid mist cloud emanating from Foskor drifting over onto the bridge. Appeared to be emanating from the sulphur melter area. On opening my window my eyes started burning.	12
				March 2021		
1	Foskor area	Abnormal visible emissions	Foskor	2021/03/02 18:27	Visible brown emissions appeared to be emanating from Foskor Sulphur A, Band C Plant stacks.	13
2	Arboretum Ext	Sewage Odour	Municipal Sewer	2021/03/08 10:15	(Adjacent to Technikon), ongoing (Was really bad on the 3rd March), Unbearable stench emanating from a Leaking Sewer manhole. Sewage has been overflowing on and off for about a year. Leak has been reported but no corrective action has been taken. The complaint will be forwarded to the Municipality.	14
3	Foskor area	Abnormal visible emissions	Foskor	2021/03/12 10:39	Please Investigate A/B stack. Emissions to be excessive.	23
4	Foskor area	Abnormal visible emissions	Foskor	2021/03/15 17:20	White emissions suspected to be SO3 from A&B stack.	24
5	eNseleni	Odour + Clinical	Mondi	2021/03/16 14:40	Strong Mondi "cabbage	29
6	eNseleni	Odour + Clinical	Mondi	2021/03/17 23:00	Strong Mondi "Cabbage" odour causing throat and nose irritation and headache. Mondi was notified.	33

No	Region	Type	Source	Date	Description	Response
7	Reclamation Group	General Air Pollution	Reclamation Group	2021/03/18 09:50	air pollution emanating from burning activities at the Reclamation Group in Alton. The RBCAA notified the City's Air Quality Management Unit, who have investigated and provided an investigation report (See attached).	1
8	Veldenvlei	Fallout	South32	2021/03/18 18:50	Occurred overnight \ early morning, Alumina fallout on car. Picture . South 32 were notified	22
9	eNseleni	Odour + Clinical	Mondi	2021/03/18 23:00	Strong Mondi "Cabbage" odour causing throat and nose irritation and headache. Mondi was notified.	33
10	eNseleni	Odour + Clinical	Mondi	2021/03/21 13:48	Mondi odour causing headache.	30
11	Veldenvlei	Odour + Clinical	Mondi	2021/03/22 05:20	"Strong rotten egg smell" causing headache.	31
12	Alton	Fallout	South32	2021/03/22 06:30	Discovered at 06h30, Alumina fallout on premises.	25
13	Veldenvlei	Odour + Clinical	Mondi	2021/03/23 07:00	"Cat urine" odour. Same odour present at 07h50 in the CBD.	31
14	CBD	Abnormal visible emissions	Foskor	2021/03/23 12:55	Excessive emissions emanating from A/B stack.	27
15	Veldenvlei	Fallout	South32	2021/03/23 14:00	Discovered at 14h00, Alumina fallout on vehicle windscreen.	26
16	Foskor area	Abnormal visible emissions	Foskor	2021/03/30 17:09	Visible brown emissions appeared to be emanating from Foskor Sulphur A, Band C Plant stacks.	28
				April 2021		
1	Veldenvlei	Fallout	South32	2021/04/04 17:35	White substance on windscreen overnight (see attached photo)	32
2	Veldenvlei	Fallout	South32	2021/04/04 17:35	White substance on windscreen overnight (see attached photo)	32
3	eNseleni	Odour + Clinical	Mondi	2021/04/08 13:00	Cabbage odour causing headache and sinus	37
4	eNseleni	Odour + Clinical	Mondi	2021/04/11 19:40	Very strong cabbage odour causing bad headache	38
5	Veldenvlei	Fallout	South32	2021/04/12 08:00	White substance on windscreen overnight	34
6	Veldenvlei	Fallout	South32	2021/04/12 08:00	White substance on windscreen overnight	34
7	Wildenweide	Fallout	South32	2021/04/12 08:00	White substance on windscreen overnight	34
8	Veldenvlei	Fallout	South32	2021/04/13 08:00	Alumina fallout on vehicle.	35

No	Region	Type	Source	Date	Description	Response
9	Veldenvlei	Fallout	South32	2021/04/14 08:00	Alumina fallout on vehicle.	35
10	eNseleni	Odour + Clinical	Mondi	2021/04/15 23:37	Very bad cabbage odour causing headache and burning nose	39
11	eNseleni	Odour + Clinical	Mondi	2021/04/16 06:09	Been smelling Mondi all night, now a guava odour.	39
12	Veldenvlei	Odour + Clinical	Mondi	2021/04/16 10:38	Sharp cat urine odour causing burning eyes and runny nose.	40
13	eNseleni	Abnormal visible emissions	Mondi	2021/04/19 13:00	Strong cabbage odour causing burning nose.	41
14	Felixton	Abnormal visible emissions	THS	2021/04/21 07:37	Smoke all over Felixton College	1
15	Felixton	Abnormal visible emissions	THS	2021/04/21 11:21	White smoke from TH engulfing Roots school affecting some of the children's breathing.	1
16	Felixton	Abnormal visible emissions	THS	2021/04/21 12:32	Heavy smoke over the school. Concerned about the children's health.	1
17	Foskor area	Abnormal visible emissions	Foskor	2021/04/22 12:12	Very dark emissions emanating from A&B Stack.	42
				May 2021		
1	eNseleni	Odour + Clinical	Mondi	2021/05/09 11:00	Pungent "cabbage" odour causing sinus and headache.	45
2	Foskor area	Abnormal visible emissions	Foskor	2021/05/10 09:00	Abnormal emissions emanating from Foskor's A\B stack.	43
3	eNseleni	Odour + Clinical	Mondi	2021/05/10 12:15	Pungent "cabbage" odour causing sinus and headache	46
4	Foskor area	Abnormal visible emissions	Foskor	2021/05/11 14:20	Bad Stack from Sulphuric Acid B and C plant.	44
5	Arboretum Ext	Odour + Clinical	Mondi	2021/05/12 09:00	Pungent guava odour. Had to close up house.	47
6	Harbour	Odour + Clinical	Mondi	2021/05/12 10:15	Employees have been complaining about a "cabbage like smell" that has been in the air since this morning and is still persistent at BTT plant .BTT personnel also picked up odours this morning around 08: 30 am whilst driving into Richards bay.	47
7	eNseleni	Odour + Clinical	Mondi	2021/05/16 22:00	Strong Mondi "cabbage" odour.	48

No	Region	Type	Source	Date	Description	Response
8	Empangeni	Odour + Clinical	Mondi	2021/05/22 13:50	“Very bad Mondi rotten egg odour from around 12h30”	49
9	Arboretum Ext	Odour + Clinical	Mondi	2021/05/22 22:10	Arboretum Extension	49
10	Harbour	Odour + Clinical	Mondi	2021/05/26 09:00	Strong “rotten cabbage” smell causing burning of the eyes.	50
11	Veldenvlei	Odour + Clinical	Mondi	2021/05/28 10:15	Pungent “rotten egg” odour.	51
12	Veldenvlei	Odour + Clinical	Mondi	2021/05/28 10:28	“heavy cabbage smell causing burning of the eyes”.	51
13	eNseleni	Odour + Clinical	Mondi	2021/05/28 10:40	Mondi “cabbage odour”	51
14	eNseleni	Odour + Clinical	Mondi	2021/05/30 12:00	Mondi “cabbage odour”	52
				June 2021		
1	Meerensee	Odour + Clinical	Mondi	2021/06/01 12:30	“Rotten egg\cabbage” odour causing headache and burning eyes.	54
2	Veldenvlei	Odour + Clinical	Mondi	2021/06/01 17:55	Pungent Mondi “cabbage” odour.	55
3	Veldenvlei	Odour + Clinical	Mondi	2021/06/01 17:55	Pungent Mondi “cabbage” odour.	55
4	Veldenvlei	Odour + Clinical	Mondi	2021/06/01 19:30	Strong “cat urine” odour.	55

No	Region	Type	Source	Date	Description	Response
5	eNseleni	Pollution	Reinhardt Transport Group Depot	2021/06/02 18:37	Ongoing Noise, Fumes, Sewage Odour from Reinhardt Transport Group Depot. The complainant has reached out to the Reinhardt Transport via email and face book messenger but has not had a response to her communication; "My name is Tracy, I am from Richard's Bay, and on behalf of myself and my fellow residents, I would like to respectfully bring to your attention, a rather concerning issue affecting those of us residing in the vicinity. Our concern is that there is a Reinhardt truck depot close to where we reside about 10km outside of Richard's Bay, that is a cause of a lot of irritation by way of noise and exhaust pollution. About 2 years ago, this particular truck depot started acting as a storage facility for cargo and from there onwards, trucking activity has been increasing steadily with this, it must also be brought to your attention that some of the drivers of these big trucks are very reckless on the road, many times we, as well as other small vehicles have been forced out of the way and the trucks often pull out in front of oncoming traffic on the N2, this is endangering lives. As for the cargo in and out of the truck depot, the trucks seem to idle a lot waiting around and we get the diesel exhaust odour wafting towards our residence, it's especially bad if the wind is blowing in our direction, this is a health concern for us all living nearby, as well as the uncovered cargo that blows towards us when the wind blows in our direction, there is noise from the truck depot some nights past 23:00 and constant banging of the truck trailer bins at all hours, as they empty their cargo, the banging becomes unbearable, it sounds like they are beating the bins with hammers or sticks. There is constant movement of trucks and noise on the property as the payloaders load, pack and push the cargo around at the site that the trucks are loading. The road that the trucks are using is also not repaired and massive holes are the result of these big vehicles in and out all the time. Is there anything that can be done to minimize the noise and exhaust pollution levels that we are experiencing and perhaps for the road to be repaired. The video I have attached is to show how loud the beating of the truck bins are at the truck stop, this was taken from my house. This noise goes on all day as well as at night up until 23:30 and is unbearable. Please could something be done about this?"	1
6	Foskor area	Abnormal visible emissions	Foskor	2021/06/09 09:00	Excessive emissions emanating from Foskor A\B Stack	53
7	Veldenvlei	Fallout	South32	2021/06/17 16:24	Alumina dust fallout on vehicle at Bokbaaivgyie	56
				July 2021		
1	Veldenvlei	Fallout	South32	2021/07/03 00:00	Alumina dust fallout on vehicle at Bokbaaivgyie	57
2	Veldenvlei	Fallout	South32	2021/07/09 13:30	Alumina dust fallout on vehicle at Bokbaaivgyie	58
3	eNseleni	Odour + Clinical	Mondi	2021/07/21 11:00	cabbage" odour	1
4	Veldenvlei	Fallout	General dust	2021/07/23 00:00	Particulate matter fallout 23 July	59

No	Region	Type	Source	Date	Description	Response
5	Felixton	Abnormal visible emissions	THS	2021/07/23 15:59	Significant emissions from Tongaat Hulett resulting in severe smoke over the village. Tongaat Hulett were notified at the time.	61
6	eNseleni	Odour + Clinical	Mondi	2021/07/29 18:00	cabbage" odour	1
				August 2021		
1	eNseleni	Odour + Clinical	Mondi	2021/08/02 09:30	"cabbage/guava odour"	71
2	Veldenvlei	Fallout	South32	2021/08/07 06:34	White fall out overnight at premises.	60
3	Veldenvlei	Fallout	South32	2021/08/07 06:54	White fall out overnight at premises.	60
4	Felixton	Odour + Clinical	THS	2021/08/07 07:23	Whilst passing Felixton, smelt a strong rotten egg smell.	61
5	Veldenvlei	Odour + Clinical	Mondi	2021/08/07 08:00	Pungent guava odour	72
6	Veldenvlei	Fallout	South32	2021/08/07 10:36	White fall out overnight at premises.	60
7	Felixton	Odour + Clinical	THS	2021/08/08 21:03	From the Engen garage just get a sewage smell that gives you a headache.	61
8	eNseleni	Odour + Clinical	Mondi	2021/08/09 10:45	cabbage" odour	73
9	Felixton	Abnormal visible emissions	THS	2021/08/09 17:10	Smoke over the village emanating from Tongaat Hulett making difficult to breathe.	1
10	eNseleni	Odour + Clinical	Mondi landfill	2021/08/10 07:55	Strong "cabbage" odour through the night and early hours of the morning causing nasal congestion and headache.	74
11	Felixton	Odour + Clinical	THS	2021/08/13 07:50	Rotten Egg Smell	61
12	eNseleni	Odour + Clinical	Mondi	2021/08/14 10:00	Strong Mondi Cabbage odour causing nasal congestion and headache.	66
13	Veldenvlei	Fallout	South32	2021/08/23 15:00	Significant white fallout (alumina) on vehicle and table. (photos taken at 15h00)	62
14	Veldenvlei	Fallout	South32	2021/08/23 18:15	Significant white fallout (Alumina) on vehicle. (Photos taken at 18h15)	62
15	eNseleni	Odour + Clinical	Mondi	2021/08/27 15:16	Bad Mondi cabbage odour	65
16	Veldenvlei	Odour + Clinical	Mondi	2021/08/29 07:24	Terrible lingering Mondi odour that leaves a taste in the mouth	64

No	Region	Type	Source	Date	Description	Response
				September 2021		
1	Veldenvlei	Odour + Clinical	Mondi	2021/09/01 08:16	Pungent Mondi guava odour	63
2	eNseleni	Odour + Clinical	Mondi	2021/09/04 05:30	Strong Mondi odour	68
3	eNseleni	Odour + Clinical	Mondi	2021/09/05 19:54	Extremely strong Mondi cabbage\cat urine odour causing nasal irritation	69
4	John Ross Highway	Odour + Clinical	Foskor	2021/09/06 08:30	Pungent acidic odour emanating from the Foskor plant causing tight chest.	2
5	Foskor area	Abnormal visible emissions	Foskor	2021/09/13 13:20	White gas emission on the Sulphuric acid C plant	67
6	Foskor area	Abnormal visible emissions	Foskor	2021/09/15 10:45	Significant plume coming from Foskor towards CBD.	2
7	eNseleni	Odour + Clinical	Mondi	2021/09/15 20:00	Strong Mondi "cabbage" odour causing headache.	70
8	Felixton	Odour + Clinical	THS	2021/09/21 07:54	Smoke and bad odour making it "hard to take a breath"	76
9	John Ross Highway	Odour + Clinical	Foskor	2021/09/21 08:54	Strong Foskor odour triggering asthma and causing tight chest	1
				October 2021		
1	Felixton	Effluent	THS	2021/10/26 10:00	Excessive"effluent being discharged into the river at approx. 10h00 this morning. Significant frothing observed.	75
				November 2021		
1	Felixton	Odour	THS	2021/11/24 16:47	Strong odour emanating from Tongaat Hulett	1
2	Felixton	Odour	THS	2021/11/29 11:31	"Very strong smell again"	1
				December 2021		
1	Veldenvlei	Fallout	South32	2021/12/07 08:40	Alumina fallout observed on vehicle windscreen	77
2	Veldenvlei	Fallout	South32	2021/12/07 08:45	Alumina fallout observed on vehicle windscreen	77
3	Wildenweide	Fallout	South32	2021/12/22 00:00	White fallout on property.	78
4	Veldenvlei	Fallout	South32	2021/12/23 00:00	White fallout observed on vehicle windscreen	78

No	Region	Type	Source	Date	Description	Response
5	Birdswood	Fallout	South32	2021/12/23 14:50	White fallout observed at home.	78
6	Veldenvlei	Odour + Clinical	Foskor	2021/12/28 06:50	Foskor odour accompanied by a haze causing coughing and eye and nose irritation	1

RESPONSES

Response	Industry Feedback
1	Unresolved / No response
2	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Non Condensable Gases (NCGs) from the Flare and Incinerator 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 246o Min = 208o. Max = 273o. Average wind speed = 2.4 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 221o Min = 174o Max = 259o. Average wind speed = 2.2 m/s Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at the Mondi monitoring stations prior or during the time of the complaint: RBCAA Monitoring Stations No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of an odour complaints from the RBCAA on the 2nd January 2021 and an investigation was immediately undertaken. Root cause was identified TRS emissions from the Flare and Incinerator. At the time of the incident, Hardwood Non-Condensable Gases (NCGs) were diverted to the Flare, and Softwood NCGs diverted to the Incinerator for combustion as the Lime Kiln was down due to low mill production. At 06:00 the Flare tripped, automatically diverting gases to the Incinerator. However, the Incinerator experienced difficulty in effectively combusting all the NCGs. In order to reduce the load on the Incinerator the mill was kept at low production rates and Softwood cooking placed on hold. As soon as the Flare tripped, the Operation Team began trouble shooting and identified the ignitor as the problem, they began working on resolving the issue with instrumentation support. By 08:30 extra support was requested, and Process Engineer and Senior Support Manager called to assist. The feedback system was found to faulty on the pilot ignitor of the Flare The Flare was started up at 12:35. 7. Corrective Actions: 1) Softwood cooking placed on hold to reduce NCG load to Incinerator; 2) Mill production remained on low rates to reduce load on incinerator; 3) Instrumentation, process engineer and support manager called out to assist; 4) Flare was put back into operation. Mondi and RBCAA Ambient TRS (ppb) Monitoring Stations: (30 min avg) Mondi Landfill Station: Mondi Alton Station Mondi Hytec Station Mondi UVS Station RBCAA CBD Station RBCAA eSikhaleni Station . Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects are listed in the table below. No. Action By When Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
3	Foskor Mannana Ntoampe responded: Immediate Actions Taken: EMG was notified so an investigation can be initiated. Incident Root cause. The nature of current operations at the Gypsum dam and unfavourable weather conditions on the day (high temperature and wind). Corrective/Preventative Actions: Water was sprayed to suppress dust General comments. Refer to the attached Investigation Report compiled by EMG. Key Learnings: No gypsum loading during windy periods. A permanent water spray system is required
4	Foskor Mannana Ntoampe responded: Immediate Actions Taken: Plant production engineers informed so they can discuss with the team. Plant personnel on shift and engineers initiated the investigation. Incident Root cause: There was a hole identified on the B Plant Final Tower above the distribution manhole resulting in moisture ingress. Corrective/Preventative Actions: The plant was stopped for 2 hours for the Final Tower Repairs. General comments: None. Key Learnings: None.

Response	Industry Feedback
5	Mpact Yolande Schoeman responded: Source and Nature of Emissions: The Environmental and Research Technologist visited the Mpact Wastewater Treatment Plant. (WWTP) when the odour complaint was received as part on the investigation process. A southerly wind was blowing ($\pm 180^\circ$) at a speed of 3.8m/s and the ambient temperature at the WWTP was 26°C. At the time of the investigation ,their were no effluent pond and/or clarifier cleaning activities occurring that could of resulted in an offensive type of odour. WWTP reports also indicate that their have been no effluent pond and/or clarifier cleaning activities since 15 Jan up until 18 Jan 2021. Mpact Felixton Mills' boiler stacks opacities were below permit requirements and could not have impacted ambient air quality to generate an offensive odour. Compliance with Permits: No non-compliances identified. Findings & Recommendations: Mpact is unlikely to be the source of the odour detected in Felixton Village from the 15th of January up until 18th of January 2021. THS Nicolas Govender responded: Findings on Complaint: Operational we are currently shut We are currently busy the opening and washing down of vessels in the factory section of the plant for our maintenance shut Some residue does remain in the vessels after we had shut down in December This may have resulted in the smell odour once washed out but it doesn't smell like sewage. It was also noted that the municipal sewage plant before the underpass and a manhole outside our main office was also overflowing on Saturday up until Monday The spillage was reported to the Municipality call centre a few times The one at the main office is very close to Felixton Roots and may be the likely source of the odour. Compliance with Permits: There was no non compliance with permit conditions. Root Cause & Corrective Action: We will continue to monitor and report sewage leaks to the Municipality.
6	RBTGrindrod Anzel Horn responded: Please kindly note the following from the Grindrod Line Manager-Operations: "Kindly note that we have been on a 11-day Coal Shut since the 16th January to date. No Train offloading activities has been done since then. On Sunday we had experienced heavy rainfall until yesterday evening. Our vessel only resumed loading at 18:35 last night. Not sure which location or surrounding area the Black Dust could have been elevated from. Certainly not from RBTG." Below also see the relevant wind data on the day of the complaint which indicates a dominant wind direction of SSW during the time of the complaint which confirms that the dust fallout could not have been a result of wind-blown dust from the Navitrade coal stockpiles either.
7	South32 Alison Gerber responded. Investigation: On 16 January no alumina was being transferred to Hillside from the harbour as the Logistics team were preparing to transfer coke. The Logistics team specifically monitored alumina transfer on 17 January and did not observe any fugitive dust on the overland conveyor. Root cause: It is possible that residual alumina on the sides of the conveyor was picked up by the high wind speed observed on 16 January. Actions: A preventative weekly conveyor cleaning schedule is in place
8	South32 Calvin Mkhabela responded: Hillside has conducted an investigation to understand the source and root cause of the emissions. One of the identified sources of emission was mainly the Gas Treatment Centre number 2 (GTC2). The GTC's are an integral part of our operations, and due to the nature of the aluminium production process, cannot be stopped as they need to operate on a continuous basis. The teams have conducted an investigation and the identified contributing factors to the recent emissions are being addressed in a timely manner. Unfortunately, our key supplier of filter bags for the GTC's was negatively impacted by the Covid-19 pandemic which resulted in unforeseen delays in the delivery of the bags. The adhoc replacement programme of damaged filter bags was also impacted as our specialised contracting partner was also impacted by the pandemic. The global bag change-out programme at the GTC's is by design a continuous replacement programme, and to minimise emissions our immediate response plan includes the following: - The specialised contracting firm is on site and is fast-tracking the planned change-out and ad-hoc bag replacements - Additional resources have been sourced to bolster the team conducting the filter bag changes - We have mobilised dedicated resources for the ad-hoc bag change-out and immediate repair of premature bag failures - Resources are working through the weekend to resolve the GTC2 emissions - Our bag supplier has reinstated normal production and expected delivery is in February 2021 - Further to the above, we have also engaged another supplier to source and air freight the filter bags to fast-track the change-out programme
9	RBCT Thobile Nkosi replied: On the 24th January 2021, RBCT was on normal operation and did not have any abnormal activities occurred on the day. Based on wind direction and Particulate matter monitoring results for the 24th of January, RBCT is not responsible for the complaint. RBTGrindrod Anzel Horn replied: Please kindly note the following from the Grindrod Line Manager-Operations: "Kindly note that we have been on a 11-day Coal Shut since the 16th January to date. No Train offloading activities has been done since then. On Sunday we had experienced heavy rainfall until yesterday evening. Our vessel only resumed loading at 18:35 last night. Not sure which location or surrounding area the Black Dust could have been elevated from. Certainly not from RBTG." Below also see the relevant wind data on the day of the complaint which indicates a dominant wind direction of SSW during the time of the complaint which confirms that the dust fallout could not have been a result of wind-blown dust from the Navitrade coal stockpiles either.

Response	Industry Feedback
10	Mondi Candice Webb responded: Please allocate Complaints number 6,7,8 to Mondi and I will respond as soon as possible.
11	City of uMhlathuze: sanitation
12	Foskor Kurt Brinkhuis & Nkosinathi Mqadi: Immediate Actions Taken The Sulphuric acid plant A was shut so to repair the gas leaks. Incident Root cause There was a gas leak in one of Sulphuric A-plant's structures. Corrective/Preventative Actions Shut the Sulphuric acid A-plant and repaired the leaks.
13	Foskor Kurt Brinkhuis & Nkosinathi Mqadi: Immediate Actions Taken • Standby Engineer was contacted and asked to investigate the matter. • The investigation was conducted . • The issue was discussed with the Operations Management team. Incident Root cause It was concluded that it could have been the reflection caused by the sunset. Corrective/Preventative Actions None.
14	City of uMhlathuze responded: Thank you for bringing this to our attention, the team has been dispatched to attend to the complaint. Follow up inspection will be conducted to check on the situation.
15	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Non-Condensable Gases to atmosphere due to a Flare trip 3. Metrological Conditions Mondi monitoring station: Average wind direction during time of complaints = 250o Min = 160o. Max = 360o Average wind speed = 1.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 252o Min = 95o Max = 325o. Average wind speed = 0.2 m/s. Calculation of Impacts Mondi Monitoring Stations: · TRS of 17ppb recorded at Alton station at 23:00. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: During the evening of 11 February 2021, the Mondi mill was in start up condition after a planned reliability shut. Non-condensable gases were diverted to the Flare and Modo for incineration as per design. At 20:57 the Flare tripped due to a brief interruption of air supply and NCG's vented through the Carbon Filters and to atmosphere. The production team immediately reacted and Flare was back in operation by 21:02. Instrumentation and process engineers were called to identify the root cause of the interrupted air supply. The above incident, coupled with low wind speeds most likely resulted in poor dispersion of the odour and subsequent complaints during the early hours of the morning. Corrective Actions: 1) NCG Softwood cooking placed on hold to reduce NCG load to Modo; 2) Flare was put back into operation; 3) Instrumentation and process engineer called out to address. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 4 No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs.

Response	Industry Feedback
16	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Fugitive emissions during abnormal conditions – mill start up 3. Metrological Conditions: Mondi monitoring stations. Average wind direction during time of complaints = 201o Min = 167o. Max = 227o. Average wind speed = 1.4 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint Avg = 188o Min = 52o Max = 336o. Average wind speed = 1.6 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior or during the time of the complaint: Description of Incident: During 12 February 2021, the Mondi mill was in start up after a planned reliability shut. Despite a comprehensive investigation. No root cause for the complaint was identified. It is likely that fugitive odour from unstable mill conditions contributed to ambient odour at the time of the complaint. 7. Corrective Actions: None 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When: 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
17	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Source of Odour (AEL source code where applicable). Fugitive emissions during abnormal conditions – mill start up after crash shut 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 210o Min = 207o. Max = 237o. Average wind speed = 4.8 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint Avg = 203o Min = 183o Max = 209o. Average wind speed = 5.2 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior or during the time of the complaint. Please note landfill station was out of operation at the time of the complaint: Description of Incident: On 19 February 2021, the Mondi mill was in start up after a crash shut caused by a mill wide power outage. Despite a comprehensive investigation. No root cause for the complaint was identified. It is likely that fugitive odour from unstable mill conditions contributed to ambient odour at the time of the complaint. 7. Corrective Actions: None 8. Preventative Measures : Mondi has committed future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
18	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified within Mondi. 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 204o Min = 198o. Max = 250o. Average wind speed = 5.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 203o Min = 201o Max = 206o. Average wind speed = 8.8 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at the Mondi monitoring stations prior or during the time of the complaint. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions None taken. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
19	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified 3. Metrological Conditions Mondi monitoring stations: Average wind direction during time of complaints = 210o Min = 192o. Max = 232o. Average wind speed = 5.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 205o Min = 201o Max = 208o. Average wind speed = 6.5 m/s. Calculation of Impacts Mondi Monitoring Stations: No TRS exceedances recorded at the Mondi monitoring stations prior or during the time of the complaint. RBCAA Monitoring: Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
20	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 210o Min = 132o. Max = 255o. Average wind speed = 2.2 m/s Brackenhams monitoring station Average wind direction at RBCAA Brackenhams station during time of the complaint = 192o Min = 132o Max = 229o. Average wind speed = 2.5 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at the Mondi monitoring stations prior or during the time of the complaint. Root cause for the peak at the Hytec station was determined to be Mondi effluent plant. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions None taken. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021
21	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable) No source identified 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints Avg= 233o Min = 221o. Max = 256o. Average wind speed = 1.2 m/s RBCAA Brackenhams monitoring station: Average wind direction at RBCAA Brackenhams station during time of the complaint Avg = 179o Min = 13o Max = 358o. Average wind speed = 0.5 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior or during the time of the complaint. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions None 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
22	South32 Alison Gerber responded. Complaint: White substance on windscreen overnight (see attached photo) Meteorological data: No rainfall, wind direction mostly northerly switching to WSW at 11pm on 17 March (see attached). Investigation: No visible stack emissions were observed by plant operators or by the cameras. Logistics – no alumina transfer was taking place from the harbour GTCs – During day shift on 17 March leak detection was noted as trending up on GTC5 Filter 13 and was flagged for investigation by the night shift. GTC5 Filter 13 was stopped at 20:40 for leak detection investigation. Four bags were plugged and the filter was restarted at 03:20. Filter 13 bags are 3.94 years old and global bag change out is planned for 30 March 2021. Root cause: GTC5 Filter 13 has had bags requiring plugging although they are within their life span – this could be the cause of the white product seen on the vehicle. Action: Continue to monitor leak detection tubes and trends. Execute global bag change on Filter 13 as per plan on 30 March 2021.
23	Denzil Naidoo & Nkosinathi Mqadi responded: Immediate actions taken: Brought in cooler acid from the P tanks which resulted in Final acid Tower temperature to drop. Incident root cause: B plant FAT (Final Acid tower) acid inlet temperature was high. Corrective /preventative Actions: Continuously bringing cooler acid into the final acid tank. General comments : None Key learnings: None.
24	Denzil Naidoo & Nkosinathi Mqadi responded: Immediate actions taken: Standby Engineer was contacted and asked to investigate the matter. The investigation was conducted. Engineers brought in cooler acid from the P tanks which resulted in final acid tower temperature to drop. Incident Root Cause: B plant final acid tower acid inlet temperature was high. Corrective /Preventative Actions: Planning to change the B Plant Acid final cooler. It has been delivered to Foskor and ready for installation.

Response	Industry Feedback
25	South32 Alison Gerber responded: Complaint: White substance found overnight on premises, see attached photograph. Meteorological data: No rainfall overnight, wind direction SW. Investigation: Logistics – no alumina transfer was taking place from the harbour. GTCs – On 21 March stack emissions were identified on GTC5 from filter 8 during night shift inspection. Filter 8 was stopped at 23:11 and restarted at 23:26 after the leaking bag was changed. Root cause: GTC5 Filter 8 had one leaking filter bag that was required to be changed although it was within its life span – this could be the cause of the white product seen on the premises. However, the wind direction does not align for leaking bag on GTC5 to be solely responsible for the large volume of fall out in the photograph. It is possible that due to the heavy rainfall experienced on the morning of 21 March that an accumulation of alumina was washed down from the roof and once the rainwater evaporated the material was visible on the tar. Action: Leaking filter bag was changed - Done. Continue to monitor leak detection tubes and trends - Ongoing. Inspections of GTCs per shift – Ongoing Execute accelerated global bag change out - Ongoing
26	South32 Alison Gerber responded: Complaint: White substance on windscreen overnight (see attached photo). Meteorological data: No rainfall. Investigation: No visible stack emissions were observed by plant operators or by the cameras. Logistics – No transfer of alumina took place. GTCs – GTC5 Filter 7 was stopped at 13:49 on 23 March for investigation following trending of the leak detection system. Bag number 3 on cell F was plugged and the filter was restarted at 20:30. Root cause: Leaking bag #3 on filter 7 of GTC5. Action: Leaking bag plugged – done Continue to monitor leak detection tubes and trends - Ongoing. Inspections of GTCs per shift – Ongoing, Execute accelerated global bag change out - Ongoing
27	Foskor Nkosinathi Zulu and Nkosinathi Mqadi responded: Complaint : Excessive emissions emanating from A&B stack. Immediate Actions taken: Changed tank number 5 and replaced it with tank number 2 in order to cool the acid temperature. Incident Root cause: High temperature of acid at B plant which affected Tank number 5. This tank flows into the final absorption tower (FAT) hence when the acid temperature is high on the final absorption tower it affected the stack emissions. Corrective/Preventative Actions: Fully commissioning Tank number 2 so as to cool the acid temperature and reduce the excessive visible stack emissions.
28	Foskor Kurt Brinkhuis and Nkosinathi Mqadi responded: Complaint: Visible brown emissions appeared to be emanating from Sulphuric Acid A, B and C plants. Immediate Actions taken: Sulphuric Acid Plant Engineer was contacted and requested to investigate the matter. The investigation was conducted. The issue was discussed with the Operations management team.. Trends showed that the conditions of operations were normal. The table above shows that SO2 emissions were within specification. Incident Root Cause: It was concluded that there were no brown emissions during the time of the investigation and there were no exceedances identified during that period. (refer to photograph 1,2 and table 1).
29	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 205o Min = 191o. Max = 241o. Average wind speed = 4.8 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 209o Min = 198o Max = 223o. Average wind speed = 4.1 m/s. Calculation of Impacts: Mondi Monitoring Stations No TRS exceedances recorded at the Mondi Landfill monitoring station prior or during the time of the complaint. Alton monitoring station was out of service at the time due to a fault, and Hytec station is out of service due to a robbery at the station. RBCAA Monitoring Stations No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022 4

Response	Industry Feedback
30	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 216o Min = 19o. Max = 228o. Average wind speed = 5.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 195o Min = 175o Max = 205o. Average wind speed = 6.3 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi monitoring stations prior or during the time of the complaint. Hytec station is out of service due to a robbery at the station. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
31	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Mondi Effluent Plant 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 220o Min = 206o. Max = 277o. Average wind speed = 1.0 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 235o Min = 226o Max = 249o. Average wind speed = 0.8 m/s. Calculation of Impacts: Mondi Monitoring Stations TRS exceedance of 8.8ppb at 22:30 on 23 March 2021 – Alton station: TRS exceedance of 10.3ppb at 02:30 on 23 March 2021 – Alton station TRS exceedance of 20.4ppb at 04:30 on 23 March 2021 – Alton station Hytec station is out of operation due to a robbery at the station. Landfill station was out of operation due to PC failure. Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Root cause was identified by a Process engineer on 23 March 2021 at 07:20. The caustic soda (caustic) dosing line was blocked with a build-up of caustic crystals. Consequently, caustic dosing for low levels of effluent pH was insufficient to maintain pH above the threshold required to prevent odour from the effluent plant. 7. Corrective Actions The crystallization of caustic was cleared and dosing resumed. 8. Preventative Measures: A number of preventative have been identified and implemented: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
32	South 32 Alison Gerber responded: Meteorological data: No rainfall, see attached wind direction (Harbour West). Investigation: GTCs – On Sunday 4 April operations identified that the even filter hoppers on GTC5 were overflowing causing alumina spillages. The fluorinated alumina screens were bypassed on 1 April due to alumina overflowing into the refuse bin instead of going to the fluorinated alumina silos. The system could not handle the tonnage of alumina and alumina started to overflow from the hoppers. Level high alarms did not activate on the filters (2,8,10,12) and filters 4&6 level high alarms were activated however the filters did not trip. On further investigation it was identified that the level probes were not functioning as per process design to trip the filters to prevent spillage of alumina. Root cause: •Incorrect size of fluorinated mesh screens installed, • The 324 system (fluorinated alumina) cannot handle the volumes when the fluorinated screens are bypassed. • Filter hopper level high probes were not function as process design. Action: Corrective Action Responsible Due date Remove incorrect meshes on both screens Production/PCI Complete Fluorinated system to be operated with both fluorinated screens online PCI/Production Complete Fabric to be changed on the fluorinated alumina expansion bin & troubleshooting to be done on the fluorinated system, Production, Complete Preventative Action Responsible Due date Instrument Team to service all GTC 5 hopper level probes & test if they are working Nokusa Ndaba 09 April 2021 Once GTC hopper level probes are serviced, Automation Engineer will remove all software forces/bypass interlocks for the hopper level high alarms to enable the filter to trip if level high is detected Duncan Zungu 09 April 2021 Review screen installation task to ensure that correct screens are installed when changing the screens Ntsatsi Sephula 15 April 2021. Continue with troubleshooting of fluorinated alumina system efficiency when fluorinated screens are by-passed Mabusi Hlophe 16 April 2021

Response	Industry Feedback
33	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 205o Min = 191o. Max = 241o. Average wind speed = 1.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 248o Min = 4o Max = 357o. Average wind speed = 0.7 m/s. Calculation of Impacts: Mondi Monitoring Stations No TRS exceedances recorded at Mondi monitoring stations prior or during the time of the complaint. Hytec station is out of service due to a robbery at the station. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When: Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021, Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.
34	South 32 Alison Gerber responded: Complaint: White substance on windscreen overnight. Meteorological data: No rainfall, see attached wind direction SW from 17:00 11 April. Investigation: Logistics – transfer of alumina did take place, but no spillages of fugitive dust noted. GTCs – GTC5 Filter 9 was investigated for a possible leak on dayshift Sunday 11 April, there were no visible stack emissions from GTC5. Bags 8 & 10 were plugged on cell I. It is unlikely that this filter could have resulted in the fallout due to the wind direction at that time. During the inspection no other filters were noted as having a visible emissions. During dayshift on Monday 12 April GTC5 Filter 10 was investigated for a possible bag leak. Cell D bag 9 was identified as requiring replacement due to the size of the holes. During the investigation visible stack emissions were noted from the GTC. It is possible that the dust fall out was a result of the bag leak on GTC5 Filter 10. The filter is scheduled for global bag change out on 21 April. Root cause: •Leaking filter bag 9 on GTC5 filter 10 due to normal wear and tear. Filter 10 is 4.18 years old and is scheduled for global bag change on 21 April 2021. Action: Corrective Action: Responsible Due date, Changed leaking bag on Filter 10, Production Team 3 , Complete: Plugged GTC 5 Filter 9 Production Team 1 Complete; Preventative Action Responsible Due date Execute Global bag change on Filter 10 as per plan Mabusi Hlophe 21 April 2021. Consistently do bag leak investigation every shift Production On going.
35	South 32 Alison Gerber responded: Complaint: Alumina fallout on vehicle in Veldenvlei observed at 07:50 14 April. Would have occurred between 09:00 13 April – 07:50 14 pril. See photo below. Meteorological data: No rainfall, wind direction N to NE. Wind vector for Hillside to impact Veldenvlei: SW – S, Investigation: Logistics – no transfer of alumina to site. GTCs – no visible stack emissions and no bag leaks since morning of 12 April. Conclusion: Due to the wind direction during the period that the dust accumulated, no direct emissions from a possible event at Hillside could have contributed to the fallout.
36	South 32 Alison Gerber responded: Investigation: There was a stack emission from GTC1 caused by a leaking bag on filter 1. The leaking bag had been identified on the morning of 12 January and was in the process of being replaced when the telephonic complaint was received. Root cause: GTC1 filter 1 is currently due for a global bag change – however the shipment of filter bags from our suppliers in Canada due in December was delayed and is expected mid-February. Action: The leaking filter bag was replaced. Filter 1 being closely monitored for any leaking bags while we wait for the shipment to arrive.
37	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): No source identified. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 193o, Average wind speed = 3.1 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 195o Average wind speed = 3.4 m/s. Calculation of Impacts: Mondi Monitoring Stations: · TRS of 5.8ppb measured at the Landfill station at 10:00 · TRS of 5.8ppb measured at the Landfill station at 10:30. Root cause of above exceedances identified and the landfill leachate pond. Aeration pump had tripped causing localised odour. The pump was restarted and back in service by 11:30. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions: None taken. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021, 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.

Response	Industry Feedback
38	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). No source identified. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 223o Average wind speed = 1.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 210o Average wind speed = 0.8 m/s. Calculation of Impacts: Mondi Monitoring Stations · TRS of 8.8ppb measured at the Alton station at 19:30 · TRS of 9.6ppb measured at the Landfill station at 20:00 Root cause of above exceedances identified as Mondi effluent Plant. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.
39	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Fugitive emissions during abnormal conditions – mill start up after unplanned maintenance shut 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 218o Average wind speed = 5.6 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint Avg = 220o Average wind speed = 6.2 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior or during the time of the complaint. Please note landfill station was out of operation at the time of the complaint: RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: On the 14th April 2021 the Mondi mill undertook an unplanned maintenance shut of Recovery Boiler 1. The mill was back in operation by early hours of 16th April 2021. Despite a comprehensive investigation, no point source emission was identified. It is likely that fugitive odour from unstable mill conditions contributed to ambient odour at the time of the complaint. 7. Corrective Actions: None 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When : 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
40	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Non Condensable Gas System 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 198o. Average wind speed = 6.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 200o Average wind speed = 8.6 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior to the time of the complaint. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA at 10:46 and an investigation immediately undertaken. At the time of the complaint, Mondi was in the process of stabilising the Non-Condensable Gas (NCG) system after mill start up. The Lime Kiln (primary NCG burning zone) was in process of heating up. Consequently, Hardwood Gases were in the Flare (secondary burning zone) for destruction and Softwood gases were in the Incinerator (tertiary burning zone) until the Lime Kiln reached the required temperature to safely accept NCGs. At 10:33 the operator switched Hardwood gases from the Flare to the Lime Kiln. At the time of the switch it was identified that the Softwood NCG system had lost vacuum, resulting in release of fugitive gases into the atmosphere. Online TRS analysers at the Lime Kiln, Flare and Incinerator confirmed no gases were released through these point sources. 7. Corrective Actions: Process Engineers were called to assist in trouble shooting the loss of vacuum on the Soft Wood system. Engineers suspected a disturbance in gas flow. After switching the gases between burning zones, the vacuum was restored at 11:38 and the NCG system stabilised. The NCG system was monitored for any further disturbances over the next 24 hours. None were identified. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during start up conditions. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
41	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): No source identified 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 140o Average wind speed = 3.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 158o Average wind speed = 3.5 m/s. Calculation of Impacts: Mondi Monitoring Stations: No ambient TRS exceedances measured at the Mondi station prior to the time of the complaint. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.
42	Foskor Nkosinathi Zulu and Nkosinathi Mqadi responded: Immediate Actions taken: A tank with high acid temperature was changed and replaced with a tank with acid from storage tanks. Incident Root cause: The acid had a high temperature at Sulphuric Acid B plant which affected the final tank. Due to the high temperature of the acid on the final absorption tower a visible stack then appeared. Corrective/Preventative Actions: Fully commissioning the tank with the acid from the storage tanks to cool the acid temperature and reduce the excessive visible stack emissions.
43	Foskor Mr Vujaha Mabunda and Nkkosinathi Mqadi responded: Immediate Actions taken: The acid temperature was cooled down by pumping acid from the acid storage tanks. Incident Root Cause: B Plant had a high acid temperature that affected the final absorption tower, hence the appearance of abnormal emissions. Corrective/preventative Actions: Fully commissioned the tank with the acid from the storage tanks to cool the acid temperature and continuously monitor the temperature to reduce the excessive visible stack emissions. General Comments: There were no SO2 exceedances during the period of incident (see table below). Key Learnings: None
44	Foskor Mr Vujaha Mabunda and Nkkosinathi Mqadi responded: Immediate Actions taken: The acid temperature was cooled down by pumping acid from the acid storage tanks. Incident Root Cause: Both Plants had a high acid temperature that affected the final absorption towers, hence the appearance of visible stack. Corrective /Preventative Actions. Fully commissioned the tank with the acid from the storage to cool the acid temperature and continuously monitor the temperature to reduce excessive visible stack emissions. General Comments: There were no SO2 exceedances during the period of incident (see table above). Key Learnings: None
45	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Mondi Effluent Treatment Plant 3. Metrological Conditions. Mondi monitoring stations Average wind direction during time of complaints = 183o, Average wind speed = 6.1 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 205o Average wind speed = 6.9 m/s. Calculation of Impacts: Mondi Monitoring Stations: · TRS of 16ppb measured at the Landfill station at 10:30, · TRS of 17ppb measured at the Landfill station at 11:00, · TRS of 23ppb measured at the Landfill station at 11:00 Root cause of above exceedances identified as the Mondi Effluent Plant. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident Prior to receiving notification of the complaint. The Shift Coordinator had contacted Environmental Manager at 11:15 on the 9th May to discuss elevated levels of TRS at the Landfill station. It was determined after investigation that the Mondi Secondary Effluent Treatment Plant (SETP) was the source of the odour and the plant stopped. Mondi Environmental Manager received notification of odour complaint from the RBCAA at 03:46 on 10 May 2021 and further investigations undertaken. Mondi concludes that the SETP may have been the source of the odour complaint. 7. Corrective Actions: SETP was taken offline at 12:00 and restarted at 16:00. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
46	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Source of Odour (AEL source code where applicable). Mondi Effluent Plant 3. Metrological Conditions Mondi monitoring stations Average wind direction during time of complaints = 183o Average wind speed = 3.8 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 192o Average wind speed = 4.5 m/s. Calculation of Impacts Mondi Monitoring Stations: · TRS of 15ppb measured at the Landfill station at 12:00 · TRS of 9ppb measured at the Landfill station at 12:30 · TRS of 20ppb measured at the Landfill station at 13:00 Root cause of above exceedances identified as the Mondi Effluent Plant. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. The Mondi Secondary Effluent Treatment Plant was determined as a possible source of the odour. 7. Corrective Actions: Mondi stopped reclaiming from the Effluent Emergency Ponds in order to reduce odour. 8. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
47	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Source of Odour (AEL source code where applicable) Mondi Effluent Treatment Plant 3. Metrological Conditions Mondi monitoring stations: Average wind direction during time of complaints = 250o Average wind speed = 0.4 m/s RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 230o Average wind speed = 0.2 m/s. Calculation of Impacts: Mondi Monitoring Stations · TRS of 5.3ppb measured at the Alton station at 09:00 · TRS of 8.1ppb measured at the Landfill station at 11:30 · TRS of 7.0ppb measured at the Landfill station at 12:00 · TRS of 7.1ppb measured at the Landfill station at 12:30 Root cause of above exceedances identified as the Mondi Effluent Plant. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA at 09:43 and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. The Mondi Secondary Effluent Treatment Plant was determined as a possible source of the odour. 7. Corrective Actions: Mondi stopped the SETP in order to reduce odour from the plant. Reclaiming from the Effluent Emergency Ponds was also stopped. 8. Preventative Measures: The Odour Abatement Task Team is in the process of identifying mitigation measures to reduce odour from the effluent plant. Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. Mondi and RBCAA Ambient TRS Monitoring Stations (30min avg). 12 May 2021 Mondi Landfill Station Mondi Alton Station: Mondi Hytec Station RBCAA CBD Station RBCAA eSikalini Station 4 No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.
48	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable).No source identified 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 193o , Average wind speed = 3.5 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 195o Average wind speed = 3.4 m/s. Calculation of Impacts: Mondi Monitoring Stations: No exceedances recorded at Mondi Monitoring Stations. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. 7. Corrective Actions: None taken. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
49	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Mondi Effluent Treatment Plant 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 150 and 230o Average wind speed = 2.4 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 154o and 232 Average wind speed = 2.2 m/s. Calculation of Impacts Mondi Monitoring Stations: · TRS exceedance of 20.0ppb at Alton station at 20:00, · TRS exceedance of 10.3ppb at Alton station at 20:30, · TRS exceedance of 15.2ppb at Alton station at 21:30, · TRS exceedance of 12.9ppb at Alton station at 22:00. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA at 13:52 on 22 May. Based on the description of the odour the environmental manager requested shift coordinator to take the Mondi Secondary Effluent Treatment Plant (SETP) offline at 14:00. Area operators were asked to conduct odour checklists in their plants, no deviations were reported. At 14:50 Mondi Environmental Manager checked with the complainant who confirmed odour had subsided. The SETP is required to reduce Chemical Oxygen Demand (COD) load of Mondi effluent prior to discharge to sea. Consequently, Mondi switched the SETP back on line at 17:15. Mondi Alton Station began to record high TRS around 19:30. In response, the Shift Coordinator switched the SETP offline at 21:19. It took some time for ambient TRS to reduce, most likely due to overcast weather conditions. Another complaint received at 22:10. 7. Corrective Actions Mondi stopped the SETP in order to reduce odour from the plant. 8. Preventative Measures: The Odour Abatement Task Team is in the process of identifying mitigation measures to reduce odour from the effluent plant. Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 4 No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
50	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Non Condensable Gas System 3. Metrological Conditions Mondi monitoring stations Average wind direction during time of complaints = 287o Average wind speed = 0.2 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 289o Average wind speed = 0.2 m/s. Calculation of Impacts: Mondi Monitoring Stations: No TRS exceedances recorded at Mondi stations prior to the time of the complaint. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: During the early hours of 26th of May, Mondi was starting up after an unplanned shutdown. During the start-up process, Mondi began experiencing difficulty maintaining the vacuum on the Non-Condensable Gas (NCG) system. Standby process engineers were called out to investigate. A build up of condensate in the line was identified as root cause, Mondi Environmental Manager notified authorities and RBCAA of the challenges and possible odour risk. Once root cause was determined, draining and purging of the line commenced. Mondi received notification of the complaint at 09:04. 7. Corrective Actions: Draining and purging of the NCG line was undertaken. The Odour Abatement Task Team are updating start-up checklists to prevent a reoccurrence. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during start up conditions. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
51	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Non Condensable Gas System 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 235o Average wind speed = 0.3 m/s . RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 252o Average wind speed = 0.2 m/s. Calculation of Impacts: Mondi Monitoring Stations : TRS of 10ppb recorded at Alton station at 09:30 TRS of 8.3ppb recorded at Alton station at 10:00. RBCAA Monitoring Stations: TRS of 6.0ppb recorded at eSikhaleni station at 07:00: Description of Incident At 07:50 on 28th of May, Mondi identified a loss of vacuum on the Non-Condensable Gas (NCG) system. Process engineers started to investigate in order to address as soon as possible. Mondi Environmental Manager notified authorities and RBCAA at 09:53 of possible odour risk as a result. Mondi was notified of first odour complaint at 10:25. Root cause of the disturbance on the NCG system was identified as ingress of air through passing CRP pressure control valve. The NCG system normalized immediate after air ingress was addressed at 11:35. 7. Corrective Actions: CRP pressure control valve will be replaced at next opportunity. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during start up conditions. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
52	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable) No source identified 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 199o Average wind speed = 8.5 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 195o Average wind speed = 8.8 m/s. Calculation of Impacts: Mondi Monitoring Stations: TRS of 12.2ppb recorded at Landfill station at 09:30. TRS of 10.5ppb recorded at Landfill station at 11:30, Root cause of the above exceedances were identified as localised odour from the leachate pond, which is situated in close proximity to the station. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Shift Coordinator reported that the Leachate Pond odour was strong in the area of the landfill. However, in consultation with the Environmental Manager it was agreed that this is a localised source of odour. As a precaution, the Secondary Effluent Treatment Plant was taken offline. No root cause for odour complaint identified. 7. Corrective Actions None taken. 8. Preventative Measures, Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
53	Foskor Mr Amon Dlamini and Nkkosinathi Mqadi responded: Original Complaint: Visible stack from Sulphuric Acid A and B plants. Immediate Actions taken: To Change the tank with high acid temperature and replace it with a tank filled with cold acid from the storage tanks. Incident Roots cause. The Acid had a high temperature at Sulphuric Acid B plant which affected the final tank. Due to the high temperature of the acid on the final absorption tower a visible stack then appeared. Corrective/Preventative Actions: Fully commissioning the tank with cold acid from the storage tanks to cool the acid temperature and reduce the excessive visible stack emissions.
54	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable). Mondi Effluent Treatment Plant 3. Metrological Conditions: Mondi monitoring stations Average wind direction during time of complaints = 215o, Average wind speed = 4.4 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 202o Average wind speed = 5.1 m/s. Calculation of Impacts: Mondi Monitoring Stations: · TRS exceedance of 15.0ppb at Alton station at 09:00, · TRS exceedance of 05.1ppb at Alton station at 11:30, · TRS exceedance of 06.9ppb at Landfill station at 12:30, · TRS exceedance of 20.0ppb at Landfill station at 13:00, RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident: Mondi Environmental Manager investigated the complaint and identified all point source emissions were in specification. Based on the description of the odour and ambient TRS recorded at the Alton Monitoring station prior to the complaint, the Mondi Secondary Effluent Treatment Plant (SETP) was identified as the source. 7. Corrective Actions: Mondi stopped the SETP at in order to reduce odour from the plant. 8. Preventative Measures: The Odour Abatement Task Team is in the process of identifying mitigation measures to reduce odour from the effluent plant. This includes further investigation and trials of the use of odour suppression chemicals. No. Action By When 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021, 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.

Response	Industry Feedback
55	Mondi Candice Webb responded: Source of Odour (AEL source code where applicable): Fugitive emissions as a result of mill instability 3. Metrological Conditions: Mondi monitoring stations: Average wind direction during time of complaints = 250o Average wind speed = 3.3 m/s. RBCAA Brackenham monitoring station: Average wind direction at RBCAA Brackenham station during time of the complaint = 228o Average wind speed = 3.5m/s. Calculation of Impacts: Mondi Monitoring Stations: TRS of 18ppb recorded at Landfill station at 17:00, TRS of 16ppb recorded at Landfill station at 17:30, TRS of 11ppb recorded at Landfill station at 20:00, High ambient landfill TRS is attributed to localised odour from Mondi Landfill Leachate pond. Odour suppression chemicals for the pond have been ordered. RBCAA Monitoring Stations: No TRS exceedances recorded at RBCAA stations. Description of Incident: Prior to the time of the complaints Mondi undertook an opportunity to take a shut on the Lime Mud Clarifier Disc (LMCD) Filter due to a decrease in efficiency. As per standard operating procedure, Non-condensable gases (NCGs) were diverted to the Flare and Incinerator for destruction. Online TRS analysers on both the Flare and Incinerators were monitored closely and no exceedances were noted during this time: · Flare maximum recorded TRS during period of investigation: 2.4ppb at 19:00, · Incinerator maximum recorded TRS during period of investigation: 0.3ppb at 19:10, The Kiln was put back into operation at 19:40. In addition, the mill started experiencing instability during this time. As a result, fugitive emissions generated during the LMCD shut and during the period of mill instability may have resulted in the complaints. 7. Corrective Actions: Recovery Boiler 1 and 2 firing and production rates reduced to a minimum, Hardwood and softwood plants offline to reduce NCGs. Any remaining residual Hardwood gases were diverted to the Lime Kiln at 19:47. 8. Preventative Measures: Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during start up conditions. Ambient TRS (ppb) Mondi & RBCAA Monitoring Stations: (30min avg) 01 Jun 2021 Mondi Landfill Station: Mondi Alton Station Mondi Hytec Station Mondi UVS Station RBCAA CBD Station RBCAA eSikalini Station 4 No. Action By When: 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021, 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022.
56	South 32 Alison Gerber responded: Wind direction: CBD station 210 - 216° (SSW). Investigation: GTC1 Filter 5 was investigated for possible leaking bags identified from the leak detection trends on the morning of 17 June. No stack emissions were visible at the time of inspection. The filter was stopped at 10:40am and 4 bags were changed. The filter was restarted at 12:35pm. Root Cause: GTC 1 Filter 5 had 4 bags changed on the 17 June. There were no visible emissions at the time of the investigation and bag change, however, this is the likely cause of the dust fall out. Action: Leaking bags changed. Continuous monitoring of the leak detection trends and investigation for ad hoc change out.
57	South 32 Alison Gerber responded: Weather – Northerly wind direction from 8pm 1 July – 11pm 3 July, no rain. Investigation – GTC2 had one bag changed the evening of the 2 July. No visible emissions were noted during the bag change. Conclusion: Although Hillside did change a filter bag on the evening of the 2 July, this event could not have contributed to the deposition noted on Mr Harvey's vehicle due to the wind direction.
58	South 32 Alison Gerber responded: Investigation – Operations - No bag leaks on the 9 July, no visible emissions noted from GTCs, FTCs or alumina silos. TS Manager, Zanele Madinane, went out to investigate at the complainants address. The material was brown in nature and appeared to be general dust. There was not enough material for a sample. Conclusion – with high windspeeds it is suspected that general dust and PM was generated and accumulated on the windscreen. No event occurred at Hillside during this period that could have contributed to this deposition.
59	South 32 Alison Gerber responded: Investigation: • Zaine Ismail visited the complainants residence and collected a sample of the material. The material is dark in colour with vegetation contaminating the sample. The sample is too small for analysis and inconsistent with alumina. • No stack emissions were noted on the GTCs or FTCs or abnormal occurrences • No emissions noted from the alumina silos and conveyor system Conclusion: There were no fugitive dust emissions from an event at Hillside during the period that are consistent with the sample.

Response	Industry Feedback
60	South 32 Alison Gerber responded (10/08/2021): Investigation: Site visit/material: TS Supervisor did try and visit complainant at 82 Via Verbena on Saturday, unfortunately there was no answer. Material in the photo graphs from the complainants appeared white in nature consistent with alumina. GTCs: Stack emissions were observed from GTC5. Leak detection investigation identified filter 9 cell C, bag 7 as requiring replacement. Filter was stopped at 08:02 and leaking bag was changed. Root Cause: Filter 9 is 3.63 years old. Wear and tear is due to the age of the filter and is scheduled for global bag change 4 Oct 2021. Actions: • Change leaking filter bag – completed • Execute global bag change – 4 Oct 2021 • Consistently due bag leak investigations – On going
61	Tonga Hulet - Nicolas Govender responded (13/08/2021): Findings and Complaints: Over the past few weeks Felixton Mill operations have been disrupted and inconsistent due to crushing of the arson/fire cane stemming from the riots. Compliance with permits: Abnormal conditions did occur resulting in exceedances upon start up and shutdown. Root cause: During the recent riots and unrest, a significant volume of cane was compromised when set alight and burnt. This burnt or arson cane deteriorates rapidly and ferments which decreases the cane purity by converting sugar to ethanol and other chemicals. This deterioration is compounded by the delays in transporting cane to the mill from the fields and waiting to be processed. Operationally, apart from the fermenting process, the arson cane creates polysaccharides which resulted in foaming of our cooling water system. This eventually brought the plant to a complete stop and full of product that could not be processed into sugar. In trying to troubleshoot this issue, we were forced to start and stop the plant several times resulting in upset conditions which caused higher volumes of effluent and load swings on the boilers. The product that was not processable had to be diluted and also treated as effluent. This increased the loading at the effluent plant hence the odour. Corrective action: The levels at the effluent plant is being closely monitored and the effluent within specification is being discharged via sea outfall line. - Dosing of lime, caustic soda and hydrogen peroxide is maintained at the effluent plant. - Wind direction is considered before starting up of the boilers. - All cane with low purities and old cane affected by the arson fires were stopped immediately from being processed at Felixton mill.
62	South 32 Alison Gerber responded (24/08/2021): Investigation: Wind direction: Moving from West at 19:00 22 Aug, to North at 01:00 23 Aug and continuing into the 24th. Due to the Northerly wind direction no events occurring on the 23 August could have resulted in the dust fall out experienced by the complainants. Logistics: • No vessels offloading on 22 August, • Transfer of Pet Coke from port to Hillside on 22 August, • Transfer of alumina from port to Hillside on 23 August at 15:00 Treatment and Services: • Last visible stack emission 7 Aug on GTC5, • 2 bags changed on filter 5 on GTC3 at 14:24 on 22 August, no visible stack emissions, Root cause: There were no events at Hillside on 23 August that could have resulted in the dust fall out. It is possible that there may have been dust fall out generated on the 22 August; however, no stack emissions were noted on the route inspection and during the filter bag change out, and this material was redistributed with the high winds on the 23 August.

Response	Industry Feedback
63	Mondi Candice Webb responded (10/09/2021 10:24) Description of Incident: During 1 September 2021, Mondi was in the process of undertaking a reliability shut as was communicated to stakeholders and authorities on 27 August 2021. At the time of the complaint, Non-Condensable Gases (NCGs) from the Evaporation streams were combined with the flow from the Hard Wood (HW) digester NCG line and directed to the Flare. The Flare was utilised as the Kiln was offline in the shut. When the HW NCGs were switched to the flare, the flare TRS Analyser started to alarm as TRS of 30mg/m3 was recorded. It was noted that the flare burner temperature was below 700 ° C, efficient NCG combustion occurs at a temperature greater than 800 ° C. Consequently, the process engineer immediately requested NCGs switched to the incinerator for combustion which was on hot standby as a precaution. Probable causes for low burner temperature of the Flare although suspected, has not yet been determined. The flare will be taken offline for inspection and maintenance on 15 September 2021 ahead of the Annual Shut down. Corrective Actions NCGs switched to Incinerator for combustion. Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during start up conditions. 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs
64	Mondi Candice Webb responded (10/09/2021 10:24) Description of Incident: Fugitive emissions as a result of mill instability. Description of Incident: During the evening of the 28th August 2021 Mondi was experiencing mill instability as a result of Recovery Boiler 2 tripping. Despite a full investigation, the source of the odour could not be identified. It is most likely that fugitive emissions resulted in the increase of ambient odour. Corrective Actions None Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. In the interim, monitoring of the NCG system vacuum has been added to the environmental checklist for management of NCGs during upset conditions. Action 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2021
65	Mondi - Candice Webb responded (10/09/2021 10:24) Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions None taken. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
66	Mondi - Candice Webb responded (10/09/2021 10:24) No source identified. Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA at 10:31 and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Shift Coordinator reported that the Leachate Pond odour was strong in the area of the landfill. However, in consultation with the Environmental Manager it was agreed that this is a localised source of odour. The Secondary Effluent Treatment Plant had already been switched off prior to the complaint due to wet weather conditions and temperature inversion. No root cause for odour complaint identified. Corrective Actions None Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
67	Foskor - Nkosinathi Mqadi responded 14/09/2021: Original complaint white gas emissions from Sulphuric acid C plant .Immediate action taken no immediate action taken, because the release was not harmful to humans and the environment. Incident root cause the information received from the Sulphuric acid C Plant is that there were not abnormal activities that were taking place, nothing out of the ordinary and not adjustments were made between 08h00-13h30. White plume was a steam caused by the equipment failure which resulted in the release of water in the form of steam.

Response	Industry Feedback
68	Mondi - Candice Webb responded (15/09/2021 11:26) No source identified. Description of Incident: an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions None taken. Preventative Measures 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021. 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
69	Mondi - Candice Webb responded (15/09/2021 11:26) No source identified. Description of Incident: Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions None. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 3 Redirection of all NCGs from the Lime Kiln to 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
70	Mondi - Candice Webb responded (21/09/2021 14:08) No source identified within Mondi. Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions None taken. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. Action 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
71	Mondi - Candice Webb responded (14/10/2021) Source of Odour (AEL source code where applicable) No source identified within Mondi. Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Process engineers and area operators undertook plant specific odour checks and investigated any possible leaks. No deviations identified. No root cause for odour complaint identified. Corrective Actions None taken. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
72	Mondi - Candice Webb responded (14/10/2021) Source of Odour (AEL source code where applicable) Mondi Effluent Treatment Plant Description of Incident Mondi Environmental Manager investigated the complaint and identified all point source emissions were in specification. Based on the description of the odour and ambient TRS recorded at the Alton Monitoring station prior to the complaint, the Mondi Secondary Effluent Treatment Plant (SETP) was identified as the source. Corrective Actions Mondi stopped the SETP at 08:35 in order to reduce odour from the plant. Preventative Measures The Odour Abatement Task Team is in the process of identifying mitigation measures to reduce odour from the effluent plant. An effluent odour management procedure was implemented on 10 August 2021 in order to improve odour. This plan includes responsibilities of stopping and restarting the SETP based on TRS measured at the Alton monitoring station Action 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022

Response	Industry Feedback
73	Mondi - Candice Webb responded (14/10/2021) Source of Odour (AEL source code where applicable) Pin hole sized NCG leak identified Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Shift Coordinator undertook detailed investigations. A small pinhole leak on the NCG pipeline was identified. Instruction for scaffolding to be build and leak strapped was given straight away. No other sources of dour were identified. Despite the identification and repair of the pinhole NCG leak, Mondi feels that it is unlikely that the leak was the source of the odour. Corrective Actions NCG leak repaired. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
74	Mondi - Candice Webb responded (14/10/2021) Source of Odour (AEL source code where applicable) No source identified within Mondi Calculation of Impacts Elevated TRS recorded at Landfill station both prior and during the time of the complaint. Root cause of the above exceedances were identified as localised odour from the leachate pond, which is situated in close proximity to the station. RBCAA Monitoring Stations No TRS exceedances recorded at RBCAA stations prior or during the time of the complaint: Description of Incident Mondi Environmental Manager received notification of odour complaint from the RBCAA and an investigation immediately undertaken. Environmental Manager and Shift Coordinator undertook detailed investigations. All point source emissions found to be well within specification. The hardwood and softwood gasses were stable in the Lime Kiln for incineration. Shift Coordinator reported that the Leachate Pond odour was strong in the area of the landfill. However, in consultation with the Environmental Manager it was agreed that this is a localised source of odour. As a precaution, the Secondary Effluent Treatment Plant was taken offline. No root cause for odour complaint identified. Corrective Actions None taken. Preventative Measures Mondi has committed to future odour abatement projects in order to reduce odour incidents associated with NCG burning zones. Projects listed in the table below. 3 Redirection of all NCGs from the Lime Kiln to Recovery Boiler for combustion. This is in line with industry best practice and will be a more effective means of NCG destruction. Q3 2021 4 Replacement of existing Flare (secondary burning zone) with a new Flare for more effective destruction of NCGs. Q3 2022
75	Tongaat Hulet - Nicolas Govender responded (29/10/2021 14:20): Findings on Complaint Complaint was received at 14h40, immediate investigations were conducted and effluent discharge samples were taken. No frothing or foam was observed. Colour of discharge looked normal. - Sample results were as follows : ph TSS COD, Treated Effluent 7,85 25 69 ppm, Upstream 7,54 24 5 ppm, Downstream 7,44 23 11 ppm Compliance with Permits There were no non-compliance with permits. Root Cause Effluent discharge COD's were within specification on the day, the daily sample taken at approximately 08h00 was at a COD of 72 ppm. Effluent discharge flow was a around 20m3 and within the design permitted limits. Corrective Action Continuous monitoring for the Effluent discharge. V isual inspections for any signs of foaming.
76	Tongaat Hulet - Nicolas Govender responded (19/11/2021 10:12): Findings on Complaint-There was a power outage on Monday 20 September 2021 at the Eskom Substation. This prevented us from starting up as we were scheduled to start up at 16h00. Boilers werecompletely shut and only began starting up at around 04h00 the next morning.We tried not to start up all the boilers simultaneously. One had to be started around 06h30. Compliance with Permits-Abnormal conditions did occur during start up, after Monday shut. Root cause Power outage during our Monday maintenance shut forced us to completely stop all the boilers-We also tried to stagger the start up of the boilers to prevent significant abnormal conditions-Wind direction was south westerly which blew the emissions directly into the village. Corrective Action-Scrubber system was flushed to ensure effectives and the fuel was cut back-Factory Operations was requested to take more steam, this was to speed up the process of raising the boiler as the demand for steam will increased
77	South 32 Alison Gerber responded (09/12/2021 14:20): Investigation: Logistics – offloading and transfer of pet coke GTCs – On dayshift 6 December two filter bags were changed on GTC2, one each on filter 1 and filter 3. Stack emissions were visible prior to the bag changes. Root cause: Due to high windspeeds on the 6th December the fugitive dust from the leaking bags that were changed was deposited at the complainants residences. Actions: 1. 2 Bags were changed on 6 December 2. GTC2 , filter 3 is due for global bag change on 20 Jan 2022 3. Task team allocated to conduct bag leak investigations on all GTC2 filters to check for possible bag leaks and conduct ad hoc bag changes – to be completed by 10 Dec.

Response	Industry Feedback
78	South 32 Alison Gerber responded (10/01/2022 14:13): Meteorology: Rainfall: 22 Dec – 54mm 23 Dec – 119mm Wind Direction: The wind direction was for the majority of the period coming from the NE - not the correct wind vector for impact from Hillside. Investigation: Logistics: No off loading due to the rain Operations: GTCs – 22 Dec - GTC2 4 Bags changed, GTC5 1 bag changed. No visible stack emissions visible during the bag changes. - 23 Dec – no bag changes Root cause: No events were identified that could have resulted in the dust fall out during this period as the wind direction was towards Hillside. Hillside has noted an increase in complaints of dust fall out during periods of rainfall. Note: complain allocated by RBCAA to South 32, based on wind direction shift (19/01/2022 14:13)

APPENDIX E

PM₁₀ EXCEEDANCE LOG

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
January 2021									
1	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	Brackenham	2021/01/20	51	207	5.5	No response required	None	2
June 2021									
1	PM ₁₀ Daily NEMA Standard (75 µg/m ³)	eSikhaleni	2021/06/23	106	38	1.1	Fire	Unrest in eSikhaleni, burning of tyres in roads.	1
2	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eNseleni	2021/06/23	67	10	1.2	Fire	Breaking of concrete slab next to monitoring station.	2
3	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eSikhaleni	2021/06/23	106	38	1.1	Fire	Unrest in eSikhaleni, burning of tyres in roads.	2
July 2021									
1	PM ₁₀ Daily NEMA Standard (75 µg/m ³)	eNseleni	2021/07/01	93	259	1.5	Fire	Haze of smoke in area	1
2	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eNseleni	2021/07/01	93	259	1.5	Fire	Haze of smoke in area	2
3	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eSikhaleni	2021/07/01	65	263	1.2	Fire	Haze of smoke in area	2
4	PM ₁₀ Daily NEMA Standard (75 µg/m ³)	eSikhaleni	2021/07/03	94	38	1.8	Fire	Haze of smoke in area	1
5	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eNseleni	2021/07/03	56	41	2.1	No response required	None	2
6	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eSikhaleni	2021/07/03	94	38	1.8	No response required	None	2
August 2021									
1	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eSikhaleni	2021/08/05	53	9	1.7	No response required	None	2
October 2021									
1	PM ₁₀ Daily WHO Guideline (50 µg/m ³)	eSikhaleni	2021/10/14 0:00	69	37	4.8	No response required	None	2

RESPONSES

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction

APPENDIX F

PM_{2.5} EXCEEDANCE LOG

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			April 2021						
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/04/12	40	241	2.2	No response required	None	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/04/13	35	36	1.6	No response required	None	2
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/04/14	28	45	2.4	No response required	None	2
4	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/04/20	47	234	3.2	Tongaat Hulett	Process upset	1
5	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/04/20	47	234	3.2	No response required	None	2
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/04/29	35	29	2.4	No response required	None	2
			May 2021						
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/05/16	26	228	2.7	No response required	None	2
2	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/05/26	41	332	1.5	Agricultural	Seasonal	1
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/05/26	30	324	1.4	No response required	None	2
4	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/05/26	41	332	1.5	No response required	None	2
5	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/05/27	46	22	2.4	Agricultural	Seasonal	1
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/05/27	28	356	2.3	No response required	None	2
7	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/05/27	46	22	2.4	No response required	None	2
8	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/05/28	26	241	2.3	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
9	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/05/28	34	238	2.3	No response required	None	2
			June 2021						
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/13	27	44	1.6	No response required	None	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/14	28	223	2	No response required	None	2
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/15	30	47	2.4	No response required	None	2
4	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/16	26	43	2.4	No response required	None	2
5	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/17	30	245	2.8	No response required	None	2
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/06/23	30	353	1.4	No response required	None	2
7	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/23	26	38	1.1	No response required	None	2
8	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/24	28	250	2.8	No response required	None	2
9	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/06/25	29	329	1.6	No response required	None	2
10	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/25	26	38	1.9	No response required	None	2
11	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/26	30	265	2.0	No response required	None	2
12	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/06/28	26	37	3.9	No response required	None	2
			July 2021						
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/01	31	263	1.2	No response required	Fire-Haze of smoke in Area	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/03	32	38	1.8	No response required	None	2
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/09	35	239	3.1	No response required	Fire -possibly related to political unrest in the area (Zuma).	2
4	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/07/18	63	269	1.2	Tonga Hulett (Meteorology)	Based on wind direction.	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
5	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/07/18	28	319	1.9	Tongaat Hulett (Meteorology)	Based on wind direction.	2
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/18	63	269	1.2	Tongaat Hulett (Meteorology)	Based on wind direction.	2
7	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/20	26	44	2.3	No response required	None	2
8	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/07/23	49	236	4.9	Tongaat Hulett (Meteorology)	Based on wind direction.	1
9	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/23	49	236	4.9	No response required	None	2
10	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/07/28	55	30	2	Agricultural	Seasonal	1
11	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/07/29	43	139	2.4	Agricultural	Seasonal	3
12	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/07/29	43	139	2.4	No response required	None	2
August 2021									
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/02	29	232	3.2	No response required	None	2
2	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/08/05	56	9	1.7	Tongaat Hulett	Boiler	9, 10
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/05	56	9	1.7	No response required	None	2
4	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/06	27	280	4.1	No response required	None	2
5	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/08/09	30	221	5.8	No response required	None	2
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/09	39	226	4.9	No response required	None	2
7	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/10	33	237	3.9	No response required	None	2
8	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/12	38	229	5	No response required	None	2
9	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Brackenham	2021/08/18	26	203	1.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
10	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/18	50	227	2.8	No response required	None	2
11	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/08/18	50	227	2.8	Agricultural	Seasonal	11
12	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/24	30	268	3.5	No response required	None	2
13	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/26	40	46	4.8	No response required	None	2
14	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/08/27	41	18	4.9	Agricultural	Seasonal	4
15	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/27	41	18	4.9	No response required	None	2
16	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/08/31	33	232	2.8	No response required	None	2
September 2021									
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/02	31	41	5.2	No response required	None	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/03	32	37	6.1	No response required	None	2
3	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/04	35	199	3.1	No response required	None	2
4	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/05	39	46	3	No response required	None	2
5	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/09/06	54	235	4.5	Tongaat Hulett	Based on wind direction.	5
6	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/06	54	235	4.5	No response required	None	2
7	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/09/13	46	264	2	Agricultural	PM elevated all day.	6
8	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/13	46	264	2	No response required	None	2
9	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/09/14	44	43	3.5	Agricultural	PM elevated all day.	6
10	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/14	44	43	3.5	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
11	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/09/21	69	219	4.8	Tongaat Hulett	Start up from electrical outage	7, 8
12	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/21	69	219	4.8	Tongaat Hulett	Start up from electrical outage	8
13	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/09/24	39	269	4.2	No response required	Mpact responded	12
October 2021									
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/10/13	38	55	2.6	No response required	None	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/10/14	43	37	4.8	No response required	Mpact responded	13
3	PM _{2.5} Daily NEMA Standard (40 µg/m ³)	Felixton	2021/10/14	43	37	4.8	Tongaat Hulett	Mpact responded	13, 1
November 2021									
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/11/18 0:00	27	223	5.3	No response required	None	2
2	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/11/29 0:00	27	198	2.4	No response required	None	2
December 2021									
1	PM _{2.5} Daily WHO Guideline (25 µg/m ³)	Felixton	2021/12/06 0:00	30	2	4.6	No response required	None	2

RESPONSES

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
3	Mpact - Yolande Schoeman responded 05/08/2021: Investigation: Source and Nature of Emissions: • The trend shows that a high concentration of PM_{2.5} was detected on 29 July 2021. • The activities which occurred at the Boiler house as well the Coal Storage areas were investigated, for the evening of 28 July and 29 July 2021. • Reports indicate that the Mpact Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the duration and stacks opacities were below permit requirements. There were no abnormal incidences. • Reports also show there were no abnormal activities occurring at the Coal Storage areas that could of resulted in dust or particulate emissions.

Response	Industry Feedback
	Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the PM_{2.5} exceedances that occurred at the Felixton Station on 29 July 2021.
4	Mpac - Yolande Schoeman responded 30/08/2021: Meteorological Information • PM_{2.5} increased at 14h00 on 26 August 2021 up until ±20h00 the following evening, 27 August 2021. • RBCAA daily reports indicate there were predominately Northern winds(18-46°) blowing 26 to 27 August 2021, at speeds of 4.8m/s. Investigation § Source and Nature of Emissions: § The trend shows that a high concentration of PM_{2.5} was detected on 26 and 27 August 2021. § The activities which occurred at the Mpac Boiler house as well the Coal Storage areas were investigated. § Reports indicate that the Mpac Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the duration and stacks opacities were below permit requirements. There were no abnormal incidences. § Reports show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the PM_{2.5} NEMA exceedances that occurred at the Felixton Station on 27 August 2021.
5	Mpac - Yolande Schoeman responded 20/09/2021: Investigation Source and Nature of Emissions: § The activities which occurred at the Mpac Boiler house as well the Coal Storage areas were investigated. § Reports indicate that the Mpac Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the duration and stacks opacities were below permit requirements. There were no abnormal incidences. § Reports show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the PM_{2.5} NEMA exceedances that occurred at the Felixton Station on 6 September 2021.
6	Mpac - Yolande Schoeman responded 20/09/2021: Meteorological Information • PM_{2.5} increased significantly from 04h00 on 13 September 2021 till 07h00 the following day 14 September 2021. At 19h00 till 23h00 on 14 September the PM levels increased again and exceeded the NEMA 40ppb limit. • RBCAA daily reports indicate there were predominately South Easterly winds(263°) blowing on 13 September 2021, at speeds of 2.5m/s. On 14 September there were mainly Northerly winds (43°) blowing at speeds of 3.5m/s. Investigation Source and Nature of Emissions: § The activities which occurred at the Mpac Boiler house as well the Coal Storage areas were investigated. § Reports from 13 and 14 September indicate that the Mpac Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the durations and stacks opacities were below permit requirements. There were no abnormal incidences. § Reports show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the PM_{2.5} NEMA exceedances that occurred at the Felixton Station on 13 and 14 September 2021.
7	Mpac - Yolande Schoeman responded 23/09/2021: South westerly winds were recorded at the Felixton RBCAA monitoring station on Tuesday, 21 September 2021. The paper machine shut at 12h51 and started up at 15h12, the boilers did not completely shut down, therefore start-up conditions at the Boiler house were stable .

Response	Industry Feedback
	The activities which occurred on the morning of 21 Sep 2021 at the Mpact Boiler house as well the Coal Storage areas were investigated. The morning and afternoon reports indicate that the Mpact Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the durations and stacks opacities were below permit requirements. There were no abnormal incidences recorded. Reports show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Mpact is unlikely to be source of the PM _{2.5} NEMA exceedances recorded at the Felixton station on the morning of 21 September 2021
8	Tongaat Hullet - Nicolas Govender responded 23/09/2021: We were starting up from an electrical outage. A formal response to a 3rd party complaint for the same period will also be forwarded.
9	Tongaat Hullet - Nicolas Govender responded 27/09/2021: We had experienced numerous stoppages during this time due to the processing of old cane in the system. On this day the boiler was on slow fires for most of the day as the Factory team was fault finding. We started to raise pressures from around 10h00 to 16h00. We tried to start the process up but was still experiencing issues and shut down again later that night. Tongaat Hulett may have contributed to the exceedances recorded at the Felixton monitoring station.
10	Mpact - Yolande Schoeman responded 27/09/2021: Northerly winds were recorded at the Felixton RBCAA monitoring station on 5 August 2021. The paper machine ran well and there were no start-up conditions at the Boiler house . Activities occurring at the Mpact Boiler house as well the Coal Storage areas were investigated. The morning and afternoon reports indicate that the Mpact Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the durations and stacks opacities were below permit requirements. There were no abnormal incidences recorded. Reports show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Mpact is unlikely to be source of the PM _{2.5} NEMA exceedances recorded at the Felixton station on the morning of 5 August 2021
11	Mpact - Yolande Schoeman responded 27/09/2021: South westerly winds were recorded at the Felixton RBCAA monitoring station on 18 August 2021. The boiler house was also conducting its annual Iso-kinetic stack emission testing by an external service provider from 16-19 August 2021. Boiler house activities; camera footage and stack opacities were checked. Internal shift reports and preliminary feedback from the service provider indicate that the boilers ran well and there were no abnormal incidences that could have resulted in significant dust or particulate emissions. Shift reports also show there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Mpact is unlikely to be source of the PM _{2.5} NEMA exceedances recorded at the Felixton station on the morning of 18 August 2021
12	Mpact - Yolande Schoeman responded 27/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 24 September 2021. The paper machine shut for 2 hours and started up at 17h40 ; start-up conditions for all boilers were stable (±5min) and below the controlled emitter regulations requirements. Activities occurring at the Mpact Boiler house as well the Coal Storage areas were investigated. The morning and afternoon reports indicate that the Mpact Felixton Mills' boilers were running efficiently; camera footage of stacks were monitored for the durations and stacks opacities were below permit requirements. There were no abnormal incidences recorded. Reports show 3 coal trucks were offloaded the morning and there were no abnormal activities occurring at the Coal Storage areas that could have resulted in dust or particulate emissions. Mpact is unlikely to be source of the PM _{2.5} NEMA exceedances recorded at the Felixton station on the morning of 24 September 2021
13	Mpact - Yolande Schoeman responded 20/10/2021: A northerly wind was detected on Thursday, 14 October 2021. On Thursday afternoon very strong winds started blowing at Felixton and Empangeni from ±16h00, therefore the significant PM detected the afternoon was most likely due to the fugitive dust being blown around, see graph below of high wind speeds detected at ESikhaleni Station. Mpact mill had a maintenance shut the previous day thus the Paper machine and Boiler house started up early the morning, start-up stack opacities were monitored closely from 06H00 and the reports indicate start-up opacities were well below permit regulations. The stacks were clear for the remainder of the day. Mpact is unlikely to be the source of the PM _{2.5} exceedance that occurred on 14 October 2021.

APPENDIX G
SO₂ EXCEEDANCE LOG

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/01 00:00	15	213	4.9	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/02 00:00	10	239	3.1	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/03 00:00	14	48	2.6	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/01/04 00:00	8	57	3.5	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/04 00:00	9	57	3.5	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/05 00:00	11	28	4	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/06 00:00	12	222	5.3	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/07 00:00	19	229	3.5	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/08 00:00	16	57	3.5	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/09 00:00	8	66	4.1	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/10 00:00	8	243	5.1	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/13 00:00	14	130	2.5	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/01/14 00:00	9	58	2.9	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/01/15 00:00	8	51	5.2	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/17 00:00	14	225	3.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
16	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/20 00:00	8	216	5.2	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/01/22 00:00	12	53	4.7	No response required	None	2
18	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/01/23 00:00	21	45	5.7	No response required	None	2
19	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/01/23 00:00	21	45	5.7	No response required	None	2
20	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/01/26 00:00	22	33	4.4	No response required	None	2
21	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/01/26 00:00	22	33	4.4	No response required	None	2
22	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/27 00:00	11	211	3.7	No response required	None	2
23	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/01/28 00:00	21	230	4.7	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/01/28 00:00	21	230	4.7	No response required	None	2
			February 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/02/02 00:00	9	240	2.6	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/02/05 00:00	10	211	3.2	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/02/20 00:00	11	223	2.8	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/02/23 00:00	18	38	4.3	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/02/23 00:00	16	38	4.3	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/02/24 00:00	9	236	2.4	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/02/26 00:00	10	221	3.1	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/02/27 00:00	9	244	2.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
9	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/02/28 00:00	10	236	2.1	No response required	None	2
			March 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/03 00:00	12	46	3	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/04 00:00	19	49	2.1	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/05 00:00	9	235	3.9	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/06 00:00	12	224	2.7	Foskor	None	3
5	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/06 11:50	321	177	2.3	Foskor	None	3
6	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/07 00:00	9	55	3.4	No response required	None	2
7	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/03/08 00:00	21	32	5	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/08 00:00	21	32	5	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/09 00:00	13	319	4.4	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/09 00:00	10	319	4.4	No response required	None	2
11	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/03/10 00:00	26	218	2.6	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/10 00:00	13	218	2.6	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/10 00:00	26	218	2.6	No response required	None	2
14	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/10 12:10	197	164	3.7	Foskor (meteorology)	Based on wind direction	25
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/11 00:00	17	234	3.8	No response required	None	2
16	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/03/11 22:00	161	183	3.4	Foskor (meteorology)	Based on wind direction	25

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
17	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/11 22:40	279	175	3.8	Foskor (meteorology)	Based on wind direction	25
18	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/11 22:50	326	164	3.7	Foskor (meteorology)	Based on wind direction	25
19	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/11 23:00	267	163	3.7	Foskor (meteorology)	Based on wind direction	25
20	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/03/11 23:00	166	158	3.7	Foskor (meteorology)	Based on wind direction	25
21	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/11 23:20	215	159	3.5	Foskor (meteorology)	Based on wind direction	25
22	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/11 23:50	213	154	3.5	Foskor (meteorology)	Based on wind direction	25
23	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/03/13 00:00	26	46	4.6	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/13 00:00	26	46	4.6	No response required	None	2
25	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/14 00:00	19	43	4.8	No response required	None	2
26	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/03/15 00:00	30	46	4.4	No response required	None	2
27	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/15 00:00	30	46	4.4	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/18 00:00	17	238	2.4	No response required	None	2
29	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/18 14:40	192	167	3.1	Foskor (meteorology)	Based on wind direction	25
30	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/18 14:50	260	168	3.7	Foskor (meteorology)	Based on wind direction	25
31	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/03/23 00:00	32	217	2.5	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
32	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/23 00:00	32	217	2.5	No response required	None	2
33	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 14:50	199	171	3.6	Foskor (meteorology)	Based on wind direction	25
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 15:00	222	165	3.5	Foskor (meteorology)	Based on wind direction	25
35	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/03/23 15:00	222	167	3.2	Foskor (meteorology)	Based on wind direction	25
36	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 15:10	347	161	3.5	Foskor (meteorology)	Based on wind direction	25
37	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 15:20	212	167	3.2	Foskor (meteorology)	Based on wind direction	25
38	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 15:50	220	171	3.0	Foskor (meteorology)	Based on wind direction	25
39	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 16:00	212	157	2.9	Foskor (meteorology)	Based on wind direction	25
40	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/03/23 16:00	170	165	2.9	Foskor (meteorology)	Based on wind direction	25
41	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 16:40	442	166	3.2	Foskor (meteorology)	Based on wind direction	25
42	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/03/23 17:00	183	156	2.5	Foskor (meteorology)	Based on wind direction	25
43	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 17:10	269	166	2.7	Foskor (meteorology)	Based on wind direction	25
44	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 17:20	494	167	2.5	Foskor (meteorology)	Based on wind direction	25
45	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/03/23 17:30	195	157	2.1	Foskor (meteorology)	Based on wind direction	25

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
46	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/26 00:00	10	346	1.8	No response required	None	2
47	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/27 00:00	9	226	3	No response required	None	2
48	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/03/28 00:00	10	220	3.9	No response required	None	2
49	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/28 00:00	11	231	4	No response required	None	2
50	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/03/31 00:00	20	33	3.9	No response required	None	2
51	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/03/31 00:00	20	33	3.9	No response required	None	2
52	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/03/31 00:00	11	33	3.9	No response required	None	2
April 2021									
1	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/01 00:00	11	211	2.8	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/02 00:00	10	6	3.7	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/03 00:00	11	229	4.3	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/05 00:00	10	263	1.3	No response required	None	2
5	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/04/07 00:00	20	38	4.5	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/07 00:00	20	38	4.5	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/09 00:00	8	225	1.5	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/10 00:00	10	44	3.0	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/11 00:00	14	349	3.0	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/12 00:00	11	224	2.7	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
11	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/13 00:00	9	18	2.2	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/14 00:00	12	34	2.8	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/14 00:00	11	34	2.8	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/15 00:00	10	228	2.4	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/16 00:00	9	220	6.7	No response required	None	2
16	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/04/16 22:00	215	154	4.1	Foskor (meteorology)	Based on wind direction	25
17	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/04/18 00:00	31	35	4.6	No response required	None	2
18	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/18 00:00	31	35	4.6	No response required	None	2
19	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/18 00:00	14	35	4.6	No response required	None	2
20	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/19 00:00	19	No Data	No Data	No response required	None	2
21	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/23 00:00	8	255	4.7	No response required	None	2
22	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/24 00:00	10	259	5.7	No response required	None	2
23	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/25 00:00	9	241	3.3	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/27 00:00	12	18	2.6	No response required	None	2
25	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/04/27 00:00	39	18	2.6	No response required	Response: South 32	4, 1
26	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/27 00:00	39	18	2.6	No response required	Response: South 32	2
27	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/04/27 17:00	270	52	2.5	Foskor & South32 (meteorology)	Based on wind direction	4

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
28	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 17:20	482	47	3.5	Foskor & South32 (meteorology)	Based on wind direction	4
29	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 17:30	388	56	2.7	Foskor & South32 (meteorology)	Based on wind direction	4
30	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 17:40	286	57	2.3	Foskor & South32 (meteorology)	Based on wind direction	4
31	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 17:50	216	56	2.3	Foskor & South32 (meteorology)	Based on wind direction	4
32	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:00	343	53	2.0	Foskor & South32 (meteorology)	Based on wind direction	4
33	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/04/27 18:00	380	41	1.2	Foskor & South32 (meteorology)	Based on wind direction	4
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:10	530	55	1.8	Foskor & South32 (meteorology)	Based on wind direction	4
35	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:20	377	51	2.0	Foskor & South32 (meteorology)	Based on wind direction	4
36	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:30	443	30	1.0	Foskor & South32 (meteorology)	Based on wind direction	4
37	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:40	364	39	0.1	Foskor & South32 (meteorology)	Based on wind direction	4
38	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/04/27 18:50	224	354	0.1	Foskor & South32 (meteorology)	Based on wind direction	4
39	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/04/28 00:00	11	208	2.7	No response required	None	2
40	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/04/29 00:00	10	3	2.9	No response required	None	2
41	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/04/29 00:00	12	3	2.9	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			May 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/05/01 00:00	10	256	3.7	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/02 00:00	10	270	1.8	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/04 00:00	14	43	1.8	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/05 00:00	10	51	1.6	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/06 00:00	9	27	2.3	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/07 00:00	8	52	3.2	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/08 00:00	15	59	2.8	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/08 00:00	9	59	2.8	No response required	None	2
9	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/11 00:00	21	5	1.9	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/11 00:00	9	5	1.9	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/11 00:00	21	5	1.9	No response required	None	2
12	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/12 00:00	23	245	1.9	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/12 00:00	23	245	1.9	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/13 00:00	12	10	2.4	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/13 00:00	8	10	2.4	No response required	None	2
16	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/14 00:00	14	32	1.7	No response required	None	2
17	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/15 00:00	31	19	2.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
18	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/15 00:00	16	19	2.1	No response required	None	2
19	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/15 00:00	31	19	2.1	No response required	None	2
20	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/16 00:00	13	241	3.1	No response required	None	2
21	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/05/19 00:00	26	29	4.7	No response required	None	2
22	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/19 00:00	31	29	4.7	No response required	None	2
23	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/19 00:00	26	29	4.7	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/19 00:00	31	29	4.7	No response required	None	2
25	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/05/20 00:00	38	31	5.8	No response required	None	2
26	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/20 00:00	28	31	5.8	No response required	None	2
27	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/20 00:00	38	31	5.8	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/20 00:00	28	31	5.8	No response required	None	2
29	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/21 00:00	42	180	3.4	No response required	None	2
30	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/21 00:00	42	180	3.4	No response required	None	2
31	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/23 00:00	9	3	2.4	No response required	None	2
32	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/05/24 00:00	25	41	4.4	No response required	None	2
33	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/24 00:00	25	41	4.4	No response required	None	2
34	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/05/25 00:00	24	40	4.4	No response required	None	2
35	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/25 00:00	24	40	4.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
36	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/26 00:00	8	310	1.7	No response required	None	2
37	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/26 00:00	14	310	1.7	No response required	None	2
38	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/05/27 00:00	14	15	2.7	No response required	None	2
39	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/27 00:00	16	15	2.7	No response required	None	2
40	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/28 00:00	14	251	2.2	No response required	None	2
41	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/05/30 00:00	50	225	3.6	Foskor (meteorology)	Based on wind direction	25
42	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/05/30 00:00	50	225	3.6	No response required	None	2
43	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/30 00:00	50	225	3.6	No response required	None	2
44	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/05/30 21:00	1004	199	3.7	Foskor (meteorology)	Based on wind direction	25
45	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/05/30 21:40	3036	190	4.5	Foskor (meteorology)	Based on wind direction	25
46	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/05/30 21:50	2934	193	3.6	Foskor (meteorology)	Based on wind direction	25
47	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/05/31 00:00	12	5	2.4	No response required	None	2
June 2021									
1	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/01 00:00	10	267	3.4	No response required	None	2
2	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/06/03 00:00	25	238	6.3	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/03 00:00	25	238	6.3	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/04 00:00	15	246	4.9	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/06 00:00	10	346	2.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
6	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/07 00:00	26	28	3.5	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/07 00:00	13	28	3.5	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/07 00:00	26	28	3.5	No response required	None	2
9	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/08 00:00	26	36	3.4	No response required	None	2
10	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/08 00:00	22	36	3.4	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/08 00:00	26	36	3.4	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/08 00:00	22	36	3.4	No response required	None	2
13	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/09 00:00	20	36	2.5	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/09 00:00	14	36	2.5	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/09 00:00	20	36	2.5	No response required	None	2
16	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/10 00:00	10	351	1.4	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/11 00:00	18	21	2.0	No response required	None	2
18	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/12 00:00	35	32	3.5	No response required	Response: South 32	14
19	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/12 00:00	31	32	3.5	No response required	Response: South 32	14
20	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/12 00:00	35	32	3.5	No response required	Response: South 32	14
21	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/12 00:00	31	32	3.5	No response required	Response: South 32	14
22	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/12 23:00	136	7	1.7	South32 (meteorology)	Based on wind direction	14
23	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/13 00:00	59	14	1.9	No response required	Response: South 32	5

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
24	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/13 00:00	15	14	1.9	No response required	Response: South 32	5
25	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/13 00:00	59	14	1.9	No response required	Response: South 32	5
26	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/06/13 00:00	59	14	1.9	South32 (meteorology)	Based on wind direction	5
27	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/13 01:00	138	339	2.1	South32 (meteorology)	Based on wind direction	5
28	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 17:50	214	28	5.4	South32 (meteorology)	Based on wind direction	5
29	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 18:00	273	30	4.9	South32 (meteorology)	Based on wind direction	5
30	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/13 18:00	144	36	4.4	South32 (meteorology)	Based on wind direction	5
31	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 19:00	220	18	2.4	South32 (meteorology)	Based on wind direction	5
32	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/13 19:00	190	330	2.0	South32 (meteorology)	Based on wind direction	5
33	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 19:10	206	28	2.8	South32 (meteorology)	Based on wind direction	5
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 19:30	207	208	1.6	South32 (meteorology)	Based on wind direction	5
35	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/13 19:40	193	245	1.5	South32 (meteorology)	Based on wind direction	5
36	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/14 00:00	19	279	2.2	No response required	None	2
37	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/15 00:00	22	24	3.2	South32	Compressed air outage GTC's & FTC's	6
38	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/15 00:00	30	24	3.2	South32	Compressed air outage GTC's & FTC's	6
39	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/15 00:00	22	24	3.2	South32	Compressed air outage GTC's & FTC's	6

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
40	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/15 00:00	30	24	3.2	South32	Compressed air outage GTC's & FTC's	6
41	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/15 19:00	139	28	6.1	South32	Compressed air outage GTC's & FTC's	6
42	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/16 00:00	33	40	4.1	South32	Compressed air outage GTC's & FTC's	7
43	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/16 00:00	29	40	4.1	South32	Compressed air outage GTC's & FTC's	7
44	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/16 00:00	33	40	4.1	South32	Compressed air outage GTC's & FTC's	7
45	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/16 00:00	29	40	4.1	South32	Compressed air outage GTC's & FTC's	7
46	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/16 04:00	136	25	4.2	South32	Compressed air outage GTC's & FTC's	7
47	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/17 00:00	18	273	3.0	No response required	Response: South 32	8
48	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/17 04:50	201	340	1.6	South32 (meteorology)	Based on wind direction	8
49	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/17 05:10	196	338	1.6	South32 (meteorology)	Based on wind direction	8
50	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/06/18 00:00	64	247	2.6	Foskor (meteorology)	Based on wind direction	17, 66
51	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/18 00:00	64	247	2.6	No response required	Response: South 32	17, 66
52	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/18 00:00	12	229	2.9	No response required	Response: South 32	17, 66
53	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/18 00:00	64	247	2.6	No response required	Response: South 32	17, 66
54	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/18 15:00	202	188	2.4	Foskor (meteorology)	Based on wind direction	17, 66
55	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 15:40	212	191	2.0	Foskor (meteorology)	Based on wind direction	17, 66

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
56	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 15:50	908	171	2.3	Foskor (meteorology)	Based on wind direction	17, 66
57	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:00	674	158	2.7	Foskor (meteorology)	Based on wind direction	17, 66
58	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/18 16:00	1198	177	1.8	Foskor (meteorology)	Based on wind direction	17, 66
59	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:10	714	174	2.3	Foskor (meteorology)	Based on wind direction	17, 66
60	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:20	1462	181	1.7	Foskor (meteorology)	Based on wind direction	17, 66
61	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:30	2601	178	1.6	Foskor (meteorology)	Based on wind direction	17, 66
62	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:40	927	182	1.5	Foskor (meteorology)	Based on wind direction	17, 66
63	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 16:50	812	193	0.9	Foskor (meteorology)	Based on wind direction	17, 66
64	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/18 17:00	503	242	0.6	Foskor (meteorology)	Based on wind direction	17, 66
65	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/20 00:00	18	36	3.6	No response required	None	2
66	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/20 00:00	16	36	3.6	No response required	None	2
67	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/21 00:00	20	39	4.1	No response required	Response: South 32	9
68	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/21 00:00	28	39	4.1	No response required	Response: South 32	9
69	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/21 00:00	20	39	4.1	No response required	Response: South 32	9
70	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/21 00:00	28	39	4.1	No response required	Response: South 32	9

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
71	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/06/21 07:00	181	18	2.8	South32 (meteorology)	Based on wind direction	9
72	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/21 07:40	195	21	3.1	South32 (meteorology)	Based on wind direction	9
73	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/22 00:00	31	33	3.7	No response required	None	2
74	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/22 00:00	24	33	3.7	No response required	None	2
75	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/22 00:00	31	33	3.7	No response required	None	2
76	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/22 00:00	24	33	3.7	No response required	None	2
77	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/23 00:00	32	346	1.2	No response required	None	2
78	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/23 00:00	32	346	1.2	No response required	None	2
79	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/24 00:00	9	263	3.2	No response required	None	2
80	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/24 00:00	12	273	2.8	No response required	None	2
81	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/25 00:00	9	342	2.0	No response required	None	2
82	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/25 00:00	16	342	2.0	No response required	None	2
83	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/26 00:00	23	267	2.2	No response required	None	2
84	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/26 00:00	23	267	2.2	No response required	None	2
85	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/28 00:00	21	26	4.9	No response required	None	2
86	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/28 00:00	21	26	4.9	No response required	None	2
87	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/28 00:00	60	26	4.9	No response required	Response: South 32	10, 1
88	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/28 00:00	60	26	4.9	No response required	Response: South 32	10, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
89	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/06/28 00:00	60	26	4.9	South32 (meteorology)	Based on wind direction	10
90	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/06/29 00:00	12	242	2.8	No response required	None	2
91	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/29 00:00	16	256	2.6	No response required	None	2
92	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/29 00:00	15	256	2.6	No response required	None	2
93	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/29 14:40	201	172	2.1	Foskor (meteorology)	Based on wind direction	11
94	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/06/29 22:00	264	47	2.8	Foskor & South32 (meteorology)	Based on wind direction	11
95	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/06/29 22:30	201	48	2.9	Foskor & South32 (meteorology)	Based on wind direction	11
96	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/06/29 22:40	537	41	3.3	Foskor & South32 (meteorology)	Based on wind direction	11
97	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/06/29 22:50	699	41	2.9	Foskor & South32 (meteorology)	Based on wind direction	11
98	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/06/30 00:00	26	4	2.7	No response required	Response: South 32	18
99	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/06/30 00:00	29	4	2.7	No response required	Response: South 32	18
100	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/06/30 00:00	26	4	2.7	No response required	Response: South 32	18
101	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/06/30 00:00	29	4	2.7	No response required	Response: South 32	18
102	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/06/30 17:10	247	10	1.1	South32 (meteorology)	Based on wind direction	18
July 2021									
1	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/02 00:00	24	17	3.0	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
2	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/02 00:00	16	17	3.0	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/02 00:00	24	17	3.0	No response required	None	2
4	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/07/02 23:00	136	42	3.5	Foskor & South32 (meteorology)	Based on wind direction	12
5	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/02 23:20	207	35	3.5	Foskor & South32 (meteorology)	Based on wind direction	12
6	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/02 23:30	249	51	2.9	Foskor & South32 (meteorology)	Based on wind direction	12
7	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/07/03 00:00	139	46	2.8	Foskor & South32 (meteorology)	Based on wind direction	12
8	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/03 00:00	31	36	2.8	No response required	None	2
9	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/03 00:00	29	36	2.8	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/03 00:00	31	36	2.8	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/03 00:00	29	36	2.8	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/07/04 00:00	14	229	3.8	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/06 00:00	10	25	2.9	No response required	None	2
14	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/07 00:00	25	29	3.8	No response required	None	2
15	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/07 00:00	23	29	3.8	No response required	None	2
16	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/07 00:00	25	29	3.8	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/07 00:00	23	29	3.8	No response required	None	2
18	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/08 00:00	42	34	6	No response required	Response: South 32	19

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
19	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/08 00:00	42	34	6	No response required	Response: South 32	19
20	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/08 00:00	17	34	6	No response required	Response: South 32	19
21	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/08 17:40	260	35	6.1	Foskor & South32 (meteorology)	Based on wind direction	19
22	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/08 18:00	198	35	6.7	Foskor & South32 (meteorology)	Based on wind direction	19
23	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/07/08 18:00	227	34	6.8	Foskor & South32 (meteorology)	Based on wind direction	19
24	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/08 18:20	372	34	6.4	Foskor & South32 (meteorology)	Based on wind direction	19
25	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/07/08 18:30	426	36	6	Foskor & South32 (meteorology)	Based on wind direction	19
26	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/09 00:00	20	271	4.6	Foskor & South32 (meteorology)	Based on wind direction	13
27	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/09 00:00	20	271	4.6	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/09 00:00	35	271	4.6	No response required	None	2
29	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/09 00:00	35	271	4.6	South32 (meteorology)	Based on wind direction	13
30	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/09 05:00	166	28	4.8	South32 (meteorology)	Based on wind direction	13, 1
31	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/10 00:00	11	17	1.9	No response required	None	2
32	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/11 00:00	10	11	2.5	No response required	None	2
33	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/12 00:00	26	37	5.8	No response required	None	2
34	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/12 00:00	26	37	5.8	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
35	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/12 00:00	19	37	5.8	No response required	None	2
36	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/13 00:00	45	200	4.8	No response required	Response: South 32	24
37	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/13 00:00	45	200	4.8	No response required	Response: South 32	24
38	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/13 07:50	392	190	3.8	Foskor (meteorology)	Based on wind direction	24
39	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/13 08:00	241	188	4.1	Foskor (meteorology)	Based on wind direction	24
40	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/13 08:00	135	188	4.7	Foskor (meteorology)	Based on wind direction	24
41	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/13 08:40	278	182	5.9	Foskor (meteorology)	Based on wind direction	24
42	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/13 13:00	178	174	4.5	Foskor (meteorology)	Based on wind direction	24
43	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/13 13:30	265	173	4.1	Foskor (meteorology)	Based on wind direction	24
44	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/13 13:40	299	173	4.2	Foskor (meteorology)	Based on wind direction	24
45	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/07/14 00:00	9	239	3.7	No response required	None	2
46	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/14 16:10	233	163	4.2	Foskor (meteorology)	Based on wind direction	20
47	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/14 16:20	285	144	3.9	Foskor (meteorology)	Based on wind direction	20
48	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/15 00:00	15	9	2.2	No response required	None	2
49	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/16 00:00	17	25	1.9	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
50	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/17 00:00	28	12	1.7	No response required	None	2
51	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/17 00:00	28	12	1.7	No response required	None	2
52	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/19 00:00	24	27	3.5	No response required	None	2
53	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/19 00:00	9	27	3.5	No response required	None	2
54	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/19 00:00	24	27	3.5	No response required	None	2
55	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/20 00:00	33	28	3.9	South32 (meteorology)	Based on wind direction	15
56	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/20 00:00	42	28	3.9	South32 (meteorology)	Based on wind direction	15
57	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/20 00:00	33	28	3.9	South32 (meteorology)	Based on wind direction	15
58	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/20 00:00	42	28	3.9	South32 (meteorology)	Based on wind direction	15
59	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/20 21:00	135	23	3.2	South32 (meteorology)	Based on wind direction	15
60	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/20 23:00	147	323	0.9	South32 (meteorology)	Based on wind direction	15
61	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/21 00:00	21	260	3.5	No response required	Response: South 32	16
62	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/07/21 00:00	9	257	3.9	No response required	Response: South 32	16
63	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/21 00:00	21	260	3.5	No response required	Response: South 32	16
64	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/07/21 00:00	154	272	1.2	South32 (meteorology)	Based on wind direction	15
65	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/07/23 00:00	12	235	5.6	No response required	None	2
66	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/07/24 00:00	8	240	3.9	No response required	None	2
67	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/25 00:00	18	344	2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
68	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/25 21:00	201	355	1.6	South32 (meteorology)	Based on wind direction	21
69	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/07/25 21:10	192	341	1.6	South32 (meteorology)	Based on wind direction	21
70	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/26 00:00	25	28	3.7	No response required	None	2
71	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/26 00:00	10	28	3.7	No response required	None	2
72	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/26 00:00	25	28	3.7	No response required	None	2
73	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/07/27 00:00	38	35	6.3	No response required	None	2
74	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/27 00:00	28	35	6.3	No response required	None	2
75	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/27 00:00	38	35	6.3	No response required	None	2
76	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/27 00:00	28	35	6.3	No response required	None	2
77	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/07/29 00:00	25	254	2.3	No response required	None	2
78	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/29 00:00	25	254	2.3	No response required	None	2
79	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/30 00:00	13	283	2.3	No response required	None	2
80	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/07/31 00:00	9	32	2.5	No response required	None	2
81	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/07/31 00:00	11	32	2.5	No response required	None	2
August 2021									
1	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/08/01 00:00	27	26	2.3	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/01 00:00	18	26	2.3	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/01 00:00	27	26	2.3	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
4	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/02 00:00	9	228	3.2	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/03 00:00	16	30	4.1	No response required	None	2
6	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/04 00:00	22	40	5	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/04 00:00	22	40	5	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/05 00:00	11	38	3.1	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/05 00:00	11	38	3.1	No response required	None	2
10	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/06 00:00	13	280	4.4	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/06 00:00	10	290	4.8	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/07 00:00	9	244	2.2	No response required	None	2
13	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/08 00:00	22	41	3.7	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/08 00:00	22	41	3.7	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/08 00:00	10	41	3.7	No response required	None	2
16	SO ₂ Daily WHO Standard (8 ppb)	Felixton	2021/08/09 00:00	9	226	4.9	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/09 00:00	9	240	5.6	No response required	None	2
18	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/09 00:00	15	240	5.6	No response required	None	2
19	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/11 00:00	24	24	4.6	No response required	None	2
20	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/11 00:00	24	24	4.6	No response required	None	2
21	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/11 00:00	15	24	4.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
22	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/12 00:00	25	306	5.7	No response required	None	2
23	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/08/12 00:00	23	306	5.7	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/12 00:00	25	306	5.7	No response required	None	2
25	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/12 00:00	23	306	5.7	No response required	None	2
26	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/08/13 00:00	20	245	4.8	No response required	None	2
27	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/13 00:00	20	245	4.8	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/15 00:00	11	40	2.2	No response required	None	2
29	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/16 00:00	12	22	3.1	No response required	None	2
30	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/17 00:00	22	36	6.1	No response required	None	2
31	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/17 00:00	22	36	6.1	No response required	None	2
32	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/17 00:00	10	36	6.1	No response required	None	2
33	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/19 00:00	12	209	3.9	No response required	None	2
34	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/20 00:00	9	247	3.4	No response required	None	2
35	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/21 00:00	12	9	3.7	No response required	None	2
36	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/21 00:00	16	9	3.7	No response required	None	2
37	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/22 00:00	10	250	3.6	No response required	None	2
38	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/23 00:00	17	20	3.4	No response required	None	2
39	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/23 00:00	13	20	3.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
40	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/24 00:00	24	296	4.2	No response required	None	2
41	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/08/24 00:00	32	296	4.2	No response required	None	2
42	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/24 00:00	24	296	4.2	No response required	None	2
43	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/24 00:00	32	296	4.2	No response required	None	2
44	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/08/26 00:00	31	34	6.1	No response required	None	2
45	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/26 00:00	31	34	6.1	No response required	None	2
46	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/26 00:00	17	34	6.1	No response required	None	2
47	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/08/28 00:00	25	234	6.8	No response required	None	2
48	SO ₂ Daily WHO Standard (8 ppb)	Arboretum	2021/08/28 00:00	10	231	6.7	No response required	None	2
49	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/08/28 00:00	25	234	6.8	No response required	None	2
50	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/08/28 14:40	268	221	9	Foskor	Sulphuric acid plant gas leak	22, 23
51	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/29 00:00	9	253	3.6	No response required	None	2
52	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/08/30 00:00	19	38	3.8	No response required	None	2
53	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/30 00:00	19	38	3.8	No response required	None	2
54	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/08/31 00:00	14	244	2.7	No response required	None	2
			September 2021						
1	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/02 00:00	33	33	5.4	No response required	None	2
2	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/09/02 00:00	22	33	5.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
3	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/02 00:00	33	33	5.4	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/02 00:00	22	33	5.4	No response required	None	2
5	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/03 00:00	32	34	6.2	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/03 00:00	32	34	6.2	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/09/04 00:00	16	173	3.8	No response required	Response: South 32	27
8	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/09/04 04:40	234	221	5.8	Foskor	Sulphuric acid C plant gas leak	26, 27
9	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/09/04 14:00	203	164	1.5	Foskor	Sulphuric acid C plant gas leak	26, 27
10	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/05 00:00	20	38	3.6	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/05 00:00	20	38	3.6	No response required	None	2
12	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/05 00:00	11	38	3.6	No response required	None	2
13	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/09/06 00:00	15	219	5.2	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/10 00:00	14	38	4.6	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/10 00:00	9	38	4.6	No response required	None	2
16	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/11 00:00	31	37	7.2	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/11 00:00	31	37	7.2	No response required	None	2
18	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/12 00:00	25	41	6.6	No response required	None	2
19	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/12 00:00	25	41	6.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
20	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/14 00:00	16	42	3.5	No response required	None	2
21	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/09/15 00:00	12	215	5.1	No response required	None	2
22	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/09/18 00:00	26	89	2.4	No response required	None	2
23	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/18 00:00	10	89	2.4	No response required	None	2
24	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/18 00:00	26	89	2.4	No response required	None	2
25	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/09/18 14:30	192	161	3.2	Foskor (meteorology)	Based on wind direction	28
26	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/19 00:00	9	41	5.3	No response required	None	2
27	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/19 00:00	11	41	5.3	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/09/21 00:00	9	204	5	No response required	None	2
29	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/09/22 00:00	16	194	2.9	No response required	None	2
30	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/23 00:00	20.2	42	4.9	No response required	None	2
31	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/23 00:00	20.2	42	4.9	No response required	None	2
32	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/09/23 23:00	210	34	6.7	Foskor & South32 (meteorology)	Based on wind direction	29, 2
33	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/09/23 23:00	137	34	7	Foskor & South32 (meteorology)	Based on wind direction	29, 2
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/09/23 23:10	242	34	6.4	Foskor & South32 (meteorology)	Based on wind direction	29, 2
35	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/24 00:00	13	278	4.3	No response required	None	2
36	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/09/25 00:00	22	31	4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
37	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/25 00:00	22	31	4	No response required	None	2
38	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/09/27 00:00	12	28	5.4	No response required	None	2
			October 2021						
1	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/01 00:00	19	26	4.7	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/01 00:00	19	26	4.7	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/10/03 00:00	9	231	4.5	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/07 00:00	13	52	3.9	No response required	None	2
5	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/08 00:00	24	26	5.4	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/08 00:00	24	26	5.4	No response required	None	2
7	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/08 00:00	10	26	5.4	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/09 00:00	13	250	5	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/11 00:00	11	87	3.5	No response required	None	2
10	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/12 00:00	25	43	4.5	No response required	None	2
11	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/12 00:00	25	43	4.5	No response required	None	2
12	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Harbour West	2021/10/13 00:00	55	37	3.7	Foskor	Sulphuric acid B plant gas leak	30
13	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/13 00:00	55	37	3.7	No response required	None	2
14	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/13 00:00	55	37	3.7	No response required	None	2
15	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/13 00:00	14	37	3.7	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
16	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/13 18:00	183	61	4.1	Foskor	Sulphuric acid B plant gas leak	30
17	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 18:30	355	62	4	Foskor	Sulphuric acid B plant gas leak	30
18	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 18:40	486	62	4.1	Foskor	Sulphuric acid B plant gas leak	30
19	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 18:50	256	55	4.1	Foskor	Sulphuric acid B plant gas leak	30
20	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/13 19:00	173	57	3.8	Foskor	Sulphuric acid B plant gas leak	30
21	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 19:50	436	55	3.9	Foskor	Sulphuric acid B plant gas leak	30
22	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 20:00	712	52	4.1	Foskor	Sulphuric acid B plant gas leak	30
23	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/13 20:00	438	46	4.2	Foskor	Sulphuric acid B plant gas leak	30
24	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 20:10	507	46	3.1	Foskor	Sulphuric acid B plant gas leak	30
25	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 20:20	674	52	3	Foskor	Sulphuric acid B plant gas leak	30
26	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/13 20:30	511	45	3.3	Foskor	Sulphuric acid B plant gas leak	30
27	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/10/14 00:00	13	5	5.5	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/14 00:00	42	27	6.1	No response required	None	2
29	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/14 00:00	25	27	6.1	No response required	None	2
30	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/14 00:00	42	27	6.1	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
31	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/10/14 00:00	25	27	6.1	No response required	None	2
32	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/14 12:00	144	57	5.2	Foskor	Sulphuric acid A plant gas leak	31
33	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/14 12:00	254	62	4.3	Foskor	Sulphuric acid A plant gas leak	31
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/14 13:30	207	66	5.4	Foskor	Sulphuric acid A plant gas leak	31
35	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/14 14:50	212	61	4.1	Foskor	Sulphuric acid A plant gas leak	31
36	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/10/15 00:00	11	13	3.6	No response required	None	2
37	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/15 00:00	13	97	4	No response required	None	2
38	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/15 19:20	198	41	4.9	Foskor & South32 (meteorology)	Based on wind direction	32
39	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/15 20:30	240	36	5.7	Foskor & South32 (meteorology)	Based on wind direction	32
40	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/10/16 00:00	9	212	4.4	No response required	None	2
41	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/17 00:00	10	217	2.9	No response required	None	2
42	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/10/17 22:20	194	196	3.8	Foskor (meteorology)	Based on wind direction	33, 48
43	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/10/18 00:00	26	201	3.7	No response required	None	2
44	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/10/18 00:30	370	Calm	0.5	Foskor	Sulphuric acid plant gas leak	37
45	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/10/18 01:20	216	223	4.2	Foskor	Sulphuric acid plant gas leak	37

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
46	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/10/18 02:40	506	228	4.9	Foskor	Sulphuric acid plant gas leak	37
47	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/10/18 03:00	201	224	4	Foskor	Sulphuric acid plant gas leak	37, 34
48	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/10/18 03:10	438	224	4	Foskor	Sulphuric acid plant gas leak	37
49	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/10/18 03:20	302	223	3.5	Foskor	Sulphuric acid plant gas leak	37
50	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/19 00:00	11	200	2.2	No response required	None	2
51	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/10/19 11:30	284	171	2.7	Foskor (meteorology)	Based on wind direction	35, 36
52	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/10/19 11:40	213	163	2.6	Foskor (meteorology)	Based on wind direction	35, 36
53	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/20 00:00	14	48	4.2	No response required	None	2
54	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/20 00:00	12	48	4.2	No response required	None	2
55	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/21 00:00	22	52	5.6	No response required	None	2
56	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/21 00:00	22	52	5.6	No response required	None	2
57	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/22 00:00	19	26	5.3	No response required	None	2
58	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/28 00:00	10	64	4.6	No response required	None	2
59	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 00:00	165	47	3.5	Foskor	Sulphuric acid plant gas leak	38
60	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Harbour West	2021/10/29 00:00	161	45	6.7	Foskor	Sulphuric acid plant gas leak	38
61	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/10/29 00:00	161	45	6.7	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
62	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/10/29 00:00	161	45	6.7	No response required	None	2
63	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 00:40	265	49	3.8	Foskor	Sulphuric acid plant gas leak	38
64	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 00:50	567	49	4.3	Foskor	Sulphuric acid plant gas leak	38
65	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 01:00	272	53	4.2	Foskor	Sulphuric acid plant gas leak	38
66	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 01:00	339	50	4.5	Foskor	Sulphuric acid plant gas leak	38
67	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 01:30	503	47	4.9	Foskor	Sulphuric acid plant gas leak	38
68	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 01:40	314	48	5.2	Foskor	Sulphuric acid plant gas leak	38
69	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 01:50	673	46	4.1	Foskor	Sulphuric acid plant gas leak	38
70	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:00	520	47	4.9	Foskor	Sulphuric acid plant gas leak	38
71	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 02:00	659	46	5.2	Foskor	Sulphuric acid plant gas leak	38
72	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:10	888	43	4.6	Foskor	Sulphuric acid plant gas leak	38
73	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:20	1078	49	4.7	Foskor	Sulphuric acid plant gas leak	38
74	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:30	779	46	5.1	Foskor	Sulphuric acid plant gas leak	38

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
75	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:40	393	46	5.7	Foskor	Sulphuric acid plant gas leak	38
76	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 02:50	298	47	6	Foskor	Sulphuric acid plant gas leak	38
77	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:00	257	48	6.4	Foskor	Sulphuric acid plant gas leak	38
78	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 03:00	998	44	5.7	Foskor	Sulphuric acid plant gas leak	38
79	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:10	630	46	6	Foskor	Sulphuric acid plant gas leak	38
80	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:20	1229	42	5.4	Foskor	Sulphuric acid plant gas leak	38
81	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:30	1562	46	5.1	Foskor	Sulphuric acid plant gas leak	38
82	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:40	1625	40	4.9	Foskor	Sulphuric acid plant gas leak	38
83	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 03:50	686	40	6.5	Foskor	Sulphuric acid plant gas leak	38
84	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:00	691	38	6.2	Foskor	Sulphuric acid plant gas leak	38
85	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 04:00	409	39	6.2	Foskor	Sulphuric acid plant gas leak	38
86	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:10	331	37	6.3	Foskor	Sulphuric acid plant gas leak	38
87	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:20	228	38	6.9	Foskor	Sulphuric acid plant gas leak	38

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
88	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:30	380	37	6.4	Foskor	Sulphuric acid plant gas leak	38
89	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:40	491	41	5.6	Foskor	Sulphuric acid plant gas leak	38
90	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 04:50	331	40	5.6	Foskor	Sulphuric acid plant gas leak	38
91	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:00	351	39	6.7	Foskor	Sulphuric acid plant gas leak	38
92	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 05:00	507	38	6.6	Foskor	Sulphuric acid plant gas leak	38
93	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:10	847	38	6.1	Foskor	Sulphuric acid plant gas leak	38
94	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:20	1049	38	6.1	Foskor	Sulphuric acid plant gas leak	38
95	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:30	288	38	6.7	Foskor	Sulphuric acid plant gas leak	38
96	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:40	206	36	6.9	Foskor	Sulphuric acid plant gas leak	38
97	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 05:50	301	39	7.3	Foskor	Sulphuric acid plant gas leak	38
98	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 06:00	276	40	6.5	Foskor	Sulphuric acid plant gas leak	38
99	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 06:10	271	43	7.7	Foskor	Sulphuric acid plant gas leak	38
100	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 11:40	237	44	9	Foskor	Sulphuric acid plant gas leak	38

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
101	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/10/29 13:00	156	48	8.6	Foskor	Sulphuric acid plant gas leak	38
102	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 13:20	289	45	9	Foskor	Sulphuric acid plant gas leak	38
103	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/10/29 13:30	238	47	8.4	Foskor	Sulphuric acid plant gas leak	38
104	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/10/31 00:00	8	209	2.8	No response required	None	2
105	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/10/31 13:20	229	172	3.5	Foskor	Sulphuric acid C plant gas leak	38, 39
106	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/10/31 13:30	197	159	3.8	Foskor	Sulphuric acid C plant gas leak	38, 39
			November 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/01 00:00	15	54	5.3	No response required	None	2
2	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/02 00:00	17	224	6.4	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/03 00:00	13	176	3.3	No response required	None	2
4	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/05 00:00	26	41	4.7	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/05 00:00	26	41	4.7	No response required	None	2
6	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/06 00:00	9	226	4.3	No response required	None	2
7	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/11/07 00:00	28	215	2	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/07 00:00	28	215	2	No response required	None	2
9	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 08:00	220	171	1.4	Foskor	Sulphuric acid B plant gas leak	40, 62

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
10	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 09:30	224	178	1.6	Foskor	Sulphuric acid B plant gas leak	40, 62
11	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/11/07 10:00	161	175	3	Foskor	Sulphuric acid B plant gas leak	40, 62
12	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 10:20	196	174	3.2	Foskor	Sulphuric acid B plant gas leak	40, 62
13	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 10:40	225	178	3.1	Foskor	Sulphuric acid B plant gas leak	40, 62
14	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 11:00	259	170	3.6	Foskor	Sulphuric acid B plant gas leak	40, 62
15	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/07 14:10	264	169	3.5	Foskor	Sulphuric acid B plant gas leak	40, 62
16	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/09 00:00	9	212	5.3	No response required	None	2
17	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/11 00:00	9	149	2.8	No response required	None	2
18	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/11 00:00	16	205	3.5	No response required	None	2
19	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/11/11 15:00	159	181	4.6	Foskor	Sulphuric acid plant gas leak	44
20	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/11 15:40	218	175	4.3	Foskor	Sulphuric acid plant gas leak	44
21	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/11 15:50	434	180	4.2	Foskor	Sulphuric acid plant gas leak	44
22	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/11 16:00	424	172	3.8	Foskor	Sulphuric acid plant gas leak	44
23	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/11/11 16:00	171	153	4.1	Foskor	Sulphuric acid plant gas leak	44

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
24	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/11 16:10	271	165	4.2	Foskor	Sulphuric acid plant gas leak	44
25	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/12 00:00	20	21	5.6	No response required	None	2
26	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/12 00:00	11	10	4.7	No response required	None	2
27	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/12 00:00	20	21	5.6	No response required	None	2
28	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/13 00:00	11	166	3	No response required	None	2
29	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/13 00:00	13	176	3.2	No response required	None	2
30	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/13 08:30	229	171	2.9	Foskor	Sulphuric acid A plant gas leak	42, 43
31	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/13 08:40	237	168	3.2	Foskor	Sulphuric acid A plant gas leak	42, 43
32	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/13 08:50	210	170	2.7	Foskor	Sulphuric acid A plant gas leak	42, 43
33	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/13 09:00	258	171	2.9	Foskor	Sulphuric acid A plant gas leak	42, 43
34	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/11/14 00:00	24	215	2.8	No response required	Response: Foskor and South 32	45, 47
35	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/14 00:00	24	215	2.8	No response required	None	2
36	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/14 11:00	251	199	3.6	Foskor (meteorology)	Based on wind direction	45, 47, 57
37	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/14 11:20	209	181	3.6	Foskor (meteorology)	Based on wind direction	45, 47, 57
38	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/14 12:30	213	197	4	Foskor (meteorology)	Based on wind direction	45, 47, 57

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
39	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/15 00:00	40	37	4.3	No response required	None	2
40	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/15 00:00	40	37	4.3	No response required	None	2
41	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/11/15 20:00	152	54	3.8	Foskor	Sulphuric acid B plant gas leak	46, 63
42	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 20:30	297	58	3.6	Foskor	Sulphuric acid B plant gas leak	46, 63
43	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 20:40	282	52	3.6	Foskor	Sulphuric acid B plant gas leak	46, 63
44	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 20:50	241	50	3.6	Foskor	Sulphuric acid B plant gas leak	46, 63
45	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/11/15 21:00	323	43	3.7	Foskor	Sulphuric acid B plant gas leak	46, 63
46	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 21:30	364	41	3.6	Foskor	Sulphuric acid B plant gas leak	46, 63
47	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 21:40	653	38	4.5	Foskor	Sulphuric acid B plant gas leak	46, 63
48	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 21:50	591	37	4	Foskor	Sulphuric acid B plant gas leak	46, 63
49	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 22:00	773	38	3.7	Foskor	Sulphuric acid B plant gas leak	46, 63
50	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/11/15 22:00	220	37	4.4	Foskor	Sulphuric acid B plant gas leak	46, 63
51	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/15 22:10	205	37	4.1	Foskor	Sulphuric acid B plant gas leak	46, 63
52	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/16 00:00	10	218	5.4	No response required	None	2
53	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/17 00:00	18	143	3.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
54	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/18 00:00	11	204	5.6	No response required	None	2
55	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/19 14:30	239	183	2.3	Foskor	Sulphuric acid plant gas leak	49, 51
56	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/20 00:00	11.4	280	1.7	No response required	None	2
57	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/20 12:10	193	178	2.5	Foskor	Sulphuric acid plant gas leak	50, 52
58	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/20 12:20	249	185	2.2	Foskor	Sulphuric acid plant gas leak	50, 52
59	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/21 00:00	13	26	3.7	No response required	None	2
60	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/22 00:00	42	35	6.3	No response required	None	2
61	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/22 00:00	42	35	6.3	No response required	None	2
62	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/22 00:00	14	35	6.3	No response required	None	2
63	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/23 00:00	24	230	4.8	No response required	None	2
64	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/11/23 00:00	24	230	4.8	No response required	None	2
65	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/11/23 22:00	338	221	4.4	Foskor	Sulphuric acid plant gas leak	53, 59
66	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/11/23 22:00	195	222	5.4	Foskor	Sulphuric acid plant gas leak	53, 59
67	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/11/23 22:10	249	222	4.4	Foskor	Sulphuric acid plant gas leak	53, 59
68	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/11/23 22:20	202	225	5.6	Foskor	Sulphuric acid plant gas leak	53, 59
69	SO ₂ Daily WHO Standard (8 ppb)	Arboretum	2021/11/24 00:00	10	213	5.4	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
70	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/11/24 00:00	14	216	5.1	No response required	None	2
71	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/11/25 00:00	24	236	3.7	No response required	None	2
72	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/25 00:00	24	236	3.7	No response required	None	2
73	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/11/25 11:00	150	168	3.7	Foskor	Sulphuric acid plant gas leak	54, 56
74	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 11:40	241	184	3.8	Foskor	Sulphuric acid plant gas leak	54, 56
75	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 11:50	246	214	2.6	Foskor	Sulphuric acid plant gas leak	54, 56
76	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 12:00	266	165	3.1	Foskor	Sulphuric acid plant gas leak	54, 56
77	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/11/25 12:00	169	160	3.3	Foskor	Sulphuric acid plant gas leak	54, 56
78	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 12:20	234	147	3.5	Foskor	Sulphuric acid plant gas leak	54, 56
79	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 12:30	240	164	3.4	Foskor	Sulphuric acid plant gas leak	54, 56
80	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/25 13:10	209	147	3.4	Foskor	Sulphuric acid plant gas leak	54, 56
81	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/11/26 09:10	195	Calm	0.7	Foskor	Sulphuric acid plant gas leak	54, 56
82	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/27 00:00	29	45	4.4	No response required	None	2
83	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/27 00:00	29	45	4.4	No response required	None	2
84	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/27 01:20	317	50	2.1	Foskor	Sulphuric acid plant gas leak	56

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
85	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/11/27 03:40	245	46	1.8	Foskor	Sulphuric acid plant gas leak	56
86	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/11/28 00:00	46	34	6.7	No response required	None	2
87	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/28 00:00	46	34	6.7	No response required	None	2
88	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/28 00:00	14	34	6.7	No response required	None	2
89	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/11/29 00:00	11	104	2.6	No response required	None	2
90	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/11/30 00:00	12	52	5.4	No response required	None	2
			December 2021						
1	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/01 00:00	14	164	4.3	No response required	None	2
2	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/02 00:00	24	47	4.8	No response required	None	2
3	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/02 00:00	24	47	4.8	No response required	None	2
4	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/03 00:00	18	237	3.7	No response required	None	2
5	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/05 00:00	12	40	3	No response required	None	2
6	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/12/06 00:00	102	310	5.3	No response required	None	2
7	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/06 00:00	31	327	4.7	No response required	None	2
8	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/06 00:00	102	310	5.3	No response required	None	2
9	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/06 00:00	31	327	4.7	No response required	None	2
10	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	CBD	2021/12/06 00:00	102	310	5.3	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
11	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 21:50	226	225	4.3	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
12	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/06 22:00	377	217	3.7	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
13	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 22:30	824	217	3.3	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
14	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 22:40	1156	207	3.2	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
15	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 22:50	213	212	3.4	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
16	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 23:00	451	215	3	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
17	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/06 23:00	1001	219	3.1	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
18	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 23:10	1500	225	3.4	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
19	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 23:30	211	219	3.1	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
20	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 23:40	1689	219	2.9	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
21	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/06 23:50	1984	211	2.6	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	58, 61
22	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/12/07 00:10	105	203	3.2	Foskor	Sulphuric acid A plant start up at 2021-12-06 19:49	60, 1
23	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/07 00:10	105	203	3.2	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
24	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/07 00:10	105	203	3.2	No response required	None	2
25	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 12:50	301	189	4.3	Foskor	Sulphuric acid plant gas leak	60, 64
26	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 13:00	450	180	3.7	Foskor	Sulphuric acid plant gas leak	60, 64
27	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 13:00	161	195	4	Foskor	Sulphuric acid plant gas leak	60, 64
28	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 13:10	343	174	3.9	Foskor	Sulphuric acid plant gas leak	60, 64
29	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 13:20	463	171	3.6	Foskor	Sulphuric acid plant gas leak	60, 64
30	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 13:30	370	173	4.2	Foskor	Sulphuric acid plant gas leak	60, 64
31	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 13:40	504	180	4	Foskor	Sulphuric acid plant gas leak	60, 64
32	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 14:00	431	181	4.9	Foskor	Sulphuric acid plant gas leak	60, 64
33	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 14:00	361	176	4.1	Foskor	Sulphuric acid plant gas leak	60, 64
34	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 14:10	911	174	3.4	Foskor	Sulphuric acid plant gas leak	60, 64
35	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 14:20	1022	174	3.9	Foskor	Sulphuric acid plant gas leak	60, 64
36	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 14:30	329	178	3.5	Foskor	Sulphuric acid plant gas leak	60, 64

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
37	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 15:00	292	175	3.6	Foskor	Sulphuric acid plant gas leak	60, 64
38	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 15:00	466	178	3.6	Foskor	Sulphuric acid plant gas leak	60, 64
39	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 15:20	512	172	3	Foskor	Sulphuric acid plant gas leak	60, 64
40	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 15:30	415	176	3	Foskor	Sulphuric acid plant gas leak	60, 64
41	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 15:40	268	174	2.8	Foskor	Sulphuric acid plant gas leak	60, 64
42	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:00	198	171	2.5	Foskor	Sulphuric acid plant gas leak	60, 64
43	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 16:00	275	173	2.9	Foskor	Sulphuric acid plant gas leak	60, 64
44	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:10	311	168	2.8	Foskor	Sulphuric acid plant gas leak	60, 64
45	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:20	365	172	2.3	Foskor	Sulphuric acid plant gas leak	60, 64
46	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:30	244	161	2.4	Foskor	Sulphuric acid plant gas leak	60, 64
47	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:40	347	172	3	Foskor	Sulphuric acid plant gas leak	60, 64
48	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 16:50	621	171	3	Foskor	Sulphuric acid plant gas leak	60, 64
49	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 17:00	688	176	2.3	Foskor	Sulphuric acid plant gas leak	60, 64

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
50	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 17:00	429	170	2.6	Foskor	Sulphuric acid plant gas leak	60, 64
51	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 17:10	248	175	2.4	Foskor	Sulphuric acid plant gas leak	60, 64
52	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 17:20	543	172	2.3	Foskor	Sulphuric acid plant gas leak	60, 64
53	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 17:30	788	170	2.1	Foskor	Sulphuric acid plant gas leak	60, 64
54	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 17:50	412	180	2.3	Foskor	Sulphuric acid plant gas leak	60, 64
55	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 18:00	374	178	2.7	Foskor	Sulphuric acid plant gas leak	60, 64
56	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 18:00	421	175	2.5	Foskor	Sulphuric acid plant gas leak	60, 64
57	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 21:10	255	Calm	0.8	Foskor	Sulphuric acid plant gas leak	60, 64
58	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 21:20	606	Calm	0.9	Foskor	Sulphuric acid plant gas leak	60, 64
59	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 21:30	268	Calm	0.4	Foskor	Sulphuric acid plant gas leak	60, 64
60	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/07 22:00	199	Calm	0.9	Foskor	Sulphuric acid plant gas leak	60, 64
61	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/07 22:20	236	Calm	0.3	Foskor	Sulphuric acid plant gas leak	60, 64
62	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/08 00:00	10	79	2.6	No response required	None	2
63	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/08 00:10	253	Calm	0.9	Foskor (meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
64	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/09 00:00	10	39	3.3	No response required	None	2
65	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/09 00:00	11	39	3.3	No response required	None	2
66	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/10 00:00	23	51	3.9	No response required	None	2
67	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/10 00:00	22.7	51	3.9	No response required	None	2
68	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/11 00:00	30	45	4.4	No response required	None	2
69	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/11 00:00	30	45	4.4	No response required	None	2
70	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/11 00:00	9	45	4.4	No response required	None	2
71	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/13 00:00	20	9	2.9	No response required	None	2
72	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/13 00:00	21	9	2.9	No response required	None	2
73	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/13 00:00	20	9	2.9	No response required	None	2
74	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/13 00:00	21	9	2.9	No response required	None	2
75	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/14 00:00	8	253	3.8	No response required	None	2
76	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/15 00:00	24	23	4.4	No response required	None	2
77	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/15 00:00	24	23	4.4	No response required	None	2
78	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/15 00:00	17	23	4.4	No response required	None	2
79	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/12/16 00:00	28	227	4.9	No response required	None	2
80	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/16 00:00	28	227	4.9	No response required	None	2
81	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/17 00:00	41	216	4.6	No response required	None	2

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
82	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/17 00:00	11	196	3.9	No response required	None	2
83	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/17 00:00	41	216	4.6	No response required	None	2
84	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/17 13:10	197	185	4.8	Foskor	Sulphuric acid A plant gas leak	65
85	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/17 19:20	206	215	3.2	Foskor	Sulphuric acid A plant gas leak	65
86	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/17 20:00	236	216	2.5	Foskor	Sulphuric acid A plant gas leak	65
87	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/17 20:00	202	201	3.1	Foskor	Sulphuric acid A plant gas leak	65
88	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/17 20:30	311	179	4.4	Foskor	Sulphuric acid A plant gas leak	65
89	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/17 20:40	308	198	2.3	Foskor	Sulphuric acid A plant gas leak	65
90	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/20 00:00	11	68	3.8	No response required	None	2
91	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/21 00:00	15	68	3.9	No response required	None	2
92	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/22 00:00	19	38	4.7	No response required	None	2
93	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/22 00:00	8	38	4.7	No response required	None	2
94	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/23 00:00	9	193	3.6	No response required	None	2
95	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Scorpio	2021/12/24 00:00	65	174	2.2	Foskor	Sulphuric acid B plant gas leak	67, 71
96	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/24 00:00	65	174	2.2	Foskor	Sulphuric acid B plant gas leak	67
97	SO ₂ Daily WHO Standard (8 ppb)	Arboretum	2021/12/24 00:00	10	122	2.5	Foskor	Sulphuric acid B plant gas leak	67

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
98	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/24 00:00	65	174	2.2	Foskor	Sulphuric acid B plant gas leak	67
99	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 02:00	197	178	3.8	Foskor	Sulphuric acid B plant gas leak	67, 70
100	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/24 02:00	230	177	3.7	Foskor	Sulphuric acid B plant gas leak	67, 70
101	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 02:10	254	184	4.3	Foskor	Sulphuric acid B plant gas leak	67, 70
102	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 02:30	199	182	4	Foskor	Sulphuric acid B plant gas leak	67, 70
103	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 02:40	307	172	3.2	Foskor	Sulphuric acid B plant gas leak	67, 70
104	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 02:50	251	161	2.9	Foskor	Sulphuric acid B plant gas leak	67, 70
105	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 03:00	561	160	3.1	Foskor	Sulphuric acid B plant gas leak	67, 70
106	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/24 03:00	211	164	3.5	Foskor	Sulphuric acid B plant gas leak	67, 70
107	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 03:10	219	159	3.4	Foskor	Sulphuric acid B plant gas leak	67, 70
108	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 04:00	808	168	2.7	Foskor	Sulphuric acid B plant gas leak	67, 70
109	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/24 04:00	536	162	2.1	Foskor	Sulphuric acid B plant gas leak	67, 70
110	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 04:10	736	159	2.2	Foskor	Sulphuric acid B plant gas leak	67, 70
111	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 04:20	1004	155	2.6	Foskor	Sulphuric acid B plant gas leak	67, 70

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
112	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 04:30	409	159	2.7	Foskor	Sulphuric acid B plant gas leak	67, 70
113	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 04:50	219	No Data	0.4	Foskor	Sulphuric acid B plant gas leak	67, 70
114	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 10:50	574	315	1.8	Foskor	Sulphuric acid B plant gas leak	67, 70
115	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/24 11:00	551	312	1.8	Foskor	Sulphuric acid B plant gas leak	67, 70
116	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/24 11:00	174	304	1.6	Foskor	Sulphuric acid B plant gas leak	67, 69
117	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/25 00:00	24	73	3.4	Foskor	Sulphuric acid B plant gas leak	67
118	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/25 00:00	24	73	3.4	Foskor	Sulphuric acid B plant gas leak	67
119	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/25 08:00	184	49	3.4	Foskor	Sulphuric acid B plant gas leak	67, 73
120	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/25 08:10	459	37	2.6	Foskor	Sulphuric acid B plant gas leak	67, 72
121	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/25 08:20	435	55	3.2	Foskor	Sulphuric acid B plant gas leak	67, 72
122	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/25 23:00	292	63	3.1	Foskor	Sulphuric acid B plant gas leak	67, 73
123	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/25 23:40	1131	60	3.6	Foskor	Sulphuric acid B plant gas leak	67, 72
124	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/25 23:50	619	58	3.2	Foskor	Sulphuric acid B plant gas leak	67, 72
125	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Harbour West	2021/12/26 00:00	806	54	5.1	Foskor	Sulphuric acid B plant gas leak	67, 76
126	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/26 00:00	805.9	54	5.1	Foskor	Sulphuric acid B plant gas leak	67

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
127	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/26 00:00	806	54	5.1	Foskor	Sulphuric acid B plant gas leak	67
128	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 03:00	496	59	2.9	Foskor	Sulphuric acid B plant gas leak	67, 75
129	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 03:10	849	60	2.9	Foskor	Sulphuric acid B plant gas leak	67, 74
130	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 03:20	519	50	2.9	Foskor	Sulphuric acid B plant gas leak	67, 74
131	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 03:30	574	54	2.3	Foskor	Sulphuric acid B plant gas leak	67, 74
132	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 03:40	735	66	3.2	Foskor	Sulphuric acid B plant gas leak	67, 74
133	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 05:50	227	72	2.6	Foskor	Sulphuric acid B plant gas leak	67, 74
134	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 06:00	754	60	3.4	Foskor	Sulphuric acid B plant gas leak	67, 75
135	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 06:20	876	57	2.8	Foskor	Sulphuric acid B plant gas leak	67, 74
136	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 06:30	317	59	3.3	Foskor	Sulphuric acid B plant gas leak	67, 74
137	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 06:40	1746	55	4	Foskor	Sulphuric acid B plant gas leak	67, 74
138	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 06:50	1400	56	4.1	Foskor	Sulphuric acid B plant gas leak	67, 74
139	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:00	1890	49	3.5	Foskor	Sulphuric acid B plant gas leak	67, 74
140	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 07:00	1466	45	3.5	Foskor	Sulphuric acid B plant gas leak	67, 75

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
141	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:10	1898	55	3.3	Foskor	Sulphuric acid B plant gas leak	67, 74
142	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:20	757	43	3.1	Foskor	Sulphuric acid B plant gas leak	67, 74
143	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:30	1300	47	3.1	Foskor	Sulphuric acid B plant gas leak	67, 74
144	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:40	1253	36	4.1	Foskor	Sulphuric acid B plant gas leak	67, 74
145	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 07:50	1695	43	4.2	Foskor	Sulphuric acid B plant gas leak	67, 74
146	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:00	605	47	4.4	Foskor	Sulphuric acid B plant gas leak	67, 74
147	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 08:00	1093	44	4.3	Foskor	Sulphuric acid B plant gas leak	67, 75
148	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:10	924	48	3.8	Foskor	Sulphuric acid B plant gas leak	67, 74
149	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:20	1596	42	3.9	Foskor	Sulphuric acid B plant gas leak	67, 74
150	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:30	2067	41	4.2	Foskor	Sulphuric acid B plant gas leak	67, 74
151	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:40	971	42	5.1	Foskor	Sulphuric acid B plant gas leak	67, 74
152	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 08:50	397	44	4.5	Foskor	Sulphuric acid B plant gas leak	67, 74
153	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:00	493	40	4.9	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
154	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 09:00	904	44	5.5	Foskor	Sulphuric acid B plant gas leak	67, 75
155	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:10	356	39	5.1	Foskor	Sulphuric acid B plant gas leak	67, 74
156	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:20	1595	39	5.3	Foskor	Sulphuric acid B plant gas leak	67, 74
157	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:30	966	40	5.1	Foskor	Sulphuric acid B plant gas leak	67, 74
158	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:40	1044	52	6.1	Foskor	Sulphuric acid B plant gas leak	67, 74
159	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 09:50	971	54	6.4	Foskor	Sulphuric acid B plant gas leak	67, 74
160	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 10:00	1289	51	5.7	Foskor	Sulphuric acid B plant gas leak	67, 74
161	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 10:00	768	47	6.7	Foskor	Sulphuric acid B plant gas leak	67, 75
162	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 10:10	1585	50	6.6	Foskor	Sulphuric acid B plant gas leak	67, 74
163	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 10:20	852	56	6.6	Foskor	Sulphuric acid B plant gas leak	67, 74
164	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 10:40	323	37	6.7	Foskor	Sulphuric acid B plant gas leak	67, 74
165	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 10:50	383	38	7	Foskor	Sulphuric acid B plant gas leak	67, 74
166	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:00	1213	41	6.7	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
167	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 11:00	1574	43	7	Foskor	Sulphuric acid B plant gas leak	67, 75
168	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:10	819	38	6.6	Foskor	Sulphuric acid B plant gas leak	67, 74
169	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:20	969	39	7.4	Foskor	Sulphuric acid B plant gas leak	67, 74
170	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:30	1549	45	6.5	Foskor	Sulphuric acid B plant gas leak	67, 74
171	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:40	2419	47	7.3	Foskor	Sulphuric acid B plant gas leak	67, 74
172	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 11:50	2474	50	7.7	Foskor	Sulphuric acid B plant gas leak	67, 74
173	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:00	1195	40	8	Foskor	Sulphuric acid B plant gas leak	67, 74
174	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 12:00	1411	45	7.5	Foskor	Sulphuric acid B plant gas leak	67, 75
175	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:10	1063	39	7.8	Foskor	Sulphuric acid B plant gas leak	67, 74
176	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:20	1345	47	6.9	Foskor	Sulphuric acid B plant gas leak	67, 74
177	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:30	3174	45	8.1	Foskor	Sulphuric acid B plant gas leak	67, 74
178	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:40	1124	47	7.4	Foskor	Sulphuric acid B plant gas leak	67, 74
179	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 12:50	564	52	7.2	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
180	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 13:00	998	52	7.7	Foskor	Sulphuric acid B plant gas leak	67, 74
181	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 13:00	865	54	7.5	Foskor	Sulphuric acid B plant gas leak	67, 75
182	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 13:10	715	53	8.2	Foskor	Sulphuric acid B plant gas leak	67, 74
183	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 13:20	1506	54	8.2	Foskor	Sulphuric acid B plant gas leak	67, 74
184	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 13:40	1210	51	6.6	Foskor	Sulphuric acid B plant gas leak	67, 74
185	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 13:50	662	54	7	Foskor	Sulphuric acid B plant gas leak	67, 74
186	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:00	467	58	8	Foskor	Sulphuric acid B plant gas leak	67, 74
187	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 14:00	825	53	7.6	Foskor	Sulphuric acid B plant gas leak	67, 75
188	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:10	1317	52	7.2	Foskor	Sulphuric acid B plant gas leak	67, 74
189	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:20	1248	54	6.5	Foskor	Sulphuric acid B plant gas leak	67, 74
190	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:30	543	54	7.6	Foskor	Sulphuric acid B plant gas leak	67, 74
191	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:40	525	53	8.7	Foskor	Sulphuric acid B plant gas leak	67, 74
192	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 14:50	852	48	7.6	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
193	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:00	868	55	7.2	Foskor	Sulphuric acid B plant gas leak	67, 74
194	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 15:00	1028	52	6.9	Foskor	Sulphuric acid B plant gas leak	67, 75
195	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:10	1724	50	7.2	Foskor	Sulphuric acid B plant gas leak	67, 74
196	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:20	908	53	7.3	Foskor	Sulphuric acid B plant gas leak	67, 74
197	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:30	847	48	7.1	Foskor	Sulphuric acid B plant gas leak	67, 74
198	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:40	1079	53	6.8	Foskor	Sulphuric acid B plant gas leak	67, 74
199	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 15:50	741	54	5.9	Foskor	Sulphuric acid B plant gas leak	67, 74
200	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:00	646	50	7	Foskor	Sulphuric acid B plant gas leak	67, 74
201	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 16:00	1078	51	7.3	Foskor	Sulphuric acid B plant gas leak	67, 75
202	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:10	1369	48	7.1	Foskor	Sulphuric acid B plant gas leak	67, 74
203	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:20	1377	53	7.7	Foskor	Sulphuric acid B plant gas leak	67, 74
204	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:30	749	50	7.5	Foskor	Sulphuric acid B plant gas leak	67, 74
205	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:40	1319	51	6.7	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
206	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 16:50	1008	51	7.7	Foskor	Sulphuric acid B plant gas leak	67, 74
207	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 17:00	438	56	6.2	Foskor	Sulphuric acid B plant gas leak	67, 75
208	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 17:10	642	52	6.7	Foskor	Sulphuric acid B plant gas leak	67, 74
209	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 17:20	732	57	6.3	Foskor	Sulphuric acid B plant gas leak	67, 74
210	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 17:50	885	54	6.3	Foskor	Sulphuric acid B plant gas leak	67, 74
211	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 18:00	553	54	6.3	Foskor	Sulphuric acid B plant gas leak	67, 74
212	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 18:00	178	55	6.1	Foskor	Sulphuric acid B plant gas leak	67, 75
213	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 18:10	391	52	5.7	Foskor	Sulphuric acid B plant gas leak	67, 74
214	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 19:00	400	52	6.4	Foskor	Sulphuric acid B plant gas leak	67, 74
215	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 19:00	386	53	6.2	Foskor	Sulphuric acid B plant gas leak	67, 75
216	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 19:10	1126	51	6.9	Foskor	Sulphuric acid B plant gas leak	67, 74
217	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 19:30	235	55	6.6	Foskor	Sulphuric acid B plant gas leak	67, 74
218	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 19:50	334	52	6	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
219	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:00	594	50	6.4	Foskor	Sulphuric acid B plant gas leak	67, 74
220	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 20:00	943	53	5.7	Foskor	Sulphuric acid B plant gas leak	67, 75
221	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:10	1749	52	5.6	Foskor	Sulphuric acid B plant gas leak	67, 74
222	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:20	872	54	5.4	Foskor	Sulphuric acid B plant gas leak	67, 74
223	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:30	609	54	5.7	Foskor	Sulphuric acid B plant gas leak	67, 74
224	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:40	642	54	5.1	Foskor	Sulphuric acid B plant gas leak	67, 74
225	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 20:50	1193	54	5.8	Foskor	Sulphuric acid B plant gas leak	67, 74
226	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:00	1928	54	5.2	Foskor	Sulphuric acid B plant gas leak	67, 74
227	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 21:00	2294	49	5.3	Foskor	Sulphuric acid B plant gas leak	67, 75
228	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:10	2249	50	5.2	Foskor	Sulphuric acid B plant gas leak	67, 74
229	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:20	1558	48	5	Foskor	Sulphuric acid B plant gas leak	67, 74
230	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:30	1791	52	5.6	Foskor	Sulphuric acid B plant gas leak	67, 74
231	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:40	3080	47	5.7	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
232	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 21:50	3161	43	5.3	Foskor	Sulphuric acid B plant gas leak	67, 74
233	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:00	2802	44	4.9	Foskor	Sulphuric acid B plant gas leak	67, 74
234	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 22:00	2357	44	5.3	Foskor	Sulphuric acid B plant gas leak	67, 75
235	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:10	3145	45	5.6	Foskor	Sulphuric acid B plant gas leak	67, 74
236	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:20	2629	43	5.4	Foskor	Sulphuric acid B plant gas leak	67, 74
237	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:30	2326	43	4.9	Foskor	Sulphuric acid B plant gas leak	67, 74
238	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:40	2187	44	5.5	Foskor	Sulphuric acid B plant gas leak	67, 74
239	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 22:50	1055	44	5.7	Foskor	Sulphuric acid B plant gas leak	67, 74
240	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 23:00	1080	44	6.5	Foskor	Sulphuric acid B plant gas leak	67, 74
241	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/26 23:00	393	42	5.8	Foskor	Sulphuric acid B plant gas leak	67, 75
242	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 23:10	457	41	5.8	Foskor	Sulphuric acid B plant gas leak	67, 74
243	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 23:40	301	42	6.1	Foskor	Sulphuric acid B plant gas leak	67, 74
244	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/26 23:50	254	43	5.6	Foskor	Sulphuric acid B plant gas leak	67, 74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
245	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 00:00	906	42	5.8	Foskor	Sulphuric acid B plant gas leak	68, 77
246	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 00:00	218	37	5.4	Foskor	Sulphuric acid B plant gas leak	68, 78
247	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	Harbour West	2021/12/27 00:00	204	39	4.8	Foskor	Sulphuric acid B plant gas leak	68, 78
248	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Harbour West	2021/12/27 00:00	204	39	4.8	Foskor	Sulphuric acid B plant gas leak	68
249	SO ₂ Daily WHO Standard (8 ppb)	Harbour West	2021/12/27 00:00	204	39	4.8	Foskor	Sulphuric acid B plant gas leak	68
250	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/27 00:00	15	39	4.8	Foskor	Sulphuric acid B plant gas leak	68
251	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 00:10	257	39	4.8	Foskor	Sulphuric acid B plant gas leak	68, 77
252	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 05:00	1077	70	2.3	Foskor	Sulphuric acid B plant gas leak	68, 78
253	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 05:20	713	78	2.1	Foskor	Sulphuric acid B plant gas leak	68, 77
254	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 05:30	1745	53	2.6	Foskor	Sulphuric acid B plant gas leak	68, 77
255	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 05:40	1620	57	2.3	Foskor	Sulphuric acid B plant gas leak	68, 77
256	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 05:50	2254	53	2.4	Foskor	Sulphuric acid B plant gas leak	68, 77
257	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:00	1188	52	2.2	Foskor	Sulphuric acid B plant gas leak	68, 77
258	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 06:00	834	43	4.4	Foskor	Sulphuric acid B plant gas leak	68, 78
259	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:10	1200	42	4.3	Foskor	Sulphuric acid B plant gas leak	68, 77

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
260	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:20	467	43	4.6	Foskor	Sulphuric acid B plant gas leak	68, 77
261	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:30	484	40	5.2	Foskor	Sulphuric acid B plant gas leak	68, 77
262	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:40	737	40	5.3	Foskor	Sulphuric acid B plant gas leak	68, 77
263	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 06:50	931	43	4.7	Foskor	Sulphuric acid B plant gas leak	68, 77
264	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 07:00	748	42	5.4	Foskor	Sulphuric acid B plant gas leak	68, 77
265	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 07:00	217	35	5.1	Foskor	Sulphuric acid B plant gas leak	68, 78
266	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 07:10	402	38	5.2	Foskor	Sulphuric acid B plant gas leak	68, 77
267	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 08:50	245	42	4.7	Foskor	Sulphuric acid B plant gas leak	68, 77
268	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 09:00	175	42	4.5	Foskor	Sulphuric acid B plant gas leak	68, 78
269	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 09:50	424	40	3.9	Foskor	Sulphuric acid B plant gas leak	68, 77
270	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 10:00	232	40	4.6	Foskor	Sulphuric acid B plant gas leak	68, 77
271	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 10:00	165	40	4.7	Foskor	Sulphuric acid B plant gas leak	68, 78
272	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 10:40	495	53	3.5	Foskor	Sulphuric acid B plant gas leak	68, 77
273	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 11:00	205	43	5	Foskor	Sulphuric acid B plant gas leak	68, 78

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
274	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 11:20	540	50	4	Foskor	Sulphuric acid B plant gas leak	68, 77
275	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 11:30	234	39	6.4	Foskor	Sulphuric acid B plant gas leak	68, 77
276	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 12:30	320	43	6.2	Foskor	Sulphuric acid B plant gas leak	68, 77
277	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 19:00	187	52	4.6	Foskor	Sulphuric acid B plant gas leak	68, 78
278	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 19:40	803	72	3	Foskor	Sulphuric acid B plant gas leak	68, 77
279	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 20:00	180	42	3.8	Foskor	Sulphuric acid B plant gas leak	68, 78
280	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 20:20	538	31	3.9	Foskor	Sulphuric acid B plant gas leak	68, 77
281	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 20:40	297	37	4.2	Foskor	Sulphuric acid B plant gas leak	68, 77
282	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 20:50	209	36	4.1	Foskor	Sulphuric acid B plant gas leak	68, 77
283	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 21:00	616	38	3.7	Foskor	Sulphuric acid B plant gas leak	68, 78
284	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 21:10	503	45	3.9	Foskor	Sulphuric acid B plant gas leak	68, 77
285	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 21:20	1637	49	3.3	Foskor	Sulphuric acid B plant gas leak	68, 77
286	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 21:30	1398	43	4	Foskor	Sulphuric acid B plant gas leak	68, 77
287	SO ₂ Hourly NEMA Standard (134 ppb)	Harbour West	2021/12/27 23:00	303	39	5.8	Foskor	Sulphuric acid B plant gas leak	68, 78

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
288	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 23:20	1174	39	5.6	Foskor	Sulphuric acid B plant gas leak	68, 77
289	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 23:30	222	40	6.6	Foskor	Sulphuric acid B plant gas leak	68, 77
290	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/27 23:40	321	43	6.2	Foskor	Sulphuric acid B plant gas leak	68, 77
291	SO ₂ Daily NEMA Standard & WHO Interim Target 1 (48 ppb)	CBD	2021/12/28 00:00	100	217	4.2	Foskor	Sulphuric acid B plant gas leak	68
292	SO ₂ Daily WHO Interim Target 2 (19 ppb)	CBD	2021/12/28 00:00	100	217	4.2	Foskor	Sulphuric acid B plant gas leak	68
293	SO ₂ Daily WHO Interim Target 2 (19 ppb)	Scorpio	2021/12/28 00:00	28	240	3.7	Foskor	Sulphuric acid B plant gas leak	68
294	SO ₂ Daily WHO Standard (8 ppb)	Arboretum	2021/12/28 00:00	10	219	4.1	Foskor	Sulphuric acid B plant gas leak	68
295	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/28 00:00	100	217	4.2	Foskor	Sulphuric acid B plant gas leak	68
296	SO ₂ Daily WHO Standard (8 ppb)	Scorpio	2021/12/28 00:00	28	240	3.7	Foskor	Sulphuric acid B plant gas leak	68
297	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Harbour West	2021/12/28 01:20	299	39	5.7	Foskor	Sulphuric acid B plant gas leak	68
298	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Arboretum	2021/12/28 06:00	238	235	5.3	Foskor	Sulphuric acid B plant gas leak	68
299	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/28 06:00	790	223	5	Foskor	Sulphuric acid B plant gas leak	68
300	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Arboretum	2021/12/28 06:10	248	230	4.6	Foskor	Sulphuric acid B plant gas leak	68
301	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 06:30	572	219	4.8	Foskor	Sulphuric acid B plant gas leak	68
302	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 06:40	2139	217	4.3	Foskor	Sulphuric acid B plant gas leak	68

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
303	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 06:50	1876	220	4.5	Foskor	Sulphuric acid B plant gas leak	68
304	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 07:00	1194	220	5.9	Foskor	Sulphuric acid B plant gas leak	68
305	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/28 07:00	330	223	5.6	Foskor	Sulphuric acid B plant gas leak	68
306	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 07:10	420	227	5.3	Foskor	Sulphuric acid B plant gas leak	68
307	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 07:50	240	222	5.6	Foskor	Sulphuric acid B plant gas leak	68
308	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/28 08:00	577	217	5.8	Foskor	Sulphuric acid B plant gas leak	68
309	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 08:10	598	216	5.6	Foskor	Sulphuric acid B plant gas leak	68
310	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 08:20	944	219	6.1	Foskor	Sulphuric acid B plant gas leak	68
311	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 08:30	916	216	5.1	Foskor	Sulphuric acid B plant gas leak	68
312	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 08:40	504	220	6.1	Foskor	Sulphuric acid B plant gas leak	68
313	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 08:50	368	208	5.8	Foskor	Sulphuric acid B plant gas leak	68
314	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:00	479	214	5.7	Foskor	Sulphuric acid B plant gas leak	68
315	SO ₂ Hourly NEMA Standard (134 ppb)	CBD	2021/12/28 09:00	516	211	5.9	Foskor	Sulphuric acid B plant gas leak	68

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
316	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:10	569	217	6	Foskor	Sulphuric acid B plant gas leak	68
317	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:20	458	207	6.1	Foskor	Sulphuric acid B plant gas leak	68
318	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:30	767	212	5.6	Foskor	Sulphuric acid B plant gas leak	68
319	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:40	562	210	5.6	Foskor	Sulphuric acid B plant gas leak	68
320	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 09:50	259	206	6.3	Foskor	Sulphuric acid B plant gas leak	68
321	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	CBD	2021/12/28 10:00	201	213	5.3	Foskor	Sulphuric acid B plant gas leak	68
322	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/28 14:00	217	184	5	Foskor	Sulphuric acid B plant gas leak	68
323	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/28 15:00	203	180	3.8	Foskor	Sulphuric acid B plant gas leak	68
324	SO ₂ Hourly NEMA Standard (134 ppb)	Scorpio	2021/12/28 15:00	154	183	3.6	Foskor	Sulphuric acid B plant gas leak	68
325	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/28 15:20	199	184	3.7	Foskor	Sulphuric acid B plant gas leak	68
326	SO ₂ 10-minute NEMA Standard & WHO Guideline (191 ppb)	Scorpio	2021/12/28 15:30	225	179	3.2	Foskor	Sulphuric acid B plant gas leak	68
327	SO ₂ Daily WHO Standard (8 ppb)	Arboretum	2021/12/31 00:00	9	228	3.1	No response required	None	2
328	SO ₂ Daily WHO Standard (8 ppb)	CBD	2021/12/31 00:00	16	234	2.9	No response required	None	2

RESPONSES

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
3	Foskor - Nkosinathi Mqadi responded : The RBCAA Scorpio station recorded significant SO ₂ concentrations. Based on wind direction, Foskor is kindly requested to investigate their process urgently. Immediate Actions Taken: Following the external complaint received on Sunday, an investigation was conducted. Four Gas leaks were already identified. Scaffolding erection was in progress for access. The plant was stopped for 8,05 hours to repair the leaks; this matter was resolved. Incident root cause: Crack on welding. Corrective/ Preventative Actions: The leak was repaired.
4	South 32 - Alison Gerber responded: There were no abnormal occurrences reported on the 27th April. All SO ₂ emissions were within the legislated limits of 500mg/Nm3 and 250mg/Nm3. With the north easterly wind it is unlikely that Hillside impacted Harbour West station, however, there may have been a contribution to the exceedances at Harbour West.
5	South 32 Alison Gerber responded 17/6/2021: There were no abnormal occurrences reported at the GTCs or FTCs for 13 June. SO ₂ emissions on GTC2 and GTC4 and FTC1 and FTC2 were within the legislated limits for the period. Please see below the results for 10min, 1hour and 24hour averages. Due to the wind direction Hillside may have contributed to the exceedances at Scorpio station.
6	South 32 - Alison Gerber responded 18/6/2021: The exceedances on 15 and 16 June relate to the compressed air outage. I'm just waiting for the RCA from Maintenance and then I will respond. South 32 Alison Gerber responded 23/6/2021: On 15 June at 18:41 Hillside experienced a loss of compressed air which resulted in the tripping of GTCs and the FTCs tripping into emergency bypass mode. Please see attached abnormal occurrence report for the event.
7	South 32 Alison Gerber responded 23/6/2021: Following the compressed air outage during the start-up GTC4 had a few filters that did not start to alumina that had filled up the reactors. At 5am on 16 June there were still 3 filters that had not yet started up. From 12am on the 16 June the trends on GTC2, GTC4, FTC1 and FTC2 are all normal and within the legislated limits. Following the outage there may have been an accumulation of SO ₂ in the dip around Scorpio station. There may have been an inversion layer resulting in the accumulation of SO ₂ . Over the following few days there have been elevated levels at Scorpio station in the early mornings.
8	South 32 - Alison Gerber responded 23/6/2021: There were no abnormal occurrences reported on the morning of 17 June. See below 10min readings leading up to the exceedances. There were no elevated SO ₂ levels, and all were within the legislated limits. Due to the low wind speed there may have been an accumulation of SO ₂ at the time in the dip surrounding Scorpio station. Due to the wind direction Hillside may have contributed to the exceedance at Scorpio station.
9	South 32 - Alison Gerber responded 23/6/2021: There were no abnormal occurrences reported during this time or in the earlier hours of the morning. The 10min averages also do not indicate a quick spike of SO ₂ . All readings were within the legislated limits. Due to the wind direction, Hillside may have contributed to the exceedances at Scorpio.
10	South 32 - Alison Gerber responded 29/6/2021: FTC1 has VRI3 on 3 monthly service resulting in filters 5 and 6 being down (8 out of 10 filters running). Hillside has noted an increase in the FTC1 SO ₂ readings, however, they are still within the limit of 500mg/Nm3. VRI3 is expected to be returned to service late Wednesday or Thursday depending if it requires any additional mechanical repairs. GTC4 had a fresh alumina feed stoppage from 12:38 – 14:31 (2 hours) for 328 expansion bin inspection. This did result in increased SO ₂ at GTC4; however, this is after the peak readings were recorded at Scorpio station during the morning. There were no other abnormal occurrences reported on the 28 June or evening of 27 June.
11	South 32 - Alison Gerber responded 12/7/2021: There were no abnormal occurrences reported on the 29 June and all SO ₂ emissions were within the permitted limits. Due to the wind direction Hillside could not have contributed to the exceedances at Harbour West.
12	South 32 - Alison Gerber responded 12/7/2021: One filter was stopped on GTC2 for a change of a filter bag on the evening of 2 July, however, no exceedance was noted on GTC2 SO ₂ levels. No abnormal occurrences were reported and all SO ₂ emissions were with permitted limits. Due to the wind direction Hillside could not have contributed to the exceedance at Harbour West.
13	South 32 - Alison Gerber responded 12/7/2021: No abnormal occurrences were reported and all SO ₂ emissions were within the permitted limits. Due to wind direction Hillside may have contributed to the exceedance at Scorpio station.

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14	South 32 - Alison Gerber responded 21/7/2021: There were no abnormal occurrences reported. Emissions were within the permitted levels. However due to the wind direction Hillside may have contributed to the exceedance at Scorpio.
15	South 32 - Alison Gerber responded 21/7/2021: GTC2 had Filter 13 down for 3 monthly maintenance service (07:45- 14:35) and fresh alumina feed was stopped from 11:31 – 12:32 for inspection of the 328-expansion bin. This is what has resulted in the spike of SO ₂ at 12pm. However, this does not align with the timing of the exceedance at 21:00. No other production / maintenance activities or abnormal occurrences were reported on the on the other abatement equipment. Due to the wind direction Hillside may have contributed to the exceedance at Scorpio.
16	South 32 - Alison Gerber responded 26/7/2021: There were no abnormal occurrences, planned production or maintenance activities reported on the evening of 20 July that could have impacted SO ₂ emissions. All SO ₂ emissions were within the permitted limits. Due to wind direction Hillside may have contributed to the exceedances at Scorpio.
17	South 32 - Alison Gerber responded 25/8/2021: There were no abnormal occurrences at Hillside on this day. Due to the wind direction Hillside could not have contributed to these NEMAQA exceedances.
18	South 32 - Alison Gerber responded 25/8/2021: There were no abnormal occurrences at Hillside on this day. SO ₂ emissions were within the legislated limits. Due to the wind direction Hillside may have contributed to the exceedance at Scorpio station.
19	South 32 - Alison Gerber responded 25/8/2021: No abnormal occurrences were reported on 8 July. GTC2 and GTC4 both had fresh feed alumina stoppages for air lift cleaning, however, this was several hours before the 10-minute exceedances. Due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West.
20	South 32 - Alison Gerber responded 25/8/2021: No abnormal occurrences were reported for the 14 July. Due to the wind direction Hillside could not have contributed to the exceedances at Scorpio.
21	South 32 - Alison Gerber responded 25/8/2021: GTC2 had 3 filters down between 11:09am and 13:00 due to alumina fines in the system, however this was several hours before the SO ₂ exceedances and did not result in an exceedance of Hillside's AEL. No other abnormal occurrences were reported on the 25 July. All SO ₂ emissions were within the AEL limits. Due to the wind direction, Hillside may have contributed to cumulative effect at Scorpio.
22	South 32 - Alison Gerber responded 31/8/2021: There was a fresh feed stoppage from 2-3pm on GTC4 due Hall C 324 silo XV005 valve failing to open. Three filters tripped on GTC4 after 17:30 due to hopper level high due to the Hall C 324 silo XV005 breakdown and the valve was replaced. The fresh feed stoppage between 2 - 3pm may have contributed to the 10min exceedance at CBD station.
23	Foskor - Nkosinathi Mqadi responded 31/8/2021: On the 28th of August 2021 there were three identified gas leaks. The root cause was related to the age of the plant thus the gas leaks are inevitable. As soon as the gas leaks were spotted an investigation was conducted to identify where exactly the leaks emanate from, as a result appropriate step was taken to address it. The corrective measures were to shut down the Sulphuric Acid C plant to repair the leaks by sealing the openings of the gas leaks on the economizer and heat exchanger.
24	South 32 - Alison Gerber responded (25/08/2021): WHO - SO ₂ Exceedance: Scorpio monitoring stations on 13 July 2021 No abnormal were reported. Due to the wind direction Hillside could not have contributed to the exceedances at Scorpio.
25	South 32 - Alison Gerber responded (31/08/2021): I have reviewed the below outstanding responses. Due to the wind direction from the south, Hillside could not have contributed to the exceedances at Scorpio.
26	Foskor - Nkosinathi Mqadi responded (06/09/2021 16:34): Incident Root Cause There was no abnormality identified by the plant Engineers though the cause of the exceedance may be due to a gas leak which had been identified from the Sulphuric Acid C plant's super heater through inspections. Immediate Actions Taken • Sulphuric Acid Plant Engineer was contacted and asked to investigate the matter. • Gas leaks had already been identified and repaired by the team, but the plant was inspected to identify more gas leaks. Corrective/Preventative Actions • Continuously monitor the plant's operations to detect any gas leaks.

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27	South 32- Alison Gerber responded (07/09/2021 15:09): No abnormal occurrences were reported on the 4 September. All emissions were within the limits. Due to the wind direction Hillside may have contributed to the exceedance at CBD station but could not have contributed to the exceedance at Scorpio.
28	South 32 - Alison Gerber responded (20/09/2021): Hillside's SO ₂ emissions were within the legislated limits during the period of the exceedance at Scorpio. Due to the southerly wind direction (161°) Hillside could not have contributed to the exceedance.
29	South 32 - Alison Gerber responded (28/09/2021): There were no abnormal occurrences noted on the 23 September. Below SO ₂ trends indicate normal operations and no exceedances of the permitted levels. Due to the northerly wind direction Hillside may have contributed to the cumulative effect at Harbour West.
30	Foskor - Nkosinathi Mqadi responded (14/10/2021): There was a gas leak at the Sulphuric Acid B Plant. Root cause: The leak was caused by the rupture of the duct that connects to the drying tower in the B Plant. This rupture could have been caused by several factors such as corrosion of the duct or weather elements. Corrective measures/Immediate actions: The ruptures on the duct were repaired by AGT (Contractor). The Sulphuric Acid B Plant is monitored for any other leaks.
31	Foskor - Nkosinathi Mqadi responded (15/10/2021): There was a gas leak at the Sulphuric Acid A Plant. Root cause: The leak was identified at the A Plant Interpass tower duct. The cause of the leak can be explained by the variation in temperature, extreme weather leads to the expansion and contraction of the insulation material. Continuous contraction and expansion lead to openings in the plant ducts resulting in small leaks. Corrective measures/Immediate actions: The leak was repaired by AGT (Contractor). The Sulphuric Acid A Plant is still monitored for any other leaks.
32	South 32 - Alison Gerber responded (20/10/2021): No abnormal occurrences were reported on the 15 October. All SO ₂ emissions were within the permitted limits. Due to the wind direction from the North, Hillside may have contributed to the cumulative effect at Harbour West.
33	South 32 - Alison Gerber responded (20/10/2021): At 7am on 17 October the SO ₂ analyser on FTC1 so we are not able to supply the results for FTC1 during the period of the exceedance, however, no abnormal occurrences were reported on the 17 October on any of the abatement equipment. Due to the southerly wind direction Hillside could not have contributed to the exceedance at Scorpio station.
34	South 32 - Alison Gerber responded (20/10/2021): At 7am on 17 October the SO ₂ analyser on FTC1 so we are not able to supply the results for FTC1 during the period of the exceedance, however, no abnormal occurrences were reported on FTC1. GTC1 did experience a fresh feed stoppage due to a hopper blower pressure fault 14:53 – 15:05 18 Oct, however, this was several hours after the exceedance. No other abnormal occurrences were reported on any of the abatement equipment. Due to the SW wind direction Hillside may have contributed to the cumulative impact which resulted in the hourly and 10min average exceedances at CBD.
35	South 32 - Alison Gerber responded (20/10/2021): There were no abnormal occurrences reported on 19 October. No exceedances were reported during the period. Due to the Southerly wind direction Hillside could not have contributed to the exceedances at Scorpio station.
36	Foskor - Billy-Joe Du Preez responded (22/10/2021 13:58): After an investigation we have concluded that Foskor cannot explain the abnormal SO ₂ values of 284 and 212.9 that are seen in the attached data report. Attached is an official Daily Production Shift Report. From the report the Turbine speed of Sulphuric Acid plants was slightly increased at 13:00 to 2800 RPM. However, during the times of the exceedances (11:30-11:40) the plants were at a much lower Turbine speed and production was lower, releasing less SO ₂ from the stacks and cannot explain the high SO ₂ values. On the report are evidence that the SO ₂ from the stacks does not vary highly at 11:30. No major gas leaks were detected on the ducts of the plants.
37	Foskor - Billy-Joe Du Preez responded (22/10/2021 14:14): Allow me to explain the exceedances seen on the 18th of October 2021. At about 00:00 the Sulphuric Acid plants was hot enough and the engineers decided to move from the start-up scrubber to the normal scrubber to increase production rate. This led to some gas release that was in the scrubber. This was not deliberate, and the gas could not be processed due to electricity outages in the area. Foskor encountered unexpected and unplanned electricity disruptions before the 18th so the ducting's and other pipes could not be emptied, without electricity the pumps does not work and cannot pump all SO ₂ from the scrubbers. This led a slightly above normal SO ₂ gas release event.
38	Foskor - Billy-Joe Du Preez responded (03/11/2021 02:41PM): On the 2nd and 3rd of November 2021 Foskor Richards Bay did an investigation to find the root cause of SO ₂ exceedances recorded at the Harbour West and Scorpio station on the 29th of October 2021 and 31st of October 2021. Foskor experienced a power outage and hence all the plants were offline on the 28th of October 2021. C-Plant came online at 06:25 on 29th of October 2021 and was online for 25 minutes, then C-Plant was shut down due to a gas leak at the superheater inlet. The gas leak issue was dealt with immediately and it took a few hours to repair. On the 31st of October 2021 C-Plant experienced a gas leak at the Goggle Valve that was seen as a major leak and the Plant was stopped at 15:00 to fix the leak, this might explain the exceedance on 31 October 2021. However, C-Plant are not responsible for the exceedances from 00:40 – 06:10 on the 29th of October 2021. On the 29th of October 2021, in the early morning A & B Plants were also prepared for start-up. During start up there were some gas releases from the scrubbers due to the power outage from

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	the previous day and minor gas leaks in ducting due to heavy rain. Contractors were tasked to fix the minor leaks as soon as possible. However, nothing major occurred at Foscok and we cannot quite explain the extremely high exceedances observed at the Harbour West station. All Foscok employees were on the premises during the 11:40 and 13:30 – 13:40 exceedances on 29 October 2021 and nothing major was reported to the Clinic.
39	South 32 - Alison Gerber responded (08/11/2021 13:28): There were no abnormal occurrences reported on 31 October. A breakdown has been logged for the SO ₂ analyser on GTC4 that is reading elevated levels while all other parameters are well within range. However, due to the wind direction Hillside could not have contributed to the exceedance at Scorpio Station.
40	South 32 - Alison Gerber responded (08/11/2021 13:34): Please see the below 10min averages. Please note that GTC4 SO ₂ analyser is currently reading elevated levels and is not a true reflection of the SO ₂ emissions. A breakdown has been logged for the instrument. No abnormal occurrences were reported for the 7 November. Due to the wind direction Hillside could not have contributed to the exceedances at Scorpio station.
41	South 32 Alison Gerber responded (08/11/2021 13:36): Please see the below 10min averages. Please note that GTC4 SO ₂ analyser is currently reading elevated levels and is not a true reflection of the SO ₂ emissions. A breakdown has been logged for the instrument. No abnormal occurrences were reported for the 7 November. Due to the wind direction Hillside could not have contributed to the hourly exceedance at Scorpio station.
42	South 32 - Alison Gerber responded (15/11/2021 09:10): Based on wind direction Hillside could not have contributed to the exceedances at Scorpio station on 13 November.
43	Foscok - Billy-Joe Du Preez responded (15/11/2021 11:34PM): On the morning of 13 November 2021, it was discovered that there was a gas leak at Economizer 1 and Converter at the Sulphuric Acid A-Plant. Plant supervisors immediately investigated, and the repair team was called out to focus on the problem. When repairs were done the team had to tear off the broken ducting and replace the area with new ducting. This caused some gas to escape for a few minutes while repairs were done and then sealed. The A-Plant Economizer 1 still has a few minor gas leaks that are being repaired today and tomorrow. We plan to fix these leaks before they become bigger.
44	Foscok - Sabelo Forere responded (15/11/2021 12:44PM): Kindly receive the response obtained from the Sulphuric Acid A and B Plants' shift Supervisor today regarding the exceedances recorded at the Scorpio Station on the 11th of November 2021: Root Cause During the start-up of plant A, it was discovered that the start-up scrubber was leaking SO ₂ gas. The start-up scrubber is utilized for the purpose of absorbing excess SO ₂ gas when the plant is being started as the plant would normally operate under abnormal conditions for a certain period. Immediate Actions The scrubber was immediately repaired, and the convertor temperature was normalized so to facilitate the conversion of SO ₂ gas to SO ₃ . This would prevent SO ₂ gas that didn't react well in the convertor from being vented out of the A and B plants combined main stack. Corrective Measures Monitor the scrubber for possible deviations that could cause gas leaks daily before and on start-up operations and the convertor's temperature profile to prevent any fugitive gas emissions.
45	South 32 - Alison Gerber responded (16/11/2021 10:31): Due to the wind direction Hillside could not have contributed to the exceedances on the 14 November at Scorpio station.
46	South 32 - Alison Gerber responded (17/11/2021 10:25): GTC4 SO ₂ analyser is still reading incorrectly and is excluded from the below graphs. No abnormal occurrences reported on FTCs and all values below the limit of 500mg/Nm ³ . There was an abnormal occurrence on GTC2 between 09h38 a.m. – 11h58 a.m., which was significantly earlier in the day than the exceedances. Filter 11 tripped on high differential pressure due a broken poppet shaft while filter 5 was down for 6 monthly service. The SO ₂ emissions on GTC2 however, were below the limit of 250mg/Nm ³ . No other abnormal occurrences were reported. Due to the wind direction Hillside may have contributed to the exceedances of the 10 minute and hourly averages at Harbour West on the 15 November.
47	Foscok - Billy-Joe Du Preez responded (16/11/2021 16:29PM): Based on wind direction it is unlikely that Foscok Acid Division contributed to the SO ₂ exceedance on 2021/11/14.
48	Foscok - Sabelo Forere responded (18/11/2021 09:09): In response to the exceedance that occurred on the 17th of October 2021 recorded at the Scorpio station at 22h20, the Sulphuric acid plants' supervisors have reported that there were no abnormal activities at the time of the SO ₂ exceedance, but there was a possibility of gas leaks due to the deteriorated condition of the plants caused by ageing.

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49	South 32 - Alison Gerber responded (22/11/2021 09:51): Due to the wind direction Hillside could not have contributed to the 10min exceedance on 19 Nov at Scorpio.
50	South 32 - Alison Gerber responded (22/11/2021 09:53): Due to the wind direction Hillside could not have contributed to the exceedance.
51	Foskor - Billy-Joe Du Preez responded (22/11/2021 14:28PM): On the 19th of November 2021 Sulphuric Acid C-Plant was operating under normal conditions. However, on the 18th of November Sulphuric Acid A&B Plants went offline because engineers had to conduct maintenance on the Turbine and the blower was washed. The supervisors believe that the exceedance recorded on the 19th of November could have been caused by the Sulphuric Acid Plants start-up process and minor gas release from the scrubbers."
52	Foskor - Billy-Joe Du Preez responded (22/11/2021 14:34PM): On the 20th of November 2021 Sulphuric Acid C-Plant was operating under normal conditions. On Saturday 20 November 2021 Sulphuric supervisors discovered a few minor gas leaks at the Sulphuric Acid B-Plant Economizer 1 and Converter area. The issue was immediately escalated, and scaffolding was erected to address the gas leaks. Some gas leaks were fixed. Due to the position of these gas leaks it is a time-consuming job and contractors are still busy addressing the gas leaks. We plan to fix all the gas leaks within the next few days at the Economizer 1 area.
53	Foskor - Sabelo Forere responded (24/11/2021 10:16): This email is in response to the NEMA and WHO Standards SO ₂ exceedance recorded at the Richards Bay CBD on the 23th of November 2021 at night between 22:00 pm - 23:00 pm. The Sulphuric AB Plants appears to have contributed to the exceedance as the wind direction is slightly higher than the 210 degrees to the CBD. Root Cause Though the AB plants are running on scrubber, however, there were notable SO ₂ gas concentrations on the plants' site due to gas leaks influenced by the aged material of the plants and also possibly the rain which could have resulted in thermal shock exacerbating the gas leaks. Immediate Actions/Corrective Measures The plants were momentarily shut so to repair the gas leaks which is why at the moment it is on start-up scrubber.
54	South 32 - Alison Gerber responded (26/11/2021 11:01 and 11:09): There were no abnormal occurrences on 25 November. Due to the wind direction Hillside could not have contributed to the exceedances reported at Scorpio station.
55	South 32 - Alison Gerber responded (29/11/2021 12:18): Hillside had no abnormal occurrences during on 26 Nov. All SO ₂ emissions were within the legislated concentrations. Hillside's weather station indicates a southerly wind direction and Hillside therefore could not have contributed to the cumulative emissions at Scorpio station.
56	Foskor - Billy-Joe Du Preez responded (03/12/2021 11:48): Below are investigation outcomes for the SO ₂ exceedances that were recorded on 25, 26 and 27 November 2021, I humbly apologize for the late response. 25 November 2021: On the 25th of November Sulphuric Acid B-Plant was shut down to perform maintenance. The Sulphuric Acid plant went offline at 09:44, the maintenance was done to replace the B-Plant drying tower outlet duct. When employees replaced the ducting, the old sheeting had to be removed and this led to some slight abnormal gas release into the atmosphere. We suspect that this is the cause of the exceedances at the Scorpio station from 11:40 until 13:10. The gas escaped from the outlet tower and then the outlet tower was covered with new insulation material. The SO ₂ exceedances occurred momentarily then dipped due to the wind direction blowing towards Scorpio station. Maintenance was completed on the 26th of November 2021 just before 06:00 in the morning. Sulphuric Acid B-Plant came online at about 06:50. Sulphuric Acid A and C plants were performing under normal conditions during this time. 26 November 2021: On the 26th of November 2021 all the Sulphuric Acid Plants were operating under normal conditions in the early morning hours. However, we suspect that the SO ₂ exceedance on 26 November 2021 can be explained by Sulphuric Acid B-Plant start up processes. When the Sulphuric Acid B-Plant came online at 6:50 the Burner temperature were very low, temp was at 405°C. 405°C is not optimal for the plant so the Burner had to increase temperature for optimal acid production processes, we suspect that at 09:10 the plant was starting to operate under normal conditions and caused some minor gas release from the scrubber. The process is very temperature sensitive; the scrubber/s takes time to adjust to production rates after start-up occurs. 27 November 2021: On the 26th of November 2021 Foskor experienced a power outage at about 09:30. All the Sulphuric Acid Plants went offline, Sulphuric Acid B-Plant came online at 18:29, Burner temperature went from 700°C to 402°C during this down-time. We think that the cause of the exceedance can be explained using the conditions experienced on the 26th of November 2021. 402°C is not optimal for the plant so the Burner had to increase temperature for optimal acid production processes, we

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	suspect that later in the evening the plant was starting to operate under normal conditions and caused some minor gas release from the scrubber. Sulphuric Acid C-Plant Burner dropped from 795°C to 481°C, Sulphuric Acid C-Plant also came online at later in the evening. When the Sulphuric Acid Plants come online cold gas are sometimes released through the scrubber when hot optimal gas fills the ducting. This is only a minor gas release and only sometimes occurs during Acid plant start-ups. We believe this is the cause of the two SO ₂ exceedances recorded on the 27th of November 2021 at 01:20 and 03:20 in the morning.
57	Foskor - Nkosinathi Mqadi responded 07/12/2021 13:59: This SO ₂ exceedance was investigated by Billy-Joe du Preez on the 15th of November 2021. After receiving the exceedance notification he went to Sulphuric Acid Plant Supervisors and Engineers for an investigation; nobody had an explanation for these exceedances recorded from 00:00 on the 14th of November 2021. According to Supervisors the plants were running on normal conditions. One or two minor gas leaks were seen in the Sulphuric Acid Plants, but not enough to cause exceedances. All major gas leaks were fixed the previous day in all Sulphuric Acid Plants.
58	South 32 - Alison Gerber responded (07/12/2021 12:27): There were no abnormal occurrences reported prior to or during the exceedances noted at CBD station last night. Hillside did have an external power dip at 3:18 am 7 December, but that was several hours after the exceedances. Please note that the compressor on GTC2 SO ₂ analyser failed on 3 December and is currently out for repair. GTC4 SO ₂ analyser is also still reading high following several interventions by Hillside instrument techs. Unfortunately our consultants have been delayed coming to site, as they were outside of the country when the travel bans were placed on travel to South Africa. Due to the wind direction Hillside may have contributed to the cumulative effect at the 6 Dec at CBD station but is unlikely to have caused the exceedances.
59	South 32 - Alison Gerber responded (07/12/2021 12:12): There were no abnormal occurrences reported. SO ₂ emissions were within permitted concentrations. Due to wind direction Hillside may have contributed to the cumulative effect at CBD station on 23 November.
60	South 32 - Alison Gerber responded (08/12/2021 09:14, 09:16): There were no abnormal occurrences reported. Due to the wind direction Hillside could not have contributed to the exceedances on the 7 Dec at Scorpio station.
61	Foskor - Sabelo Forere responded (08/12/2021 12:12): In response to the exceedances recorded in the CBD area on the 6th of December 2021 from 21:50 to 00:00: The plants' shift supervisors reported that there couldn't have been any abnormalities from Foskor as all three Sulphuric Acid Plants A, B and C were shut from the morning due to a Power outage that took place on Monday the 6th December 2021 and 2 of them were later started after midnight although the A plant was started at 19:49 pm. The power outage provided an opportunity to repair/rectify any deviations in the plants' site.
62	Foskor - Sabelo Forere responded (15/12/2021 09:35): In response to the exceedances recorded on the 7th of November 2021 at the Scorpio station: The SO ₂ exceedances may have been the result of abnormal conditions the plant was running under as it had to be stopped to repair the waste heat boiler the previous day which may have disrupted the temperature profile of the B plant after it started again hence resulting in slight exceedances above 191.
63	Foskor - Sabelo Forere responded (15/12/2021 10:02): There was a shut on the Sulphuric Acid Plant "A" to repair the Final cooler shell and Interpass tower. When a shell is ruptured the Sulphur dioxide can escape through the openings resulting in gas leaks which is what may have caused the exceedances at Harbour west. The SO ₂ is cooled down when it passes over tubes which consist of a coolant medium (water) and this process takes place within a shell which prevents the gas from becoming fugitive.
64	Foskor - Sabelo Forere responded (17/12/2021 10:18): In response to the SO ₂ exceedances recorded on the 7th of December 2021 at the Scorpio station: Due to the power outage the previous day which resulted in the Sulphuric Acid Plants to be started on the 7th at midnight and early in the morning, the plants were operating at abnormal conditions. Thus the Sulphur Dioxide that had been left within the plants' structures while they were off had to be purged out upon starting the plants (as it would not be at optimum temperature) to facilitate the conversion of the remaining SO ₂ to SO ₃ so to prevent the release of excessive unreacted SO ₂ into the atmosphere.
65	Foskor - Billy-Joe Du Preez responded (20/12/2021 15:54): An investigation was conducted on the 20th of December 2021 to find the cause of the SO ₂ exceedance recorded on 17 December 2021. On the 17th of December 2021 supervisors noticed a gas leak on the Third Pass Inlet tower ducting in Sulphuric Acid A-Plant. The plant was shut down at 13:40 to address the gas leak. This gas leak could be the cause of unusual gas releases recorded on 17 December. The Sulphuric Acid A-Plant underwent a shutdown process, and the gas leak was fixed in the Third Pass Inlet tower. Engineers started Sulphuric Acid A-Plant at approximately 16:08, the SO ₂ exceedance at 20:00 can be the result of start-up processes and a minor gas release from the scrubber.
66	Foskor - Billy-Joe Du Preez responded (23/12/2021 11:07): An investigation was conducted this morning to find the cause of the exceedances recorded on the 18th of June 2021. On the 18th of June Sulphuric Acid B-Plant was shut down at about 08:00 in the morning for maintenance reasons. The plant was offline for 7.25 hours and was started at 15:00 in the afternoon. When Sulphuric Acid B-Plant came online the acid profile in the Plant was inadequate for optimal acid production, this caused above normal SO ₂ exceedances from the start-up scrubber. The recommended equipment was then heated to reduce SO ₂ emissions.

Response	Industry Feedback
67	Foskor - Nkosinathi Mqadi responded (2021-12-27): At the Standby meeting, it was reported that the Sulphuric Acid B plant had seven gas leaks on the interpass outlet. It was on shut for six hours to repair. Other major gas leaks will be repaired this morning. The cherry picker will be used to assess and fix other less significant leaks. At the meeting I explained all the risks and the consequences of high SO₂ levels. Sabelo Forere 28/12/21 08:28 08:43: In response to the exceedances recorded at Harbour West on the 26th of December 2021: Root Cause There were several gas leaks from the Interpass Tower outlet due to the rainy weather causing thermal shock and the deteriorated state of the Sulphuric acid B plant because of its age. Corrective Measures The plant was shut for 6 hours to minimize the gas leaks and repair the rupture on the outlet. Other minor gas leaks were to be assessed using cherry pickers on the 26th of December 2021 according to their significance and the threat they pose to people and the environment. Sabelo Forere 28/12/21 08:28 09:04 and 09:07: In response to the exceedance that was recorded at 23h00 on the 25th of December 2021: Root Causes There was thermal shock in the Sulphuric A plant's structures due to rainy weather on the 24th which worsened the gas leaks in the A plant. What causes the occurrence of minor gas leaks is due to the fact that as the plants age the material used as cladding on ducts and other structures tend to deteriorate and begin to have openings which are worsened by rain as it is cold and the gas in the structures is hot causing thermal shock thus exacerbating gas leaks. Corrective Measures The plant was temporarily shut to repair the gas leaks.
68	Foskor -Sabelo Forere responded (29/12/2021 10:13 and 10:16): In response to the exceedances recorded at the Scorpio Station and the CBD: Root Cause Foskor was experiencing challenges with sealing gas leaks at the B Plant's Economizer 2 duct as there was several them due to thermal fatigue. Corrective Measures The duct was then repaired by replacing its corroded and deteriorated cladding and the plant was started as it had been off.
69	South 32 - Alison Gerber responded (04/01/2022 09:43): Hillside could not have contributed to the below hourly exceedances due to the wind direction. For the exceedance at 11:00 Hillside may have contributed to the cumulative effect due to the northerly wind direction. No abnormally were reported at Hillside on the 24th Dec.
70	South 32 - Alison Gerber responded (04/01/2022 09:59): Hillside could not have contributed to the below 10-min exceedances due to the wind direction. For the exceedance at 10:50 and 11:00 Hillside may have contributed to the cumulative effect due to the northerly wind direction. No abnormally were reported at Hillside on the 24th Dec.
71	South 32 - Alison Gerber responded (04/01/2022 10:00): No abnormal occurrences were reported at Hillside on the 23/24 December. Due to the wind direction Hillside could not have contributed to the exceedance.
72	South 32 - Alison Gerber responded (04/01/2022 10:08): There were no abnormal occurrences reported on the 25 December. Due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West. Please note that the GTC4 SO₂ analyser is still reading incorrectly.
73	South 32 - Alison Gerber responded (04/01/2022 10:09): There were no abnormal occurrences reported on the 25 December. Due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West.
74	South 32 - Alison Gerber responded (04/01/2022 10:14): No abnormal occurrences were reported on the 26 December. However due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West Station.
75	South 32 - Alison Gerber responded (04/01/2022 10:15): No abnormal occurrences were reported on the 26 December. However due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West Station
76	South 32 - Alison Gerber responded (04/01/2022 10:17): No abnormal occurrences were reported on the 26 December. However due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West Station.
77	South 32 - Alison Gerber responded (04/01/2022 10:20): No abnormal occurrences were reported on the 27 December. However due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West Station.
78	South 32 - Alison Gerber responded (04/01/2022 10:20): No abnormal occurrences were reported on the 27 December. However due to the wind direction Hillside may have contributed to the cumulative effect at Harbour West Station.

APPENDIX H
TRS EXCEEDANCE LOG

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
			January 2021						
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/07 20:00	5	290	0.6	Mondi (meteorology)	Based on wind direction	3
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/13 23:30	6	313	0.2	Mondi (meteorology)	Based on wind direction	3
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 00:00	6	298	0.4	Mondi (meteorology)	Based on wind direction	3
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 00:30	7	331	0.2	Mondi (meteorology)	Based on wind direction	3
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 01:00	6	357	0.2	Mondi (meteorology)	Based on wind direction	3
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 01:30	9	69	0.4	Mondi (meteorology)	Based on wind direction	3
7	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/01/14 01:40	9	71	0.2	Mondi (meteorology)	Based on wind direction	3
8	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/01/14 01:50	11	75	0.4	Mondi (meteorology)	Based on wind direction	3
9	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/01/14 02:00	11	69	0.6	Mondi (meteorology)	Based on wind direction	3
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 02:00	10	51	0.4	Mondi (meteorology)	Based on wind direction	3
11	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/01/14 02:10	10	48	0.3	Mondi (meteorology)	Based on wind direction	3
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 02:30	7	26	0.1	Mondi (meteorology)	Based on wind direction	3
13	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/14 03:00	7	45	0.8	Mondi (meteorology)	Based on wind direction	3
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/01/15 02:00	6	69	2	Mondi (meteorology)	Based on wind direction	3
			March 2021						

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/03/04 05:00	9	15	1.2	Mondi	Lime Kiln	4
2	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/03/04 05:10	10	9	1.1	Mondi	Lime Kiln	4
3	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/03/04 05:20	11	13	0.9	Mondi	Lime Kiln	4
4	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/03/04 05:30	11	20	0.8	Mondi	Lime Kiln	4
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/03/04 05:30	7	22	0.8	Mondi	Lime Kiln	4
April 2021									
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/21 08:30	8	42	1.2	Mondi	Lime Kiln	5
2	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/04/21 08:50	11	49	1.0	Mondi	Lime Kiln	5
3	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/04/21 09:00	11	39	1.4	Mondi	Lime Kiln	5
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/21 09:00	8	31	1.5	Mondi	Lime Kiln	5
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/26 23:30	5	36	0.9	Mondi (meteorology)	Based on wind direction	1
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/27 06:00	6	47	1.5	Mondi (meteorology)	Based on wind direction	1
7	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/04/27 06:30	15	47	1.5	Mondi (meteorology)	Based on wind direction	1
8	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/27 06:30	17	70	1.0	Mondi (meteorology)	Based on wind direction	1
9	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/04/27 06:40	23	73	0.7	Mondi (meteorology)	Based on wind direction	1
10	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/04/27 06:50	11	91	0.7	Mondi (meteorology)	Based on wind direction	1
11	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/27 08:00	5	47	2.0	Mondi (meteorology)	Based on wind direction	1
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/04/28 22:00	5	39	0.6	Mondi (meteorology)	Based on wind direction	1
May 2021									

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
1	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/04 03:30	13	72	0.7	Mondi (meteorology)	Based on wind direction	1
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/04 03:30	13	66	0.6	Mondi (meteorology)	Based on wind direction	1
3	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/04 03:40	13	75	0.4	Mondi (meteorology)	Based on wind direction	1
4	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/04 03:50	14	52	0.6	Mondi (meteorology)	Based on wind direction	1
5	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/04 04:00	13	48	0.5	Mondi (meteorology)	Based on wind direction	1
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/04 04:00	10	66	0.8	Mondi (meteorology)	Based on wind direction	1
7	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/04 04:10	10	66	1.1	Mondi (meteorology)	Based on wind direction	1
8	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/04 06:30	6	81	0.8	Mondi (meteorology)	Based on wind direction	1
9	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/05 08:00	6	21	1.7	Mondi (meteorology)	Based on wind direction	1
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/05 20:30	6	42	0.6	Mondi (meteorology)	Based on wind direction	1
11	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/05 21:30	6	29	0.2	Mondi (meteorology)	Based on wind direction	1
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/06 00:00	6	56	0.7	Mondi (meteorology)	Based on wind direction	1
13	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/06 00:30	10	31	0.9	Mondi (meteorology)	Based on wind direction	1
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/06 00:30	9	53	0.7	Mondi (meteorology)	Based on wind direction	1
15	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/06 00:40	10	52	0.7	Mondi (meteorology)	Based on wind direction	1
16	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/06 01:00	6	41	0.5	Mondi (meteorology)	Based on wind direction	1
17	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/06 19:30	7	48	0.3	Mondi (meteorology)	Based on wind direction	1
18	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/06 19:40	12	72	0.0	Mondi (meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
19	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/11 20:30	5	46	1.4	Mondi (meteorology)	Based on wind direction	1
20	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/15 02:30	7	89	1.5	Mondi (meteorology)	Based on wind direction	1
21	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/26 03:30	11	52	1.2	Mondi (meteorology)	Based on wind direction	1
22	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 03:40	10	54	1.0	Mondi (meteorology)	Based on wind direction	1
23	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 03:50	18	47	1.4	Mondi (meteorology)	Based on wind direction	1
24	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:00	14	54	1.5	Mondi (meteorology)	Based on wind direction	1
25	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/26 04:00	12	60	1.6	Mondi (meteorology)	Based on wind direction	1
26	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:10	11	67	1.8	Mondi (meteorology)	Based on wind direction	1
27	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:20	10	58	1.6	Mondi (meteorology)	Based on wind direction	1
28	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:30	21	48	1.5	Mondi (meteorology)	Based on wind direction	1
29	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/26 04:30	21	59	1.4	Mondi (meteorology)	Based on wind direction	1
30	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:40	23	61	1.4	Mondi (meteorology)	Based on wind direction	1
31	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 04:50	19	67	1.2	Mondi (meteorology)	Based on wind direction	1
32	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 05:00	19	63	1.3	Mondi (meteorology)	Based on wind direction	1
33	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/26 05:00	13	67	1.6	Mondi (meteorology)	Based on wind direction	1
34	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/26 05:10	14	70	1.8	Mondi (meteorology)	Based on wind direction	1
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/28 06:30	11	69	1.6	Mondi (meteorology)	Based on wind direction	1
36	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/28 06:40	14	62	1.5	Mondi (meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
37	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/28 06:50	12	84	1.4	Mondi (meteorology)	Based on wind direction	1
38	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/05/28 07:00	10	73	1.7	Mondi (meteorology)	Based on wind direction	1
39	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/05/28 07:00	6	67	1.6	Mondi (meteorology)	Based on wind direction	1
June 2021									
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/02 20:30	8	29	0.1	Mondi	Secondary Effluent Treatment	11
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/02 21:00	6	52	0.3	Mondi	Secondary Effluent Treatment	11
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 19:00	5	235	8.1	Mondi	Secondary Effluent Treatment	11
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 20:00	5	242	6.8	Mondi	Secondary Effluent Treatment	11
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 20:30	5	236	8.3	Mondi	Secondary Effluent Treatment	11
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 21:00	5	239	8	Mondi	Secondary Effluent Treatment	11
7	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 22:00	6	238	6.5	Mondi	Secondary Effluent Treatment	11
8	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/06/03 23:00	6	241	6.3	Mondi	Secondary Effluent Treatment	11
9	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/07 02:00	13	55	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/07 02:00	12	73	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
11	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/07 02:10	13	77	0.5	Tongaat Hulett (meteorology)	Based on wind direction	12
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/07 02:30	6	67	1	Tongaat Hulett (meteorology)	Based on wind direction	12
13	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/07 03:30	6	55	1	Tongaat Hulett (meteorology)	Based on wind direction	12
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/07 04:00	10	24	0.9	Tongaat Hulett (meteorology)	Based on wind direction	12
15	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/07 04:10	11	17	0.8	Tongaat Hulett (meteorology)	Based on wind direction	12

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
16	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/07 04:20	12	37	0.9	Tongaat Hulett (meteorology)	Based on wind direction	12
17	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/09 07:30	8	42	1	Tongaat Hulett (meteorology)	Based on wind direction	12
18	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/10 02:30	7	91	0	Tongaat Hulett (meteorology)	Based on wind direction	12
19	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/10 21:00	5	10	0.7	Tongaat Hulett (meteorology)	Based on wind direction	12
20	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/11 01:30	5	63	0	Tongaat Hulett (meteorology)	Based on wind direction	12
21	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/11 02:00	8	56	0.5	Tongaat Hulett (meteorology)	Based on wind direction	12
22	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/11 02:20	16	50	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
23	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/11 02:30	14	98	0.7	Tongaat Hulett (meteorology)	Based on wind direction	12
24	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/11 02:30	10	81	1	Tongaat Hulett (meteorology)	Based on wind direction	12
25	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/12 23:00	7	37	2.2	Tongaat Hulett (meteorology)	Based on wind direction	12
26	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:00	21	69	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/15 05:00	16	74	0.7	Tongaat Hulett (meteorology)	Based on wind direction	12
28	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:10	16	61	0.8	Tongaat Hulett (meteorology)	Based on wind direction	12
29	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:20	12	92	0.8	Tongaat Hulett (meteorology)	Based on wind direction	12
30	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:30	11	91	0.7	Tongaat Hulett (meteorology)	Based on wind direction	12
31	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/15 05:30	12	94	0.5	Tongaat Hulett (meteorology)	Based on wind direction	12
32	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:40	12	100	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
33	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 05:50	14	91	0.3	Tongaat Hulett (meteorology)	Based on wind direction	12

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
34	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/15 06:00	13	87	0.6	Tongaat Hulett (meteorology)	Based on wind direction	12
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/15 06:00	9	78	0.7	Tongaat Hulett (meteorology)	Based on wind direction	12
36	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/16 20:30	9	44	0.9	Tongaat Hulett (meteorology)	Based on wind direction	12
37	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/16 20:30	9	58	1	Tongaat Hulett (meteorology)	Based on wind direction	12
38	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/16 20:40	12	63	0.9	Tongaat Hulett (meteorology)	Based on wind direction	12
39	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/17 04:00	11	51	1.5	Mondi	Secondary Effluent Treatment	9
40	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/17 04:00	7	46	1.4	Mondi	Secondary Effluent Treatment	9
41	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 03:00	6	36	1.9	Mondi	Shut down of the mill	8
42	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 04:00	11	48	1.3	Mondi	Shut down of the mill	8
43	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 04:20	24	56	1.1	Mondi	Shut down of the mill	8
44	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 04:30	22	64	0.6	Mondi	Shut down of the mill	8
45	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 04:30	20	68	0.9	Mondi	Shut down of the mill	8
46	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 04:40	19	74	1	Mondi	Shut down of the mill	8
47	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 04:50	19	66	1.1	Mondi	Shut down of the mill	8
48	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 05:00	14	69	0.7	Mondi	Shut down of the mill	8
49	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 05:00	8	72	0.7	Mondi	Shut down of the mill	8
50	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 06:00	16	67	1.2	Mondi	Shut down of the mill	8
51	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 06:00	18	63	1.4	Mondi	Shut down of the mill	8

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
52	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 06:10	25	66	1.5	Mondi	Shut down of the mill	8
53	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 06:20	14	57	1.4	Mondi	Shut down of the mill	8
54	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 06:30	7	79	0.8	Mondi	Shut down of the mill	8
55	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 08:00	9	34	2.1	Mondi	Shut down of the mill	8
56	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 08:10	14	27	2.1	Mondi	Shut down of the mill	8
57	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/21 21:00	9	64	1.3	Mondi	Shut down of the mill	8
58	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/21 21:00	9	69	1	Mondi	Shut down of the mill	8
59	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 04:30	9	32	2.3	Mondi	Shut down of the mill	8
60	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 04:40	10	30	2.4	Mondi	Shut down of the mill	8
61	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 04:50	14	31	2.2	Mondi	Shut down of the mill	8
62	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 05:00	12	48	2.3	Mondi	Shut down of the mill	8
63	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 05:00	9	47	2.6	Mondi	Shut down of the mill	8
64	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 05:30	14	34	2.4	Mondi	Shut down of the mill	8
65	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 05:30	14	42	2.6	Mondi	Shut down of the mill	8
66	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 05:40	14	50	2.6	Mondi	Shut down of the mill	8
67	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 05:50	13	41	2.9	Mondi	Shut down of the mill	8
68	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 06:00	11	33	2.4	Mondi	Shut down of the mill	8
69	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 06:00	10	41	2.5	Mondi	Shut down of the mill	8

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
70	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 06:20	11	50	2.7	Mondi	Shut down of the mill	8
71	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 06:30	16	40	2.6	Mondi	Shut down of the mill	8
72	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 06:30	13	35	2.5	Mondi	Shut down of the mill	8
73	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 06:40	15	34	2.5	Mondi	Shut down of the mill	8
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 07:30	7	33	2.7	Mondi	Shut down of the mill	8
75	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 08:00	7	24	2.6	Mondi	Shut down of the mill	8
76	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 19:00	10	48	1.8	Mondi	Shut down of the mill	8
77	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 19:00	7	52	2	Mondi	Shut down of the mill	8
78	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 21:00	14	18	0.3	Mondi	Shut down of the mill	8
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 21:00	8	22	0.3	Mondi	Shut down of the mill	8
80	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 21:30	9	34	0.3	Mondi	Shut down of the mill	8
81	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 21:50	16	22	0.8	Mondi	Shut down of the mill	8
82	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 22:00	16	21	0.5	Mondi	Shut down of the mill	8
83	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 22:00	12	50	0.3	Mondi	Shut down of the mill	8
84	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 22:10	11	93	0.3	Mondi	Shut down of the mill	8
85	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 22:30	10	33	1.1	Mondi	Shut down of the mill	8
86	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 22:30	13	22	0.8	Mondi	Shut down of the mill	8
87	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 22:40	12	27	0.7	Mondi	Shut down of the mill	8

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
88	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 22:50	17	6	0.6	Mondi	Shut down of the mill	8
89	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/22 23:00	13	355	1.2	Mondi	Shut down of the mill	8
90	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 23:00	9	17	1.2	Mondi	Shut down of the mill	8
91	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/22 23:30	6	86	0.6	Mondi	Shut down of the mill	8
92	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 00:30	7	39	1.1	Mondi	Start-up of the mill	10
93	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 01:30	6	43	0.7	Mondi	Start-up of the mill	10
94	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 02:00	5	32	1.1	Mondi	Start-up of the mill	10
95	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 02:30	8	22	1.2	Mondi	Start-up of the mill	10
96	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 02:40	10	25	1.4	Mondi	Start-up of the mill	10
97	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 17:00	7	11	0.6	Mondi	Start-up of the mill	10
98	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 18:00	13	338	0.2	Mondi	Start-up of the mill	10
99	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 18:10	12	337	0.3	Mondi	Start-up of the mill	10
100	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 18:20	25	339	0.2	Mondi	Start-up of the mill	10
101	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 18:30	10	339	0.1	Mondi	Start-up of the mill	10
102	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 18:30	7	353	0.2	Mondi	Start-up of the mill	10
103	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 19:00	5	48	0.6	Mondi	Start-up of the mill	10
104	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 19:30	12	66	1.2	Mondi	Start-up of the mill	10
105	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 19:30	9	76	1.3	Mondi	Start-up of the mill	10

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
106	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/23 20:30	7	81	1	Mondi	Start-up of the mill	10
107	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/23 20:50	13	75	1.3	Mondi	Start-up of the mill	10
108	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/25 03:00	5	66	0.8	Tongaat Hulett (meteorology)	Based on wind direction	12
109	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/25 05:00	7	86	0.2	Tongaat Hulett (meteorology)	Based on wind direction	12
110	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/28 20:00	6	51	2.4	Tongaat Hulett (meteorology)	Based on wind direction	12
111	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/29 19:30	5	47	0.2	Tongaat Hulett (meteorology)	Based on wind direction	12
112	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 02:30	9	68	1	Tongaat Hulett (meteorology)	Based on wind direction	12
113	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 02:40	17	43	0.8	Tongaat Hulett (meteorology)	Based on wind direction	12
114	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 03:30	29	16	2.3	Tongaat Hulett (meteorology)	Based on wind direction	12
115	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 03:30	13	17	2	Tongaat Hulett (meteorology)	Based on wind direction	12
116	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 04:00	5	63	1.6	Tongaat Hulett (meteorology)	Based on wind direction	12
117	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 04:20	11	71	1.5	Tongaat Hulett (meteorology)	Based on wind direction	12
118	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 04:30	15	62	1.4	Tongaat Hulett (meteorology)	Based on wind direction	12
119	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 04:30	7	63	1.2	Tongaat Hulett (meteorology)	Based on wind direction	12
120	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 09:30	7	355	2.4	Tongaat Hulett (meteorology)	Based on wind direction	12
121	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 09:50	14	0	1.8	Tongaat Hulett (meteorology)	Based on wind direction	12
122	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 10:00	10	7	1.9	Tongaat Hulett (meteorology)	Based on wind direction	12
123	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 10:00	7	354	1.6	Tongaat Hulett (meteorology)	Based on wind direction	12

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
124	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 13:30	10	353	1.5	Tongaat Hulett (meteorology)	Based on wind direction	12
125	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 13:40	15	352	1.3	Tongaat Hulett (meteorology)	Based on wind direction	12
126	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/06/30 13:50	10	358	1.6	Tongaat Hulett (meteorology)	Based on wind direction	12
127	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/06/30 14:00	6	10	1.9	Tongaat Hulett (meteorology)	Based on wind direction	12
July 2021									
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/07/02 07:00	6	85	1.0	Mondi	Secondary Effluent Treatment	11
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/07/02 07:30	5	60	1.3	Mondi	Secondary Effluent Treatment	11
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/07/04 02:00	6	241	5.1	Mondi	Secondary Effluent Treatment	11
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/07/04 02:30	5	235	6.5	Mondi	Secondary Effluent Treatment	11
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/07/04 03:00	6	232	6.6	Mondi	Secondary Effluent Treatment	11
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/07/04 04:30	6	236	6.8	Mondi	Secondary Effluent Treatment	11
August 2021									
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/01 06:30	7	59	2	Mondi (meteorology)	Based on wind direction	1
2	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/01 06:50	11	41	2	Mondi (meteorology)	Based on wind direction	1
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/01 07:00	5	48	1.1	Mondi (meteorology)	Based on wind direction	1
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/08/02 05:30	6	237	4.7	Mondi (meteorology)	Based on wind direction	1
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/05 04:00	10	63	1.6	Mondi	Unstable conditions - Fugitive emissions	23
6	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 04:10	14	67	1.8	Mondi	Unstable conditions - Fugitive emissions	23
7	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/05 06:00	6	50	1.9	Mondi	Unstable conditions - Fugitive emissions	23

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
8	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 06:20	11	57	2.1	Mondi	Unstable conditions - Fugitive emissions	23
9	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 06:30	12	53	1.6	Mondi	Unstable conditions - Fugitive emissions	23
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/05 06:30	12	58	1.5	Mondi	Unstable conditions - Fugitive emissions	23
11	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 06:40	13	59	1.5	Mondi	Unstable conditions - Fugitive emissions	23
12	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 06:50	13	63	1.3	Mondi	Unstable conditions - Fugitive emissions	23
13	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/05 07:00	13	67	1.4	Mondi	Unstable conditions - Fugitive emissions	23
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/05 07:00	9	70	1.4	Mondi	Unstable conditions - Fugitive emissions	23
15	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/05 21:30	6	30	1.2	Mondi	Unstable conditions - Fugitive emissions	23
16	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/07 19:30	6	40	0.4	Mondi (meteorology)	Based on wind direction	1
17	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/07 20:00	7	273	0.4	Mondi (meteorology)	Based on wind direction	1
18	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/07 22:30	10	75	0.4	Mondi (meteorology)	Based on wind direction	1
19	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/07 22:30	7	84	0.4	Mondi (meteorology)	Based on wind direction	1
20	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/07 23:00	10	49	0.4	Mondi (meteorology)	Based on wind direction	1
21	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/07 23:00	10	65	0.6	Mondi (meteorology)	Based on wind direction	1
22	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/07 23:10	12	65	0.6	Mondi (meteorology)	Based on wind direction	1
23	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/07 23:30	9	55	1	Mondi (meteorology)	Based on wind direction	1
24	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/07 23:40	12	40	0.9	Mondi (meteorology)	Based on wind direction	1
25	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/07 23:50	10	52	1.3	Mondi (meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
26	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 00:00	10	66	1	Mondi (meteorology)	Based on wind direction	1
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/08 00:00	9	Calm	0.9	Mondi (meteorology)	Based on wind direction	1
28	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 00:30	9	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
29	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/08 00:30	11	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
30	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 00:40	10	13	1.1	Mondi (meteorology)	Based on wind direction	1
31	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 00:50	13	Calm	0.5	Mondi (meteorology)	Based on wind direction	1
32	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 01:00	12	Calm	0.5	Mondi (meteorology)	Based on wind direction	1
33	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/08 01:00	10	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
34	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 01:10	11	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/08 04:30	11	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
36	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 04:50	15	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
37	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 05:00	13	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
38	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/08 05:00	10	Calm	0.6	Mondi (meteorology)	Based on wind direction	1
39	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/08 05:10	10	Calm	0.9	Mondi (meteorology)	Based on wind direction	1
40	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/09 07:00	10	41	2	Mondi (meteorology)	Based on wind direction	1
41	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/09 07:00	6	52	1.9	Mondi (meteorology)	Based on wind direction	1
42	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 19:30	7	213	6.3	Tongaat Hulett	Effluent treatment	16
43	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 20:30	6	216	5.2	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
44	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 21:00	10	222	4.4	Tongaat Hulett	Effluent treatment	16
45	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 21:00	11	222	5.2	Tongaat Hulett	Effluent treatment	16
46	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 21:10	11	222	6.6	Tongaat Hulett	Effluent treatment	16
47	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 21:20	12	223	4.6	Tongaat Hulett	Effluent treatment	16
48	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 21:30	15	223	4.9	Tongaat Hulett	Effluent treatment	16
49	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 21:30	12	223	5.5	Tongaat Hulett	Effluent treatment	16
50	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 21:40	13	224	5.8	Tongaat Hulett	Effluent treatment	16
51	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 22:00	11	225	4.3	Tongaat Hulett	Effluent treatment	16
52	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 22:00	9	221	4.3	Tongaat Hulett	Effluent treatment	16
53	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 22:30	12	225	4.2	Tongaat Hulett	Effluent treatment	16
54	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 22:40	11	229	3.7	Tongaat Hulett	Effluent treatment	16
55	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 22:50	16	222	4.1	Tongaat Hulett	Effluent treatment	16
56	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 23:00	12	211	7.1	Tongaat Hulett	Effluent treatment	16
57	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 23:00	10	212	5.9	Tongaat Hulett	Effluent treatment	16
58	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 23:20	14	210	5.2	Tongaat Hulett	Effluent treatment	16
59	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 23:30	18	207	5.8	Tongaat Hulett	Effluent treatment	16
60	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/09 23:30	14	215	5.4	Tongaat Hulett	Effluent treatment	16
61	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 23:40	10	217	5.1	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
62	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/09 23:50	14	222	5.3	Tongaat Hulett	Effluent treatment	16
63	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 00:00	16	208	7.8	Tongaat Hulett	Effluent treatment	16
64	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 00:00	10	205	7.3	Tongaat Hulett	Effluent treatment	16
65	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 00:30	9	216	6.5	Tongaat Hulett	Effluent treatment	16
66	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 00:40	10	222	5.8	Tongaat Hulett	Effluent treatment	16
67	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 01:00	10	209	6.5	Tongaat Hulett	Effluent treatment	16
68	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 01:00	8	212	6	Tongaat Hulett	Effluent treatment	16
69	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 01:30	10	222	3.9	Tongaat Hulett	Effluent treatment	16
70	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 01:40	10	221	3	Tongaat Hulett	Effluent treatment	16
71	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 01:50	11	217	4.3	Tongaat Hulett	Effluent treatment	16
72	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 02:00	11	215	5	Tongaat Hulett	Effluent treatment	16
73	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 02:00	10	219	6.1	Tongaat Hulett	Effluent treatment	16
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 02:30	8	222	5.5	Tongaat Hulett	Effluent treatment	16
75	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 03:00	10	224	5.6	Tongaat Hulett	Effluent treatment	16
76	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 03:00	8	223	6	Tongaat Hulett	Effluent treatment	16
77	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 03:30	6	223	5.2	Tongaat Hulett	Effluent treatment	16
78	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 04:00	6	222	5.9	Tongaat Hulett	Effluent treatment	16
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 04:30	6	228	6.4	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
80	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/10 17:30	10	197	1.1	Tongaat Hulett	Effluent treatment	16
81	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 17:40	17	193	1.2	Tongaat Hulett	Effluent treatment	16
82	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/10 17:50	12	Calm	0.9	Tongaat Hulett	Effluent treatment	16
83	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 02:00	18	47	3	Tongaat Hulett	Effluent treatment	16
84	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 02:10	31	49	3.1	Tongaat Hulett	Effluent treatment	16
85	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 02:20	22	38	3.3	Tongaat Hulett	Effluent treatment	16
86	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 02:30	13	31	2.9	Tongaat Hulett	Effluent treatment	16
87	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 02:30	10	37	2.7	Tongaat Hulett	Effluent treatment	16
88	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 02:40	11	35	2.6	Tongaat Hulett	Effluent treatment	16
89	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/12 07:30	7	79	2	Mondi (meteorology)	Based on wind direction	1
90	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 11:30	5	230	7.3	Tongaat Hulett	Effluent treatment	16
91	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 12:00	6	230	7.9	Tongaat Hulett	Effluent treatment	16
92	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 17:00	6	230	7.2	Tongaat Hulett	Effluent treatment	16
93	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 17:30	8	224	5.9	Tongaat Hulett	Effluent treatment	16
94	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 18:00	10	216	5.5	Tongaat Hulett	Effluent treatment	16
95	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 18:10	10	216	5.6	Tongaat Hulett	Effluent treatment	16
96	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 18:20	10	219	6.1	Tongaat Hulett	Effluent treatment	16
97	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 18:30	9	225	6.5	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
98	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 19:00	10	221	6.1	Tongaat Hulett	Effluent treatment	16
99	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 19:00	10	223	6	Tongaat Hulett	Effluent treatment	16
100	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 19:10	10	225	6.2	Tongaat Hulett	Effluent treatment	16
101	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 19:30	10	224	5.8	Tongaat Hulett	Effluent treatment	16
102	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 19:30	9	226	6.2	Tongaat Hulett	Effluent treatment	16
103	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 19:40	10	225	5.7	Tongaat Hulett	Effluent treatment	16
104	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 20:00	11	225	6	Tongaat Hulett	Effluent treatment	16
105	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 20:00	11	229	6.9	Tongaat Hulett	Effluent treatment	16
106	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 20:10	12	229	7	Tongaat Hulett	Effluent treatment	16
107	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 20:20	11	232	7.7	Tongaat Hulett	Effluent treatment	16
108	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 21:30	7	229	4.9	Tongaat Hulett	Effluent treatment	16
109	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 21:50	10	230	5.4	Tongaat Hulett	Effluent treatment	16
110	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 22:00	8	225	6.6	Tongaat Hulett	Effluent treatment	16
111	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 22:20	15	217	5.5	Tongaat Hulett	Effluent treatment	16
112	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 22:30	11	209	5.5	Tongaat Hulett	Effluent treatment	16
113	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 22:30	10	213	6	Tongaat Hulett	Effluent treatment	16
114	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 22:50	10	214	7	Tongaat Hulett	Effluent treatment	16
115	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 23:00	13	215	5.7	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
116	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/12 23:00	8	225	5.7	Tongaat Hulett	Effluent treatment	16
117	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/12 23:10	10	223	4.8	Tongaat Hulett	Effluent treatment	16
118	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/08/13 00:00	6	232	7.1	Mondi (meteorology)	Based on wind direction	1
119	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/13 00:30	6	223	6.7	Tongaat Hulett	Effluent treatment	16
120	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/13 00:50	12	210	5.5	Tongaat Hulett	Effluent treatment	16
121	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/13 01:00	15	220	6	Tongaat Hulett	Effluent treatment	16
122	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/13 01:00	7	234	5.6	Tongaat Hulett	Effluent treatment	16
123	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/08/13 06:00	7	237	6.3	Mondi (meteorology)	Based on wind direction	1
124	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/13 14:30	8	199	1.8	Tongaat Hulett	Effluent treatment	16
125	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/13 14:50	11	180	1.5	Tongaat Hulett	Effluent treatment	16
126	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/14 20:00	12	38	1.3	Tongaat Hulett	Effluent treatment	16
127	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/14 20:10	15	33	1.4	Tongaat Hulett	Effluent treatment	16
128	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/14 20:20	20	2	1.4	Tongaat Hulett	Effluent treatment	16
129	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/14 20:30	15	Calm	0.2	Tongaat Hulett	Effluent treatment	16
130	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/14 20:30	10	Calm	0.2	Tongaat Hulett	Effluent treatment	16
131	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/14 20:40	12	Calm	0	Tongaat Hulett	Effluent treatment	16
132	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 01:00	7	Calm	0.6	Tongaat Hulett	Effluent treatment	16
133	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 06:30	11	54	2.3	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
134	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 06:30	6	52	2.4	Tongaat Hulett	Effluent treatment	16
135	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 08:30	13	Calm	0.4	Tongaat Hulett	Effluent treatment	16
136	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 08:40	14	Calm	0.5	Tongaat Hulett	Effluent treatment	16
137	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 08:50	15	Calm	0.3	Tongaat Hulett	Effluent treatment	16
138	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 09:00	18	Calm	0.8	Tongaat Hulett	Effluent treatment	16
139	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 09:00	14	Calm	0.9	Tongaat Hulett	Effluent treatment	16
140	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 09:10	14	39	1	Tongaat Hulett	Effluent treatment	16
141	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 09:20	11	Calm	0.9	Tongaat Hulett	Effluent treatment	16
142	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 09:30	11	Calm	0.9	Tongaat Hulett	Effluent treatment	16
143	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 09:30	10	71	1	Tongaat Hulett	Effluent treatment	16
144	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 09:40	10	Calm	0.7	Tongaat Hulett	Effluent treatment	16
145	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 10:00	11	61	2	Tongaat Hulett	Effluent treatment	16
146	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/15 10:00	11	64	2	Tongaat Hulett	Effluent treatment	16
147	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/15 10:10	13	69	2.1	Tongaat Hulett	Effluent treatment	16
148	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/16 01:00	7	Calm	0.4	Mondi (meteorology)	Based on wind direction	1
149	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/16 01:20	13	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
150	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/16 01:30	6	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
151	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/16 03:00	7	Calm	0.8	Mondi (meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
152	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/16 06:00	14	Calm	0.4	Tongaat Hulett	Effluent treatment	16
153	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/16 06:20	35.4	Calm	0.1	Tongaat Hulett	Effluent treatment	16
154	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/18 18:30	15	231	2.2	Tongaat Hulett	Effluent treatment	16
155	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/18 18:30	9	216	1.7	Tongaat Hulett	Effluent treatment	16
156	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/18 19:30	6	Calm	0.8	Tongaat Hulett	Effluent treatment	16
157	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/18 20:00	6	209	1.5	Tongaat Hulett	Effluent treatment	16
158	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/18 22:00	13	226	3.7	Tongaat Hulett	Effluent treatment	16
159	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/18 22:10	14	227	3.9	Tongaat Hulett	Effluent treatment	16
160	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/18 22:20	15	226	3.6	Tongaat Hulett	Effluent treatment	16
161	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/18 23:30	5	234	4.4	Tongaat Hulett	Effluent treatment	16
162	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/18 23:50	11	235	4.2	Tongaat Hulett	Effluent treatment	16
163	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 00:00	14	230	4.5	Tongaat Hulett	Effluent treatment	16
164	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 00:00	15	230	4.1	Tongaat Hulett	Effluent treatment	16
165	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 00:10	23	226	4	Tongaat Hulett	Effluent treatment	16
166	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 11:30	8	230	4.7	Tongaat Hulett	Effluent treatment	16
167	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 11:40	11	231	4.3	Tongaat Hulett	Effluent treatment	16
168	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 12:30	8	227	4.8	Tongaat Hulett	Effluent treatment	16
169	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 12:40	11	224	4.9	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
170	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 14:00	5	213	4.2	Tongaat Hulett	Effluent treatment	16
171	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 16:00	11	231	2.6	Tongaat Hulett	Effluent treatment	16
172	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 16:10	12	229	2.5	Tongaat Hulett	Effluent treatment	16
173	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 16:20	11	235	2.3	Tongaat Hulett	Effluent treatment	16
174	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 16:30	11	244	1.9	Tongaat Hulett	Effluent treatment	16
175	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 16:40	12	245	2.1	Tongaat Hulett	Effluent treatment	16
176	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 16:50	13	238	1.7	Tongaat Hulett	Effluent treatment	16
177	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 17:00	7	231	2.5	Tongaat Hulett	Effluent treatment	16
178	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 17:30	5	207	2.6	Tongaat Hulett	Effluent treatment	16
179	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 18:00	16	216	2.4	Tongaat Hulett	Effluent treatment	16
180	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 18:00	18	217	2.4	Tongaat Hulett	Effluent treatment	16
181	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 18:10	20	216	2.5	Tongaat Hulett	Effluent treatment	16
182	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 18:20	19	218	2.4	Tongaat Hulett	Effluent treatment	16
183	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 18:30	13	214	2.5	Tongaat Hulett	Effluent treatment	16
184	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 18:30	10	212	2.7	Tongaat Hulett	Effluent treatment	16
185	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 18:40	10	211	3	Tongaat Hulett	Effluent treatment	16
186	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 19:30	7	210	3.1	Tongaat Hulett	Effluent treatment	16
187	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 20:00	7	211	2.4	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
188	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 20:30	11	214	2.5	Tongaat Hulett	Effluent treatment	16
189	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 20:30	9	220	2.6	Tongaat Hulett	Effluent treatment	16
190	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 20:50	12	226	2.6	Tongaat Hulett	Effluent treatment	16
191	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/19 21:00	11	213	3.7	Tongaat Hulett	Effluent treatment	16
192	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/19 21:00	5	205	3.1	Tongaat Hulett	Effluent treatment	16
193	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/21 04:50	14	17	2.1	Tongaat Hulett	Effluent treatment	16
194	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/22 04:40	11	218	3.8	Tongaat Hulett	Effluent treatment	16
195	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/23 02:00	6	Calm	0.2	Tongaat Hulett	Effluent treatment	16
196	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 02:20	16	Calm	0.2	Tongaat Hulett	Effluent treatment	16
197	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 02:30	21	Calm	0.9	Tongaat Hulett	Effluent treatment	16
198	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/23 02:30	25	Calm	0.8	Tongaat Hulett	Effluent treatment	16
199	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 02:40	29	Calm	0.9	Tongaat Hulett	Effluent treatment	16
200	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 02:50	26	Calm	0.7	Tongaat Hulett	Effluent treatment	16
201	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/23 03:30	10	Calm	0.5	Tongaat Hulett	Effluent treatment	16
202	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 03:50	25	Calm	0	Tongaat Hulett	Effluent treatment	16
203	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 04:30	23	24	1.1	Tongaat Hulett	Effluent treatment	16
204	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/23 04:30	14	Calm	0.5	Tongaat Hulett	Effluent treatment	16
205	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/23 04:40	14	Calm	0.1	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
206	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 12:00	5	233	5.5	Tongaat Hulett	Effluent treatment	16
207	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 12:30	6	230	6	Tongaat Hulett	Effluent treatment	16
208	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 13:00	6	229	5.3	Tongaat Hulett	Effluent treatment	16
209	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 13:30	10	225	5.9	Tongaat Hulett	Effluent treatment	16
210	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/24 13:50	11	226	5.6	Tongaat Hulett	Effluent treatment	16
211	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 14:00	9	227	5.8	Tongaat Hulett	Effluent treatment	16
212	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 14:30	10	224	5.4	Tongaat Hulett	Effluent treatment	16
213	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/24 14:40	11	224	5.5	Tongaat Hulett	Effluent treatment	16
214	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/24 14:50	10	224	5.2	Tongaat Hulett	Effluent treatment	16
215	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/24 15:00	11	227	5.6	Tongaat Hulett	Effluent treatment	16
216	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 15:00	9	226	5.2	Tongaat Hulett	Effluent treatment	16
217	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/24 15:10	9	225	4.9	Tongaat Hulett	Effluent treatment	16
218	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 15:30	7	231	5.5	Tongaat Hulett	Effluent treatment	16
219	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/24 16:00	6	230	4.7	Tongaat Hulett	Effluent treatment	16
220	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/08/28 17:00	5	241	8	Mondi	Unstable conditions - Fugitive emissions	23
221	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/08/29 04:30	6	237	6	Mondi	Soft Wood Non-Condensable Gas Leak	24
222	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/29 12:30	5	223	5.5	Tongaat Hulett	Effluent treatment	16
223	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/29 13:00	6	235	5.6	Tongaat Hulett	Effluent treatment	16

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
224	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/29 14:00	5	229	4.2	Tongaat Hulett	Effluent treatment	16
225	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/29 17:30	14	Calm	0.5	Tongaat Hulett	Effluent treatment	16
226	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/29 17:40	24	Calm	0.1	Tongaat Hulett	Effluent treatment	16
227	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/29 17:50	15	Calm	0.6	Tongaat Hulett	Effluent treatment	16
228	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/29 18:00	10	157	1.5	Tongaat Hulett	Effluent treatment	16
229	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/29 18:00	8	Calm	0.8	Tongaat Hulett	Effluent treatment	16
230	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/29 19:30	5	Calm	0.8	Tongaat Hulett	Effluent treatment	16
231	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/30 00:30	21	21	1.5	Tongaat Hulett	Effluent treatment	16
232	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/30 00:50	55	43	1.3	Tongaat Hulett	Effluent treatment	16
233	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/30 01:00	24	43	1.4	Tongaat Hulett	Effluent treatment	16
234	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/30 01:00	9	26	1.4	Tongaat Hulett	Effluent treatment	16
235	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/30 17:00	5	72	3.5	Tongaat Hulett	Effluent treatment	16
236	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/30 18:00	7	71	2.4	Tongaat Hulett	Effluent treatment	16
237	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 19:00	9	61	1.6	Mondi (meteorology)	Based on wind direction	15
238	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 19:20	14	62	1.5	Mondi (meteorology)	Based on wind direction	15
239	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 19:30	11	66	1.6	Mondi (meteorology)	Based on wind direction	15
240	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 19:30	9	61	1.6	Mondi (meteorology)	Based on wind direction	15
241	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 19:50	12	53	1.5	Mondi (meteorology)	Based on wind direction	15

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
242	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 20:00	11	65	1.4	Mondi (meteorology)	Based on wind direction	15
243	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 20:00	8	47	1.1	Mondi (meteorology)	Based on wind direction	15
244	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 20:10	10	Calm	0.8	Mondi (meteorology)	Based on wind direction	15
245	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 20:30	13	65	1.8	Mondi (meteorology)	Based on wind direction	15
246	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 20:30	12	46	1.6	Mondi (meteorology)	Based on wind direction	15
247	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 20:40	16	30	1.5	Mondi (meteorology)	Based on wind direction	15
248	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 21:00	5	23	1.3	Mondi (meteorology)	Based on wind direction	15
249	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 22:00	11	52	1.6	Mondi (meteorology)	Based on wind direction	15
250	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 22:00	12	55	1.1	Mondi (meteorology)	Based on wind direction	15
251	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 22:10	12	Calm	0.9	Mondi (meteorology)	Based on wind direction	15
252	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 22:20	12	Calm	0.9	Mondi (meteorology)	Based on wind direction	15
253	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 22:30	22	Calm	0.8	Mondi (meteorology)	Based on wind direction	15
254	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 22:30	12	58	1.2	Mondi (meteorology)	Based on wind direction	15
255	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 22:40	10	58	1.4	Mondi (meteorology)	Based on wind direction	15
256	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 23:00	11	56	1.8	Mondi (meteorology)	Based on wind direction	15
257	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 23:00	11	58	1.9	Mondi (meteorology)	Based on wind direction	15
258	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 23:10	10	61	2.1	Mondi (meteorology)	Based on wind direction	15
259	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 23:20	12	56	1.9	Mondi (meteorology)	Based on wind direction	15

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
260	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/30 23:30	12	61	1.6	Mondi (meteorology)	Based on wind direction	15
261	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/30 23:30	8	66	1.4	Mondi (meteorology)	Based on wind direction	15
262	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 00:30	5	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
263	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 01:00	6	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
264	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 01:30	15	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
265	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 01:30	16	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
266	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 01:40	20	Calm	0.9	Mondi (meteorology)	Based on wind direction	1
267	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 01:50	12	Calm	0.8	Mondi (meteorology)	Based on wind direction	1
268	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 02:00	11	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
269	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 02:00	7	Calm	0.6	Mondi (meteorology)	Based on wind direction	1
270	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 03:00	7	Calm	0.7	Mondi (meteorology)	Based on wind direction	1
271	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 03:20	14	52	1	Mondi (meteorology)	Based on wind direction	1
272	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 03:30	22	29	1.1	Mondi (meteorology)	Based on wind direction	1
273	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/08/31 03:30	13	19	1.3	Mondi (meteorology)	Based on wind direction	1
274	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 03:30	29	19	1.3	Tongaat Hulett	Effluent treatment	16, 17
275	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/08/31 03:40	13	13	1	Tongaat Hulett	Effluent treatment	1
276	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 03:40	37	13	1	Tongaat Hulett	Effluent treatment	16, 17
277	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 03:50	49	15	1.6	Tongaat Hulett	Effluent treatment	16, 17

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
278	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 04:00	16	Calm	0.5	Tongaat Hulett	Effluent treatment	16, 17
279	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 04:00	26	Calm	0.5	Tongaat Hulett	Effluent treatment	16, 17
280	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 04:10	33	Calm	0.5	Tongaat Hulett	Effluent treatment	16, 17
281	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 04:20	29	Calm	0.6	Tongaat Hulett	Effluent treatment	16, 17
282	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 04:30	12	33	1.2	Tongaat Hulett	Effluent treatment	16, 17
283	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 16:30	6	234	3.5	Tongaat Hulett	Effluent treatment	16, 17
284	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 22:30	5	228	5.7	Tongaat Hulett	Effluent treatment	16, 17
285	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 23:00	7	225	5.2	Tongaat Hulett	Effluent treatment	16, 17
286	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/08/31 23:30	11	223	4.1	Tongaat Hulett	Effluent treatment	16, 17
287	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 23:40	13	223	4.1	Tongaat Hulett	Effluent treatment	16, 17
288	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/08/31 23:50	12	219	4.1	Tongaat Hulett	Effluent treatment	16, 17
September 2021									
1	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:00	13	218	4.3	Tongaat Hulett	Effluent treatment	18, 85
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 00:00	14	218	4.6	Tongaat Hulett	Effluent treatment	18, 85
3	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:10	14	218	4.4	Tongaat Hulett	Effluent treatment	18, 85
4	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:20	16	218	5.2	Tongaat Hulett	Effluent treatment	18, 85
5	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:30	15	217	5.0	Tongaat Hulett	Effluent treatment	18, 85
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 00:30	16	217	5.1	Tongaat Hulett	Effluent treatment	18, 85
7	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:40	16	217	5.2	Tongaat Hulett	Effluent treatment	18, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
8	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 00:50	17	218	5.0	Tongaat Hulett	Effluent treatment	18, 85
9	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:00	15	219	4.8	Tongaat Hulett	Effluent treatment	18, 85
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 01:00	14	218	4.4	Tongaat Hulett	Effluent treatment	18, 85
11	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:10	14	218	4.9	Tongaat Hulett	Effluent treatment	18, 85
12	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:20	15	219	3.6	Tongaat Hulett	Effluent treatment	18, 85
13	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:30	14	219	4.4	Tongaat Hulett	Effluent treatment	18, 85
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 01:30	14	217	4.2	Tongaat Hulett	Effluent treatment	18, 85
15	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:40	15	217	4.2	Tongaat Hulett	Effluent treatment	18, 85
16	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 01:50	15	215	4.1	Tongaat Hulett	Effluent treatment	18, 85
17	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 02:00	12	216	3.4	Tongaat Hulett	Effluent treatment	18, 85
18	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 02:00	10	211	3.9	Tongaat Hulett	Effluent treatment	18, 85
19	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 02:10	10	211	4.2	Tongaat Hulett	Effluent treatment	18, 85
20	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 02:30	10	211	3.8	Tongaat Hulett	Effluent treatment	18, 85
21	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 02:40	11	212	4.0	Tongaat Hulett	Effluent treatment	18, 85
22	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 02:50	13	210	3.8	Tongaat Hulett	Effluent treatment	18, 85
23	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 03:00	9	208	2.8	Tongaat Hulett	Effluent treatment	18, 85
24	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 03:20	11	205	2.6	Tongaat Hulett	Effluent treatment	18, 85
25	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 03:30	6	210	2.5	Tongaat Hulett	Effluent treatment	18, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
26	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/09/01 06:30	6	238	5.0	Mondi	Unstable conditions - Fugitive emissions	25
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/09/01 07:30	6	232	3.3	Mondi	Unstable conditions - Fugitive emissions	25
28	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/09/01 08:00	6	245	2.5	Mondi	Unstable conditions - Fugitive emissions	25
29	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/09/01 10:00	6	257	4.1	Mondi	Unstable conditions - Fugitive emissions	25
30	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/09/01 10:30	6	240	3.9	Mondi	Unstable conditions - Fugitive emissions	25
31	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 20:00	6	Calm	0.1	Mondi	Unstable conditions - Fugitive emissions	25
32	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 20:30	9	Calm	0.8	Mondi	Unstable conditions - Fugitive emissions	25
33	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/01 20:40	10	Calm	0.9	Mondi	Unstable conditions - Fugitive emissions	25
34	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/01 21:00	10	Calm	0.8	Mondi	Unstable conditions - Fugitive emissions	25
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 21:00	10	Calm	0.8	Mondi	Unstable conditions - Fugitive emissions	25
36	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/01 21:10	10	Calm	0.9	Mondi	Unstable conditions - Fugitive emissions	25
37	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 21:30	8	Calm	0.9	Mondi	Unstable conditions - Fugitive emissions	25
38	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 22:00	7	Calm	0.6	Mondi	Unstable conditions - Fugitive emissions	25
39	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 23:00	11	46	1.1	Mondi	Unstable conditions - Fugitive emissions	25
40	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 23:20	26	Calm	0.8	Mondi	Unstable conditions - Fugitive emissions	25
41	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 23:30	32	Calm	0.7	Mondi	Unstable conditions - Fugitive emissions	25
42	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/01 23:30	5	Calm	0.9	Mondi	Unstable conditions - Fugitive emissions	25
43	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/01 23:30	22	Calm	0.9	Mondi	Unstable conditions - Fugitive emissions	25

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
44	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 23:40	21	61	1.2	Mondi	Unstable conditions - Fugitive emissions	25
45	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/01 23:50	12	Calm	0.8	Mondi	Unstable conditions - Fugitive emissions	25, 18
46	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/02 00:30	7	Calm	0.7	Mondi	Unstable conditions - Fugitive emissions	25
47	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/02 00:50	10	Calm	0.7	Mondi	Unstable conditions - Fugitive emissions	25
48	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/02 01:00	12	60	1	Mondi	Unstable conditions - Fugitive emissions	25
49	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/02 01:00	13	60	1	Mondi	Unstable conditions - Fugitive emissions	19, 25, 1
50	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/02 01:00	7	Calm	0.6	Mondi	Unstable conditions - Fugitive emissions	25
51	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/02 01:00	21	Calm	0.6	Mondi	Unstable conditions - Fugitive emissions	19, 25, 1
52	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/02 01:10	32	Calm	0.5	Mondi	Unstable conditions - Fugitive emissions	19, 25, 1
53	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/02 01:20	17	Calm	0.3	Mondi	Unstable conditions - Fugitive emissions	19, 25, 1
54	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/02 04:00	6	Calm	0.7	Mondi	Unstable conditions - Fugitive emissions	25
55	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/04 11:30	8	226	4.6	Tongaat Hulett	Effluent treatment	20, 85
56	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/04 18:30	7	178	1	Tongaat Hulett	Effluent treatment	20, 85
57	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/04 18:50	17	217	1.5	Tongaat Hulett	Effluent treatment	20, 85
58	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/04 19:00	19	194	1.2	Tongaat Hulett	Effluent treatment	20, 85
59	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/04 19:00	23	127	1.7	Tongaat Hulett	Effluent treatment	20, 85
60	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/04 19:10	26	110	1.8	Tongaat Hulett	Effluent treatment	20
61	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/04 19:20	24	93	2	Tongaat Hulett	Effluent treatment	20

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
62	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/04 23:30	8	Calm	0.5	Tongaat Hulett (Meteorology)	Effluent treatment	20, 85
63	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/04 23:50	10	Calm	0.4	Tongaat Hulett (Meteorology)	Effluent treatment	20, 85
64	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/05 00:00	9	Calm	0.5	Tongaat Hulett (Meteorology)	Effluent treatment	21, 85
65	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/05 00:00	7	Calm	0.6	Tongaat Hulett (Meteorology)	Effluent treatment	21, 85
66	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/05 00:30	6	45	1	Mondi	Flare	21, 26
67	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/05 03:00	45	46	1.2	Mondi	Flare	26
68	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/05 03:10	22	56	1	Mondi	Flare	26
69	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/05 03:20	113	64	1.6	Mondi	Flare	26
70	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/05 03:30	58	61	1.9	Mondi	Flare	26
71	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/05 03:30	8	59	1.9	Mondi	Flare	26
72	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/05 03:30	32	59	1.9	Mondi	Flare	26
73	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/05 03:40	32	60	1.7	Mondi	Flare	26
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/06 04:30	7	229	4.5	Tongaat Hulett	Effluent treatment	22, 85
75	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 06:30	8	189	2.4	Tongaat Hulett	Effluent treatment	31, 32
76	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/07 06:40	11	190	1.8	Tongaat Hulett	Effluent treatment	31, 32
77	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 07:00	6	216	2.7	Tongaat Hulett	Effluent treatment	31, 32
78	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 09:30	6	215	2.9	Tongaat Hulett	Effluent treatment	31, 32
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 10:30	6	212	3.8	Tongaat Hulett	Effluent treatment	31, 32

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
80	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/07 10:40	10	209	4.2	Tongaat Hulett	Effluent treatment	31, 32
81	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 13:00	6	217	4.8	Tongaat Hulett	Effluent treatment	31, 32
82	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 13:30	7	213	4.9	Tongaat Hulett	Effluent treatment	31, 32
83	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/07 13:40	10	211	4.9	Tongaat Hulett	Effluent treatment	31, 32
84	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 14:00	8	213	4.5	Tongaat Hulett	Effluent treatment	31, 32
85	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/07 14:20	11	213	4.7	Tongaat Hulett	Effluent treatment	31, 32
86	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/07 14:30	10	220	4.6	Tongaat Hulett	Effluent treatment	31, 32
87	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/07 14:30	7	225	5.4	Tongaat Hulett	Effluent treatment	31, 32
88	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 10:00	6	235	4.4	Tongaat Hulett	Effluent treatment	30, 32
89	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 10:20	9	238	4.6	Tongaat Hulett	Effluent treatment	30, 32
90	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 11:30	7	234	4.6	Tongaat Hulett	Effluent treatment	30, 32
91	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 11:50	10	236	4.5	Tongaat Hulett	Effluent treatment	30, 32
92	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 12:00	7	235	5.2	Tongaat Hulett	Effluent treatment	30, 32
93	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 12:30	8	236	5	Tongaat Hulett	Effluent treatment	30, 32
94	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 12:40	10	236	4.6	Tongaat Hulett	Effluent treatment	30, 32
95	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 13:00	6	227	4.5	Tongaat Hulett	Effluent treatment	30, 32
96	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 16:00	5	222	3.2	Tongaat Hulett	Effluent treatment	30, 32
97	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 18:30	6	161	1.2	Tongaat Hulett	Effluent treatment	30, 32

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
98	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 18:50	13	Calm	0.9	Tongaat Hulett	Effluent treatment	30, 32
99	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 19:00	20	Calm	0.4	Tongaat Hulett	Effluent treatment	30, 32
100	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 19:00	17	Calm	0.5	Tongaat Hulett	Effluent treatment	30, 32
101	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 19:10	19	Calm	0.6	Tongaat Hulett	Effluent treatment	30, 32
102	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 19:20	10	Calm	0.6	Tongaat Hulett	Effluent treatment	30, 32
103	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 19:30	6	Calm	0.5	Tongaat Hulett	Effluent treatment	30, 32
104	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 21:00	8	Calm	0.1	Tongaat Hulett	Effluent treatment	30, 32
105	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 21:20	14	Calm	0.1	Tongaat Hulett	Effluent treatment	30, 32
106	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 21:30	35	Calm	0.2	Tongaat Hulett	Effluent treatment	30, 32
107	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 21:30	64	Calm	0.4	Tongaat Hulett	Effluent treatment	30, 32
108	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 21:40	87	Calm	0.2	Tongaat Hulett	Effluent treatment	30, 32
109	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 21:50	69	Calm	0.9	Tongaat Hulett	Effluent treatment	30, 32
110	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 22:00	71	Calm	0.9	Tongaat Hulett	Effluent treatment	30, 32
111	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 22:00	55	42	1	Tongaat Hulett	Effluent treatment	30, 32
112	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 22:10	56	38	1	Tongaat Hulett	Effluent treatment	30, 32
113	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 22:20	39	18	1.1	Tongaat Hulett	Effluent treatment	30, 32
114	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 22:30	14	Calm	0.8	Tongaat Hulett	Effluent treatment	30, 32
115	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 22:30	10	Calm	0.7	Tongaat Hulett	Effluent treatment	30, 32

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
116	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 22:50	14	Calm	0.5	Tongaat Hulett	Effluent treatment	30, 32
117	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/09 23:00	15	Calm	0.5	Tongaat Hulett	Effluent treatment	30, 32
118	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/09 23:00	6	Calm	0.5	Tongaat Hulett	Effluent treatment	30, 32
119	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 00:00	8	353	1	Tongaat Hulett	Effluent treatment	33, 86
120	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 00:20	13	Calm	0.8	Tongaat Hulett	Effluent treatment	33, 86
121	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 00:30	6	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
122	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 02:30	18	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
123	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 02:40	10	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
124	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 02:50	40	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
125	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:00	44	92	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
126	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 03:00	45	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
127	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:10	56	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	33
128	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:20	35	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	33
129	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:30	27	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
130	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 03:30	25	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
131	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:40	24	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
132	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 03:50	25	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
133	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 04:00	15	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
134	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 04:00	12	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
135	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/10 04:10	13	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	85
136	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/10 04:30	6	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	33, 85
137	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/13 06:00	6	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	85
138	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/13 11:00	6	218	3.8	Tongaat Hulett	Effluent treatment	85
139	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/13 15:00	6	211	4.1	Tongaat Hulett	Effluent treatment	85
140	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/13 22:00	11	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	1
141	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/13 22:20	22	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	1
142	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/13 22:30	28	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	1
143	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/13 22:30	14	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	1
144	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/13 22:40	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	1
145	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 00:00	11	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	85
146	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 00:00	9	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	85
147	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 00:20	11	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	85
148	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 01:00	15	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	85
149	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 01:10	15	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	85
150	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 01:20	27	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	85
151	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 01:30	25	63	1.3	Tongaat Hulett (Meteorology)	Based on wind direction	86

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
152	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 01:30	19	61	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	86
153	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 01:40	18	52	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	86
154	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 01:50	14	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	85
155	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 02:00	11	51	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	85
156	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 02:00	10	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	85
157	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 02:20	11	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	85
158	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 02:30	11	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	85
159	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 02:30	19	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	85
160	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 02:40	25	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	85
161	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/14 02:50	21	32	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	85
162	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/14 03:00	6	53	1.3	Tongaat Hulett (Meteorology)	Based on wind direction	85
163	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/14 04:00	6	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	85
164	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/14 05:30	12	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	1
165	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/14 05:30	9	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	1
166	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 09:30	6	234	6.7	Tongaat Hulett	Effluent treatment	37, 85
167	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 11:30	5	230	6.5	Tongaat Hulett	Effluent treatment	37, 85
168	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 12:00	7	226	5.9	Tongaat Hulett	Effluent treatment	37, 85
169	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 13:00	6	222	5.4	Tongaat Hulett	Effluent treatment	37, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
170	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 14:30	7	222	4.8	Tongaat Hulett	Effluent treatment	37, 85
171	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 15:00	6	215	4.7	Tongaat Hulett	Effluent treatment	37, 85
172	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 15:30	8	223	4.6	Tongaat Hulett	Effluent treatment	37, 85
173	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 16:00	11	225	4	Tongaat Hulett	Effluent treatment	37, 85
174	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 16:10	13	222	3.9	Tongaat Hulett	Effluent treatment	37, 85
175	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 16:20	11	225	3.6	Tongaat Hulett	Effluent treatment	37, 85
176	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 16:30	13	218	4.2	Tongaat Hulett	Effluent treatment	37, 85
177	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 16:30	11	222	3.8	Tongaat Hulett	Effluent treatment	37, 85
178	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 16:40	13	225	3.5	Tongaat Hulett	Effluent treatment	37, 85
179	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 17:00	7	229	3.4	Tongaat Hulett	Effluent treatment	37, 85
180	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 17:10	10	229	3.3	Tongaat Hulett	Effluent treatment	37, 85
181	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 19:30	10	232	3	Tongaat Hulett	Effluent treatment	37, 85
182	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 19:30	7	232	3.3	Tongaat Hulett	Effluent treatment	37, 85
183	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 19:50	10	235	3.6	Tongaat Hulett	Effluent treatment	37, 85
184	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 20:00	6	232	3.8	Tongaat Hulett	Effluent treatment	37, 85
185	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 20:20	16	218	2.8	Tongaat Hulett	Effluent treatment	37, 85
186	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/15 20:30	13	231	4.2	Tongaat Hulett	Effluent treatment	37, 85
187	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/15 23:30	5	220	3	Tongaat Hulett	Effluent treatment	37, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
188	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/16 16:00	8	212	1.2	Tongaat Hulett	Effluent treatment	40
189	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/16 16:20	14	222	1.5	Tongaat Hulett	Effluent treatment	40
190	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/16 21:30	12	223	4.5	Tongaat Hulett	Effluent treatment	40, 85
191	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/16 21:30	8	219	3.8	Tongaat Hulett	Effluent treatment	40, 85
192	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/16 21:40	10	218	3.6	Tongaat Hulett	Effluent treatment	40, 85
193	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 11:30	9	235	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
194	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 11:40	13	237	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
195	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 11:50	10	239	4.8	Tongaat Hulett	Effluent treatment	35, 39, 85
196	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 12:00	7	228	4.5	Tongaat Hulett	Effluent treatment	35, 39, 85
197	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 12:30	10	226	5.4	Tongaat Hulett	Effluent treatment	35, 39, 85
198	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 12:30	9	224	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
199	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 13:00	6	227	5.7	Tongaat Hulett	Effluent treatment	35, 39, 85
200	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 13:30	8	223	5.5	Tongaat Hulett	Effluent treatment	35, 39, 85
201	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 13:40	10	227	5.9	Tongaat Hulett	Effluent treatment	35, 39, 85
202	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 13:50	10	221	5.7	Tongaat Hulett	Effluent treatment	35, 39, 85
203	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 14:30	7	217	5.9	Tongaat Hulett	Effluent treatment	35, 39, 85
204	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 15:00	9	219	5.8	Tongaat Hulett	Effluent treatment	35, 39, 85
205	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 15:20	11	215	5.2	Tongaat Hulett	Effluent treatment	35, 39, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
206	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 15:30	10	219	4.9	Tongaat Hulett	Effluent treatment	35, 39, 85
207	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 15:30	11	219	5.1	Tongaat Hulett	Effluent treatment	35, 39, 85
208	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 15:40	13	217	5	Tongaat Hulett	Effluent treatment	35, 39, 85
209	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 15:50	10	222	5.4	Tongaat Hulett	Effluent treatment	35, 39, 85
210	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 16:00	12	224	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
211	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 16:00	10	221	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
212	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 16:30	10	218	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
213	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 16:40	11	215	5.5	Tongaat Hulett	Effluent treatment	35, 39, 85
214	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 16:50	12	219	5.2	Tongaat Hulett	Effluent treatment	35, 39, 85
215	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 17:00	11	215	5.6	Tongaat Hulett	Effluent treatment	35, 39, 85
216	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 17:00	12	212	5.4	Tongaat Hulett	Effluent treatment	35, 39, 85
217	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 17:10	11	218	5.3	Tongaat Hulett	Effluent treatment	35, 39, 85
218	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 17:20	14	204	5.4	Tongaat Hulett	Effluent treatment	35, 39, 85
219	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 17:30	7	208	5	Tongaat Hulett	Effluent treatment	35, 39, 85
220	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 18:00	9	208	4.1	Tongaat Hulett	Effluent treatment	35, 39, 85
221	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 18:10	10	212	4.2	Tongaat Hulett	Effluent treatment	35, 39, 85
222	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 18:20	11	206	4.3	Tongaat Hulett	Effluent treatment	35, 39, 85
223	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 18:30	6	208	4.6	Tongaat Hulett	Effluent treatment	35, 39, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
224	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 19:00	10	210	4.8	Tongaat Hulett	Effluent treatment	35, 39, 85
225	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 19:20	14	210	4.9	Tongaat Hulett	Effluent treatment	35, 39, 85
226	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 19:30	8	209	5.1	Tongaat Hulett	Effluent treatment	35, 39, 85
227	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 19:40	12	208	4.7	Tongaat Hulett	Effluent treatment	35, 39, 85
228	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 20:00	11	221	4.5	Tongaat Hulett	Effluent treatment	35, 39, 85
229	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 20:00	8	225	4	Tongaat Hulett	Effluent treatment	35, 39, 85
230	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 20:10	11	228	3.9	Tongaat Hulett	Effluent treatment	35, 39, 85
231	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 20:30	11	213	4.8	Tongaat Hulett	Effluent treatment	35, 39, 85
232	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 20:40	13	214	4.8	Tongaat Hulett	Effluent treatment	35, 39, 85
233	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 20:50	12	215	4.8	Tongaat Hulett	Effluent treatment	35, 39, 85
234	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 21:00	15	222	3.7	Tongaat Hulett	Effluent treatment	35, 39, 85
235	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 21:00	13	222	4.1	Tongaat Hulett	Effluent treatment	35, 39, 85
236	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 21:10	14	225	5.7	Tongaat Hulett	Effluent treatment	35, 39, 85
237	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/17 21:20	11	217	3	Tongaat Hulett	Effluent treatment	35, 39, 85
238	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/17 21:30	6	227	2.6	Tongaat Hulett	Effluent treatment	35, 39, 85
239	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/18 11:00	5	235	3	Tongaat Hulett	Effluent treatment	36, 38, 85
240	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/18 21:00	8	14	1	Tongaat Hulett	Effluent treatment	36, 38
241	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 21:20	20	Calm	0.9	Tongaat Hulett	Effluent treatment	36, 38

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
242	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 21:30	31	Calm	0.3	Tongaat Hulett	Effluent treatment	36, 38, 85
243	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/18 21:30	18	Calm	0.3	Tongaat Hulett	Effluent treatment	36, 38, 85
244	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 21:40	18	Calm	0.4	Tongaat Hulett	Effluent treatment	36, 38
245	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 22:30	27	Calm	0.3	Tongaat Hulett	Effluent treatment	36, 38, 85
246	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/18 22:30	25	Calm	0.6	Tongaat Hulett	Effluent treatment	36, 38, 85
247	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 22:40	32	Calm	0.6	Tongaat Hulett	Effluent treatment	36, 38
248	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 22:50	17	Calm	0.9	Tongaat Hulett	Effluent treatment	36, 38
249	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/18 23:30	7	Calm	0.1	Tongaat Hulett	Effluent treatment	36, 38
250	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 23:40	11	Calm	0	Tongaat Hulett	Effluent treatment	36, 38
251	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/18 23:50	9	Calm	0.1	Tongaat Hulett	Effluent treatment	36, 38
252	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/21 10:00	17	219	5.2	Tongaat Hulett	Effluent treatment	41, 85
253	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/21 10:00	16	218	5.3	Tongaat Hulett	Effluent treatment	41, 85
254	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/21 10:10	22	214	5.3	Tongaat Hulett	Effluent treatment	41, 85
255	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/21 17:30	6	215	4	Tongaat Hulett	Effluent treatment	41, 85
256	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/21 18:30	6	218	4.1	Tongaat Hulett	Effluent treatment	41, 85
257	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/22 21:30	6	29	1.2	Tongaat Hulett	Calm conditions and process upsets	42, 43
258	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/22 21:50	13	Calm	0.9	Tongaat Hulett	Calm conditions and process upsets	42, 43
259	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/22 22:00	11	43	1.1	Tongaat Hulett	Calm conditions and process upsets	42, 43

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
260	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/22 22:00	8	Calm	0.7	Tongaat Hulett	Calm conditions and process upsets	42, 43
261	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/22 22:30	7	Calm	0.4	Tongaat Hulett	Calm conditions and process upsets	42, 43
262	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/22 22:50	16	Calm	0.2	Tongaat Hulett	Calm conditions and process upsets	42, 43
263	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/22 23:00	20	Calm	0.5	Tongaat Hulett	Calm conditions and process upsets	42, 43
264	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/22 23:00	11	Calm	0.5	Tongaat Hulett	Calm conditions and process upsets	42, 43
265	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/24 14:00	6	226	4.4	Tongaat Hulett	Effluent treatment	44, 47, 85
266	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/24 15:00	5	229	3.6	Tongaat Hulett	Effluent treatment	44, 47, 85
267	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 11:00	7	229	6.7	Tongaat Hulett	Effluent treatment	49, 85
268	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 11:30	6	228	6.5	Tongaat Hulett	Effluent treatment	49, 85
269	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/26 12:00	10	222	7.1	Tongaat Hulett	Effluent treatment	49, 85
270	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 12:00	10	225	7.2	Tongaat Hulett	Effluent treatment	49, 85
271	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/26 12:20	10	227	7.2	Tongaat Hulett	Effluent treatment	49, 85
272	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/26 12:30	10	222	6.1	Tongaat Hulett	Effluent treatment	49, 85
273	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 12:30	9	225	6.3	Tongaat Hulett	Effluent treatment	49, 85
274	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/26 13:00	12	230	6.3	Tongaat Hulett	Effluent treatment	49, 85
275	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 13:00	9	228	6	Tongaat Hulett	Effluent treatment	49, 85
276	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 13:30	7	228	6.4	Tongaat Hulett	Effluent treatment	49, 85
277	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/26 14:00	10	228	6.2	Tongaat Hulett	Effluent treatment	49, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
278	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 14:00	8	228	5.5	Tongaat Hulett	Effluent treatment	49, 85
279	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 14:30	5	229	5.3	Tongaat Hulett	Effluent treatment	49, 85
280	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/26 15:00	7	233	5.1	Tongaat Hulett	Effluent treatment	49, 85
281	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/26 22:30	5	Calm	0	Mondi	Flare	46, 1
282	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/09/26 23:00	17	Calm	0.2	Mondi	Flare	46, 1
283	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/09/26 23:10	34	Calm	0.3	Mondi	Flare	46, 1
284	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/27 02:00	15	Calm	0.4	Mondi	Flare	48, 1
285	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/27 02:00	17	Calm	0.6	Mondi	Flare	48, 1
286	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/27 02:10	22	Calm	0.6	Mondi	Flare	48, 1
287	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/27 02:20	12	Calm	0.8	Mondi	Flare	48, 1
288	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 09:00	7	237	6.6	Tongaat Hulett	Effluent treatment	50, 53, 85
289	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 09:30	6	238	6.2	Tongaat Hulett	Effluent treatment	50, 53, 85
290	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 10:00	7	238	6.4	Tongaat Hulett	Effluent treatment	50, 53, 85
291	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/28 11:00	10	232	6	Tongaat Hulett	Effluent treatment	50, 53, 85
292	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 11:00	9	230	5.9	Tongaat Hulett	Effluent treatment	50, 53, 85
293	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/28 11:10	10	229	5.5	Tongaat Hulett	Effluent treatment	50, 53, 85
294	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 11:30	8	230	5.5	Tongaat Hulett	Effluent treatment	50, 53, 85
295	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 12:00	8	226	5	Tongaat Hulett	Effluent treatment	50, 53, 85

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
296	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 12:30	9	225	5.9	Tongaat Hulett	Effluent treatment	50, 53, 85
297	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/28 12:40	11	228	6.6	Tongaat Hulett	Effluent treatment	50, 53, 85
298	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 14:00	6	220	5.6	Tongaat Hulett	Effluent treatment	50, 53, 85
299	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/28 14:20	11	228	6	Tongaat Hulett	Effluent treatment	50, 53, 85
300	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 14:30	7	229	5.8	Tongaat Hulett	Effluent treatment	50, 53, 85
301	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 15:00	7	228	5.1	Tongaat Hulett	Effluent treatment	50, 53, 85
302	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 15:30	7	223	4.8	Tongaat Hulett	Effluent treatment	50, 53, 85
303	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 16:00	8	225	4.4	Tongaat Hulett	Effluent treatment	50, 53, 85
304	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/09/28 16:20	11	222	3.7	Tongaat Hulett	Effluent treatment	50, 53, 85
305	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/28 16:30	8	226	4.1	Tongaat Hulett	Effluent treatment	50, 53, 85
306	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/29 12:00	6	225	3	Tongaat Hulett	Effluent treatment	51, 54, 85
307	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/30 00:30	6	Calm	0.7	Tongaat Hulett (Meteorology)	Effluent treatment	52, 55, 85
308	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/09/30 01:00	6	Calm	0.9	Tongaat Hulett (Meteorology)	Effluent treatment	52, 55, 85
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1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/10/01 22:30	7	244	4.9	Mondi	Effluent treatment	57
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/10/01 23:00	5	228	4.6	Mondi	Effluent treatment	57
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/02 12:00	7	230	4.5	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
4	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/03 03:40	13	216	4.6	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
5	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/03 03:50	13	213	6.3	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
6	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/03 04:00	10	213	5.2	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
7	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/03 04:20	10	231	6.5	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
8	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:00	20	149	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
9	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/04 21:00	17	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
10	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:10	16	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
11	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:20	15	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
12	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:30	17	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
13	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/04 21:30	16	112	1	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
14	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:40	19	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
15	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/04 21:50	11	76	1.8	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
16	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/05 06:30	6	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	59, 62, 120
17	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/06 00:00	9	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
18	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/06 00:20	26	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
19	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/06 00:30	26	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
20	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/06 00:30	11	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
21	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/06 22:00	6	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
22	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/06 22:20	11	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120
23	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/06 22:30	18	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	62, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
24	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/06 22:30	10	Calm	0.5	Tonga Hulett (Meteorology)	Based on wind direction	62, 120
25	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/06 22:40	10	Calm	0.7	Tonga Hulett (Meteorology)	Based on wind direction	62, 120
26	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/07 00:00	16	Calm	0.5	Mondi (meteorology)	Based on wind direction	61, 62, 120
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/07 00:00	12	Calm	0.8	Mondi (meteorology)	Based on wind direction	61, 62, 120
28	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/07 00:10	12	Calm	0.9	Mondi (meteorology)	Based on wind direction	61, 62, 120
29	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/07 05:00	9	69	1.5	Mondi (meteorology)	Based on wind direction	61, 62, 120
30	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/07 05:10	15	59	1.4	Mondi (meteorology)	Based on wind direction	61, 62, 120
31	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/07 06:00	5	Calm	0.9	Mondi (meteorology)	Based on wind direction	61, 62, 120
32	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/08 15:00	13	222	5.4	Tonga Hulett (Meteorology)	Based on wind direction	61, 62, 120
33	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/08 15:10	27	206	5.8	Tonga Hulett (Meteorology)	Based on wind direction	61, 62, 120
34	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/08 15:20	10	217	5.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 62, 120
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 10:30	6	232	6.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
36	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 11:00	6	229	6.1	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
37	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 11:30	6	229	6.5	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
38	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 13:30	6	226	6.1	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
39	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 14:00	7	231	6.9	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
40	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 15:30	6	229	5.9	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
41	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 16:00	7	224	5.4	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
42	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 16:30	8	225	5.7	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
43	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 17:00	10	223	5.2	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
44	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 17:10	10	222	5.3	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
45	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 17:20	12	222	5.1	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
46	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 17:30	11	226	4.6	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
47	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 17:30	10	225	5.5	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
48	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 17:40	10	230	7	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
49	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 18:00	7	214	4.7	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
50	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 18:30	8	221	4.7	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
51	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 19:00	9	224	5.2	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
52	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 19:30	8	220	4.3	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
53	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 20:00	9	220	4.3	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
54	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 20:20	10	222	4.5	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
55	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 20:30	10	221	5.5	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
56	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 20:30	10	223	5.3	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
57	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 20:40	11	224	5.8	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
58	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 20:50	10	225	4.8	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120
59	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 21:00	10	222	4.6	Tongaat Hulett (Meteorology)	Based on wind direction	61, 63, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
60	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 21:00	11	221	4.4	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
61	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 21:10	10	224	4	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
62	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 21:20	12	218	4.6	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
63	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 21:30	11	218	4.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
64	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 21:30	10	218	4.1	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
65	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 21:40	11	217	3.7	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
66	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 22:00	11	223	4.6	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
67	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/09 22:00	11	226	5	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
68	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/09 22:10	11	226	5	Tonga Hulett (Meteorology)	Based on wind direction	61, 63, 120
69	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 02:00	7	225	5.1	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
70	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 04:00	5	212	4.1	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
71	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 12:00	5	226	6.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
72	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 12:30	6	221	5	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
73	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 13:00	5	229	5.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 13:30	5	221	4.2	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
75	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 14:30	6	226	4	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
76	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 15:00	8	212	4	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120
77	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/10 15:30	7	216	3.3	Tonga Hulett (Meteorology)	Based on wind direction	61, 64, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
78	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/10 15:40	10	213	3.4	Tongaat Hulett (Meteorology)	Based on wind direction	61, 64, 120
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/11 06:30	16	54	1	Mondi (meteorology)	Based on wind direction	120
80	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/11 06:40	24	Calm	0.9	Mondi (meteorology)	Based on wind direction	120
81	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/11 06:50	23	91	1.1	Mondi (meteorology)	Based on wind direction	120
82	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/11 07:00	19	Calm	0.8	Mondi (meteorology)	Based on wind direction	120
83	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/11 07:00	10	13	1.1	Mondi (meteorology)	Based on wind direction	120
84	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/11 07:10	10	357	1.4	Mondi (meteorology)	Based on wind direction	120
85	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/12 00:00	5	44	4.8	Mondi (meteorology)	Based on wind direction	120
86	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/12 00:30	6	46	4.5	Mondi (meteorology)	Based on wind direction	120
87	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/12 01:00	5	48	4.5	Mondi (meteorology)	Based on wind direction	120
88	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 02:00	7	Calm	0.1	Mondi (meteorology)	Based on wind direction	132
89	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 02:30	5	Calm	0.7	Mondi (meteorology)	Based on wind direction	132
90	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 05:00	5	Calm	0.1	Mondi (meteorology)	Based on wind direction	132
91	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 05:30	6	Calm	0.9	Mondi (meteorology)	Based on wind direction	132
92	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 06:00	7	61	1.4	Mondi (meteorology)	Based on wind direction	132
93	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/13 07:00	7	40	1.9	Mondi (meteorology)	Based on wind direction	132
94	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 12:30	10	235	2.3	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
95	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/13 12:30	12	231	2.1	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
96	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 12:50	22	222	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
97	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 13:00	10	214	2.2	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
98	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/13 14:00	10	206	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
99	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 14:10	15	205	1.8	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
100	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 14:20	12	202	2	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
101	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 14:30	13	189	1.5	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
102	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/13 14:30	10	189	1.6	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
103	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/13 14:50	10	195	1.5	Tongaat Hulett (Meteorology)	Based on wind direction	65, 120
104	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/10/13 21:00	8	22	5.9	Mondi (meteorology)	Based on wind direction	132
105	TRS 10-minute OME Standard (9.3 ppb)	CBD	2021/10/13 21:20	12	19	6	Mondi (meteorology)	Based on wind direction	132
106	TRS 10-minute OME Standard (9.3 ppb)	CBD	2021/10/13 21:30	12	20	6.3	Mondi (meteorology)	Based on wind direction	132
107	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	CBD	2021/10/13 21:30	9	22	6.7	Mondi (meteorology)	Based on wind direction	132
108	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/14 07:00	7	38	2	Mondi (meteorology)	Based on wind direction	132
109	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/14 07:30	8	61	2.1	Mondi (meteorology)	Based on wind direction	132
110	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/10/14 07:40	11	64	2.2	Mondi (meteorology)	Based on wind direction	1
111	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 09:00	5	230	4.6	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
112	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 09:30	9	226	4.2	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
113	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 09:50	11	224	4.4	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
114	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 10:00	9	227	5	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
115	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 10:10	12	226	5.2	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
116	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 10:30	10	227	5.7	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
117	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 10:40	10	228	6.4	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
118	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 10:50	10	226	5.4	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
119	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 11:00	11	227	5.6	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
120	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 11:00	9	228	5.4	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
121	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 11:30	7	229	5.2	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
122	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 12:00	8	228	5.1	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
123	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 12:10	11	229	4.9	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
124	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 12:30	8	223	4.8	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
125	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 13:00	9	222	4.9	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
126	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 13:10	10	221	5.3	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
127	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 13:20	11	225	4.7	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
128	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 13:30	11	224	5.4	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
129	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 13:30	9	224	5.6	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
130	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 14:00	8	225	4.8	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120
131	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 14:30	11	218	4.3	Tonga Hulett (Meteorology)	Based on wind direction	67, 69, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
132	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 14:40	13	218	4.3	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
133	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 14:50	10	220	4.1	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
134	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 19:00	8	218	3.3	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
135	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 19:20	21	191	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
136	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 19:30	19	192	3.4	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
137	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/16 19:30	11	212	3.5	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
138	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/16 19:40	10	219	4.2	Tongaat Hulett (Meteorology)	Based on wind direction	67, 69, 120
139	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 01:30	6	198	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
140	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 01:50	10	201	2.1	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
141	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 02:30	7	187	3	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
142	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 03:00	7	211	3.5	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
143	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 03:30	10	206	4	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
144	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 03:30	6	207	3	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
145	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 09:00	5	187	2.5	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
146	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 19:00	8	198	2.5	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
147	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 19:10	13	192	2.9	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
148	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 19:20	10	199	2.1	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
149	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 19:30	14	224	2.1	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
150	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 19:30	7	215	2.3	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
151	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 21:30	8	200	3.5	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
152	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/17 21:40	13	198	3.4	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
153	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 22:30	6	219	2.6	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
154	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/17 23:00	5	222	1.6	Tongaat Hulett (Meteorology)	Based on wind direction	66, 70, 80
155	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/18 01:30	10	227	4.7	Tongaat Hulett (Meteorology)	Based on wind direction	68, 71, 72
156	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/18 01:30	9	220	3.9	Tongaat Hulett (Meteorology)	Based on wind direction	68, 71, 72
157	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/18 02:30	5	233	3.8	Tongaat Hulett (Meteorology)	Based on wind direction	68, 71, 72
158	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/18 14:30	6	199	3.3	Tongaat Hulett (Meteorology)	Based on wind direction	68, 71, 72
159	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/20 01:20	12	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	77
160	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 02:30	9	Calm	0.2	Mondi (meteorology)	Based on wind direction	74, 75, 81
161	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 02:40	13	Calm	0.2	Mondi (meteorology)	Based on wind direction	74, 75, 81
162	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 05:00	29	Calm	0.5	Mondi (meteorology)	Based on wind direction	74, 75, 81
163	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 05:00	33	Calm	0.8	Mondi (meteorology)	Based on wind direction	74, 75, 81
164	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 05:10	35	73	1	Mondi (meteorology)	Based on wind direction	74, 75, 81
165	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 05:20	35	69	1	Mondi (meteorology)	Based on wind direction	74, 75, 81
166	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 05:30	14	60	1.3	Mondi (meteorology)	Based on wind direction	74, 75, 81
167	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/23 05:30	5	58	1.3	Mondi (meteorology)	Based on wind direction	74

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
168	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 05:30	10	58	1.3	Mondi (meteorology)	Based on wind direction	74, 75, 81
169	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 07:00	12	26	1.4	Mondi (meteorology)	Based on wind direction	74, 75, 81
170	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 07:10	16	25	1.5	Mondi (meteorology)	Based on wind direction	74, 75, 81
171	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 07:20	18	19	1.5	Mondi (meteorology)	Based on wind direction	74, 75, 81
172	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 07:30	14	41	1.1	Mondi (meteorology)	Based on wind direction	74, 75, 81
173	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 07:30	7	48	1	Mondi (meteorology)	Based on wind direction	74, 75, 81
174	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 19:30	11	224	6.6	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
175	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 19:40	12	225	6.9	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
176	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 19:50	13	222	6.1	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
177	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 20:00	12	221	6	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
178	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 20:00	12	223	5.7	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
179	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 20:10	11	221	5.4	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
180	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 20:20	11	226	5.7	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
181	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/23 20:30	10	225	6.8	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
182	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 20:30	8	228	7.1	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
183	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 21:00	5	229	7.4	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
184	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 22:00	6	213	6	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81
185	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 22:30	7	214	6	Tonga Hulett (Meteorology)	Based on wind direction	74, 75, 81

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
186	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 23:00	6	214	5.8	Tongaat Hulett (Meteorology)	Based on wind direction	74, 75, 81
187	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/23 23:30	8	215	5.9	Tongaat Hulett (Meteorology)	Based on wind direction	74, 75, 81
188	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/24 11:30	6	222	4.1	Tongaat Hulett (Meteorology)	Based on wind direction	73, 78, 82
189	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/24 12:00	9	225	4	Tongaat Hulett (Meteorology)	Based on wind direction	73, 78, 82
190	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/24 12:30	6	222	3.2	Tongaat Hulett (Meteorology)	Based on wind direction	73, 78, 82
191	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/24 13:00	7	233	4.5	Tongaat Hulett (Meteorology)	Based on wind direction	73, 78, 82
192	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/25 18:30	9	208	1.1	Tongaat Hulett (Meteorology)	Effluent treatment	79, 83, 88
193	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/25 18:50	23	Calm	0.9	Tongaat Hulett (Meteorology)	Effluent treatment	79, 83, 88
194	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:00	20	Calm	0.3	Mondi (meteorology)	Based on wind direction	76, 120, 132
195	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/27 02:00	29	Calm	0.5	Mondi (meteorology)	Based on wind direction	76, 120, 132
196	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:10	34	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
197	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:20	32	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
198	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:30	23	Calm	0.4	Mondi (meteorology)	Based on wind direction	76, 120, 132
199	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/27 02:30	17	Calm	0.2	Mondi (meteorology)	Based on wind direction	76, 120, 132
200	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:40	15	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
201	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 02:50	12	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
202	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 03:00	10	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
203	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/27 03:00	9	Calm	0.1	Mondi (meteorology)	Based on wind direction	76, 120, 132

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
204	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/27 03:10	11	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	76, 120
205	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/27 22:30	5	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	76
206	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 00:30	5	Calm	0.2	Mondi (meteorology)	Based on wind direction	98, 120, 132
207	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 01:00	6	Calm	0.2	Mondi (meteorology)	Based on wind direction	98, 120, 132
208	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 01:30	6	31	1	Mondi (meteorology)	Based on wind direction	98, 120, 132
209	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 02:00	6	Calm	0.9	Mondi (meteorology)	Based on wind direction	98, 120, 132
210	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/28 02:30	18	Calm	0.9	Mondi (meteorology)	Based on wind direction	98, 120, 132
211	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 02:30	35	66	1	Mondi (meteorology)	Based on wind direction	98, 120, 132
212	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/28 02:40	28	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
213	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/28 02:50	60	55	1.5	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
214	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/28 03:00	43	57	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
215	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 03:00	22	59	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
216	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/28 03:10	14	58	1.6	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
217	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 03:30	8	67	2.9	Tongaat Hulett (Meteorology)	Based on wind direction	98, 120
218	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 09:30	5	60	5.6	Mondi (meteorology)	Based on wind direction	98, 120, 132
219	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 10:00	6	47	4.9	Mondi (meteorology)	Based on wind direction	98, 120, 132
220	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 10:30	6	48	4.6	Mondi (meteorology)	Based on wind direction	98, 120, 132
221	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 11:00	6	50	5	Mondi (meteorology)	Based on wind direction	98, 120, 132

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
222	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 11:30	6	57	5	Mondi (meteorology)	Based on wind direction	98, 120, 132
223	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 17:00	5	73	5.1	Mondi (meteorology)	Based on wind direction	98, 120, 132
224	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 17:30	6	70	4.6	Mondi (meteorology)	Based on wind direction	98, 120, 132
225	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 18:00	6	65	4.9	Mondi (meteorology)	Based on wind direction	98, 120, 132
226	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 18:30	6	60	5.1	Mondi (meteorology)	Based on wind direction	98, 120, 132
227	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 19:00	7	58	4.5	Mondi (meteorology)	Based on wind direction	98, 120, 132
228	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/28 19:30	7	60	4.8	Mondi (meteorology)	Based on wind direction	98, 120, 132
229	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/31 20:30	5	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
230	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/10/31 21:00	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
231	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/31 21:00	9	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
232	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/10/31 21:10	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
233	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/31 21:30	6	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
234	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/31 23:00	13	26	1	Mondi (meteorology)	Based on wind direction	97, 99, 120, 132
235	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/10/31 23:00	9	26	1	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99
236	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/31 23:10	23	31	1	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99, 120
237	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/31 23:20	15	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99, 120
238	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/10/31 23:30	24	21	1	Mondi (meteorology)	Based on wind direction	97, 99, 120, 132
239	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/31 23:40	19	28	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	97, 99, 120

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
240	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/10/31 23:50	49	Calm	0.8	Tonga Hulett (Meteorology)	Based on wind direction	97, 99, 120
			November 2021						
1	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:00	43	Calm	0.9	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
2	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 00:00	34	Calm	0.7	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
3	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:10	31	Calm	0.7	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
4	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:20	30	Calm	0.6	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
5	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:30	25	Calm	0.8	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 00:30	22	Calm	0.3	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
7	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:40	22	Calm	0.2	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
8	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 00:50	20	Calm	0	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
9	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/01 01:00	10	Calm	0	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
10	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 01:00	6	Calm	0.3	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
11	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 01:30	6	Calm	0.1	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 02:00	9	Calm	0.6	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
13	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/01 02:30	7	Calm	0.3	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
14	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/03 19:00	5	Calm	0.9	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
15	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/03 22:00	12	Calm	0.3	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
16	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/03 22:00	9	Calm	0.5	Tonga Hulett (Meteorology)	Based on wind direction	95, 99
17	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/03 22:30	10	Calm	0.7	Tonga Hulett (Meteorology)	Based on wind direction	95, 99

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
18	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/03 22:30	10	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
19	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/03 22:40	11	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
20	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/03 23:00	6	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
21	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/03 23:30	20	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
22	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/03 23:30	18	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
23	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/03 23:40	16	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
24	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/03 23:50	20	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
25	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 00:00	14	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
26	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 00:00	9	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 00:00	12	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
28	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 00:10	11	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
29	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 00:10	12	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
30	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 00:20	11	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
31	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 00:30	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
32	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 00:50	17	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
33	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 01:00	15	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
34	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 01:00	9	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
35	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 01:30	8	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
36	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 01:30	5	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
37	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 01:50	12	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
38	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/04 02:00	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
39	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:00	15	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
40	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 02:00	7	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
41	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 02:00	16	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
42	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:10	19	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
43	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:20	14	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
44	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:30	28	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
45	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 02:30	30	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
46	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:40	31	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
47	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 02:50	32	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
48	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:00	27	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
49	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 03:00	25	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
50	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:10	22	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
51	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:20	27	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
52	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:30	28	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
53	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 03:30	25	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
54	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:40	21	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
55	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 03:50	25	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
56	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:00	30	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
57	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 04:00	28	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
58	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:10	30	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
59	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:20	23	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
60	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:30	18	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
61	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/04 04:30	6	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
62	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 04:30	17	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
63	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:40	17	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
64	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 04:50	15	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
65	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 05:00	12	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
66	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 05:00	8	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
67	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 05:30	7	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
68	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/04 06:00	9	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
69	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/04 06:10	11	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	95, 99
70	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/05 19:00	6	212	2.9	Tongaat Hulett (Meteorology)	Based on wind direction	84, 99
71	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/08 06:00	8	51	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	87

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
72	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/08 06:10	10	45	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	87
73	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/12 00:00	8	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/12 17:00	7	231	7.4	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
75	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/12 17:30	8	230	6.4	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
76	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/12 17:50	10	226	5.7	Tongaat Hulett (Meteorology)	Based on wind direction	102
77	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/12 18:00	10	229	5.7	Tongaat Hulett (Meteorology)	Based on wind direction	102
78	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/12 18:00	7	232	6	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/12 19:00	8	227	6.2	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
80	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/12 19:20	10	227	5.6	Tongaat Hulett (Meteorology)	Based on wind direction	102
81	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/13 21:00	11	258	1.3	Tongaat Hulett (Meteorology)	Based on wind direction	89, 102
82	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/13 21:00	7	253	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	90, 102
83	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/14 00:30	6	197	2.6	Tongaat Hulett (Meteorology)	Based on wind direction	90, 102
84	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/15 03:00	12	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
85	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 03:20	30	35	1	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
86	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 03:30	44	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
87	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/15 03:30	37	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
88	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 03:40	32	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
89	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 03:50	37	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
90	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:00	63	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
91	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/15 04:00	49	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
92	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:10	47	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
93	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:20	37	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
94	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:30	37	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
95	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/15 04:30	36	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
96	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:40	32	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
97	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 04:50	40	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
98	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 05:00	60	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
99	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/15 05:00	61	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
100	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 05:10	89	64	1	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
101	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/15 05:20	32	50	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	92, 104
102	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 12:30	8	227	5.4	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
103	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 13:00	6	225	5	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
104	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 13:30	5	221	5.5	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
105	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 15:00	7	216	5.1	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
106	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/16 15:30	9	220	4.8	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
107	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 15:30	7	217	5	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
108	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 16:00	6	221	4.8	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
109	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 16:30	7	217	4.4	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
110	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 17:00	7	217	4.1	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
111	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/16 17:30	10	217	3.8	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
112	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 17:30	8	216	3.8	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
113	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/16 18:00	6	217	3.8	Tongaat Hulett (Meteorology)	Based on wind direction	96, 105
114	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 01:00	9	184	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	101
115	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 01:20	18	184	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	101
116	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 01:30	13	193	1.8	Tongaat Hulett (Meteorology)	Based on wind direction	101
117	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 02:30	13	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	101
118	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 02:30	11	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	101
119	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 02:40	10	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	101
120	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 02:50	11	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	101
121	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 06:30	8	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	101
122	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 06:40	11	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	101
123	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 06:50	10	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	101
124	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 07:00	8	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	101
125	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 07:20	9	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	101

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
126	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 07:30	7	Calm	0.8	Tonga Hulett (Meteorology)	Based on wind direction	101
127	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 22:00	24	268	2.6	Tonga Hulett (Meteorology)	Based on wind direction	101
128	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 22:00	13	252	3.9	Tonga Hulett (Meteorology)	Based on wind direction	101
129	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 22:10	13	246	4.4	Tonga Hulett (Meteorology)	Based on wind direction	101
130	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 23:00	7	208	1.9	Tonga Hulett (Meteorology)	Based on wind direction	101
131	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 23:20	10	178	1.5	Tonga Hulett (Meteorology)	Based on wind direction	101
132	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 23:30	12	230	1.9	Tonga Hulett (Meteorology)	Based on wind direction	101
133	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/17 23:30	9	236	1.8	Tonga Hulett (Meteorology)	Based on wind direction	101
134	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/17 23:40	10	242	1.9	Tonga Hulett (Meteorology)	Based on wind direction	101
135	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/18 20:30	6	219	4	Tonga Hulett (Meteorology)	Based on wind direction	100, 106
136	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/18 21:00	8	217	4.4	Tonga Hulett (Meteorology)	Based on wind direction	100, 106
137	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/18 21:30	6	215	5.1	Tonga Hulett (Meteorology)	Based on wind direction	100, 106
138	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/21 00:10	9	286	1	Tonga Hulett (Meteorology)	Based on wind direction	1
139	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 01:30	6	226	3	Tonga Hulett (Meteorology)	Based on wind direction	103
140	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 11:00	6	229	7	Tonga Hulett (Meteorology)	Based on wind direction	103
141	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 11:30	7	227	7	Tonga Hulett (Meteorology)	Based on wind direction	103
142	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 12:00	7	220	7.1	Tonga Hulett (Meteorology)	Based on wind direction	103
143	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 12:30	7	221	6.3	Tonga Hulett (Meteorology)	Based on wind direction	103

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
144	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 13:00	6	219	6.1	Tonga Hulett (Meteorology)	Based on wind direction	103
145	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 13:30	7	220	5.7	Tonga Hulett (Meteorology)	Based on wind direction	103
146	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 14:00	5	219	5.4	Tonga Hulett (Meteorology)	Based on wind direction	103
147	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 14:30	8	224	5.4	Tonga Hulett (Meteorology)	Based on wind direction	103
148	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 15:00	9	228	5.6	Tonga Hulett (Meteorology)	Based on wind direction	103
149	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 15:30	5	226	5.8	Tonga Hulett (Meteorology)	Based on wind direction	103
150	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 18:30	8	225	5.1	Tonga Hulett (Meteorology)	Based on wind direction	103
151	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/23 18:50	11	224	5.4	Tonga Hulett (Meteorology)	Based on wind direction	103
152	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/23 19:00	11	218	4.8	Tonga Hulett (Meteorology)	Based on wind direction	103
153	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 19:00	7	222	5.3	Tonga Hulett (Meteorology)	Based on wind direction	103
154	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/23 20:00	6	227	6.9	Tonga Hulett (Meteorology)	Based on wind direction	103
155	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 06:30	6	224	5.3	Tonga Hulett (Meteorology)	Based on wind direction	1
156	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 06:50	10	222	5.1	Tonga Hulett (Meteorology)	Based on wind direction	1
157	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 07:00	6	227	6.4	Tonga Hulett (Meteorology)	Based on wind direction	1
158	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 07:30	5	224	5.8	Tonga Hulett (Meteorology)	Based on wind direction	1
159	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 13:30	6	224	6.7	Tonga Hulett (Meteorology)	Based on wind direction	1
160	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 14:30	5	217	5.5	Tonga Hulett (Meteorology)	Based on wind direction	1
161	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 20:30	11	221	3.7	Tonga Hulett (Meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
162	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 20:40	12	219	4.2	Tongaat Hulett (Meteorology)	Based on wind direction	1
163	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 20:50	12	221	3.8	Tongaat Hulett (Meteorology)	Based on wind direction	1
164	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 21:00	10	214	3.3	Tongaat Hulett (Meteorology)	Based on wind direction	1
165	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 21:00	7	219	3.6	Tongaat Hulett (Meteorology)	Based on wind direction	1
166	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 21:30	10	208	4.1	Tongaat Hulett (Meteorology)	Based on wind direction	1
167	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 21:40	11	208	4	Tongaat Hulett (Meteorology)	Based on wind direction	1
168	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 21:50	10	213	3.5	Tongaat Hulett (Meteorology)	Based on wind direction	1
169	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 22:00	11	214	3.4	Tongaat Hulett (Meteorology)	Based on wind direction	1
170	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/24 22:00	8	214	3.7	Tongaat Hulett (Meteorology)	Based on wind direction	1
171	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/24 22:10	11	213	4	Tongaat Hulett (Meteorology)	Based on wind direction	1
172	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/25 19:30	7	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	1
173	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/26 21:00	14	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	109
174	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/26 21:00	12	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	109
175	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/26 21:10	12	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	109
176	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/26 21:20	11	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	109
177	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/26 21:30	10	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	109
178	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/26 21:30	8	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	109
179	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/26 21:40	11	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	109

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
180	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/26 23:30	6	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	109
181	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 00:30	24	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	114
182	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 00:30	23	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	114
183	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 00:40	22	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	114
184	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 00:50	23	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	114
185	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/11/27 01:00	12	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	144
186	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/27 01:00	9	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	114
187	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 01:30	16	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	114
188	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/11/27 01:30	6	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	114
189	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 01:30	30	Calm	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	114
190	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 01:40	36	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	114
191	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 01:50	37	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	114
192	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:00	19	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
193	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 02:00	19	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
194	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:10	19	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
195	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:20	19	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
196	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:30	16	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
197	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 02:30	16	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
198	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:40	15	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
199	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 02:50	16	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
200	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 03:00	16	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
201	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 03:00	17	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
202	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 03:10	18	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	114
203	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 03:20	16	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	114
204	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 03:30	12	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	114
205	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 03:30	5	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	114
206	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 04:30	10	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	114
207	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 04:40	17	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	114
208	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 04:50	13	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	114
209	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 05:30	13	24	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	108, 114
210	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 05:40	11	15	1.3	Tongaat Hulett (Meteorology)	Based on wind direction	114
211	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 05:50	29	Calm	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	114
212	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 06:00	14	51	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	114
213	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/27 06:00	10	43	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	108, 114
214	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/27 06:10	13	35	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	114
215	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/28 23:00	5	213	1.6	Tongaat Hulett (Meteorology)	Based on wind direction	107, 112

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
216	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/28 23:30	6	179	1.6	Tonga Hulett (Meteorology)	Based on wind direction	107, 112
217	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/29 00:00	6	196	1.2	Tonga Hulett (Meteorology)	Based on wind direction	107, 112
218	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/30 19:00	5	210	5	Tonga Hulett (Meteorology)	Based on wind direction	111, 113
219	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/30 19:30	11	129	1.4	Tonga Hulett (Meteorology)	Based on wind direction	111, 113
220	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/30 19:30	9	218	2.8	Tonga Hulett (Meteorology)	Based on wind direction	111, 113
221	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/11/30 19:40	13	255	3.5	Tonga Hulett (Meteorology)	Based on wind direction	111, 113
222	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/11/30 20:30	5	233	6.1	Tonga Hulett (Meteorology)	Based on wind direction	111, 113
December 2021									
1	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/01 23:30	6	64	2.6	Mondi (meteorology)	Based on wind direction	115, 1
2	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/01 23:50	16	68	3.5	Mondi (meteorology)	Based on wind direction	115, 1
3	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/03 04:00	8	234	4.7	Tonga Hulett (Meteorology)	Based on wind direction	117, 1
4	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/03 04:30	7	241	4.2	Tonga Hulett (Meteorology)	Based on wind direction	117, 1
5	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/03 13:30	6	230	3.7	Tonga Hulett (Meteorology)	Based on wind direction	117, 1
6	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/04 19:00	8	Calm	0.9	Tonga Hulett (Meteorology)	Based on wind direction	116, 1
7	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/04 19:20	14	236	1	Tonga Hulett (Meteorology)	Based on wind direction	116, 1
8	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/04 19:30	9	205	1.1	Tonga Hulett (Meteorology)	Based on wind direction	116, 1
9	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/04 19:30	9	177	1.3	Tonga Hulett (Meteorology)	Based on wind direction	116, 1
10	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/04 19:40	12	179	1	Tonga Hulett (Meteorology)	Based on wind direction	116, 1
11	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/06 19:30	7	236	3.9	Tonga Hulett (Meteorology)	Based on wind direction	118, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
12	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/07 09:00	5.1	239	4.7	Tongaat Hulett (Meteorology)	Based on wind direction	119, 1
13	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/07 09:30	5.3	243	5.3	Tongaat Hulett (Meteorology)	Based on wind direction	119, 1
14	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 20:30	10	180	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	1
15	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/07 20:30	25.9	176	1	Tongaat Hulett (Meteorology)	Based on wind direction	119, 1
16	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 20:40	27	179	1	Tongaat Hulett (Meteorology)	Based on wind direction	1
17	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 20:50	27	177	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	1
18	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 21:00	24	171	1	Tongaat Hulett (Meteorology)	Based on wind direction	1
19	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/07 21:00	13.8	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	119, 1
20	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 21:10	22	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	1
21	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/07 21:20	10	Calm	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	1
22	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/07 23:30	6.4	Calm	0.9	Tongaat Hulett (Meteorology)	Based on wind direction	119, 1
23	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/09 02:00	6	Calm	No Data	Tongaat Hulett (Meteorology)	Based on wind direction	125, 1
24	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/09 02:20	10	Calm	No Data	Tongaat Hulett (Meteorology)	Based on wind direction	125, 1
25	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/09 02:30	6	Calm	No Data	Tongaat Hulett (Meteorology)	Based on wind direction	125, 1
26	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/10 04:30	7	Calm	0	Mondi (meteorology)	Based on wind direction	129
27	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/12 03:00	7	238	3.1	Tongaat Hulett (Meteorology)	Based on wind direction	1
28	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/12 15:00	6	229	2.9	Tongaat Hulett (Meteorology)	Based on wind direction	1
29	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/12 20:30	6	Calm	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
30	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/12 21:00	7	Calm	0.7	Mondi (meteorology)	Based on wind direction	124
31	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/12/12 21:30	13	29	1.1	Mondi (meteorology)	Based on wind direction	124
32	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/12 21:30	9	60	1.4	Mondi (meteorology)	Based on wind direction	124
33	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/12 23:00	8	119	1.3	Tongaat Hulett (Meteorology)	Based on wind direction	1
34	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/12 23:10	10	92	1.4	Tongaat Hulett (Meteorology)	Based on wind direction	1
35	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/13 04:00	15	57	1.7	Mondi (meteorology)	Based on wind direction	121, 1
36	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/13 04:00	8	84	1.5	Mondi (meteorology)	Based on wind direction	121, 123
37	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/13 04:00	8	84	1.5	Mondi (meteorology)	Based on wind direction	121, 123
38	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/12/13 04:10	12	85	1.2	Mondi (meteorology)	Based on wind direction	121, 1
39	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/13 05:00	5	23	1.7	Mondi (meteorology)	Based on wind direction	121, 123
40	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/13 06:30	5	45	1.2	Mondi (meteorology)	Based on wind direction	121, 123
41	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/13 08:30	6	212	1	Tongaat Hulett (Meteorology)	Based on wind direction	121, 1
42	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/13 08:50	11	228	1.2	Tongaat Hulett (Meteorology)	Based on wind direction	121, 1
43	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/14 20:30	6	221	2	Tongaat Hulett (Meteorology)	Based on wind direction	122, 1
44	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/15 23:00	8	239	7.4	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
45	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/15 23:20	12	237	6.3	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
46	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/15 23:30	7	227	4.9	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
47	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 06:30	6	237	4.7	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
48	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 07:00	8	233	5.2	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
49	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 08:00	6	243	5.9	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
50	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 08:30	5	242	6.1	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
51	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 09:30	6	243	6.6	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
52	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 16:30	5	240	5.7	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
53	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/16 18:30	7	235	5.3	Tongaat Hulett (Meteorology)	Based on wind direction	126, 1
54	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/17 09:00	7	220	4.1	Tongaat Hulett (Meteorology)	Based on wind direction	131, 1
55	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/17 18:00	8	238	2.1	Tongaat Hulett (Meteorology)	Based on wind direction	131, 1
56	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/17 18:20	10	233	1.1	Tongaat Hulett (Meteorology)	Based on wind direction	131, 1
57	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/19 03:00	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
58	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/19 03:00	13	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
59	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/19 03:10	13	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
60	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/19 03:20	17	Calm	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
61	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/19 03:30	13	Calm	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
62	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/19 03:30	8	Calm	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
63	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/19 04:00	9	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
64	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/19 04:10	10	Calm	0	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1
65	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/19 04:30	5	Calm	0.2	Tongaat Hulett (Meteorology)	Based on wind direction	127, 130, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
66	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/22 19:00	6	235	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	133, 138, 1
67	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 01:00	6	108	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
68	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 01:20	15	152	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
69	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 01:30	24	190	0.1	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
70	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 01:30	18	190	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
71	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 01:40	14	16	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
72	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 01:50	16	22	1	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
73	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 02:00	15	349	0.3	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
74	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 02:00	8	349	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
75	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 20:20	11	188	3.1	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
76	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 20:30	14	182	3.1	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
77	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 20:30	8	186	3.2	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
78	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 21:00	6	197	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
79	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 21:30	6	197	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
80	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 23:00	8	194	3.9	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
81	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/23 23:10	11	187	3.9	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
82	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/23 23:30	7	192	3.4	Tongaat Hulett (Meteorology)	Based on wind direction	135, 136, 1
83	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 00:00	7	194	3.2	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
84	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 00:30	12	194	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
85	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 00:30	12	192	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
86	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 00:40	10	195	2.9	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
87	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 00:50	15	188	2.8	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
88	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 01:00	15	202	3.2	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
89	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 01:00	9	201	3.3	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
90	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 15:00	8	187	1.5	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
91	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 15:20	13	174	1.8	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
92	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 15:30	11	151	1	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
93	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 15:30	6	151	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
94	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 16:00	6	227	0.7	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
95	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 21:00	16	332	0.4	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
96	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/24 21:00	10	200	0.5	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
97	TRS 10-minute OME Standard (9.3 ppb)	Felixton	2021/12/24 21:10	10	337	0.6	Tongaat Hulett (Meteorology)	Based on wind direction	134, 137, 1
98	TRS 10-minute OME Standard (9.3 ppb)	eSikhaleni	2021/12/30 05:30	9	325	0.5	Mondi (meteorology)	Based on wind direction	1
99	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/30 05:30	8	310	0.2	Mondi (meteorology)	Based on wind direction	1
100	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/30 19:00	7	186	1.9	Tongaat Hulett (Meteorology)	Based on wind direction	1
101	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	Felixton	2021/12/30 20:00	5	125	0.8	Tongaat Hulett (Meteorology)	Based on wind direction	1

No	Target / Guideline / Standard	Station	Date	Value (ppb)	Wind Direction (°)	Wind Speed (m/s)	Source	Comment	Response
102	TRS 30-minute WHO H ₂ S Guideline (5.0 ppb)	eSikhaleni	2021/12/31 23:30	5	71	1	Mondi (meteorology)	Based on wind direction	1

RESPONSES

Response	Industry Feedback
1	Unresolved / No Response
2	No response required / Allocated by wind direction
3	Mondi - Candice Webb: Please allocate to Mondri, and I will respond as soon as possible.
4	Mondi - Candice Webb: Mondri has investigated the exceedance and identified the root cause as elevate Lime Kiln TRS levels. Operators responded as per Standard Operating Procedure and implemented the following to reduce TRS: 1) Methanol firing reduced and then stopped. 2) Increased washing on the LMCD 3) Checked the flow and level transmitter of TRS scrubbing medium. After implementing the above, TRS did not respond accordingly, and inspection of the Lime Mud Clarifier Disk (LMCD) was undertaken. It was established that the LMCD required urgent maintenance; consequently, the Non-Condensable Gases (NCG) were moved out of the Lime Kiln and into the Flare and Incinerator for combustion until the LMCD was put back into service. In the future, NCGs will be incinerated in Recovery Boiler 1 (planned for 2021 annual shut), which is in line with Best Practice for NCG incineration.
5	Mondi - Candice Webb: Mondri has investigated the exceedance and identified root cause as elevate Lime Kiln TRS levels. Operators responded as per Standard Operating Procedure and implemented the following in order to reduce TRS: 1) Methanol firing reduced and then stopped. 2) Increased washing on the LMCD 3) Checked the flow and level transmitter of TRS scrubbing medium. After implementing the above, TRS did not respond accordingly, and inspection of the Lime Mud Clarifier Disk (LMCD) was undertaken. It was established that the LMCD required urgent maintenance, consequently the Non-Condensable Gases (NCG) were moved out of the Lime Kiln and into the Flare and Incinerator for combustion until the LMCD was put back into service. Going forward NCGs will be incinerated in Recovery Boiler 1 (planned for 2021 annual shut) which is in line with Best Practice for NCG incineration.
6	Mondi - Candice Webb: Mondri has investigated the exceedance below and identified the Mondri effluent plant as the root cause of the odour. The odour Abatement Task Team has identified an odour improvement plan for the effluent plant which we are in the process of implementing.
7	Mondi - Candice Webb: Mondri has investigated the exceedances below and identified the Mondri Secondary Effluent Treatment Plant as the source of the odour. The Odour Abatement Task Team is in the process of implementing an odour reduction plan for the SETP and will keep the RBCAA updated on the progress of the plan.
8	Mondi - Candice Webb: Mondri has investigated the exceedances listed below and attributed them to shut down of the mill. Further investigation is required by the Odour Abatement Task Team to identify all possible source of the odour during this shutdown process. A full investigation is currently underway. Mondri will provide feedback to the RBCAA as soon as possible.
9	Mondi - Candice Webb: Mondri has identified the Secondary Effluent Treatment Plant (SETP) as the source of the odour. The Odour Abatement Task Team is in the process of implementing an odour reduction plan for the SETP and will keep the RBCAA updated on the progress of the plan.
10	Mondi - Candice Webb: Mondri has investigated the exceedances listed below and attributed them to start-up of the mill. Further investigation is required by the Odour Abatement Task Team to identify all possible source of the odour during this process. A full investigation is currently underway. Mondri will provide feedback to the RBCAA as soon as possible.
11	Mondi - Candice Webb: Mondri has investigated and identified the Secondary Effluent Treatment Plant as the source of the odour. Odour from the plant has improved as we have progressed in implementing our Odour Management Plan. We will continue to manage odour accordingly.
12	Mondi - Candice Webb: Mondri has been unable to identify root cause for the exceedance below. We are currently investigating.

Response	Industry Feedback
13	Mondi - Candice Webb responded 06/08/2021: Mondi has investigated and identified the Lime Kiln as the source of odour. In response the White Liquor Clarifier Disc was taken offline for washing and put back into service during the early hours of the morning.
14	Mpact - Maggie Odayar responded 31/08/2021: Investigation § Source and Nature of Emissions: § Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the 29th of August 2021. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. § Mpact Management standby investigated upon notification from the RBCAA and no abnormal events were identified. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 29th of August 2021.
15	Mpact - Maggie Odayar responded 1/09/2021: There was no abnormal operations from 23h00 on the 29th of August, until 1h00 on the 30th of August, which could have resulted in a TRS exceedance. The Boiler plant and the Wastewater treatment plant was running as normal with no unexpected shuts or start-ups. Based on the Northerly wind direction at the time, 19 to 430 Mpact is unlikely to be the cause of the OME standard exceedance. Between 16h00 and 19h00 Mpact Operations was shut for a 48-hour maintenance outage including all the boilers. There were no abnormal conditions that could have resulted in the TRS exceedance. Based on the North Easterly wind direction at the time, Mpact unlikely to be the cause of the RBCAA Guideline exceedance.
16	Tongaat Hulett - Nicolas Govender responded 2/09/2021: Root Cause: The root cause of the TRS was stemming from an overload at our effluent treatment system. This because of the mill crushing deteriorated arson cane which was set alight during the riots. The consequence of that was contamination of our cooling tower system which led us to stop production for a week (around the first week in August) and required us to drain over 4500 tons of cooling water of poor quality for us to resume production. This then overloaded THS effluent treatment system as the effluent was of low pH resulting in poor anaerobic digestion and increased odour levels which is likely to be the cause of the spike in TRS. Compliance with Permits: Abnormal conditions did occur resulting in exceedances. Corrective Action Taken: 75 tons of caustic lye at 50% strength was dosed into the effluent treatment system, focusing on raising the dam pH in order to restore anaerobic activity. • Raw effluent from the mill is constantly being limed to achieve the same as above. • Raw effluent flowrates from the factory have been minimized to reduce hydraulic loading of the system. • Stringent internal measures have been put in place to ensure raw effluent quality is within the required specification. • Overdosing of nutrients in the dams and aerators has been employed to assist in reviving bacteria cultures for anaerobic and aerobic digestion processes.
17	Mpact - Yolande Schoeman responded 6/09/2021: Meteorological Information • Spikes in TRS readings were picked up from 03h40 till 04h30 on the morning of 31 August 2021 at the Felixton Station. That evening, ±23h40, spikes in TRS was recorded again. The TRS readings exceeded the OME TRS limit. • RBCAA daily reports indicate there were predominately calm Northern winds(13-52°) blowing in the morning between 03h40 till 04h30. The evening South Westerly winds were blowing at higher 4.1m/s wind speeds. Investigation § Source and Nature of Emissions: § Night shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the morning of 31

Response	Industry Feedback
	August 2021 as well the evening. § Mpac Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS. Compliance with Permit\ts: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 31 August 2021.
18	Mpac - Yolande Schoeman responded 6/09/2021: Meteorological Information - Increased levels of TRS emissions were picked up from 00h10 till 03h20 on the morning of 1 September at the RBCAA Felixton Station. That evening, ±23h20, spikes in TRS was recorded again. The TRS readings exceeded the OME TRS limit of 9.3ppb and the TRS WHO H2S 30-minute Standard of 5.0 ppb. - RBCAA daily reports indicate there were predominately South Westerly winds blowing at speeds of ±4.3m/s in the morning and the evening calm Northernly winds were blowing. Investigation Source and Nature of Emissions: § Night shift reports from the Mpac Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the morning of 1 September 2021 as well the evening. § Mpac Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Compliance with Permit\ts: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 1 September 2021.
19	Mpac - Yolande Schoeman responded 6/09/2021: Meteorological Information - A spike in TRS levels were picked up from 01h00 till 01h20 on the morning of 2 September at the Felixton Station. The TRS readings exceeded the OME TRS limit of 9.3ppb and the TRS WHO H2S 30-minute Standard of 5.0 ppb. - RBCAA daily reports indicate there were relatively calm Northernly winds blowing at the time of the exceedance. Investigation Source and Nature of Emissions: § Night shift reports from the Mpac Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the morning of 2 September 2021. § Mpac Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Compliance with Permit\ts: No non-compliances identified Findings & Recommendations: § Mpac is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 2 September 2021.
20	Mpac - Yolande Schoeman responded 8/09/2021 08:01: Meteorological Information - A spike in TRS was recorded at the Felixton Station ±18h50 the evening of 4 September 2021 . The TRS readings exceeded the OME TRS limit. - RBCAA daily reports indicate that the wind was blowing from a Southwestern to Easterly direction during the exceedance period. The wind speed during the averaged around 1.6m/s. Investigation Source and Nature of Emissions:

Response	Industry Feedback
	§ Weekend night shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant clarifier and/or pond cleaning activities that evening. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 4 September 2021.
21	Mpact - Yolande Schoeman responded 8/09/2021: Meteorological Information • A spike in TRS was recorded at the Felixton Station 03h10 to 03h40 the morning of 5 September 2021 . The TRS readings exceeded the OME TRS and WHO H2S limit. • RBCAA daily reports indicate that the wind was blowing from a North Easterly direction during the exceedance period. The wind speed during the exceedance period averaged around 1.5m/s. Investigation Source and Nature of Emissions: § Weekend night shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant clarifier and/or pond cleaning activities that morning. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 5 September 2021.
22	Mpact - Yolande Schoeman responded 8/09/2021: Meteorological Information • A spike in TRS was recorded at the Felixton Station 04h30 morning of 6 September 2021 . The TRS readings exceeded the WHO H2S limit. • RBCAA daily reports indicate that the wind was blowing from a South Westerly direction during the exceedance period. The wind speed during the exceedance period was 4.5m/s. Investigation Source and Nature of Emissions: § Night shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant clarifier and/or pond cleaning activities that morning. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 6 September 2021.
23	Mondi - Candice Webb : Mondi was experiencing unstable conditions on Recovery Boiler 2. Fugitive emission are the most likely source of the odour. Recovery Boiler 2 production rates were reduced to stabilise the boiler.
24	Mondi - Candice Webb : Mondi was experiencing unstable conditions on Recovery Boiler 1. Fugitive emission are the most likely source of the odour. Recovery Boiler 1 production rates were reduced to stabilise the boiler.
25	Mondi - Candice Webb : Mondi investigated the exceedance at the time. A small leak on the Soft Wood Non-condensable Gas leak was identified on the condensate drain line. Scaffold was erected and the leak clamped until a permanent repair can be undertaken during the annual shut.
26	Mondi - Candice Webb : Mondi was experiencing unstable conditions due to interrupted power supply to the mill. in response the mill switched to island mode, however it is possible that fugitive emission contributed to the exceedance.
27	Mondi - Candice Webb : Mondi investigated the exceedance at the time. A small leak on the Soft Wood Non-condensable gas line near the slacker B Scrubber was identified. Scaffold was erected and the leak clamped until a permanent repair can be undertaken during the annual shut.

Response	Industry Feedback
28	Mondi - Candice Webb : Mondi investigated the exceedance at the time. Mondi was in a planned reliability shut. It is possible fugitive emissions contributed to the odour.
29	Mondi - Candice Webb : Mondi investigated the exceedance at the time. Mondi identified challenges with Flare temperature, resulting in insufficient burning of the Non-condensable gases. Gases were diverted to the incinerator while troubleshooting on the flare was undertaken. Gases were then moved to the Lime Kiln for effective incineration. The Flare has been scheduled for full maintenance ahead of the annual shut.
30	Mpact - Yolande Schoeman responded 13/09/2021: Meteorological Information • Spikes in TRS readings were picked up $\pm$ 12h00; 19h00 and 21h30 on 9 September 2021 at the Felixton Station. The TRS readings exceeded the WHO H2S limit. • RBCAA daily reports indicate there were predominately South Easterly winds blowing in the morning and calmer Northernly winds were prevalent the evening. Investigation Source and Nature of Emissions: § Morning and night shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities occurring on the morning or evening of 9 September 2021. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 9 September 2021.
31	Mpact - Yolande Schoeman responded (13/09/2021): Meteorological Information • Spikes in TRS readings were picked up from 06h30 till 14h30 on 7 September 2021 at the Felixton Station. The TRS readings exceeded the WHO H2S limit. • RBCAA daily reports indicate there were predominately South Easterly winds blowing in the morning between 06h30 till 14h30 at winds speeds of $\pm$3.9 m/s. Investigation Source and Nature of Emissions: § Shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the morning of 7 September 2021. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS. Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 7 September 2021.
32	Tongaat Hulett - Nicolas Govender responded 13/09/2021: The mill was crushing slowly, bagasse fuel levels were low, and coal had to be used. With our effluent plant PH still coming up to an acceptable level, the effluent from the boilers sent to the effluent treatment plant may cause exceedances when coal is used. We are still working hard on the effluent plant after recent issues previously shared.
33	Mpact - Yolande Schoeman responded (20/09/2021): Meteorological Information • A spike in TRS was detected from 00h00 till 04h30 on 10 September 2021 at the Felixton Station. The TRS readings exceeded the WHO H2S limit of 5ppb and the OME TRS limit of 9.3 ppb. • RBCAA daily reports indicate there was relatively calm Northern winds blowing in the morning between 00h30 till 04h30 . Investigation Source and Nature of Emissions: § Shift reports from the Mpact Wastewater Treatment Plant reports indicates that there were no effluent plant and/or pond cleaning activities on the morning of 10 September 2021. § Mpact Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS.

Response	Industry Feedback
	Compliance with Permits: No non-compliances identified Findings & Recommendations: § Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the 10 September 2021.
34 - 35	Mondi - Candice Webb responded 21/09/2021: Mondi has investigated. Based on Wind Direction it is unlikely that Mondi is the source.
36	Mondi - Candice Webb responded 21/09/2021: Mondi has investigated, based on prevailing Wind Direction it is unlikely that Mondi contributed to the odour.
37	Mpact - Yolande Schoeman responded (21/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 15 September 2021. Mpact Boiler house and Effluent Treatment Plant shift reports indicate that there were no abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 15 September 2021.
38	Mpact - Yolande Schoeman responded (21/09/2021: Calm winds were recorded at the Felixton RBCAA monitoring station on Saturday 18 September 2021. Mpact Boiler house and Effluent Treatment Plant night shift reports indicate that there were no abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the evening of 18 September 2021.
39	Mpact - Yolande Schoeman responded (21/09/2021: South westerly winds were recorded at the Felixton RBCAA monitoring station on 17 September 2021. Mpact Boiler house and Effluent Treatment Plant shift reports indicate that there were no abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 17 September 2021.
40	Mpact - Yolande Schoeman responded (21/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 16 September 2021. The mill experienced two (2) ESKOM power dips at 17h30 and at 01h18 the evening, however start-up conditions were stable and there were no Boiler house and Effluent Treatment Plant abnormal incidences that could have contributed to the TRS exceedances Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 16 September 2021
41	Mpact - Yolande Schoeman responded (23/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 21 September 2021. Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Effluent Treatment Plant shift reports indicate that there were no cleaning activities of the pond/clarifier or abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on evening of 21 September 2021.
42	Mondi - Candice Webb responded 23/09/2021: Mondi has investigated. It is possible based on Wind Direction that fugitive emissions from Mondi may have contributed to the odour. All point source emissions were within prior to the time of the exceedance.
43	Mpact - Yolande Schoeman responded (23/09/2021: Calm Northerly winds were recorded at the Felixton RBCAA monitoring station on Wednesday, 22 September 2021. Felixton Mills' boilers were running well according to night shift reports and verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS or a rapid spike in TRS. Effluent Treatment Plant shift reports indicate that there were - no cleaning activities of the pond/clarifier that time of the night - or abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on the evening of 22 September 2021.
44	Mondi - Candice Webb responded 27/09/2021: Based on Wind Direction, it is unlikely that Mondi was the source of the TRS exceedances.
45	Tonga Hulett - Nicolas Govender responded 13/09/2021: The mill was crushing slowly, bagasse fuel levels were low, and coal had to be used. With our effluent plant PH still coming up to an acceptable level, the effluent from the boilers sent to the effluent treatment plant may cause exceedances when coal is

Response	Industry Feedback
	used. We are still working hard on the effluent plant after recent issues previously shared.
46	Mondi - Candice Webb responded 27/09/2021: Mondi has investigated. The two exceedances at eSikhaleni can be attributed to Mondi. Modi was in the process of shutting down the mill. During this process, the temperature of the Flare decreased resulting in an increase in TRS. The Process Engineers are investigating how to prevent this during start up.
47	Mpact - Yolande Schoeman responded (27/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 24 September 2021. Felixton Mills' boiler stacks opacities were verified to be below permit requirements and could not have impacted ambient air quality to generate high TRS. Effluent Treatment Plant morning shift reports indicate that there were no cleaning activities of the pond/clarifier or abnormal incidences that could have contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on evening of 24 September 2021.
48	Mondi - Candice Webb responded 28/09/2021: Mondi has investigated. It is possible that the exceedance was caused by a decrease in burning temperature of the flare during shut down conditions. This issue is being investigated ahead of start up
49	Mpact - Yolande Schoeman responded (28/09/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on Sunday, 26 September 2021. Effluent Treatment Plant day shift reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could have contributed to the TRS exceedances. Felixton Mills' boilers were verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 26 September 2021.
50	Mondi - Candice Webb responded 29/09/2021: Based on Wind Direction, it is unlikely that Mondi is the source of the TRS.
51	Mondi - Candice Webb responded 30/09/2021: Based on wind direction, it is unlikely that Mondi is the source of the odour.
52	Mondi - Candice Webb responded 01/10/2021: Based on wind direction, it is unlikely that Mondi is the source.
53	Mpact - Yolande Schoeman responded (01/10/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on Sunday, 28 September 2021. Paper machine PM ran well ,there was no upset conditions or downtime. Effluent Treatment Plant Day reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers were verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 28 September 2021.
54	Mpact - Yolande Schoeman responded (01/10/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 29 September 2021. Reports from the Paper machine; Effluent Treatment Plant and Boiler house were examined to determine if there were any conditions that could have contributed to a sulphur exceedance at 12h00. Paper machine (PM) Wednesday the PM ran well ,with no downtime or ESKOM power dips. Effluent Treatment Plant Dayshift reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers were verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 29 September 2021.
55	Mpact - Yolande Schoeman responded (01/10/2021: Calm winds were recorded at the Felixton RBCAA monitoring station on 30 September 2021. Activities occurring before and after midnight were examined from the Paper machine; Boiler house and Effluent treatment Plant shift reports. There were no abnormal or upset conditions

Response	Industry Feedback
	recorded at any of the 3 plants that could have contributed to spike in TRS recorded at the Felixton Station. Mpact is unlikely to be the source of the TRS exceedances on 30 September 2021.
56	Mondi - Candice Webb responded 04/10/2021: Mondi has investigated. Based on wind direction it is unlikely that Mondi is the source of the exceedance.
57	Mondi - Candice Webb responded 04/10/2021: Mondi has investigated. During the time of the exceedance Mondi was processing effluent from the Emergency Ponds via the Secondary Effluent Treatment Plant prior to disposal via the marine outfall. Going forward no processing of effluent from the Emergency Ponds will occur at night.
58	Mondi - Candice Webb responded 05/10/2021: Based on wind direction it is unlikely that Mondi is the source of the TRS.
59	Mondi - Candice Webb responded 06/10/2021: Mondi has investigated the below exceedance. Mondi operations are currently down for annual shut, as a result no gasses are being generated and the effluent plant is also down. Based on this and clam weather conditions at the time of the exceedance, it is unlikely that Mondi is the source.
60	Mondi - Candice Webb responded 08/10/2021: All Mondi TRS generating operations are down for the annual shut, including the Mondi Effluent Plant. It is unlikely that Mondi contributed to the exceedance.
61	Mondi - Candice Webb responded 11/10/2021: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedances.
62	Mpact - Yolande Schoeman responded (12/10/2021: A South Westerly wind was detected at the RBCCA station in Felixton on 2, 3, 4, 5, 6, 7, 8 October 2021. Effluent Treatment Plant shift reports indicate that there were no clarifier or pond cleaning activities occurring on that day. The paper machine ran well and there were no abnormal incidences that could have affected Boiler house operations. Boiler house reports indicate the stacks were below permit requirements and could not have impacted the ambient air quality to generate high TRS emissions. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton station on 2, 3, 4, 5, 6, 7, 8 October 2021.
63	Mpact - Yolande Schoeman responded (13/10/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 9 October 2021. Paper machine (PM) PM shut for 85min, started up at 15h45 and there were no ESKOM power dips. Effluent Treatment Plant Day and night shift reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers stacks operated below permit requirements after PM start up at 15h45 and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 9 October 2021.
64	Mpact - Yolande Schoeman responded (13/10/2021: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 10 October 2021. Paper machine (PM) PM ran well, with very little downtime and no ESKOM power dips. Effluent Treatment Plant Day and night shift reports indicate that there were - no cleaning activities of the ponds/clarifier - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers were verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 10 October 2021.
65	Mpact - Yolande Schoeman responded (15/10/2021: A South Westerly wind was recorded at the Felixton RBCAA monitoring station on Wednesday, 13 October 2021. Mpact mill operations were down on Wednesday for a maintenance shut. The shut reports show there were no effluent clarifier/ pond cleaning activities conducted at the Effluent Plant. The Boiler house operations were down and could not have contributed to a TRS exceedance. Mpact is unlikely to be source of the TRS exceedances recorded the Felixton Station on 13 October 2021.10.15
66	Mondi - Candice Webb responded 18/10/2021: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedances.
67	Mondi - Candice Webb responded 18/10/2021: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedances.

Response	Industry Feedback
68	Mondi - Candice Webb responded 19/10/2021: Mondi has investigated. Based on wind direction it is unlikely that Mondi is the source.
69	Mpact - Yolande Schoeman responded (20/10/2021: South Westerly winds were recorded on 16 October 2021. Paper machine (PM) PM experienced several paper breaks throughout the day and there were no ESKOM power dips. Boiler house Plant Despite paper machine downtime; the reports show boilers stacks operated below permit requirements and could not have impacted ambient air quality to generate high TRS Effluent Treatment Plant Day and night shift reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could of contributed to the TRS exceedances. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 16 October 2021.
70	Mpact - Yolande Schoeman responded 20/10/2021: South Westerly winds were recorded on 17 October 2021. Paper machine (PM) PM ran well and there were no ESKOM power dips. Effluent Treatment Plant Day and night shift reports indicate that there were - no cleaning activities of the pond/clarifier the morning and afternoon - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers stacks operated below permit requirements could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 17 October 2021.
71	Mpact - Yolande Schoeman responded 25/10/2021 08:01: South Westerly winds were recorded at the Felixton RBCAA monitoring station on 18 October 2021. Paper machine (PM) PM ran well ,with no significant downtime and there no ESKOM power dips. Effluent Treatment Plant. Day and night shift reports indicate that there were - no cleaning activities of the ponds/clarifier - or abnormal incidences that could have contributed to the TRS exceedances. Boiler house Plant Boilers were verified to be operating below permit requirements and could not have impacted ambient air quality to generate high TRS. Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 18 October 2021.
72	Tongaat Hulett - Nicolas Govender responded 25/10/2021 08:44: We stopped B line at 02h00 for normal Monday maintenance. This could not have triggered the TRS. Boiler operations resumed normal operations with no coal burnt since 00h00. Effluent plant operations also resumed normal operations for that day.
73	Mondi - Candice Webb responded 25/10/2021 16:01: Based on wind direction it is unlikely that Mondi is the source of TRS.
74	Mondi - Candice Webb responded 25/10/2021 16:09: Based on wind direction it is possible that Mondi could have contributed to the exceedances listed below. However, the mill is shut, and no cleaning activities occurred on the 23rd. The only possible source from Mondi is the Effluent Plant emergency ponds, both of which are at 50% capacity. The effluent in these ponds is slowly being pumped to our Secondary Effluent Treatment Plant for the duration of our Annual Shut as a source of nutrients for the bugs.
75	Mpact - Yolande Schoeman responded 28/10/2021 16:16: A calm Northly wind was detected in the morning and a South Westerly wind blew the evening of 23 October 2021. Mpact Felixton Mill did not conduct any odour causing activities at the Effluent treatment Plant or Ponds on Saturday, therefore could not have been the source of the TRS detected at the Felixton monitoring station .
76	Mondi - Candice Webb responded 29/10/2021 08:10: Based on wind direction it is possible that Mondi may have contributed to the exceedance. However, the mill is still down for the annual shut, no gases are being generated and effluent plant is offline. The effluent emergency pond levels are below 50%. Mondi is unable to identify root cause.
77	Mpact - Yolande Schoeman responded 29/10/2021 11:14: Mpact is unlikely to be the source of the TRS exceedances that occurred at the Felixton Station on 20 October 2021 at 01h00 the morning, there were no potential odour causing activities occurring. Effluent Treatment Plant

Response	Industry Feedback
	Reeds were removed at Effluent Pond 3 from 10h00-14h30 on Wednesday 20 October 2021. We used the opportunity to do an Odour Investigation and monitored the nearby RBCAA stations to see if any elevated TRS are detected. TRS readings were well below the limits and no TRS spikes/exceedances were detected at Felixton and ESikhaleni stations during and after that period. There also were no significant odours emanating from the activity.
78	Mpact - Yolande Schoeman responded 29/10/2021 13:00: A South Westerly wind was detected on Sunday 24 October 2021. Effluent Treatment Plant reports show there were no odour causing activities occurring at the treatment plant or effluent ponds on Sunday, therefore Mpact could not be the source of the TRS exceedance from 11h00 to 13h00.
79	Mpact - Yolande Schoeman responded 29/10/2021 14:00: As South Westerly wind was detected on Monday 25 October 2021. The removal of reeds on Effluent Pond 3 occurred in the morning and there was no unusual odour detected during the cleanout, TRS readings during that period was well below the WHO H2S and OME guideline. Mpact Felixton Mill cannot be the source of the TRS exceedance that occurred on Monday evening 25 October 2021.
80	Tongaat Hulett - Nicolas Govender responded 03/11/2021 08:48: Boilers did burn 10% coal for a few hours due to a shortage of bagasse. No permit conditions were breached. Our effluent plant operations was normal; factory operations were normal. Based on the investigations it is unlikely that TH - Felixton would have contributed to these exceedances.
81	Tongaat Hulett - Nicolas Govender responded 03/11/2021 08:58: From 02h30 to 07h30 wind direction indicates that TH could not have contributed to the exceedances. Effluent plant operations and Factory operations was normal. Boilers did not burn coal. It is unlikely that the exceedances came from TH Felixton. Our effluent plant operations was normal, factory operations were normal. Based on the investigations it is unlikely that TH - Felixton would have contributed to these exceedances.
82	Tongaat Hulett - Nicolas Govender responded 03/11/2021 09:45: Effluent plant operations and Factory operations was normal. Boilers did not burn coal. It is unlikely that the exceedances came from TH Felixton.
83	Tongaat Hulett - Nicolas Govender responded 03/11/2021 10:12: Effluent plant operations was normal. Process operations was also starting up. Boilers was burning coal @35% due to normal Monday start up. The conditions were within permit conditions. It likely that the exceedance may have come from TH Felixton.
84	Mondi - Candice Webb responded 08/11/2021 11:43: Based on wind direction and current Mondi shut conditions, it is unlikely that Mondi is the source.
85	Tongaat Hulett - Nicolas Govender responded 08/11/2021 13:35: I have selected the days & hours below that our recovering effluent plant could have possibly caused the upset conditions based on the wind direction. The effluent plant had been significantly overloaded as previously reported. The plant was still recovering during the month of September. We have tremendous progress since and are in a much better position now.
86	Tongaat Hulett - Nicolas Govender responded 08/11/2021 13:35: This one could not have been us based on wind direction.
87	Mondi - Candice Webb responded, 09 /11/2021 08:52: Based on current annual shut down at Mondi. It is unlikely that Mondi is the source of the TRS.
88	Mondi - Candice Webb responded, 11 /11/2021 10:28: Based on wind direction it is unlikely that Mondi was the source of the TRS.
89	Mondi - Candice Webb responded, 15 /11/2021 09:00: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedances.

Response	Industry Feedback
90	Mondi - Candice Webb responded, 15 /11/2021 09:02: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedances.
91	Mondi - Candice Webb responded, 15 /11/2021 15:26: Based on wind direction it is unlikely that Mondi contributed to the exceedance.
92	Mondi - Candice Webb responded, 16 /11/2021 12:50: Based on current shut down conditions it is unlikely that Mondi contributed to the TRS exceedances.
93	Mondi - Candice Webb responded, 16 /11/2021 12:51: Based on current shut down conditions it is unlikely that Mondi contributed to the TRS exceedances.
94	Mondi - Candice Webb responded, 16 /11/2021 12:52: Based on current shut down conditions it is unlikely that Mondi contributed to the TRS exceedances.
95	Mondi - Candice Webb responded, 16 /11/2021 12:52: Based on current shut down conditions it is unlikely that Mondi contributed to the TRS exceedances.
96	Based on wind direction and Mondi's shut conditions it is unlikely that Mondi is the source.
97	Mondi - Candice Webb responded, 16 /11/2021 12:53: Based on current shut conditions it is unlikely that Mondi contributed to the TRS exceedances.
98	Mpact - Yolande Schoeman responded (17/10/2021 13:26: Mpact Felixton did not conduct any activities at the Effluent plant or ponds at 02h00 the morning or throughout the day that could have contributed to an TRS exceedance on 28 Oct 2021 .
99	Mpact - Yolande Schoeman responded (17/10/2021 15:74): Effluent Reports and Boiler house reports were evaluated from 1 Nov till 7 Nov 2021 to see if any abnormal incidents or effluent clarifier/pond cleaning activities occurred. - 31 Oct to 1 Nov 2021, Calm Northerly winds were blowing and there were no abnormal activities occurring at midnight. - 4 Nov 2021, TRS exceedance at 03h00 the morning, calm winds were detected, reports show there were no abnormal activities occurring. - 5 Nov 2021, TRS exceedance at 19h00 evening a South Westerly wind was blowing , reports indicate that there were no abnormal activities occurring. Effluent clarifier or pond cleaning activities occur during the day and at not the night-time when the exceedances occurred, therefore Mpact Felixton could not been the source of the TRS exceedances detected at the Felixton monitoring station from 1 to 5 November 2021.
100	Mondi - Candice Webb responded, 22 /11/2021 09:44: Based on Wind Direction and current shut conditions at Richards Bay mill it is unlikely that Mondi contributed to the exceedance.
101	Mondi - Candice Webb responded, 22 /11/2021 09:46: Based on Wind Direction and Richards Bay mills current shut conditions. It is unlikely that Mondi contributed to the exceedance.
102	Mpact - Yolande Schoeman responded (23/11/2021 13:07: Effluent Reports and Boiler house reports were evaluated for the weekend from 12Nov till 14 Nov 2021 to see if any abnormal incidents or effluent clarifier/pond cleaning activities occurred. • The Paper Machine ran well with virtually no downtime or Eskom power dips that could of upset the processes. - Friday 12 Nov 2021, Southerly winds were blowing and there were no abnormal activities occurring at 00h30 that morning. - Saturday 13 Nov 2021, TRS exceedance at 21h00 the evening, South Westerly winds were detected, reports show there were no abnormal activities occurring. - Sunday 14 Nov 2021, TRS exceedance at 00h30 evening a South Westerly wind was blowing , reports indicate that there were no abnormal activities occurring. Effluent clarifier or pond cleaning activities occur during the day and not at night-time when the exceedances occurred, therefore Mpact Felixton could not been the source of the TRS exceedances detected at the Felixton monitoring station from 12 to 14 November 2021.
103	Mondi - Candice Webb responded, 24 /11/2021 09:02: Based on wind direction and current shut conditions it is unlikely that Mondi is the source.
104	Mpact - Yolande Schoeman responded (24/11/2021 11:00: On Monday, 15 November 2021 relatively calm winds were detected in the morning. Effluent Plant reports indicate that there were no abnormal occurrences or clarifier/pond cleaning activities that could have resulted in odours or TRS emissions. Mpact Felixton Mill was not he source of the TRS exceedances recorded at the Felixton monitoring station on 15 Nov 2021.
105	Mpact - Yolande Schoeman responded (24/11/2021 13:07: South Westerly winds were blowing from 12h30 to 18h00 on 16 Nov 2021 when the exceedances occurred. The Paper machine ran well with no downtime or ESKOM power dips that could have affected the processes. Effluent Treatment Plant reports show there were no odour causing activities occurring at the treatment plant or effluent ponds that afternoon. The Boiler house reports also show the stack emissions were well below the limits with no unusual occurrences. Mpact could not be the source of the continuous TRS emissions detected that afternoon.

Response	Industry Feedback
106	Mpact - Yolande Schoeman responded (24/11/2021 16:13: A strong South Westerly wind was blowing on Thursday , 18 November according to the ESikhaleni station meteorological data . Wind speeds picked up significantly from 06h30 the morning. The paper machine ran smoothly no downtime or unexpected ESKOM power dips that could have upset the effluent or steam generation processes. Effluent Treatment Plant reports show there were no odour causing activities occurring at the treatment plant or effluent ponds that could have resulted in a TRS peak exceedance at 21h00 the evening. Boiler house stack opacity log sheets indicate the emissions from the stacks were clear and well below the limits throughout the day. There were no abnormal occurrences regarding coal handling and offloading that could have resulted in excessive PM emissions. Based on the investigations Mpact Felixton could not have been the source of the PM and TRS exceedance experienced on 18 Nov 2021.
107	Mondi - Candice Webb responded, 29 /11/2021 14:36: Based on Wind Direction it is unlikely that Mondi is the source of the TRS.
108	Mondi - Candice Webb responded, 29 /11/2021 14:40: Based on Wind Direction it is possible that Mondi may have contributed to the following two exceedances, however based on calm winds and current shut conditions, Mondi feels it is unlikely.
109	Mondi - Candice Webb responded, 29 /11/2021 14:42: Based on prevailing wind directions and that Mondi's effluent treatment plant was operating at the time. It is possible that Mondi contributed to the exceedances.
110	Mondi - Candice Webb responded, 30 /11/2021 09:10: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedance.
111	Mondi - Candice Webb responded, 01 /12/2021 09:12: Based on wind direction it is unlikely that Mondi is the source of the TRS.
112	Mpact - Yolande Schoeman responded (01/12/2021 15:23: A Southerly and South Westerly wind was blowing around midnight on 28 Nov 2021. Effluent treatment plant reports indicate that there were no pond or clarifier cleaning activities on the evening of 28 Nov 2021, therefore Mpact could not have been the source of the TRS exceedances experienced on 28 and 29 Nov 2021.
113	Mpact - Yolande Schoeman responded (01/12/2021 15:31: A South Westerly wind was blowing when the TRS exceedances occurred. Mpact did not conduct any effluent pond or clarifier cleaning activities on the evening of 30 Nov 2021 . Mpact is not the source of the TRS exceedances on 30 Nov 2021.
114	Mpact - Yolande Schoeman responded (01/12/2021 16:02: Calm winds were detected on the 27 Nov 2021 when the TRS exceedance occurred. There were no effluent pond or clarifier cleaning activities from midnight till 06h00 the morning that could have resulted in a TRS exceedance at the Felixton Station, therefore Mpact is not the source of the TRS exceedance on 27 Nov 2021.
115	Mondi - Candice Webb responded, 02 /12/2021 10:05: Based on wind direction it is possible that Mondi may have contributed to the exceedance. However due to annual shut conditions, Mondi feels it is unlikely.
116	Mondi - Candice Webb responded, 06 /12/2021 20:15: Based on wind direction it is unlikely that Mondi contributed to the TRS.
117	Mondi - Candice Webb responded, 06 /12/2021 20:15: Based on wind direction it is unlikely that Mondi contributed to the TRS.
118	Mondi - Candice Webb responded, 07 /12/2021 09:57: Based on wind direction it is unlikely that Mondi contributed to the TRS.
119	Mondi - Candice Webb responded, 08 /12/2021 10:12:
120	Tonga Hulett - Nicolas Govender responded 08/12/2021 15:20: Kindly see attached list of exceedances for the month of October which TH might have contributed to. We were still experiencing effluent plant issues which may not be related to TRS so we have taken a decision to engage with a third party service provider to conduct investigations to determine a source of the TRS. These exceedances is something new at Felixton and we are determined to identify the source and mitigating if necessary.
121	Mpact - Yolande Schoeman responded (14/12/2021 11:23: A Northerly, wind was blowing early from 03h00 to 04h00 and a South Westerly wind at 08h30. Mpact paper machine shut down at 08h00 for maintenance shut.

Response	Industry Feedback
	Effluent Plant did not conduct any pond or clarifier cleaning activities 13 December 2021. Boiler house reports indicate during that TRS exceedance periods, the stack emissions were well below the permitted guidelines and could not have impacted the air quality to generate a high TRS.
122	Mondi - Candice Webb responded, 15 /12/2021 09:03: Based on wind direction it is unlikely that Mondi contributed to the TRS exceedance.
123	Mondi - Candice Webb responded, 15 /12/2021 09:04: Mondi has investigated the exceedances below. Based on wind direction and partial start up conditions of the Mill. It is possible Mondi contributed to the first 4 exceedances listed below.
124	Mondi - Candice Webb responded, 15 /12/2021 09:04: Mondi has investigated the exceedances below. Based on wind direction and partial start up conditions of the mill. It is possible Mondi contributed to the first 2 exceedances listed below.
125	Mondi - Candice Webb responded, 15 /12/2021 09:08: Mondi has investigated the exceedances below. Based on prevailing wind direction prior to the recorded exceedances it is unlikely that Mondi contributed.
126	Mondi - Candice Webb responded, 17 /12/2021 13:36 and 13:37: Based on wind direction it is unlikely that Mondi contributed to the TRS.
127	Mondi - Candice Webb responded, 21 /12/2021 08:29: Based on limited mill operations it is unlikely that Mondi contributed to the TRS.
128	Mondi - Candice Webb responded, 21 /12/2021 08:30: Based on wind directions and limited operations at the Richards Bay mill. It is unlikely that Mondi contributed to the TRS.
129	Mondi - Candice Webb responded, 21 /12/2021 08:32: Based on prevailing wind direction and operation of the Mondi Effluent Plant during the period of the TRS exceedance. It is possible that Mondi contributed to the TRS exceedance.
130	Mpact - Maggie Odayar responded (21/12/2021 14:14: Mpact has investigated the TRS exceedances that occurred at the Felixton Station on the morning of the 19th of December 2021, and we have found no potential odour causing activities occurring. The paper machine ran smoothly with no abnormal shuts, as well as the boilers. The exceedances occurred in the early hours of the morning, and there were no effluent cleaning activities occurring. Mpact is unlikely to be the source of the TRS exceedances.
131	Mpact - Maggie Odayar responded (21/12/2021 14:21: Mpact has investigated the TRS exceedance at the Felixton Station on the 17th of December 2021. The paper machine had two controlled stops between 12 noon and 16h00 due to a breakdown at the paper slitting station. However, there were no exceedances of emissions from the Boilers. The effluent plant operated smoothly with no cleaning activities. Mpact is unlikely to have contributed to the exceedance in TRS.
132	Mondi - Candice Webb responded, 22 /12/2021 07:50: Yes, that is fine thank you.
133	Mondi - Candice Webb responded, 23 /12/2021 10:49: Based on Wind Direction it is unlikely that Mondi contributed to the TRS.
134	Mondi - Candice Webb responded, 28 /12/2021 07:51: Based on wind direction it is unlikely that Mondi is the source of the TRS.
135	Mondi - Candice Webb responded, 28 /12/2021 07:55: Based on wind direction it is unlikely that Mondi is the source of the TRS.
136	Mpact - Yolande Schoeman responded (29/12/2021 09:35: On Thursday 23 December the paper machine stopped from 13h00 to 16h00 to change a gearbox . Boiler house reports indicate during and after the paper machine shut, the stack emissions were well below the permitted guidelines and could not have impacted the air quality to generate a high TRS. During the TRS peak exceedances at 01h00 the morning and 20h00 the evening there were no abnormal occurrences around the plant. Effluent Plant did not conduct any pond or clarifier cleaning activities on that day. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Thursday ,23 December 2021.
137	Mpact - Yolande Schoeman responded (29/12/2021 09:34: On Friday 24 December the paper machine ran smoothly with only a short stop at 13h00, which had no impact on the boiler house operations. The reports show that the boiler house maintained clear stack emissions which were well below the permitted guidelines and therefore could not have impacted the air quality to generate a high TRS. Effluent Plant did not conduct any pond or clarifier cleaning activities on that day. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Friday ,24 December 2021.

Response	Industry Feedback
138	Mpact - Yolande Schoeman responded (29/12/2021 09:35: As South Westerly wind was blowing on 22 December 2021. At approximately 18h00the mill experienced an ESKOM power dip. Boiler house reports indicate during and after the power dip, the boiler house managed to maintain clear stack emissions and therefore could not have impacted the air quality to generate a high TRS. Effluent Plant reports indicate there were no pond of clarifier cleaning activities. Mpact could not have been the source of the TRS exceedances experienced at the Felixton station on Wednesday 22 December 2021.

