

Annexure G

HISTORICAL ASSESSMENT OF AMBIENT AIR QUALITY DATA FOR THE HIGHVELD

August 2020

Table 1 Summary of ambient air quality NAAQS in the Highveld and Vaal in 2015, 16 and 17

Pollutant	Averaging period	Highveld and Vaal - monitoring station NAAQS compliance -
Sulphur dioxide (SO ₂)	10 minutes	Compliance at 10/10 stations
	1 hour	Compliance at 19/19 stations
	24 hours	Compliance at 8/14 stations (non-compliance at Kendal, Komati, Kriel, Witbank, Kwazomakuhle & Grootvlei)
	1 year	Compliance at 18/19 stations (non-compliance at Komati)
Nitrogen dioxide (NO ₂)	1 hour	Compliance at 9/9 stations
	1 year	Compliance at 15/18 stations (non-compliance at Secunda, Sharpville and Sebokeng)
Particulate matter (PM ₁₀)	24 hours	Non-compliance at 18/18 stations
	1 year	Non-compliance at 15/18 stations (compliance at Grootdraai, Majuba and Grootvlei)
Particulate matter (PM _{2.5})	24 hours	Non-compliance at 16/16 stations
	1 year	Non-compliance at 17/19 stations (compliance at Majuba and Grootvlei)

Note: Table 1 provides a summary of the analysis of the ambient monitoring results as presented in the Cumulative atmospheric impact report completed in support of the Eskom MES application for Grootvlei Power Station (August 2020)

Table 2 Summary of ambient air quality NAAQS in the Highveld in 2018, 19 and 20

Pollutant	Averaging period	NAAQS Compliance Status		
		2018	2019	2020
Sulphur dioxide (SO ₂)	10-minutes	Compliance at 14/14 stations	Compliance at 17/17 stations	Compliance at 18/18 stations
	1-hour	Compliance at 13/14 stations	Compliance at 17/17 stations	Compliance at 18/18 stations
	24-hours	Compliance at 13/14 stations	Compliance at 16/17 stations	Compliance at 16/18 stations
	1-year	Compliance at 14/14 stations	Compliance at 17/17 stations	Compliance at 17/18 stations
Nitrogen dioxide (NO ₂)	1-hour	Compliance at 14/14 stations	Compliance at 17/17 stations	Compliance at 18/18 stations
	1-year	Compliance at 14/14 stations	Compliance at 17/17 stations	Compliance at 18/18 stations
Particulate Matter (PM ₁₀)	24-hours	Compliance at 04/12 stations	Compliance at 04/10 stations	Compliance at 02/08 stations
	1-year	Compliance at 07/12 stations	Compliance at 06/10 stations	Compliance at 04/08 stations
Particulate Matter (PM _{2.5})	24-hours	Compliance at 05/11 stations	Compliance at 03/09 stations	Compliance at 05/09 stations
	1-year	Compliance at 06/11 stations	Compliance at 07/09 stations	Compliance at 08/09 stations

Poll	NO			SO ₂			PM ₁₀			PM _{2.5}		
Year	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
No. Sites	14	17	18	14	17	18	12	10	08	11	09	09

Note: Table 3 deals with the following Eskom stations Camden (CD), Elandsfontein (EL), Emzini (EM), Marapong (MP) Kendal (K2), Komati (KM), Phola (PO), Medupi (MD), Sivukile (SV), Thubelihle (TB), Kriel Village (KV), Ezamokuhle 1 (E1), Grootvlei (GV), Majuba (J1) Chicken Farm (CF), Rand Water (RW), Silobela (SB),

Kwazamokuhle (KZ), Ezamokuhle 2 (E2), Grootdraai (GD), Masakhane (MK) and is based on Eskoms interpretation of the available monitoring data

Table 3 Summary of ambient air quality NAAQS in the Vaal Triangle in 2018, 19 and 20

Poll	NO			SO2			PM10			PM2.5		
Year	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
No. Sites	1	1	1	1	1	1	-	-	-	1	1	1

Pollutant	Averaging period	NAAQS Compliance Status		
		2018	2019	2020
Sulphur dioxide (SO ₂)	10-minutes	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
	1-hour	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
	24-hours	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
	1-year	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
Nitrogen dioxide (NO ₂)	1-hour	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
	1-year	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station
Particulate Matter (PM ₁₀)	24-hours	No data	No data	No data
	1-year	No data	No data	No data
Particulate Matter (PM _{2.5})	24-hours	Compliance at 01/01 station	Non-compliance at 01/01 station	Non-compliance at 01/01 station
	1-year	Compliance at 01/01 station	Compliance at 01/01 station	Compliance at 01/01 station

Note: Analysis based on Eskom Vaal Triangle (RW) monitoring station.