



**T Makamba**

Acting Secretary: Gauteng Provincial Legislature (GPL)  
Private Bag X51  
Johannesburg  
2000

Dear Acting Secretary

**5. ENV058: With regards to air quality, could the MEC please:**

**Question (i). What was the measured air quality (including key pollutants such as PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>2</sub>, SO<sub>2</sub>, and ozone) for each of the past five financial years?**

**Response:** The analysis of the measured parameters per municipality for the past five (5) financial years shows that the particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) exceeded the National Ambient Air Quality Standards (NAAQS), especially in the winter months where there is poor atmospheric mixing. Ozone (O<sub>3</sub>) has also exceeded the NAAQS in some of the regions in the province, especially in the spring and summer seasons due to photochemical reaction of Nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds and sunlight. Very few exceedances of nitrogen dioxide were noted in the past five years. Sulphur dioxide (SO<sub>2</sub>) has been in compliance with the National Ambient Air Quality Standards. Data files for each municipality is attached.

Below is the summary of exceedances with the National Ambient Air Quality Standards:

Municipality	Financial Year	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	O <sub>3</sub>
CoJ	2024/2025	NAAQS exceeded	NAAQS exceeded	No data	No exceedances occurred	Few exceedances occurred
	2023/2024	NAAQS exceeded	NAAQS exceeded	No data	No exceedances occurred	Few exceedances occurred
	2022/2023	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2021/2022	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2020/2021	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
CoT	2024/2025	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	No exceedances occurred	Few exceedances occurred
	2023/2024	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred

Municipality	Financial Year	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	O <sub>3</sub>
	2022/2023	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2021/2022	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2020/2021	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
CoE	2024/2025	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	No exceedances occurred	Few exceedances occurred
	2023/2024	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	No exceedances occurred	Few exceedances occurred
	2022/2023	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	No exceedances occurred	Few exceedances occurred
	2021/2022	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	Few exceedances occurred	Few exceedances occurred
	2020/2021	NAAQS exceeded	NAAQS exceeded	Few exceedances occurred	No exceedances occurred	Few exceedances occurred
SDM	2024/2025	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2023/2024	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2022/2023	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2021/2022	NAAQS exceeded	NAAQS exceeded	No exceedances occurred	No exceedances occurred	Few exceedances occurred
	2020/2021	NAAQS exceeded	NAAQS exceeded	No data	No exceedances occurred	Few exceedances occurred
WRDM	2024/2025	No data	Not measured	No exceedances occurred	No exceedances occurred	No exceedances occurred
	2023/2024	No data	Not measured	No exceedances occurred	No exceedances occurred	No exceedances occurred
	2022/2023	No data	Not measured	No exceedances occurred	No exceedances occurred	No exceedances occurred
	2021/2022	No data	Not measured	No exceedances occurred	No exceedances occurred	No exceedances occurred
	2020/2021	No data	Not measured	No exceedances occurred	No exceedances occurred	No exceedances occurred

**Question (ii). Which municipalities failed to meet the prescribed minimum air quality standards in each of those years?**

**Response:** All municipalities in the province failed to meet the National Ambient air quality Standards for particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), in the last 5 (five) financial years. The high level of Particulate matter can be attributed to various sources including industrial activities, vehicles tailpipe emissions, mine tailing dams, illegal burning of waste and domestic burning of fossil fuel.

The Ozone (O<sub>3</sub>) at Sedibeng, City of Johannesburg, City of Tshwane has exceeded the NAAQS and the main contributing sources are vehicle tailpipe emissions as well as some industrial activities. Sulphur Dioxide (SO<sub>2</sub>) has been in compliance with the NAAQS for all the municipalities. Nitrogen Dioxide (NO<sub>2</sub>) had very few exceedances during the 2024/2025 financial year at the City of Tshwane Metropolitan Municipality.

**Question (iii). What are the legislated minimum air quality standards applicable to municipalities in Gauteng.**

**Response:** Municipalities across the country should comply with the National Ambient Air Quality Standards, which are limits set for the concentration of pollutants in outdoor/ambient air. The table below table indicates the National Ambient Air Quality Standards for criteria pollutants, which are applicable to the municipalities in Gauteng.

=Pollutant	Averaging Period	Frequency of Exceedances	Limit Value (µg/m <sup>3</sup> )	Limit Value (ppb)/(ppm)
Sulphur Dioxide (SO <sub>2</sub> )	10 minutes	526	500 µg/m <sup>3</sup>	191
	1-hour	88	350 µg/m <sup>3</sup>	134
	24-hour	4	125 µg/m <sup>3</sup>	48
	Annual average	0	50 µg/m <sup>3</sup>	19
Nitrogen Dioxide (NO <sub>2</sub> )	1-hour	88	200 µg/m <sup>3</sup>	106
	Annual average	0	40 µg/m <sup>3</sup>	21
Carbon Monoxide (CO)	1-hour	88	30 mg/m <sup>3</sup>	26 ppm
	8-hour	11	10 mg/m <sup>3</sup>	8.7 ppm
Ozone	8-hours (running)	11	120 µg/m <sup>3</sup>	61 ppb
Particulate Matter (PM <sub>2.5</sub> )	24-hours	4	40 µg/m <sup>3</sup>	-
	Annual average	0	20 µg/m <sup>3</sup>	-
Lead (Pb)	Annual average	0	0.5 µg/m <sup>3</sup>	-
Particulate Matter (PM <sub>10</sub> )	24-hours	4	75 µg/m <sup>3</sup>	-
	Annual average	0	40 µg/m <sup>3</sup>	-
Benzene	Annual average	0	5 µg/m <sup>3</sup>	1.6 ppb

**Question (iv). What enforcement, remedial, or compliance actions were taken against municipalities that failed to meet the prescribed standards, and what timelines have been set for compliance?**

**Response:** In terms of the National Environmental Management: Air Quality Act (Act no 39 of 2004), Municipalities are responsible for monitoring, managing, and improving air quality in their jurisdictions, through development of Air Quality Management Plans (AQMPs), monitoring and reporting ambient air quality and taking steps to reduce air pollution. Municipalities are performing these functions to a certain extent, especially management of industrial emissions.

Sources of air pollution are diverse, and pollutants can travel long distances to affect areas where pollution was not generated. The ambient air quality monitoring data is meant to inform mitigation strategies for municipalities. There is no enforcement action taken against municipalities since there is no source apportionment study conducted to prove that pollution measured is from the sources within the municipal boundaries.

Remedial actions taken include establishment of Gauteng Atmospheric Emission Licensing Authorities Committee which focuses on improving industrial emissions through stricter license conditions and identification of emission sources in facilities. Vehicle emissions are a major contributor to air pollution in the province and the department is developing plan to engage and

influence relevant sector departments to employ emission reduction strategies. Waste burning is a growing concern in the province and the department has several projects to address the problem. Air Quality Officer's Forum is convened quarterly to discuss air quality challenges in the province, and all municipalities participates. City of Tshwane and City of Johannesburg Metropolitan Municipalities are part of Breathe Cities initiative, which is a consortium between C40 Cities, Clean Air Fund and Bloomberg philanthropies, aimed at reducing air pollution and planet-warming emissions. Several projects are already initiated to address air quality challenges in these municipalities.

**Question (v). Please provide the complete raw monitoring data for each municipality for each of the past five financial years, in tabular format, including all readings from fixed and mobile monitoring stations?**

**Response:** The raw ambient air quality monitoring data files are too big to be presented in Microsoft word tables. Data for one parameter, for one year has over 2000 (two thousand) rows, and so data for one municipality will require about 50 000 (fifty thousand) rows. Data for each municipality for the past five financial years is therefore provided in excel spreadsheets in the attached folders.

**5. ENV059. Further to reply 5. ENV022, of 2025, could the MEC please:**

**Question (i): What would it cost to ensure, that the 8 monitoring stations which are currently providing raw data, become fully operational?**

**Response:** The cost for the eight (8) monitoring stations to be fully operational depend on the number of analysers and monitors per station and the age of the existing equipment. The more the analysers/monitors the higher the cost. For fully equipped station, the estimated cost for the replacement of hardware and maintenance of the station can be between R 500 000.00 - R 800 000.00 per quarter, per station. Therefore, the estimated total cost for the eight stations can be between R 4 000 000.00 – R 6 400 000.00 per quarter.

**Question (ii): What budget has been allocation in this regard?**

**Response:** There is no budget allocated for management and maintenance of ambient air quality monitoring stations in the Department, except for the data loggers, modules and screens that are being procured for the two West Rand monitoring stations. Even for the West Rand District Municipality's stations, not all the required components will be procured due to limited budget. Municipalities are mandated to monitor ambient air quality in their jurisdiction, and it is therefore their responsibility to ensure that adequate resources are allocated for maintenance and management of the stations.

**Question (iii): By which date will the 8 monitoring stations be fully operational**

**Response:** The department does not have budget, or a project initiated to bring the non-operational stations into operation, therefore there is no specific date set. Different municipalities will have different plans and timelines to fix the stations.

**Question (iv): With regards to the 10 monitoring stations that are currently not operational, what would it cost to repair each monitoring station and ensure that they become fully operational?**

**Response:** The cost to repair each station varies, depending on the extent of damage and also the number of equipment (analyser's and monitors) per station. Therefore, the estimated cost for the repairs of the ten stations can be between R 12 000 000.00 – R 15 000 000.00 once off, and thereafter, maintenance budget of R80 000 per station, for calibrations and gases.

**Question (v): What budget has been allocated in this regard?**

**Response:** There is no budget allocated for management and maintenance of ambient air quality monitoring stations in the Department for the current financial year.

**Question (vi): By which date will all 10 monitoring station be fully operational?**

**Response:** The department does not have a project initiated to bring non-operational stations into operation, therefore there is no specific date set. Different municipalities will have different plans and timelines.

**Question (vii): What legal obligation, if any, is there on this department to ensure that monitoring stations are indeed fully operational?**

**Response:** Air Quality management is a concurrent function performed by the three spheres of government, and all three spheres of government have a legal obligation to monitor ambient air quality. However, Air Quality Act places more responsibilities on Municipalities, where air quality challenges are experienced. Provinces are mandated to provide support and monitor the performance of municipalities in implementing the Air Quality Act, including ambient air quality monitoring.

The Department has in the past procured seven (7) ambient air quality monitoring stations, together with the hardware and software needed to generate data. The stations were donated to various municipalities in 2003 and province have been providing support to municipalities through appointment of service providers for maintenance and procurement of equipment. Municipalities need to ensure that adequate resources are allocated for maintenance and management of the stations. The Department is in a process to procure some required components for West Rand District Municipality and Sedibeng District Municipality during the 2025/2026 financial year. However, due to limited budget, not all the required components will be procured and not all municipalities will be supported.

**Question (viii): Please list the 15 priority stations?**

**Response:** After several stations maintenance projects were undertaken to support municipalities on the monitoring stations, the department decided to identify some stations that could be prioritised for support, depending on availability of budget.

The stations that were selected as part of priority stations are as follows:

- Buccleugh AQ Monitoring Station - COJ;
- Jabavu AQ Monitoring Station – COJ;
- Alexandra AQ Monitoring Station - COJ;

- Bodibeng AQ Monitoring Station – COT;
- Rosslyn AQ Monitoring Station - COT;
- Olievenhoutbosch AQ Monitoring Station - COT;
- Bedfordview AQ Monitoring Station - COE;
- Etwatwa AQ Monitoring Station - COE;
- Springs AQ Monitoring Station - COE;
- Olifantsfontein AQ Monitoring Station - COE;
- Thokoza AQ Monitoring Station - COE;
- Meyerton AQ Monitoring Station - SDM;
- Vanderbijlpark AQ Monitoring Station - SDM;
- Ya Rona Clinic AQ Monitoring Station – WRDM; and
- Leratong Hospital AQ Monitoring Station - WRDM.

**Question (ix): What specific attention will each of these 15 monitoring stations receive?**

**Response:** The identified priority stations require different interventions and support. The department had plans to establish a calibration laboratory/station and procure spare analysers and consumables to support stations on continuous basis, but there was no budget allocated for ambient air quality monitoring in the current financial year. The only support provided at the moment is calibration of ambient air quality monitoring stations. Future interventions will depend on specific requirements per station and availability of budget.

**Question (x): What specific support is this department providing to municipalities? Please specify for each municipality?**

**Response:** The department has provided different kind of support to municipalities. The table below provides some of the support provided to municipalities in the past years:

<b>Municipality</b>	<b>Support Provided</b>
<b>City of Johannesburg</b>	<ul style="list-style-type: none"> <li>• Supported with UPS, some meteorological components.</li> <li>• Supported with alternative power supply system for two (2) monitoring stations.</li> <li>• Supported by lending calibration gases, calibrator and zero air generator for planned calibration activities.</li> <li>• Provided physical support during calibrations.</li> <li>• Provided data validation capacity building</li> </ul>
<b>City of Ekurhuleni</b>	<ul style="list-style-type: none"> <li>• Supported with alternative power supply system for one (1) monitoring station.</li> <li>• Supported by lending calibration gases, calibrator and zero air generator for planned calibration activities.</li> <li>• Providing physical support during calibrations on request</li> <li>• Provided data validation capacity building</li> </ul>
<b>City of Tshwane</b>	<ul style="list-style-type: none"> <li>• Supported with alternative power supply system for two (2) monitoring stations.</li> <li>• Supported by lending calibration gases, calibrator and zero air generator for planned calibration activities.</li> <li>• Provided with physical support during calibrations.</li> <li>• Provided data validation capacity building.</li> </ul>
<b>West Rand District Municipality</b>	<ul style="list-style-type: none"> <li>• Supported by procuring UPS's, CO and NOx analysers</li> <li>• Supported by lending calibration gases, calibrator and zero air generator for planned calibration activities.</li> <li>• Provided physical support during planned calibrations.</li> <li>• Provided support for management of the stations.</li> </ul>

Municipality	Support Provided
	<ul style="list-style-type: none"> <li>• Provided data validation capacity building</li> </ul>
<b>Sedibeng District Municipality</b>	<ul style="list-style-type: none"> <li>• Supported with alternative power supply system for two (2) monitoring stations.</li> <li>• Supported by lending calibration gases, calibrator and zero air generator for planned calibration activities.</li> <li>• Provided physical support during calibrations.</li> <li>• Provided data validation capacity building.</li> <li>• Assisted with specifications and terms of reference preparation as well as management of service providers.</li> </ul>

Yours Sincerely



**EWAN BOTHA**

**MEMBER OF THE EXECUTIVE COUNCIL (MEC): ENVIRONMENT**

**DATE: 18-08-2025**