Eskom

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Date: 30 April 2025
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Dear Dr Gwaze,

FEBRUARY AND MARCH 2025 MONTHLY PROGRESS REPORT ON THE POSTPONEMENT OF MINIMUM EMISSION STANDARD CONDITIONS FOR KUSILE POWER STATION: REF: LSA223027

ESKOM WAS ISSUED A MINIMUM EMISSION STANDARDS (MES) POSTPONEMENT IN RESPECT OF KUSILE'S SO_2 LEVELS BY THE DFFE ON 5 JUNE 2023. THE VARIED ATMOSPHERIC EMISSION LICENCE (AEL) WAS ISSUED BY THE NKANGALA DISTRICT MUNICIPALITY ON 13 JUNE 2023. BOTH THE MES APPROVAL AND THE AEL ALLOW ESKOM TO OPERATE THE TEMPORARY STACKS WITHOUT FGD. THE APPROVALS ARE ISSUED SUBJECT TO SEVERAL CONDITIONS, INCLUDING THAT ESKOM IMPLEMENT MEASURES TO MINIMISE THE IMPACT ON HUMAN HEALTH.

This letter provides an update on key issues, including specific reporting requirements identified by the authorities in the various approvals for the Kusile temporary stacks project. Monitoring and mitigation is being implemented as far as practical in line with the programme in the Kusile Power Station Temporary Stack Monitoring Framework approved by the authorities on 18 October 2023.

As an initial point, I would like to confirm that no exceedances of the stack or ambient trigger level conditions were recorded during February and March 2025.

1. **Progress of repairs of permanent stacks for the duration of the operation of the temporary stacks.**
    I. The target date for the recovery of the west stack of 31 March 2025 had been achieved as there no units running on the temporary stack.

Risks:

I. No float in the schedule adversė, weather will have an impact on the completion date.

The Permanent Stack recovery progress report is attached **(Annexures A).**

2. Temporary Stack Emission Monitoring

Continuous Emission Monitoring (CEMS):

I. Unit 1 is operated with a unity curve for PM emissions in the months of February-March 2025. The existing particulate matter emissions correlation test curves became invalided due to the faulty monitor which was replaced. The full PM correlation test was completed on the 24th of March 2025.The station is waiting for report from services provider. The unit operated with valid parallel factors for gaseous emissions during this period.
The unit was shut down on 31 March 2025 for Inspection (IN) outage and to connect the unit to the main stack with FGD and is expected back in service on 20 May 2025.

II. Unit 2 was connected back to the main permanent stack with FGD on the 02nd of April 2025 after it has been on the outage. The unit is operating with unity curves for both the particulate matter and gaseous emissions since the return to service. The full particulate matter and gaseous emissions correlation and parallel tests are planned to be conducted once the unit has stabilized.

III. Unit 3 was connected back to the main permanent stack with FGD on the 6th of February 2025 after it has been on the outage. The unit is operating with unity curves for both the particulate matter and gaseous emissions since the return to service. The full PM emissions correlation test was completed on the 8th of April 2025. The station is waiting for the report from service provider. The gaseous emissions parallel test is planned to be conducted.

Stack Performance:

I. The Kusile Monthly Emission report for February 2025, which includes emission data for Units 1,2,4 and 5 is attached **(Annexure B**).
II. **Based on the available data information, Kusile Unit 1, 2, 3, 4 and 5 operated in compliance with the AEL emission limits for PM, NOx or SO_2** during February 2025, though there were sporadic PM's exceedances recorded on Unit 1 and 2.

3. Health Screening for the increased SO_2 emission and associated health impacts

I. Communication system is developed to enable communication with the health ambassadors in the various receptor areas.
II. The SMS facility is in place for Eskom to communicate with the communities regarding matters pertaining to their health and the SO_2 emissions.
III. The Toll-free number has been finalised. The community is guided through pre-loaded voice messaging regarding possible health concerns that they might be experiencing at that time and further guides them on which health facility nearest to them, can assist them, in case of emergency. It also enables them to leave a voice message if their concerns are not addressed on the pre-loaded voice recordings.

IV. Engagement with GHB Farms and Topigs will be conducted once the date has been agreed upon.

4. Occupational Health and Hygiene status

4.1. Continuous SO_2 Perimeter Monitoring: February and March 2025

I. Weekly monitoring of the plant's perimeter for SO_2 surges was conducted throughout February and March 2025.
II. SO_2 levels along the perimeter remained below detection levels, meeting the statutory requirement of 0.5 ppm OEL-STEL/C for both months.

4.2. Continuous Personal Exposure Sampling:

I. Three FGD Senior Plant Operators and two Controllers underwent personal exposure sampling for SO_2 during February 2025.
II. Two FGD Senior Plant Operators underwent personal exposure sampling for SO_2 during March 2025.
III. Their exposure levels were consistently below detection levels and compliant with the statutory requirement of 0.5 ppm OEL-STEL/C.

Table: Personal Exposure Sulphur Dioxide Concentration for February and March 2025

Month	Number of samples	Areas Sampled	Designation	Concentration (ppm)	Status	Comment(s)
February 2025	3	FGD	Senior Plant Operators	< 0,005	Complaint	Concentrations below OEL.
February 2025	2	FGD	Controller	< 0,005	Complaint	Concentrations below OEL.
March 2025	2	FGD	Senior Plant Operators	< 0,005	Complaint	Concentrations below OEL.

4.3. Conclusion:

Our continuous SO_2 personal and perimeter monitoring indicated compliance with regulatory limits with no ongoing issues. We will continue to monitor and investigate any anomalies to ensure the safety and well-being of both our workers and the surrounding community.

5. Stakeholder Engagement Plan and Status

Stakeholders	Method of engagement	Involvement	Status
Employees	• Awareness sessions Leadership briefings (GM's address) Employee engagements	• Once a month • Every Friday Monthly	Complete
Local Municipalities • Emalahleni • Victor Khanye • Bronkhorstspruit	Face-to-face meeting	Once a quarter	Eskom Business Connect - stakeholder engagement – was held in Steve Tshwete 5 – 6

			February 2025. Other meetings will be planned for end of May 2025 with the surrounding farms/communities
Media • Emalahleni FM • Witbank News	• Advert • Print	When required	Eskom media desk to publish

6. Ambient Air Quality Monitoring

I. In order to better assess compliance with national ambient air quality standards, identify potential sources of pollution, protect public health and the environment and establish a baseline for future mitigation measures Eskom has installed additional ambient air quality monitoring stations at Balmoral and Wilge. The existing air quality monitoring station (Phola) will complement the additional monitoring stations to reduce uncertainties, as each monitoring station has an objective linked to a power station of interest.

II. The commissioning of Ogies air quality monitoring station has been completed on the 25 February 2025 by Research, Testing and Development. The monitoring stations is equipped to continuously monitor ambient concentrations of sulphur dioxide (SO_2). In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others are also recorded. The reporting of the station data will commence from the March 2025 report.

III. The Balmoral and Wilge monitoring stations are equipped to monitor ambient concentrations of sulphur dioxide (SO_2) continuously. In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others, are also recorded.

IV. The data for this reporting period (01 – 28 February 2025) and (01 – 31 March 2025) were analysed for ambient SO_2 and NO_2 and O_3 as monitored at Balmoral, Phola and Wilge air quality monitoring stations. The Particulate Matter (PM_{10} and $PM_{2.5}$) data were further analysed for Phola. RT&D has currently stopped monitoring at Chicken farm and relocated the monitoring hut to Ogies Kombineerde school.

V. Full dynamic calibration audits are carried out on the gas analysers (SO_2, NO_2 and O_3 analysers) quarterly and particulate matter analysers are calibrated every six months. All calibration results and certificates are filed in the laboratory for assessment purposes. Inter-laboratory calibrations are routinely carried out with other accredited laboratories, to enhance quality control.

VI. There were no exceedances of the NO_2 hourly limit of 106 ppb recorded at the monitoring stations during the February and March 2025 monitoring period.

VII. There were no exceedances of the $PM_{2.5}$ daily limit of 40 $\mu g/m^3$ and PM_{10} daily limit of 75 $\mu g/m^3$ at all the monitoring station under review.

VIII. In March there was one (1) exceedance of the $PM_{2.5}$ daily limit of 40 $\mu g/m^3$ and four (4) exceedances of PM_{10} daily limit of 75 $\mu g/m^3$ at Phola monitoring station. Phola and Wilger air quality monitoring sites are in non-compliance with O_3 8 hourly limit of 61 ppb.

IX. There were no exceedances of SO_2 10-minutes limit of 191 ppb and SO_2 hourly limit of 134 ppb at all the monitoring station under review in February and March 2025.

X. There were no events that triggered the notification of stakeholders in terms of the agreed AEGL recorded in February and March 2025.

Table 1 Highest SO_2 concentrations recorded (in ppb) for February and March 2025

Monitoring Stations	10-min average (191 ppb)	Date	Hourly average (134 ppb)	Date	Daily average (48 ppb)	Date
Balmoral	82.9	28/02/2025 10:30	62.7	28/02/2025 11:00	11.6	28/02/2025
Phola	76.4	28/02/2025 13:10	60.3	28/02/2025 02:00	22.2	28/02/2025
Wilge	7.1	03/02/2025 21:50	4.0	03/02/2025 10:00	2.0	01/02/2025
Balmoral	44.1	15/03/2025 09:10	30.4	15/03/2025 10:00	13.7	06/03/2025
Phola	77.2	22/03/2025 05:10	60.1	20/03/2025 06:00	20.6	20/03/2025
Wilge	13.5	06/03/2025 19:30	9.7	06/03/2025 08:00	2.4	06/03/2025

NM – Not Monitored.

I. In February there was good representative percentage data was recovered for most of parameters monitored during the monitoring period under review at the other monitoring stations, however Wilge recorded low data for SO_2 and O_3 due to instrument failures. Both SO_2 and O_3 instruments have been removed and taken to the laboratory for repairs. Phola recorded low data for PM10 due to pump failure, however the $PM_{2.5}$ has been repaired and taken back to the site.

II. In March there was good representative percentage data was recovered for most of parameters monitored during the monitoring period under review at the other monitoring stations, however Wilge recorded low data for SO_2 due to instrument failure. The SO2 instrument has been removed and taken to the laboratory for repairs. Phola recorded low data for NO_2 due to low response and damaged pump diaphragm, however the NO_2 has been repaired and taken back to the site.

III. The raw monitoring data, downloaded at 1-minute averages, is available in real-time to the DFFE-managed South African Air Quality Information System (SAAQIS) since the 14th of December 2023 for all Eskom air quality monitoring sites.

IV. The detailed February and March 2025, Kusile ambient monitoring reports are attached (**Annexure C1 and C2).**

7. Poultry Health Monitoring

I. Kendal Poultry informed Eskom that their properties had been sold to Seriti Mining, however they indicated that monitoring should continue on the eastern and western of Kendal Poultry Layer Farm and Woodsprings Breeder Farm operations.

II. The Service Provider was appointed to monitor and report on a quarterly basis, next quarter report will be by the end of March 2025.

8. Animal Health Monitoring

I. Eskom has reached an agreement with Topigs and GHB farms regarding animal/pig health monitoring since March 2024.

II. Monitoring is carried out according to prescribed protocol and final report for February and March 2025 is attached (**Annexure D's).**

MONTHLY PROGRESS REPORTS ON THE POSTPONEMENT OF MINIMUM EMISSION STANDARD CONDITIONS FOR KUSILE POWER STATION: REF: LSA223027

9. Emergency preparedness and response

I. There has been no incidence of exceedance that required emergency response from Kusile Power Station, however the Emergency Response Team (ERT) remained on high alert.
II. The ERT is in regular communication with Emalahleni Local Municipality Emergency Services as per the Mutual Aid Agreement.
III. Emalahleni Local Municipality Emergency Services representatives in Disaster Management, Fire and Emergency Services, and Environment were added in Kusile Power Station Distribution List for regular updates.
IV. All other Service Level Agreement (SLA's) with relevant stakeholder (Kendal Power Station) remain in force for duration of the temporal stack.

In conclusion, I believe the above illustrates that Eskom is committed to complying with the conditions of the approvals granted with respect to the Kusile temporary stacks. Eskom is implementing measures to ensure that it understands its impact and can limit its operations' environmental and health impact. Further, where full implementation of the conditions is not yet completed, Eskom is working with relevant stakeholders with a focus to ensure the remaining issues are resolved as soon as possible.

I hope the above is in order. Please contact our team if you require any further information.

Yours sincerely

Christopher Nani
GENERAL MANAGER (KUSILE POWER STATION)

DATE: 30/04/2025

List of annexures

Annexure A: Kusile West Chimney Recovery Project – March 2025
Annexure B: Kusile Monthly Emission Report – February 2025
Annexure C1 and C2: Kusile Ambient Air Quality Report – February and March 2025
Annexure D's: Final Animal Health Monitoring report – February and March 2025

Dr P. Gwaze
National Air Quality Officer
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15 April 2025

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Dear Dr P. Gwaze

MONTHLY PROGRESS REPORT FOR KUSILE POWER STATION WEST STACK RECOVERY MARCH 2025

		Status	Start Date	End Date
	Unit 3 on load with FGD	100%	4 Feb 2025	6 Feb 2025
	Unit 2 Reinstatement Permits cleared	100%	14 Feb 2025	10 March 2025
	Unit 1 vertical flue liner application	80%	11 March 2025	26 March 2025

NOTES:

West Stack:

Risks

- No float in the schedule, adverse weather will have an impact on the completion date.

Trust you find the above in order.

Yours sincerely,

pp Binesh Singh

Zandi Shange
GENERAL MANAGER PROJECT MANAGEMENT

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Date:
March 2025

Enquiries: Lesiba Kgobe
Tel: +27 13 699 7817

Ref: *Kusile Power Station AEL (17/4/AEL/MP311/12/01)*

Dear Ms. Simelane

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR FEBRUARY 2025

This serves as the monthly report required in terms of Section 7.6 in Kusile Power Station's Atmospheric Emission License: 17/4/AEL/MP311/12/01. The emissions are for the month of February 2025.

Hoping the above will meet your satisfaction.

Yours sincerely

Christopher Nani
GENERAL MANAGER
DATE: 28/03/2025

Generation Division – Coal New Build Unit
Management Department (Kusile Power Station)
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1. KUSILE POWER STATION MONTHLY EMISSIONS REPORT: Atmospheric Emission License 17/4/AEL/MP311/12/01

2. Raw Materials and Products

Raw Materials and Products	**Raw Material Type**	**Units**	**Max Permitted Consumption Rate**	**Consumption Rate Feb-2025**
	Coal	Tons	*1 818 083*	*854 649*
	Fuel Oil	Tons	*5 533*	*2 234.86*
	Limestone	Tons	*72 017*	*20642*
Production Rates	**Product / By-Product Name**	**Units**	**Max Production Capacity Permitted**	**Indicative Production Rate Feb-2025**
	Energy	GWh	*2 999.808*	*1 582.77*
	Ash	Tons	*796 300*	*261 577.28*
	Gypsum	Tons	*155 100*	*11 549.40*
	RE PM	kg/MWh	*not specified*	*0.05*
	RE SOx	kg/MWh	*not specified*	*2.31*

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: [4 464 MW] x 24 hrs x days in Month/1000 to convert to GWh

3. Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal Sulphur	%	*1.3*	*0.82*
Ash in Coal	%	*38*	*30.61*
Fuel Oil Sulphur	%	*3.5*	*2.19*

4. Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO_2	NOx
Unit 1	*50*	*3500*	*750*
Unit 2	*50*	*3500*	*750*
Unit 3	*50*	*1000*	*750*
South Stack	*50*	*1000*	*750*

5. Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Feb-2025	Technology Type	Efficiency Feb-2025
Unit 1	*FFP*	*99.95%*	*FGD*	*Out of service*
Unit 2	*FFP*	*99.84%*	*FGD*	*Out of service*
Unit 3	*FFP*	*99.99%*	*FGD*	*99.98%*
Unit 4	*FFP*	*99.99%*	*FGD*	*99.98%*
Unit 5	*FFP*	*99.99%*	*FGD*	*99.95%*

Note: Both the FFP and FGD does not have bypass mode operation, hence plant 100% Utilised.

6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*100.0*	*100.0*	*100.0*
Unit 2	*100.0*	*100.0*	*100.0*
Unit 3	*100.0*	*97.3*	*97.1*
Unit 4	*100.0*	*88.7*	*100.0*
Unit 5	*100.0*	*100.0*	*100.0*

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of Feb - 2025

Associated Unit/Stack	PM	SO_2	NO_x
Unit 1	26.3	2 232	748
Unit 2	38.8	1 171	301
Unit 3	4.8	40	505
Unit 4	1.0	59	654
Unit 5	6.4	148	742
SUM	77.3	3 649	2 949

Table 7.2: Operating days in compliance to PM AEL Limit – February 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	26	0	0	0	0	15.1
Unit 2	14	1	0	0	1	36.6
Unit 3	21	0	0	0	0	3.8
Unit 4	28	0	0	0	0	0.5
Unit 5	28	0	0	0	0	2.9
SUM	**117**	**1**	**0**	**0**	**1**	

Table 7.3: Operating days in compliance to SO_2 AEL Limit - February 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	28	0	0	0	0	1 037.1
Unit 2	15	0	0	0	0	1 122.6
Unit 3	23	0	0	0	0	25.7
Unit 4	28	0	0	0	0	24.1
Unit 5	28	0	0	0	0	67.0
SUM	**122**	**0**	**0**	**0**	**0**	

Table 7.4: Operating days in compliance to NOx AEL Limit – February 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	28	0	0	0	0	346.1
Unit 2	15	0	0	0	0	290.4
Unit 3	23	0	0	0	0	354.0
Unit 4	28	0	0	0	0	273.2
Unit 5	28	0	0	0	0	339.9
SUM	**122**	**0**	**0**	**0**	**0**	

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO_2

Table 7.5: Legend Description

Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Kusile Unit 1 PM Emissions - February 2025

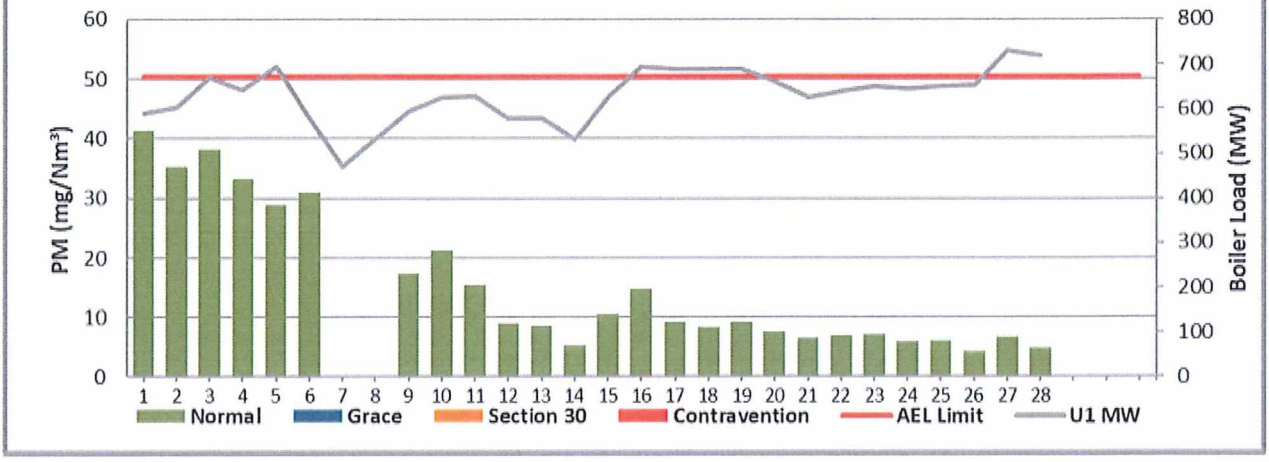
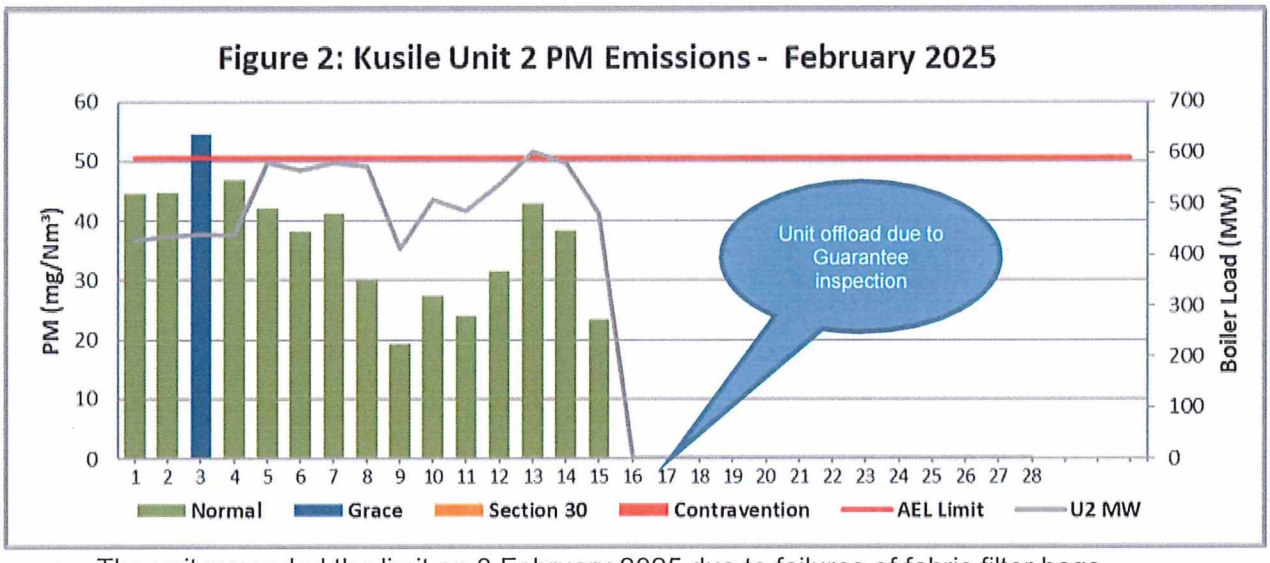
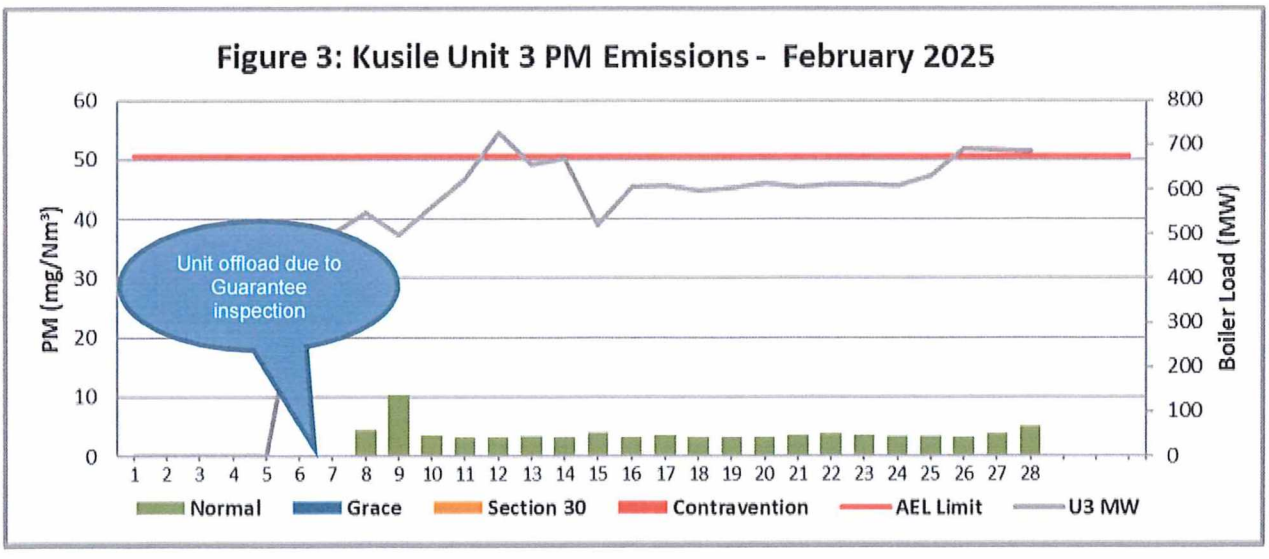


Figure 2: Kusile Unit 2 PM Emissions - February 2025



- The unit exceeded the limit on 3 February 2025 due to failures of fabric filter bags.

Figure 3: Kusile Unit 3 PM Emissions - February 2025



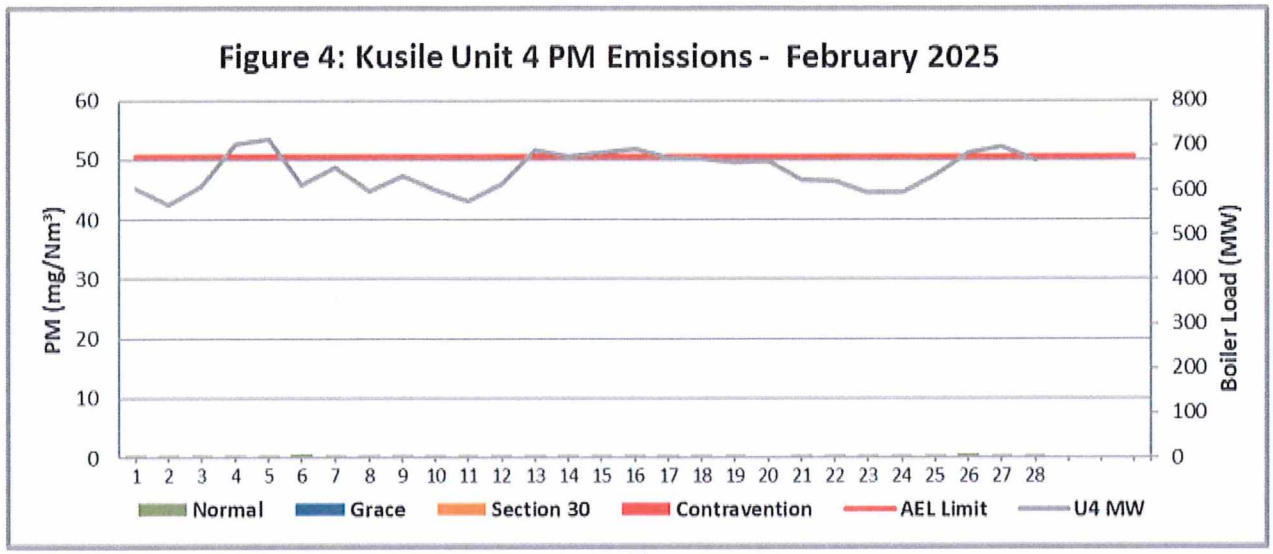


Figure 4: Kusile Unit 4 PM Emissions - February 2025
PM (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U4 MW

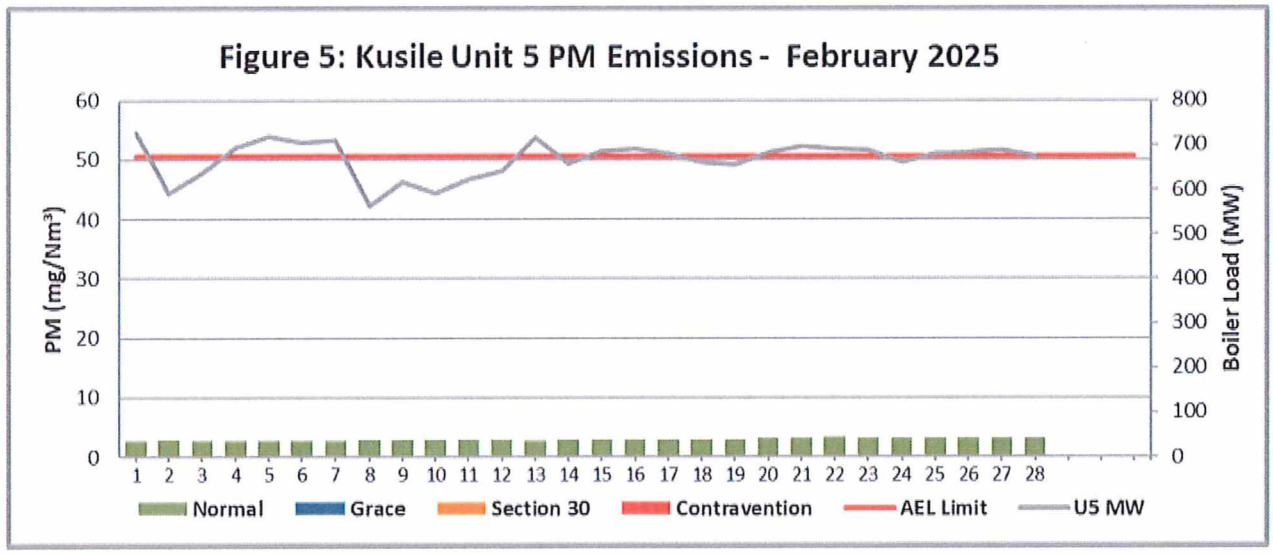


Figure 5: Kusile Unit 5 PM Emissions - February 2025
PM (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U5 MW

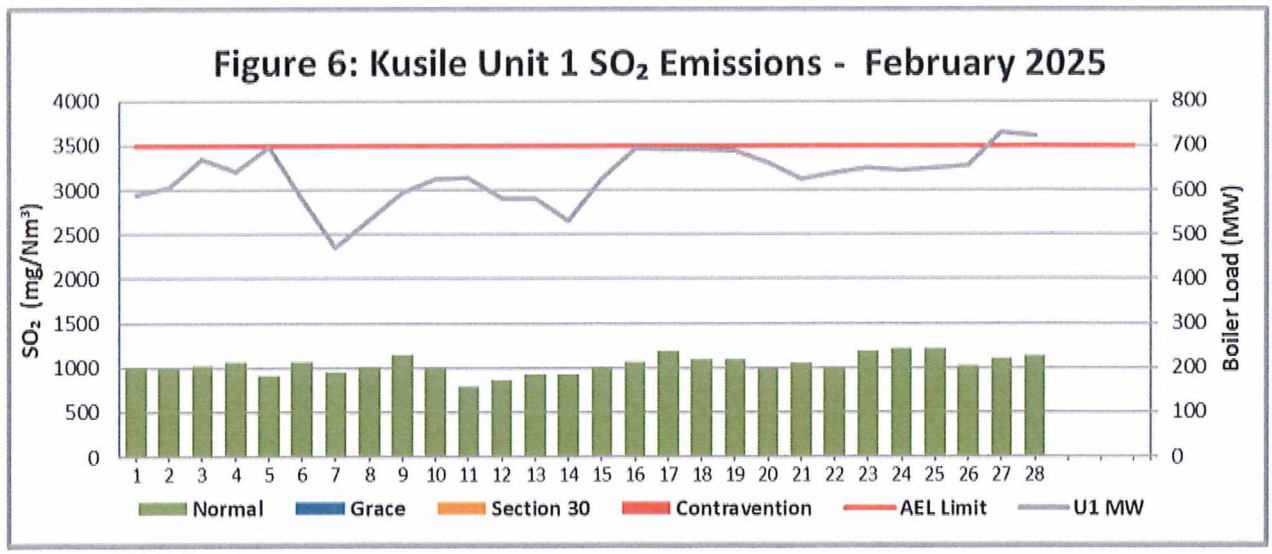


Figure 6: Kusile Unit 1 SO₂ Emissions - February 2025
SO₂ (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U1 MW

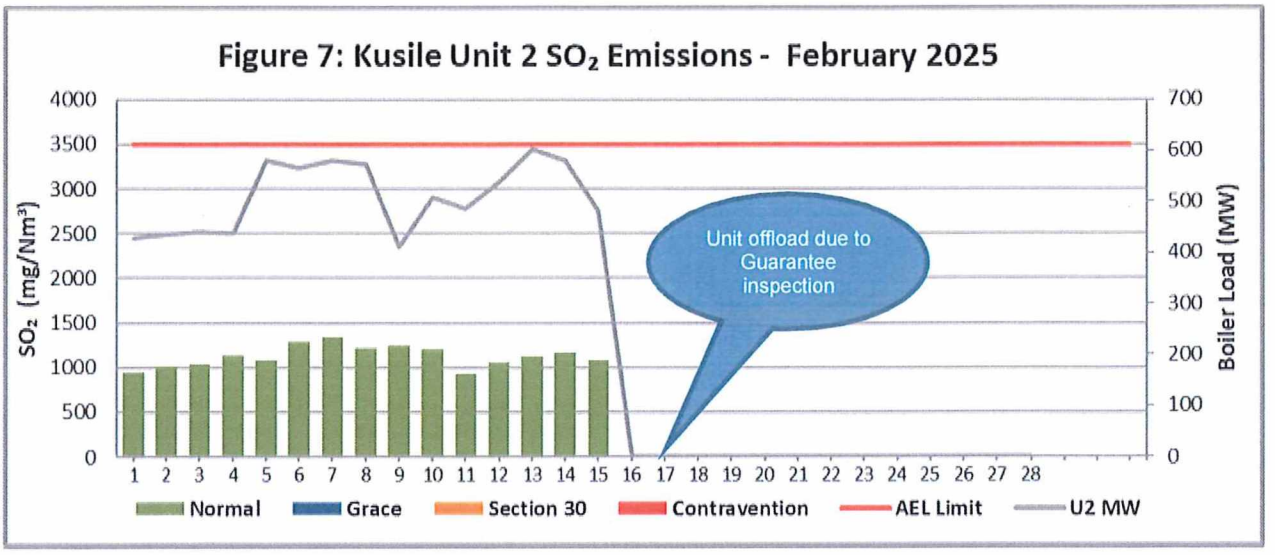


Figure 7: Kusile Unit 2 SO_2 Emissions - February 2025
SO_2 (mg/Nm³)
Boiler Load (MW)
Unit offload due to Guarantee inspection
Normal
Grace
Section 30
Contravention
AEL Limit
U2 MW

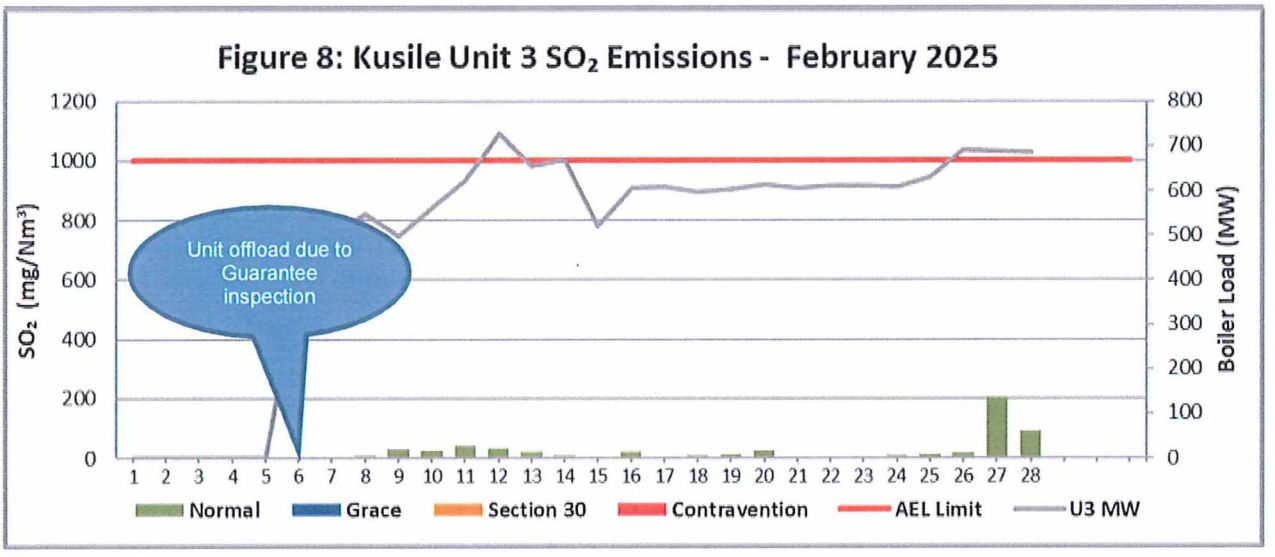


Figure 8: Kusile Unit 3 SO_2 Emissions - February 2025
SO_2 (mg/Nm³)
Boiler Load (MW)
Unit offload due to Guarantee inspection
Normal
Grace
Section 30
Contravention
AEL Limit
U3 MW

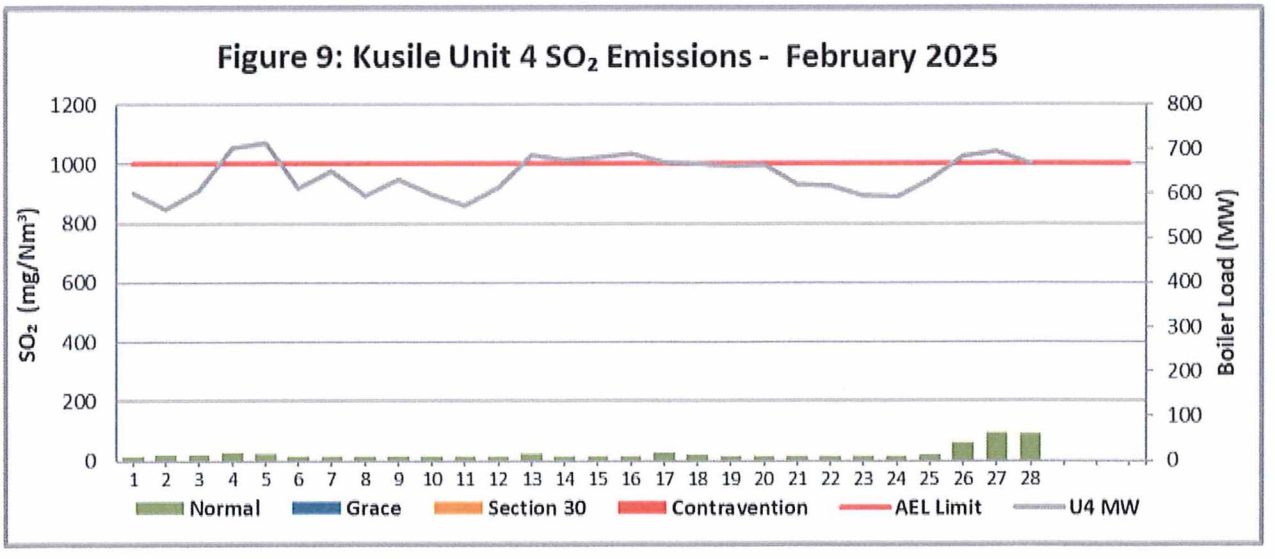


Figure 9: Kusile Unit 4 SO_2 Emissions - February 2025
SO_2 (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U4 MW

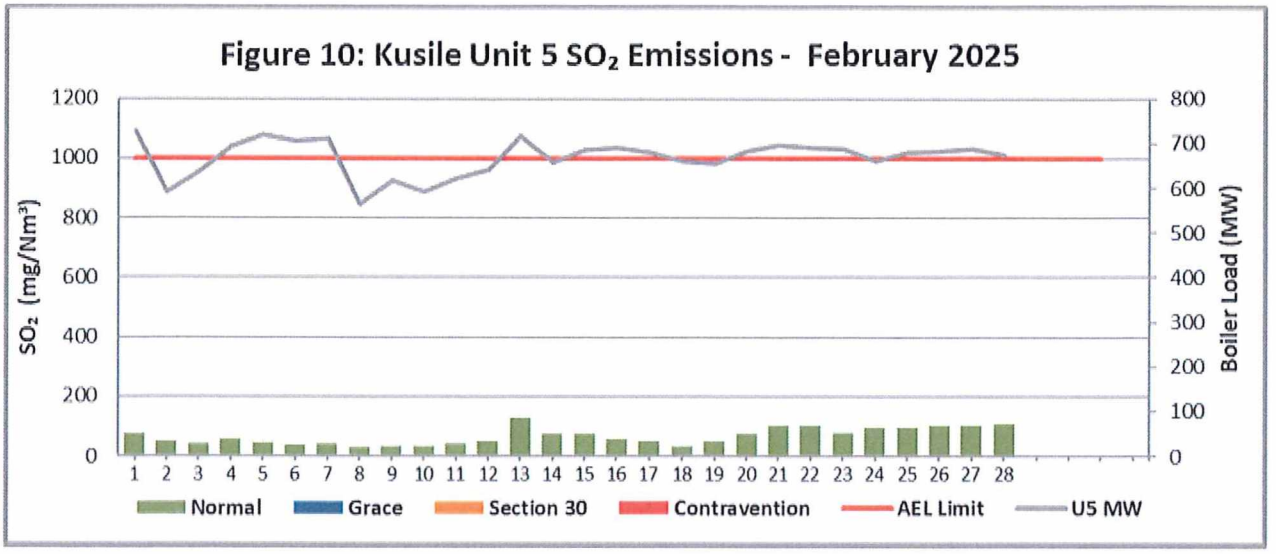


Figure 10: Kusile Unit 5 SO₂ Emissions - February 2025
SO₂ (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U5 MW

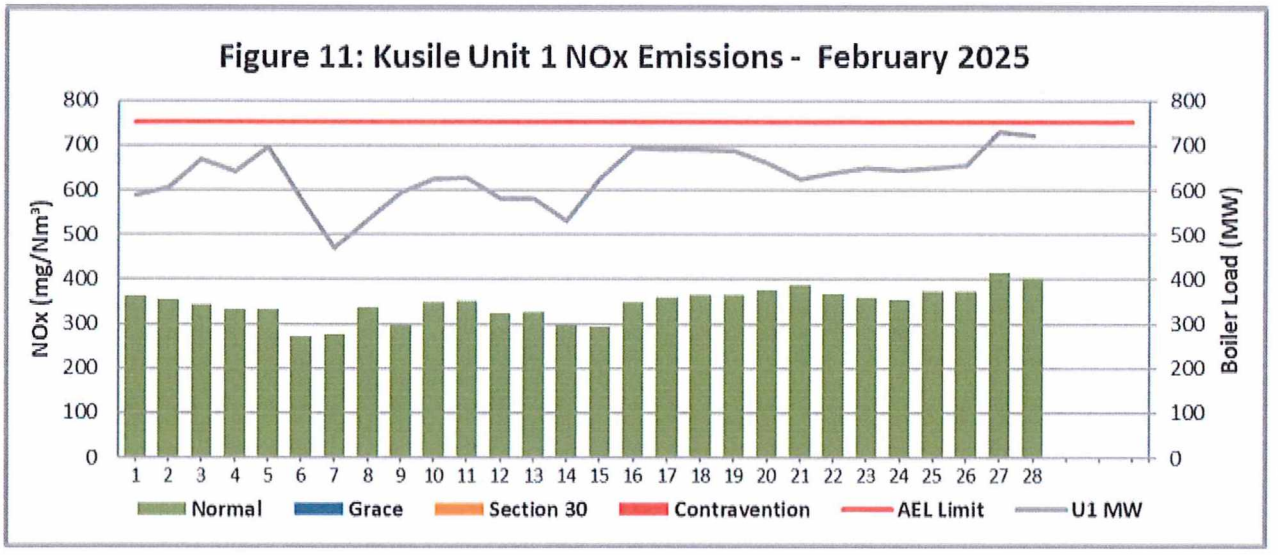


Figure 11: Kusile Unit 1 NOx Emissions - February 2025
NOx (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U1 MW

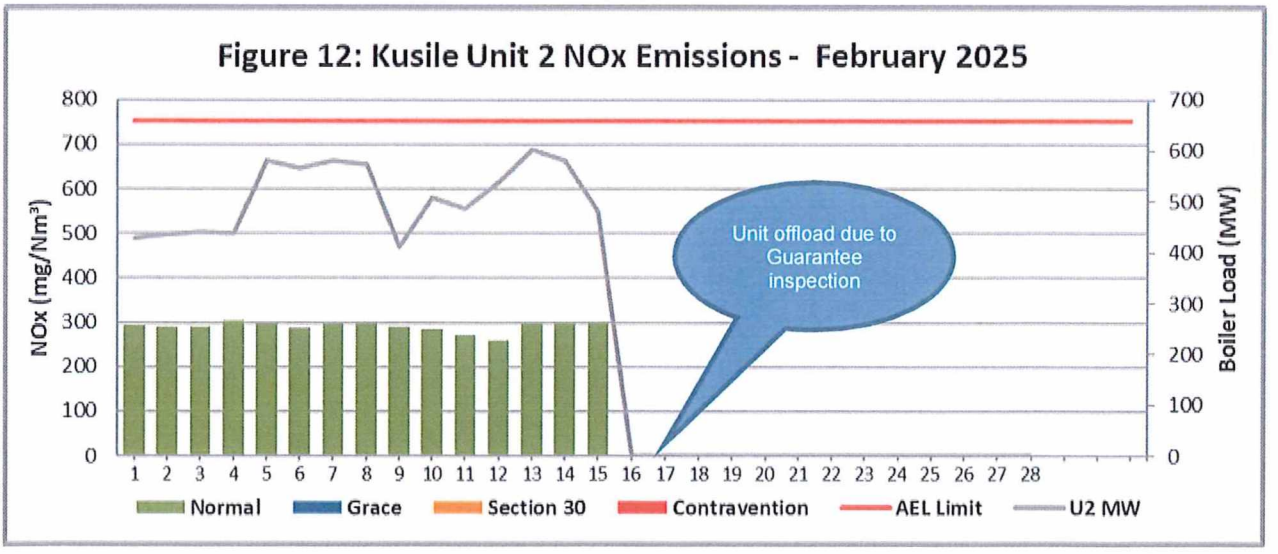


Figure 12: Kusile Unit 2 NOx Emissions - February 2025
NOx (mg/Nm³)
Boiler Load (MW)
Unit offload due to Guarantee inspection
Normal
Grace
Section 30
Contravention
AEL Limit
U2 MW

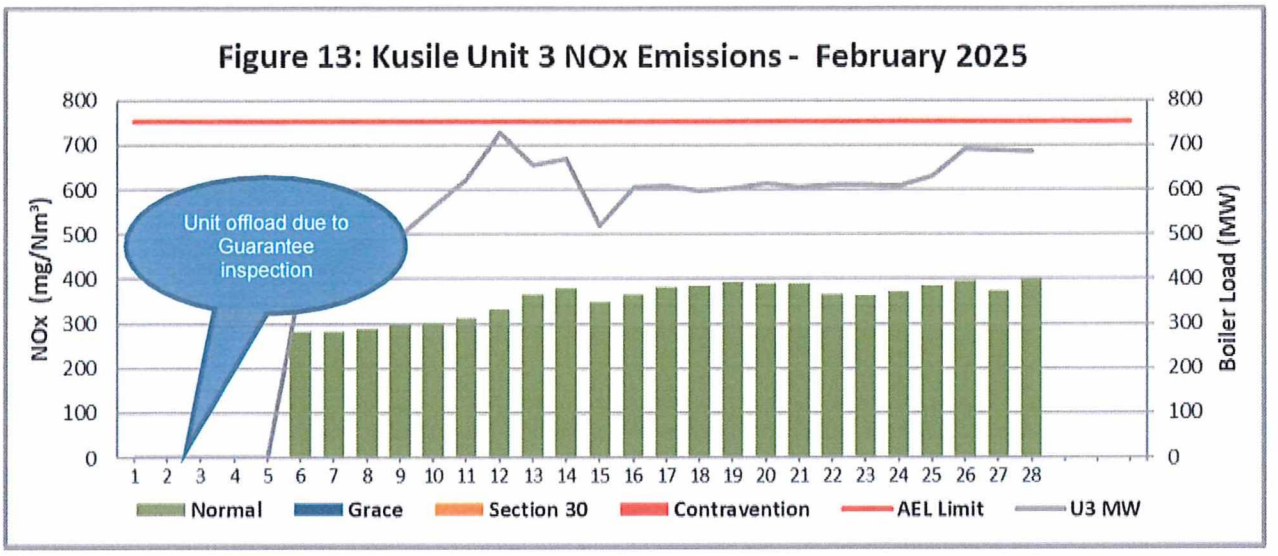


Figure 13: Kusile Unit 3 NOx Emissions - February 2025
NOx (mg/Nm³)
Boiler Load (MW)
Unit offload due to Guarantee inspection
Normal
Grace
Section 30
Contravention
AEL Limit
U3 MW

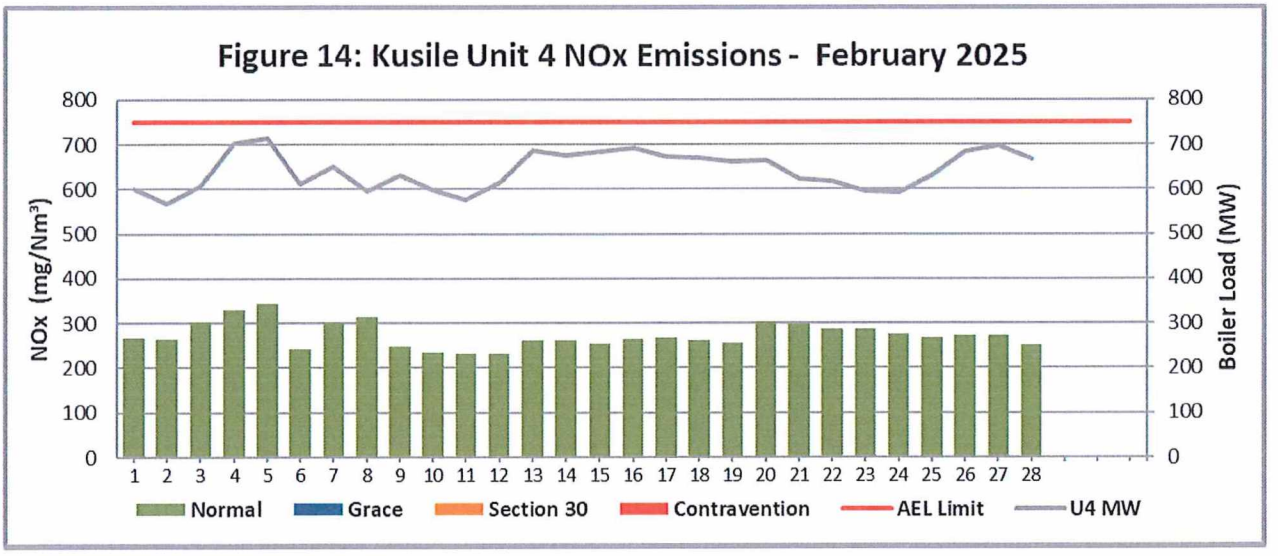


Figure 14: Kusile Unit 4 NOx Emissions - February 2025
NOx (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U4 MW

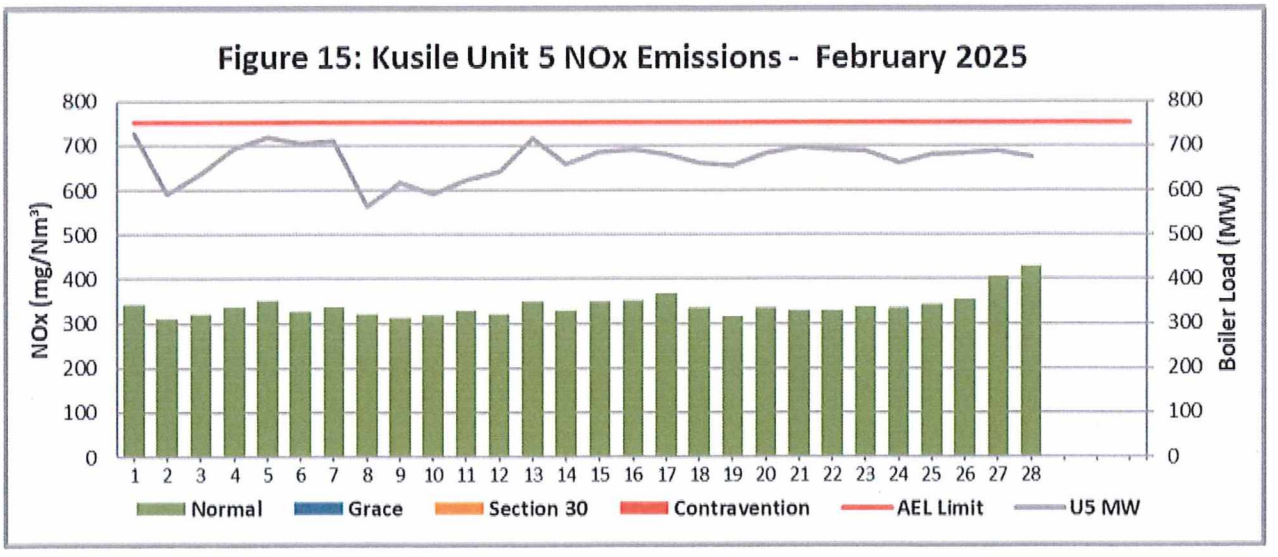


Figure 15: Kusile Unit 5 NOx Emissions - February 2025
NOx (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U5 MW

8. Correlation and Parallel test status

Unit 1:

- Unit 1 is operating with unity curve for PM. The existing particulate matter emissions correlation test curves became invalided due to the faulty monitor which was replaced. A new correlation test was conducted, however the correlation test failed. A full PM correlation test is planned for 21-26 March 2025.
- The unit is operating with a valid parallel curve.

Unit 2:

- Unit 2 is operating with valid correlation and parallel curves.

Unit 3

- Unit 3 was connected back to the main permanent stack with FGD on the 6th of February 2025 after it has been on the Guarantee Inspection outage. The full particulate matter and parallel emissions correlation tests are planned to be conducted once the unit has stabilized.

Unit 4:

- Unit 4 is operated with valid correlation and parallel curves.

Unit 5

- Unit 5 is operated with valid correlation and parallel curves.

9. Shut down and Light up information

Unit No. 1	*Event 1*		*Event 2*	
Breaker Open (BO)	4:25 pm	2025/02/04	7:30 am	2025/02/06
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	11:35 pm	2025/02/07
BO to DG SD (duration)	n/a	DD:HH:MM	01:16:05	DD:HH:MM
Fires in time			12:25 am	2025/02/08
Synch. to Grid (or BC)			9:55 am	2025/02/08
Fires in to BC (duration)		DD:HH:MM	00:09:30	DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR FEBRUARY 2025 - 17/4/AEL/MP311/12/01

Unit No. 2	*Event 1*	
Breaker Open (BO)	3:50 am	2025/02/15
Draught Group (DG) Shut Down (SD)	10:00 am	2025/02/16
BO to DG SD (duration)	01:06:10	DD:HH:MM
Fires in time		
Synch. to Grid (or BC)		
Fires in to BC (duration)		DD:HH:MM
Emissions below limit from BC (end date)		
Emissions below limit from BC (duration)		DD:HH:MM

Unit No. 3	*Event 1*		*Event 2*		*Event 3*	
Breaker Open (BO)	BO previously	BO previously	10:10 pm	2025/02/08	8:20 am	2025/02/15
Draught Group (DG) Shut Down (SD)	n/a	n/a	12:25 am	2025/02/09	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	00:02:15	DD:HH:MM	n/a	DD:HH:MM
Fires in time	9:10 pm	2025/02/06	8:50 am	2025/02/09	1:00 pm	2025/02/15
Synch. to Grid (or BC)	1:35 am	2025/02/07	4:05 pm	2025/02/09	4:50 pm	2025/02/15
Fires in to BC (duration)	00:04:25	DD:HH:MM	00:07:15	DD:HH:MM	00:03:50	DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

Unit No. 4	*Event 1*		*Event 2*		*Event 3*	
Breaker Open (BO)	2:45 am	2025/02/06	10:55 am	2025/02/11	3:25 pm	2025/02/19
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM
Fires in time	3:50 am	2025/02/06			3:25 pm	2025/02/19
Synch. to Grid (or BC)	8:45 am	2025/02/06			9:00 pm	2025/02/19
Fires in to BC (duration)	00:04:55	DD:HH:MM		DD:HH:MM	00:05:35	DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit			not > limit	not > limit
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM	n/a	DD:HH:MM

10.Complaints

No complaints reported for the month of February 2025.

Date and time complaint was received	Complaint received	Source code name	Root cause analysis	Calculation of impact/emissions associated with incidents and dispersion modelling of pollutants where applicable	Measures implemented or to be implemented to prevent recurrence	Date by which measures will be implemented
No complaints reported for the month of February 2025.						

Ms Nompumelelo Simelane
Nkangala District Municipality
PO Box 437
Middleburg
1050

Date:

April 2025

Enquiries: Lesiba Kgobe
Tel: +27 13 699 7817

Ref: *Kusile Power Station AEL (17/4/AEL/MP311/12/01)*

Dear Ms. Simelane

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR MARCH 2025

This serves as the monthly report required in terms of Section 7.6 in Kusile Power Station's Atmospheric Emission License: 17/4/AEL/MP311/12/01. The emissions are for the month of March 2025.

Hoping the above will meet your satisfaction.

Yours sincerely,

Christopher Nani
GENERAL MANAGER
DATE: 30/04/2025

Generation Division – Coal New Build Unit
Management Department (Kusile Power Station)
R545 Kendal/Balmoral Road, Haartebeesfontein Farm, Witbank
Postnet Suite 283 Private Bag X 7297 Witbank 1035 SA
Tel+27 13 693 4320 Fax +27 86 768 3030 www.eskom.co.za

1. KUSILE POWER STATION MONTHLY EMISSIONS REPORT: Atmospheric Emission License 17/4/AEL/MP311/12/01

2. Raw Materials and Products

Raw Materials and Products	**Raw Material Type**	**Units**	**Max Permitted Consumption Rate**	**Consumption Rate Mar-2025**
	Coal	Tons	*1 818 083*	*896 361*
	Fuel Oil	Tons	*5 533*	*2007.20*
	Limestone	Tons	*72 017*	*23226*
Production Rates	**Product / By-Product Name**	**Units**	**Max Production Capacity Permitted**	**Indicative Production Rate Mar-2025**
	Energy	GWh	*3 321.216*	*1 566.35*
	Ash	Tons	*796 300*	*264 068.06*
	Gypsum	Tons	*155 100*	*13 006.56*
	RE PM	kg/MWh	*not specified*	*0.01*
	RE SOx	kg/MWh	*not specified*	*1.83*

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: [4 464 MW] x 24 hrs x days in Month/1000 to convert to GWh

3. Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal Sulphur	%	*1.3*	*0.84*
Ash in Coal	%	*38*	*29.46*
Fuel Oil Sulphur	%	*3.5*	*2.85*

4. Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO_2	NOx
Unit 1	*50*	*3500*	*750*
Unit 2	*50*	*1000*	*750*
Unit 3	*50*	*1000*	*750*
South Stack	*50*	*1000*	*750*

5. Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Mar-2025	Technology Type	Efficiency Mar-2025
Unit 1	*FFP*	*99.99%*	*FGD*	*Out of service*
Unit 2	*FFP*	*Off*	*FGD*	*Out of service*
Unit 3	*FFP*	*99.99%*	*FGD*	*99.96%*
Unit 4	*FFP*	*99.99%*	*FGD*	*99.95%*
Unit 5	*FFP*	*99.96%*	*FGD*	*99.78%*

Note: Both the FFP and FGD does not have bypass mode operation, hence plant 100% Utilised.

6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*100.0*	*100.0*	*100.0*
Unit 2	*Off*	*Off*	*Off*
Unit 3	*100.0*	*100.0*	*100.0*
Unit 4	*100.0*	*99.7*	*100.0*
Unit 5	*100.0*	*99.7*	*99.9*

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of Mar - 2025

Associated Unit/Stack	PM	SO_2	NO_x
Unit 1	5.9	2 424	798
Unit 2	Off	Off	Off
Unit 3	5.6	124	599
Unit 4	1.1	178	683
Unit 5	6.5	162	819
SUM	19.1	2 870	2 900

Table 7.2: Operating days in compliance to PM AEL Limit – March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	27	0	0	0	0	3.5
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	23	0	0	0	0	3.8
Unit 4	31	0	0	0	0	0.4
Unit 5	31	0	0	0	0	3.6
SUM	**112**	**0**	**0**	**0**	**0**	

Table 7.3: Operating days in compliance to SO_2 AEL Limit - March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	30	0	0	0	0	1 177.9
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	25	0	0	0	0	60.9
Unit 4	31	0	0	0	0	65.7
Unit 5	31	0	0	0	0	75.9
SUM	**117**	**0**	**0**	**0**	**0**	

Table 7.4: Operating days in compliance to NOx AEL Limit – March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	30	0	0	0	0	384.0
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	25	0	0	0	0	359.1
Unit 4	31	0	0	0	0	252.8
Unit 5	31	0	0	0	0	386.4
SUM	**117**	**0**	**0**	**0**	**0**	

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO_2

Table 7.5: Legend Description

Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions

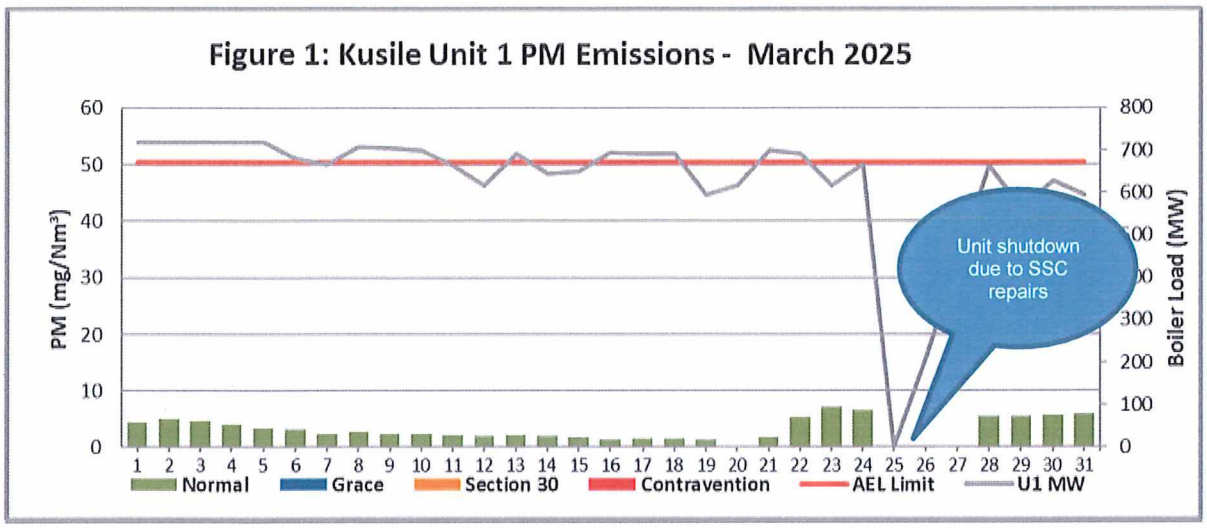


Figure 1: Kusile Unit 1 PM Emissions - March 2025
PM (mg/Nm³)
Boiler Load (MW)
Unit shutdown due to SSC repairs
Normal
Grace
Section 30
Contravention
AEL Limit
U1 MW

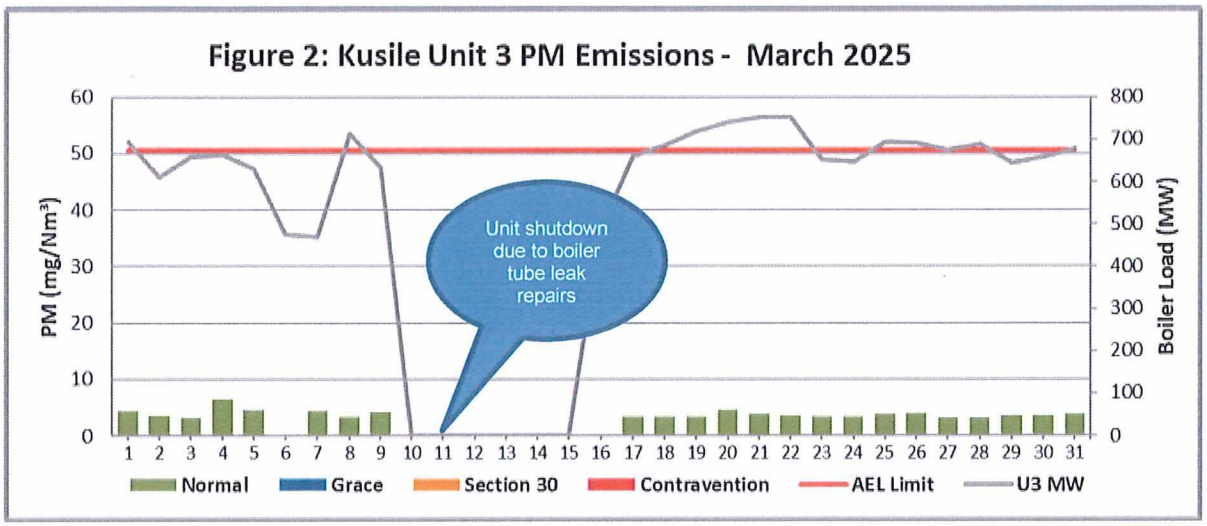


Figure 2: Kusile Unit 3 PM Emissions - March 2025
PM (mg/Nm³)
Boiler Load (MW)
Unit shutdown due to boiler tube leak repairs
Normal
Grace
Section 30
Contravention
AEL Limit
U3 MW

Figure 3: Kusile Unit 4 PM Emissions - March 2025

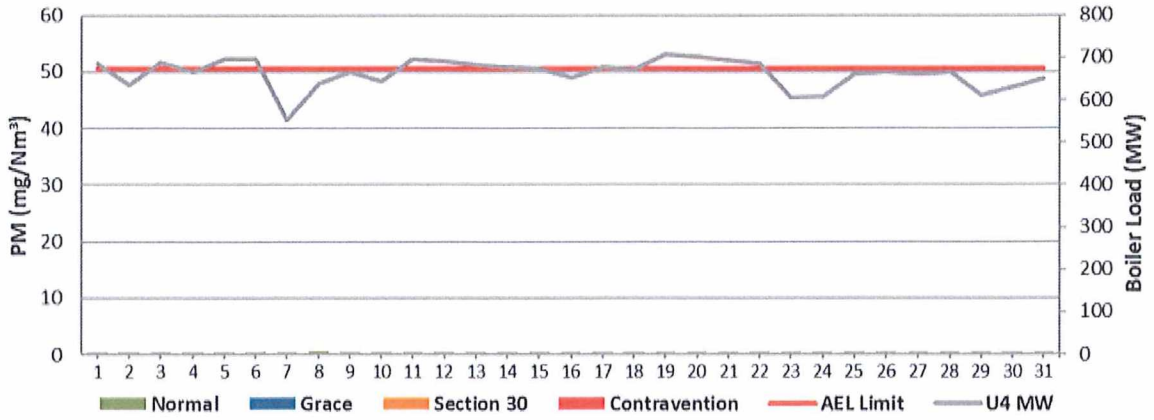


Figure 4: Kusile Unit 5 PM Emissions - March 2025

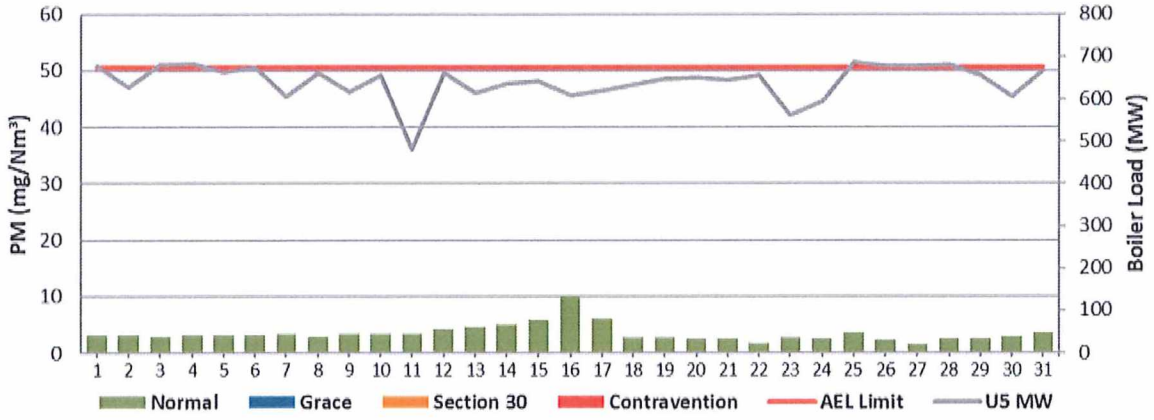


Figure 5: Kusile Unit 1 SO_2 Emissions - March 2025

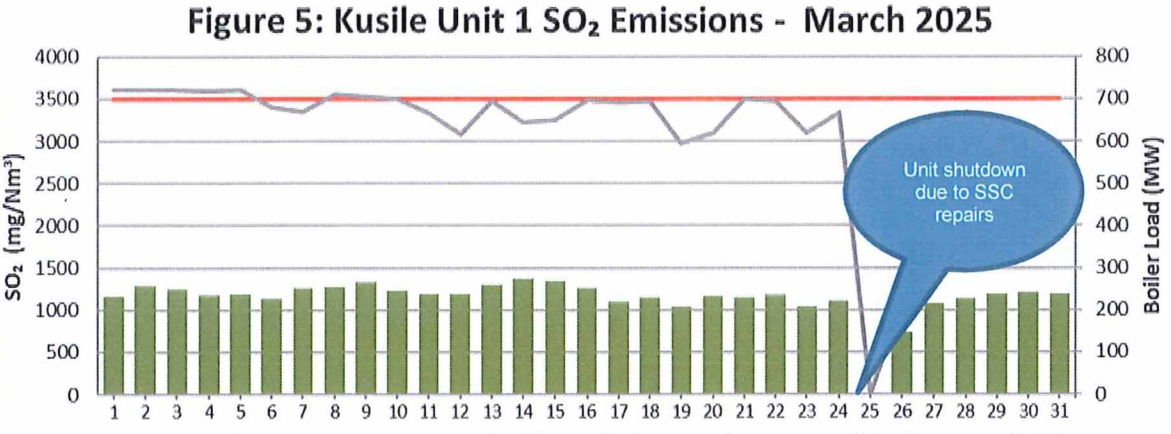


Figure 6: Kusile Unit 3 SO_2 Emissions - March 2025

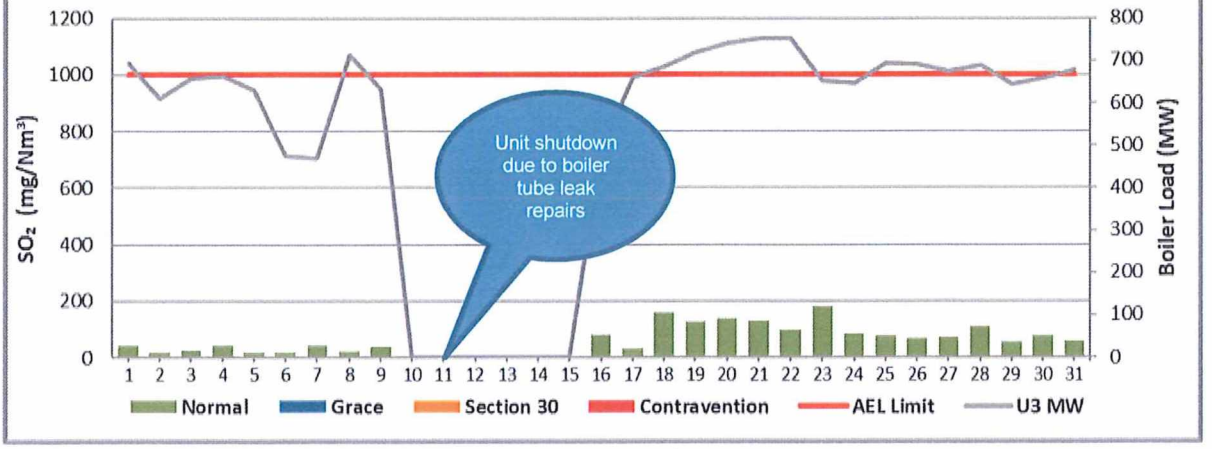


Figure 7: Kusile Unit 4 SO_2 Emissions - March 2025

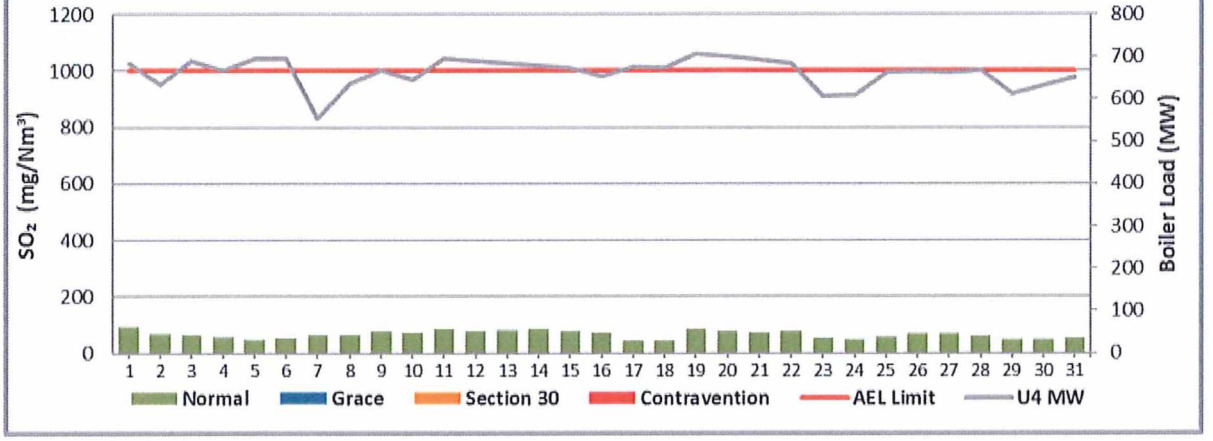
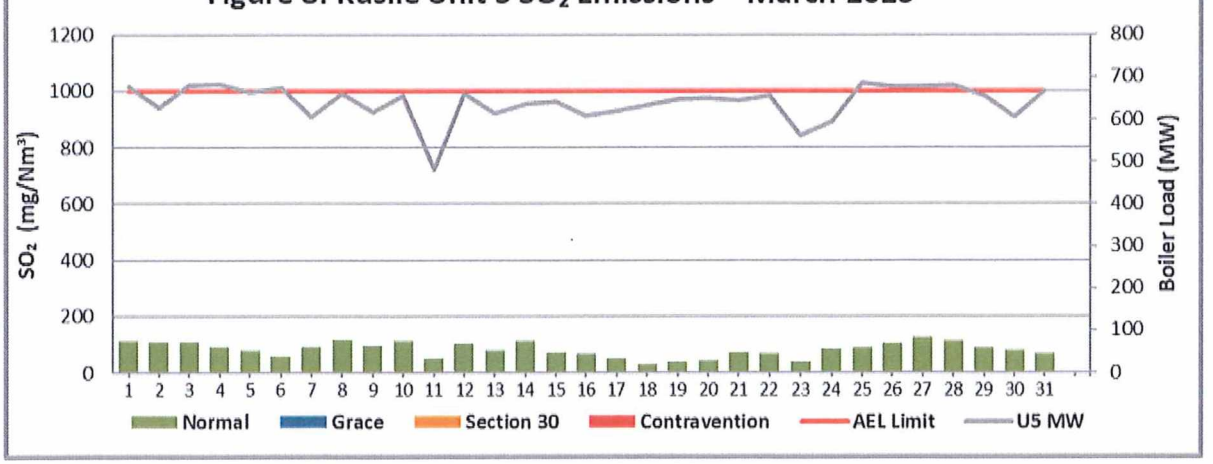


Figure 8: Kusile Unit 5 SO_2 Emissions - March 2025



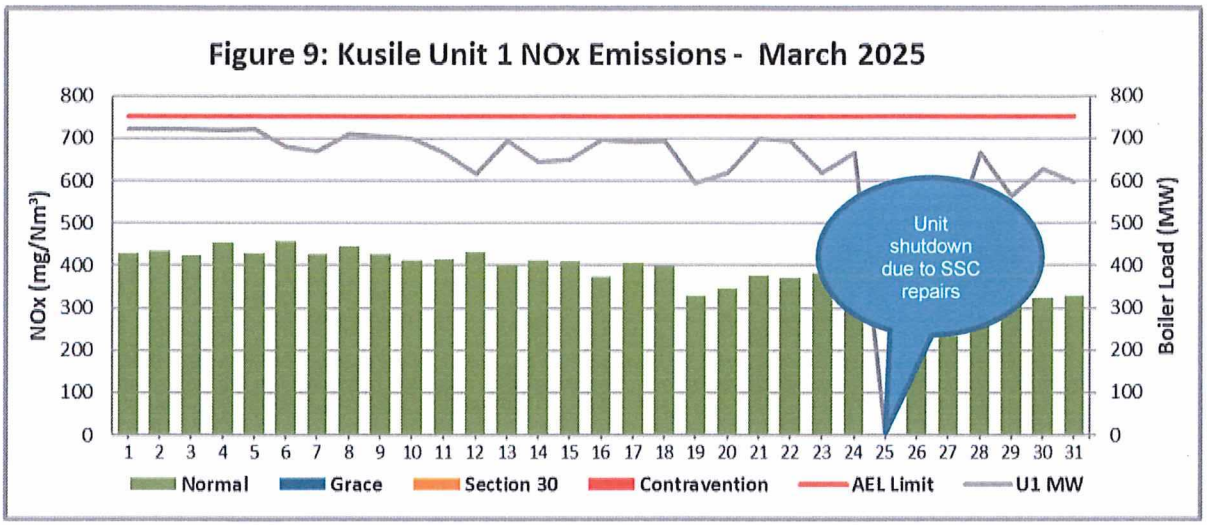


Figure 9: Kusile Unit 1 NOx Emissions - March 2025
NOx (mg/Nm³)
Boiler Load (MW)
Unit shutdown due to SSC repairs
Normal
Grace
Section 30
Contravention
AEL Limit
U1 MW

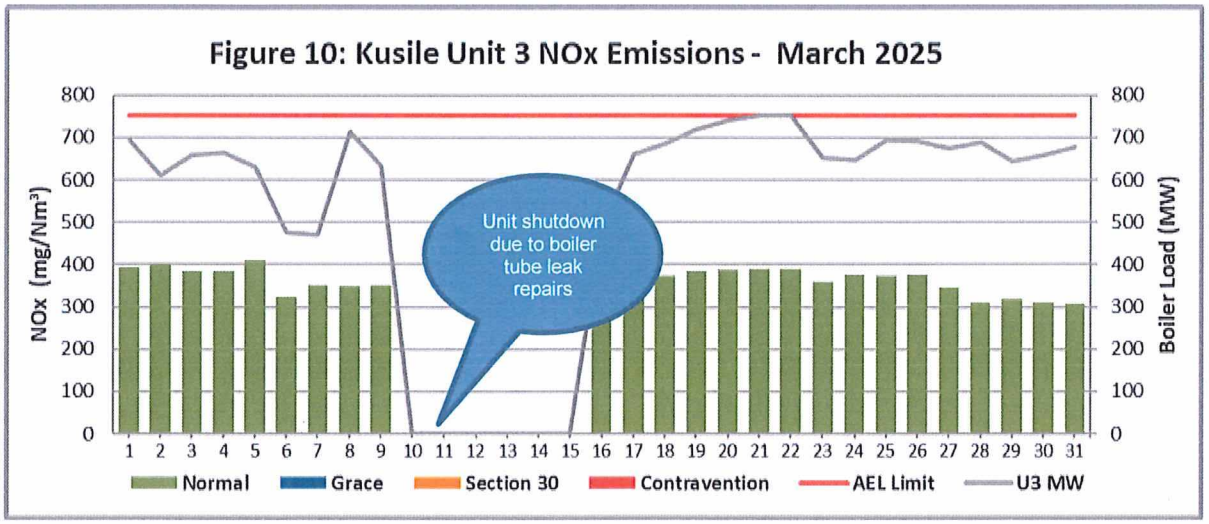


Figure 10: Kusile Unit 3 NOx Emissions - March 2025
NOx (mg/Nm³)
Boiler Load (MW)
Unit shutdown due to boiler tube leak repairs
Normal
Grace
Section 30
Contravention
AEL Limit
U3 MW

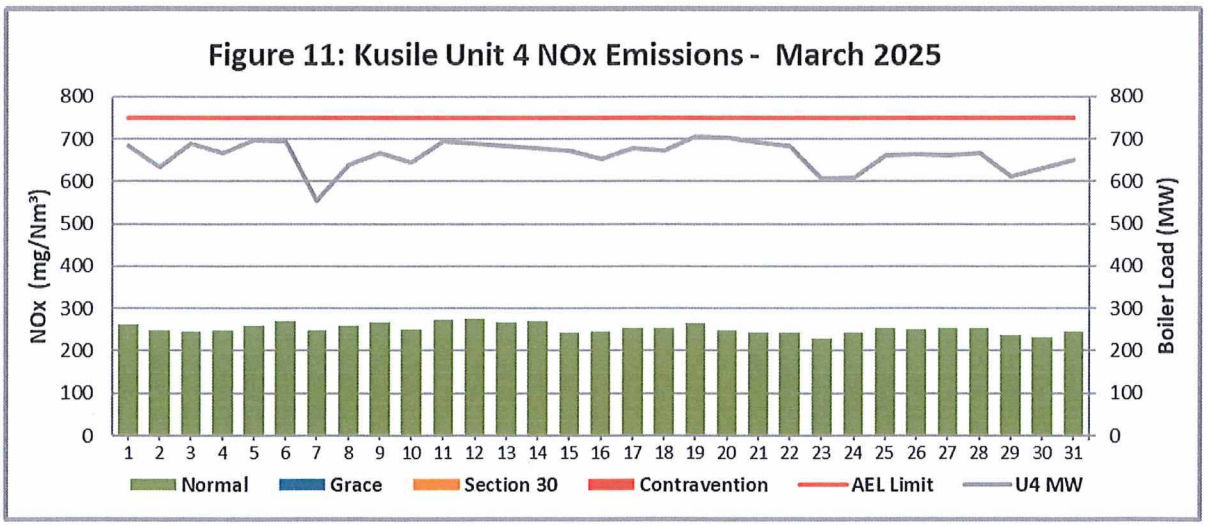
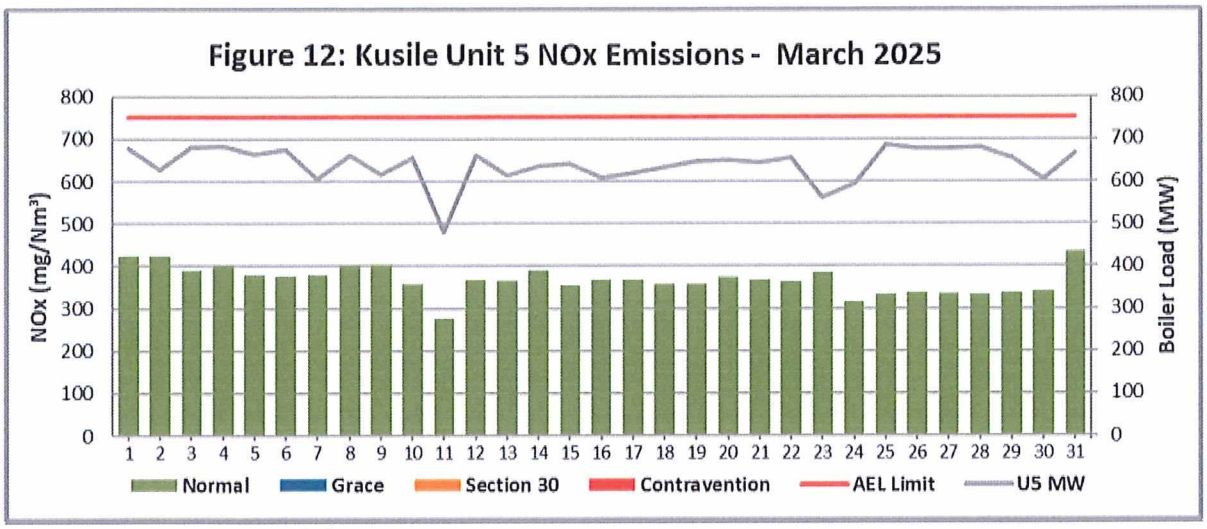


Figure 11: Kusile Unit 4 NOx Emissions - March 2025
NOx (mg/Nm³)
Boiler Load (MW)
Normal
Grace
Section 30
Contravention
AEL Limit
U4 MW



8. Correlation and Parallel test status

Unit 1:

- Unit 1 is operating with unity curve for PM. The existing particulate matter emissions correlation test curves became invalided due to the faulty monitor which was replaced. A new correlation test was conducted, however the correlation test failed. A full PM correlation test completed on the 24th of March 2025.Awaiting report from services provider

- The unit operated with valid parallel factors for gaseous emissions.

- Unit was shut down on 31 March 2025 for Inspection (IN) outage and to connect the unit to the main stack with FGD.

Unit 2:

- The unit was offload in the month of March 2025 due to Guarantee Inspection (GI) outage and to connect the unit to the main stack with FGD.

Unit 3

- The unit is operating with unity curves for particulate matter and gaseous emissions. The full PM emissions correlation test was completed on the 8th of April 2025. The station is waiting for the report from service provider. The gaseous emissions parallel test is planned to be conducted

Unit 4:

- Unit 4 is operating with valid correlation curves and parallel factors.

Unit 5

- Unit 5 is operating with valid correlation curves and parallel factors.

9. Shut down and Light up information

Unit No. 1	*Event 1*		*Event 2*		*Event 3*		*Event 4*	
Breaker Open (BO)	3:25 am	2025/03/19	1:30 pm	2025/03/24	6:25 am	2025/03/29	9:30 pm	2025/03/31
Draught Group (DG) Shut Down (SD)	3:30 am	2025/03/19	8:35 am	2025/03/25	DG did not trip or SD	DG did not trip or SD	9:30 am	2025/04/01
BO to DG SD (duration)	00:00:05	DD:HH:MM	00:19:05	DD:HH:MM	n/a	DD:HH:MM	01:09:30	DD:HH:MM
Fires in time	4:15 am	2025/03/19	1:40 pm	2025/03/26				
Synch. to Grid (or BC)	12:35 am	2025/03/20	4:05 pm	2025/03/27				
Fires in to BC (duration)	00:20:20	DD:HH:MM	01:02:25	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit				
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No. 3	*Event 1*		*Event 2*		*Event 3*	
Breaker Open (BO)	10:10 pm	2025/03/05	7:10 pm	2025/03/09	9:00 am	2025/03/23
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	4:15 pm	2025/03/10	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	00:21:05	DD:HH:MM	n/a	DD:HH:MM
Fires in time			10:05 pm	2025/03/15		
Synch. to Grid (or BC)			9:00 am	2025/03/16		
Fires in to BC (duration)		DD:HH:MM	00:10:55	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit		
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM

Unit No. 4	*Event 1*	
Breaker Open (BO)	10:30 am	2025/03/07
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM
Fires in time		
Synch. to Grid (or BC)		
Fires in to BC (duration)		DD:HH:MM
Emissions below limit from BC (end date)		
Emissions below limit from BC (duration)		DD:HH:MM

Unit No. 5	*Event 1*		*Event 2*		*Event 3*		*Event 4*		*Event 5*	
Breaker Open (BO)	11:00 am	2025/03/07	2:15 am	2025/03/11	12:35 am	2025/03/22	10:30 pm	2025/03/26	8:25 pm	2025/03/30
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	2:25 am	2025/03/11	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	00:00:10	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM
Fires in time			3:10 am	2025/03/11						
Synch. to Grid (or BC)			12:50 pm	2025/03/11						
Fires in to BC (duration)		DD:HH:MM	00:09:40	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit						
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

10.Complaints

No complaints reported for the month of March 2025.

Date and time complaint was received	**Complaint received**	**Source code name**	**Root cause analysis**	**Calculation of impact/emissions associated with incidents and dispersion modelling of pollutants where applicable**	**Measures implemented or to be implemented to prevent recurrence**	**Date by which measures will be implemented**
No complaints reported for the month of March 2025.						

Kusile Ambient Air Quality Monitoring

FEBRUARY 2025

1. INTRODUCTION

At the request of Generation Environmental Management, Research, Testing and Development Department (RT&D) air quality team initiated an additional ambient air quality monitoring site at Balmoral and Wilge, in the vicinity of Kusile power station. The objective is to assess compliance with national ambient air quality standards, identify potential sources of pollution, protect public health and the environment and establish a baseline for future mitigation measures to enable Eskom to operate temporary stacks without the flue gas desulphurisation (FGD) and comply with a minimum emission standards (MES) postponement in respect of Kusile's SO_2 levels issued by the DFFE on 5 June 2023. Both the MES postponement approval and the atmospheric emission license (AEL) allow Eskom to operate the temporary stacks without FGD. The existing air quality monitoring station (Phola) will complement the additional monitoring stations to reduce uncertainties, as each monitoring station has an objective linked to a power station of interest.

The commissioning of Ogies air quality monitoring station has been completed on the 25 February 2025 by Research, Testing and Development. The monitoring stations is equipped to continuously monitor ambient concentrations of sulphur dioxide (SO_2). In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others are also recorded. The reporting of the station data will commence from the March 2025 report.

The Balmoral and Wilge monitoring stations are currently equipped to continuously monitor ambient concentrations of sulphur dioxide (SO_2) Ozone (O_3) and nitrogen dioxide (NO_2). In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others are also recorded.

The data for this reporting period (01 – 28 February 2025) were analysed for ambient SO_2 and NO_2 and O_3 as monitored at Balmoral, Phola and Wilge air quality monitoring stations. The Particulate Matter (PM_{10} and $PM_{2.5}$) data were further analysed for Phola. RT&D has currently stopped monitoring at Chicken farm and relocated the monitoring hut to Ogies Kombineerde school.

This report focuses on the results of the ambient air quality monitoring stations; results from stack monitoring, fugitive dust and animal health are addressed in other reports.

2. DATA ACQUISITION AND QUALITY CONTROL

Each monitoring station is visited every two weeks by trained technicians for routine service. Zero and span checks are carried out on each analyser during routine services and any discrepancies are logged and used during data verification at Eskom RT&D Sustainability Department.

Full dynamic calibration audits are carried out on the gas analysers (SO_2, NO_2 and O_3 analysers) quarterly and particulate matter analysers are calibrated every six months. All calibration results and certificates are filed in the laboratory for assessment purposes. Inter-laboratory calibrations are routinely carried out with other accredited laboratories, to enhance quality control.

Data at the monitoring stations are logged directly using dedicated CR-1000 Campbell Scientific data loggers. Permanent data records of all calculated 10-minutes mean values of all parameters monitored, together with minimum and maximum values, are stored on the logging device. These are derived from 10-second scans and are also logged and saved in 1-

minute intervals. The raw 1-minute average data is also transferred live to the South African Ambient Air Quality Information System (SAAQIS) server since the 14th of December 2023 daily. In the event that the data is not available on the SAAQIS portal the stakeholders are advised to contact Eskom air quality monitoring team at RT&D. Recorded data are downloaded remotely from the site through communicators that are connected to the Eskom network and transferred onto a central computer for verification and validation.

3. MONITORING STATION LOCATIONS

Figure 1 below indicates the locations of the air quality monitoring stations in relation to the Kusile power station. The new monitoring stations, Balmoral and Wilge, are denoted by green icons and the pre-existing monitoring stations and Phola, by yellow icons.

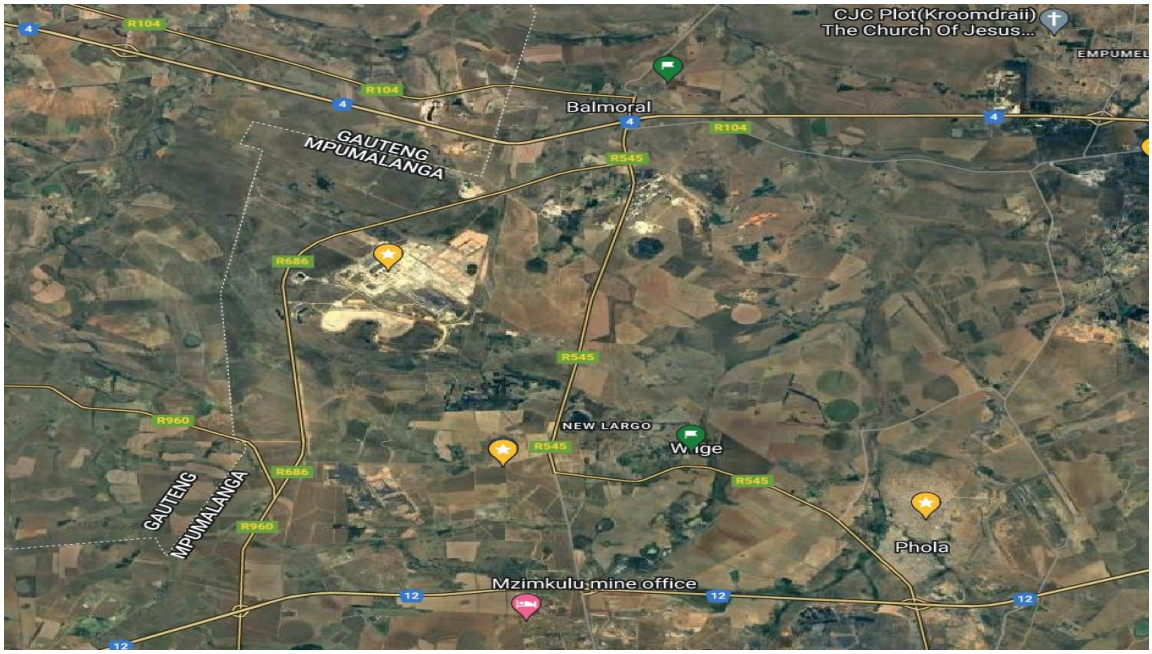


Figure 1: Air Quality Monitoring stations in relation to Kusile power station

4. MONITORING RESULTS AND DISCUSSIONS

The data is statistically analysed to assess the diurnal and monthly variations of the air pollutants, as well as to evaluate it against the current national ambient air quality standards for SO_2, NO_2, O_3, $PM_{2.5}$ and PM_{10}.

4.1. DATA RECOVERY

The SANAS guideline figure of 90% data availability per parameter monitored is used as a standard for representative data capture. This describes the required completeness of data set for the reporting of averages and is based on standard arithmetic calculations. The completeness calculations for data sets exclude zero and span data and times where service and/or maintenance is being conducted on the instruments in question. Station availability is reported as a measure of the percentage of time that electrical power was available to the monitoring station.

Table 1: Percentage data recovery per parameter monitored in February 2025

Stations name	SO_2	NO_2	O_3	$PM_{2.5}$	PM_{10}	WSP	WDR	Station Availability
Balmoral (BL)	96.3	96.3	NM	NM	NM	98.7	98.7	96.7
Phola (PO)	94.0	85.4	83.2	23.7	48.7	95.8	95.8	94.3
Wilge (WL)	12.6	95.1	0	NM	NM	99.9	99.9	99.9

NM – not monitored.

Good representative percentage data was recovered for most of parameters monitored during the monitoring period under review at the other monitoring stations, however Wilge recorded low data for SO_2 and O_3 due to instrument failures. Both SO_2 and O_3 instruments have been removed and taken to the laboratory for repairs. Phola recorded low data for PM_{10} due to pump failure, however the $PM_{2.5}$ has been repaired and taken back to the site.

4.2. METEOROLOGICAL OBSERVATIONS

The distributions of wind direction and wind speed for daytime and night-time hours for the reporting period are summarised on polar diagrams. The centre of the wind rose depicts the position of the air quality monitoring site. The positions of the spokes in the polar diagram represent directions from which the wind was blowing. The length of the segment indicates the percentage of the time the wind blew from that direction and the speed in the various categories are denoted by colours and width.

4.2.1. BALMORAL AIR QUALITY MONITORING STATION

The wind at Balmoral monitoring station was coming from the north-east, east, east-south-east and south-south-east directions during the day and from the east-south-east and south-south-east directions during the night time. The monitoring station is north-east of Kusile power station.

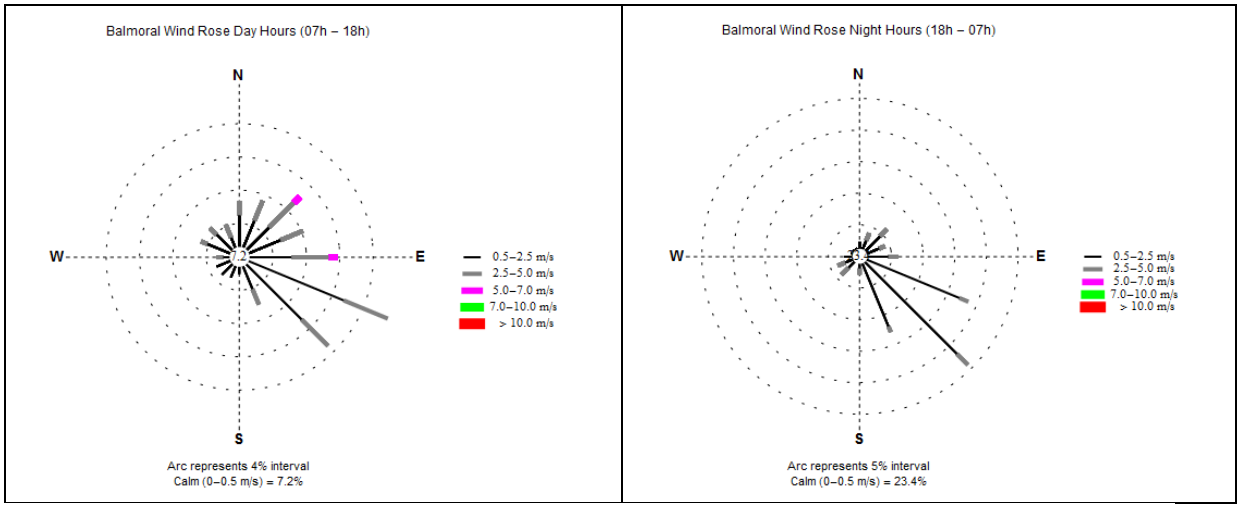


Figure 2: Wind profiles at Balmoral monitoring station

4.2.2. PHOLA AIR QUALITY MONITORING STATION

The dominant wind directions at Phola monitoring station during the day were north-east, east-north-east, east and east-south-east. During the night, the dominant wind directions were east-north-east, east and east-south-east. The monitoring station is south-east of Kusile power station.

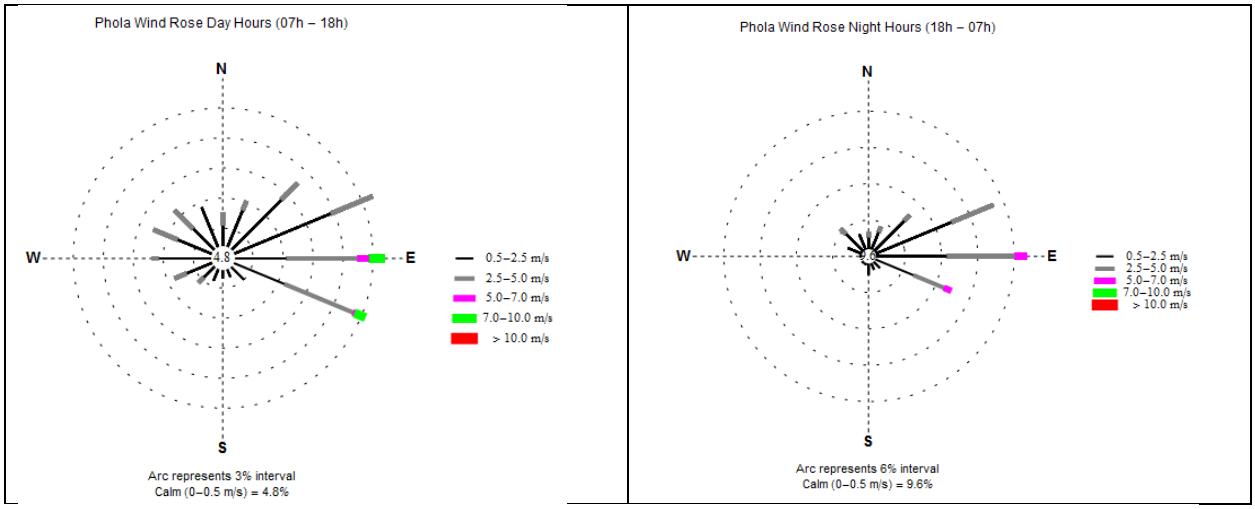


Figure 3: Wind profiles at Phola monitoring station.

4.2.3. WILGE AIR QUALITY MONITORING STATION

The wind at Wilge monitoring station was coming from the east-north-east, east to south-south-east directions during the day. The dominant wind sectors during the night are east, east-south-east and south-south-east. The monitoring station is south-east of Kusile power station.

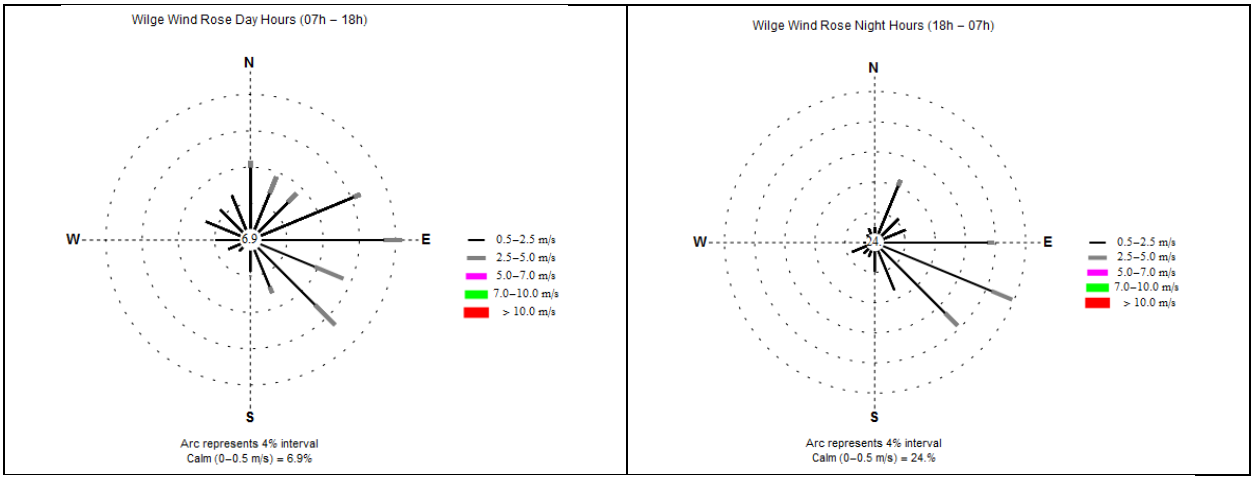


Figure 4: Wind profiles at Wilge monitoring station.

4.3. EXCEEDANCES OF THE NATIONAL AMBIENT AIR QUALITY LIMITS

Table 2: National Ambient Air Quality Standards

Pollutant	Unit	Period	Limit	Number of annual exceedances allowed	Source
Carbon Monoxide	Ppm	1hr	26.	88.	DFFE
Carbon Monoxide	Ppm	8hr	8.7	11.	DFFE
(PM_{10}) by Beta gauge	$\mu g/m^3$	24hr	75.	4.	DFFE
(PM_{10}) by Beta gauge	$\mu g/m^3$	1year	40.	0.	DFFE
($PM_{2.5}$) by Beta gauge	$\mu g/m^3$	24hr	40	4	DFFE
($PM_{2.5}$) by Beta gauge	$\mu g/m^3$	1year	20	0	DFFE
Nitrogen dioxide	Ppb	1year	21.	0.	DFFE
Nitrogen dioxide	Ppb	1hr	106.	88.	DFFE
Ozone	Ppb	8hr	61.	11.	DFFE
Sulphur dioxide	Ppb	1hr	134.	88.	DFFE
Sulphur dioxide	Ppb	10min	191.	526.	DFFE
Sulphur dioxide	Ppb	24hr	48.	4.	DFFE
Sulphur dioxide	Ppb	1year	19.	0.	DFFE

The National Department of Forestry, Fisheries and the Environment (DFFE) has set the South African Ambient Air Quality Standards for the criteria pollutants as illustrated in Table 2.

Table 3: Highest SO_2 concentration recorded (in ppb). (NAAQS in brackets)

Monitoring Stations	10-min average (191 ppb)	Date	Hourly average (134 ppb)	Date	Daily average (48 ppb)	Date
Balmoral	82.9	28/02/2025 10:30	62.7	28/02/2025 11:00	11.6	28/02/2025
Phola	76.4	28/02/2025 13:10	60.3	28/02/2025 02:00	22.2	28/02/2025
Wilge	7.1	03/02/2025 21:50	4.0	03/02/2025 10:00	2.0	01/02/2025

NM – not monitored.

There were no exceedances of SO_2 10-minutes limit of 191 ppb and SO_2 hourly limit of 134 ppb at all the monitoring station under review. The highest SO_2 concentrations recorded at the monitoring stations are indicated in Table 3 and figures 6 to 8 below.

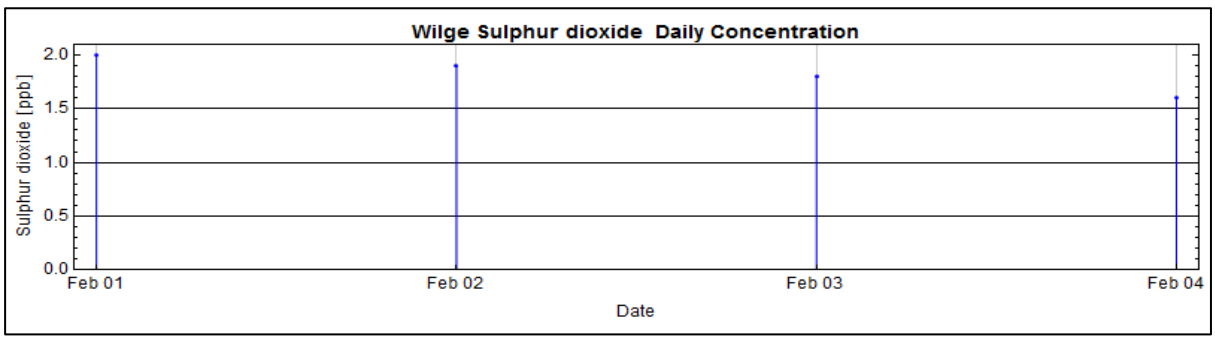


Figure 6: Time series graph for the SO_2 daily mean concentrations at Wilge AQM station (NAAQS 48 ppb)

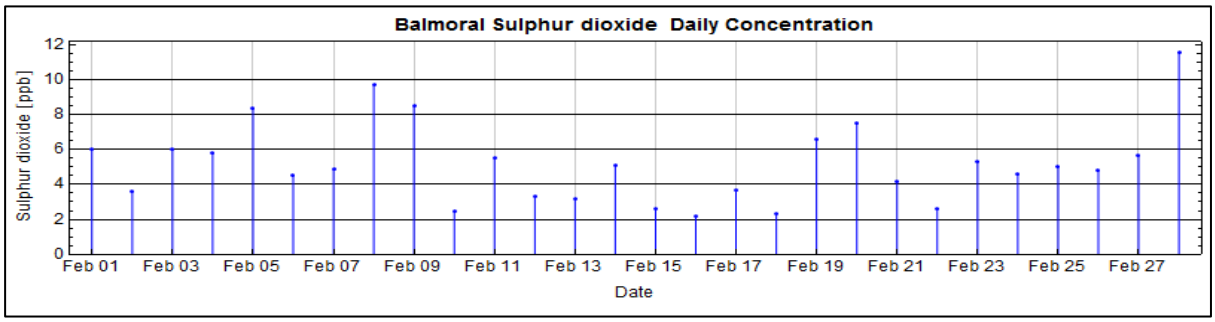


Figure 7: Time series graph for the SO_2 daily mean concentrations at Balmoral AQM station (NAAQS 48 ppb)

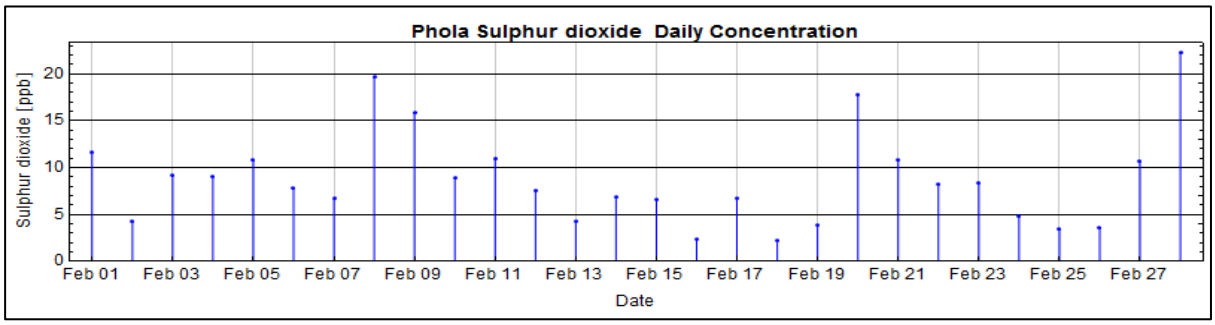


Figure 8: Time series graph for the SO_2 daily mean concentrations at Phola AQM station (NAAQS 48 ppb)

There were no exceedances of the NO_2 hourly limit of 106 ppb recorded at the monitoring stations during the February 2025 monitoring period. There were no exceedances of the $PM_{2.5}$ daily limit of 40 µg/m^3 and PM_{10} daily limit of 75 µg/m^3 at all the monitoring station under review. See Figure 09 to 10 below.

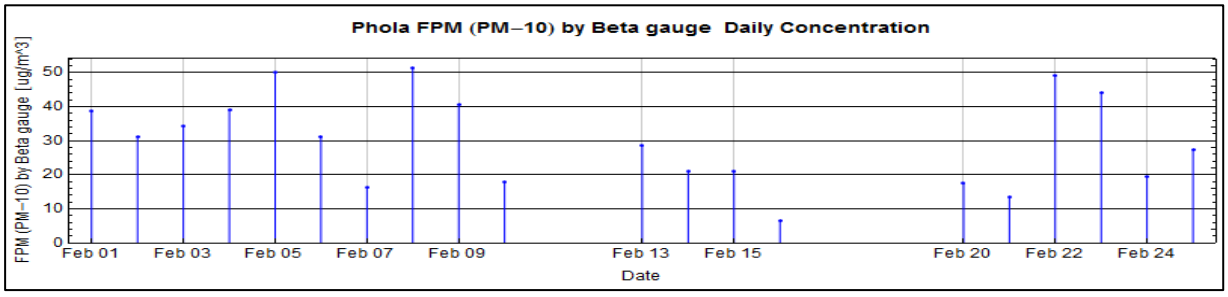


Figure 09: Time series graph for the PM_{10} daily mean concentrations at Phola AQM station (NAQS = 75 ppb)

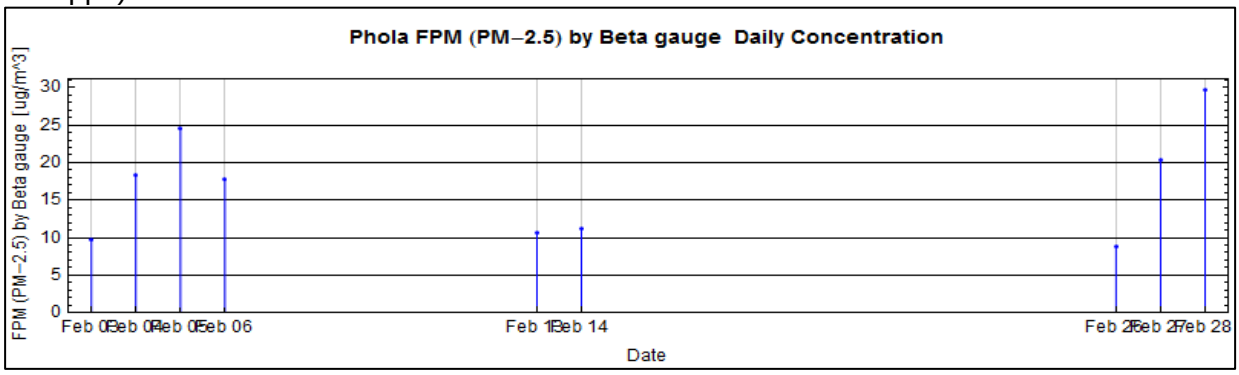


Figure 10: Time series graph for the $PM_{2.5}$ daily mean concentrations at Phola AQM station (NAAQS = 40 ppb)

Table 4: Exceedances of the NAAQ Limits per pollutant- February 2025

Averaging Period	Balmoral	Phola	Wilge
SO_2 10-min	0	0	0
SO_2 Hourly	0	0	0
SO_2 Daily	0	0	0
NO_2 Hourly	0	0	0
O_3 8-hourly	NM	16	0
$PM_{2.5}$ Daily	NM	0	NM
PM_{10} Daily	NM	0	NM

NM – not monitored.

A summary of all exceedances per pollutant for February 2025 is shown in Table 5.

SO_2 trigger levels or emergency response levels will be based on the United States Acute Exposure Guideline Levels for Hazardous Substances. (AEGL) as amended for South African circumstances. Levels confirmed with the authorities are as follows.

a. AEGL 1 – the cautionary notification level (non-disabling level) - is based on the South African NAAQS limit – for SO_2 this will be 191 ppb over 10-minute for exposure more than 4 hours.

b. AEGL 2 – the warning notification level (disabling level for those with asthma) – is aligned to the US AEGL approach – for SO_2 will be 744 ppb over a 10-minute for exposure up to 8 hours.

c. AEGL – the lethality level – for SO_2, this will be 29 771 ppb over a 10-minute period.

As indicated in the tables and figures above there were no events that triggered the notification of stakeholders in terms of the agreed AEGL recorded in February 2025.

Table 5: Number of exceedances recorded from January 2025 to February 2025

SITES	Phola	Balmoral	Wilge	Allowed No. of Exceedances (November 2023 to February 2025)
PM_{10} (Daily)	0	NM	NM	4
$PM_{2.5}$ (Daily)	0	NM	NM	4
NO_2 (hourly)	0	0	0	88
SO_2 (Hourly	0	0	0	88
SO_2 (Daily)	0	0	0	4
O_3 (8h moving)	22	NM	85	11
SO_2 (10 minute)	0	0	0	526

NM – not monitored. Exceedance of permitted rate show in red

The monitoring of particulate matter ($PM_{2.5}$) at Phola air quality monitoring was started with the temporary stack project in November 2023. No Particulate matter exceedances were recorded at Phola during the monitoring period under review.

Phola and Wilge air quality monitoring station sites are in non-compliance with O_3 8 hourly limit of 61 ppb.

5. DFFE AND SAAQIS REPORTING

The raw monitoring data, downloaded at 1-minute averages is available in real-time to the DFFE-managed South African Air Quality Information System (SAAQIS) since the 14th of December 2023 for all Eskom air quality monitoring stations daily. Data not submitted on a real time basis is provided to DFFE for inclusion in the data base for historical reporting. In the event that the data is not available on the SAAQIS portal the stakeholders are advised to contact Eskom air quality monitoring team at RT&D.

6. CONCLUSIONS

There were no exceedances of the NO_2 hourly limit of 106 ppb recorded at the monitoring stations during the February 2025 monitoring period.

There were no exceedances of SO_2 10-minutes limit of 191 ppb and SO_2 hourly limit of 134 ppb at all the monitoring station under review.

There were no exceedances of the $PM_{2.5}$ daily limit of 40 µg/m^3 and PM_{10} daily limit of 75 µg/m^3 at all the monitoring station under review.

Phola and Wilger air quality monitoring sites are in non-compliance with O_3 8 hourly limit of 61 ppb.

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AB Moatshe

Report Compiled by:
Abel Moatshe

Reviewed and Authorised by: Date of Issue: 18-March 2025

Lufuno Tshidzumba
Middle Manager Environmental Management
Research, Testing and Development (RT&D)

7. . DISTRIBUTION LIST

SUSTAINABILITY ENVIRONMENTAL Attention: Bryan McCourt	MWP
KUSILE ENVIRONMENTAL MANAGER Attention: Lesiba Kgobe	KUSILE
Online Electronic Air Quality System Project Leader: Abel Moatshe	RT&D

8. . ABBREVIATIONS

µ/m^3	Microgram per cubic meter
DEA	Department of Environmental Affairs
deg	Degree
deg C	Degree Celsius
E	East
ENE	East-north-east
ESE	East-south-east
FPM	Fine particulate matter
HUM	Humidity
m/s	Meters per second
MWP	Megawatt Park
N	North
NE	North-east
NNE	North-north-east
NNW	North-north-west
NO_1	Nitric oxide
NO_2	Nitrogen dioxide
NOX	Oxides of nitrogen
NW	North-west
O_3	Ozone
PM-10	Particulate matter < 10 microns in diameter
PM-2.5	Particulate matter < 2.5 microns in diameter
ppb	Parts per billion
ppm	Parts per million
S	South
SE	South-east
SGT	Sigma theta
SSE	South-south-east
SSW	South-south-west
SW	South-west
TMP	Ambient temperature
W	West
WDR	Wind direction from true North
WNW	West-north-west
WSP	Wind speed
WSW	West-south-west
WVL	Wind velocity

Kusile Ambient Air Quality Monitoring

MARCH 2025

1. INTRODUCTION

At the request of Generation Environmental Management, Research, Testing and Development Department (RT&D) air quality team initiated an additional ambient air quality monitoring site at Balmoral and Wilge, in the vicinity of Kusile power station. The objective is to assess compliance with national ambient air quality standards, identify potential sources of pollution, protect public health and the environment and establish a baseline for future mitigation measures to enable Eskom to operate temporary stacks without the flue gas desulphurisation (FGD) and comply with a minimum emission standards (MES) postponement in respect of Kusile's SO_2 levels issued by the DFFE on 5 June 2023. Both the MES postponement approval and the atmospheric emission license (AEL) allow Eskom to operate the temporary stacks without FGD. The existing air quality monitoring station (Phola) will complement the additional monitoring stations to reduce uncertainties, as each monitoring station has an objective linked to a power station of interest.

The commissioning of Ogies air quality monitoring station has been completed on the 25 February 2025 by Research, Testing and Development. The monitoring stations is equipped to continuously monitor ambient concentrations of sulphur dioxide (SO_2). In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others are also recorded. The reporting of the station data will commence from the April 2025 report.

The Balmoral and Wilge monitoring stations are currently equipped to continuously monitor ambient concentrations of sulphur dioxide (SO_2) Ozone (O_3) and nitrogen dioxide (NO_2). In addition, meteorological parameters of wind velocity, wind direction and ambient temperature, humidity, ambient pressure and rainfall, amongst others are also recorded.

The data for this reporting period (01 – 31 March 2025) were analysed for ambient SO_2 and NO_2 and O_3 as monitored at Balmoral, Phola and Wilge air quality monitoring stations. The Particulate Matter (PM_{10} and $PM_{2.5}$) data were further analysed for Phola. RT&D has currently stopped monitoring at Chicken farm and relocated the monitoring hut to Ogies Kombineerde school.

This report focuses on the results of the ambient air quality monitoring stations; results from stack monitoring, fugitive dust and animal health are addressed in other reports.

2. DATA ACQUISITION AND QUALITY CONTROL

Each monitoring station is visited every two weeks by trained technicians for routine service. Zero and span checks are carried out on each analyser during routine services and any discrepancies are logged and used during data verification at Eskom RT&D Sustainability Department.

Full dynamic calibration audits are carried out on the gas analysers (SO_2, NO_2 and O_3 analysers) quarterly and particulate matter analysers are calibrated every six months. All calibration results and certificates are filed in the laboratory for assessment purposes. Inter-laboratory calibrations are routinely carried out with other accredited laboratories, to enhance quality control.

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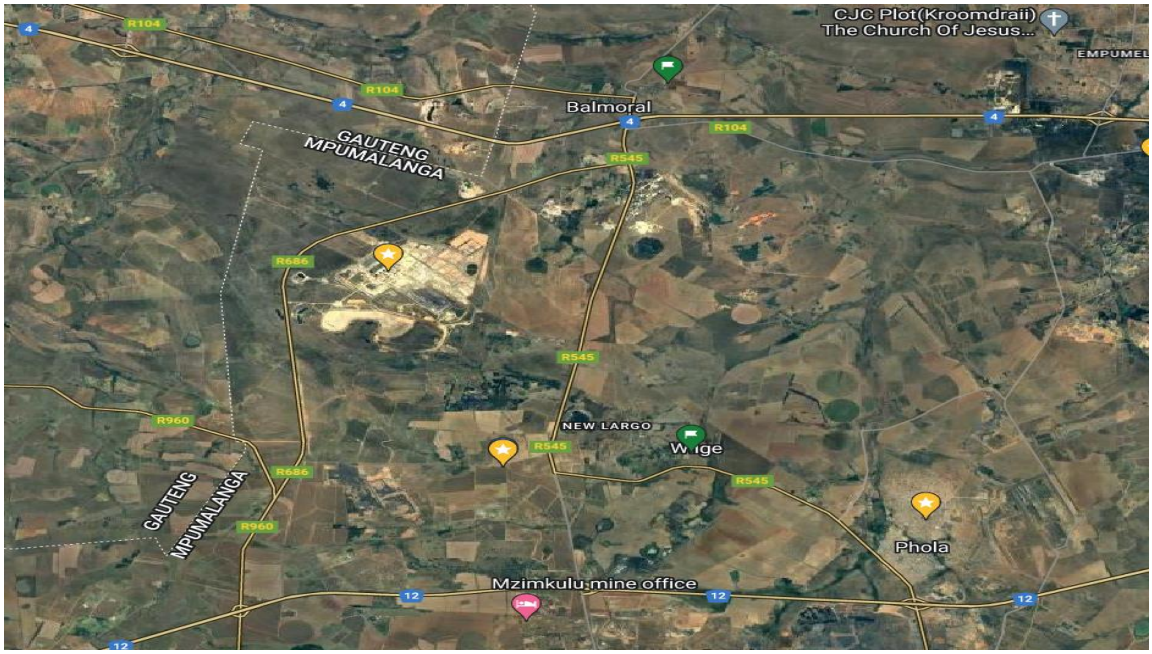


Figure 1: Air Quality Monitoring stations in relation to Kusile power station

4. MONITORING RESULTS AND DISCUSSIONS

The data is statistically analysed to assess the diurnal and monthly variations of the air pollutants, as well as to evaluate it against the current national ambient air quality standards for SO_2, NO_2, O_3, $PM_{2.5}$ and PM_{10}.

4.1. DATA RECOVERY

The SANAS guideline figure of 90% data availability per parameter monitored is used as a standard for representative data capture. This describes the required completeness of data set for the reporting of averages and is based on standard arithmetic calculations. The completeness calculations for data sets exclude zero and span data and times where service and/or maintenance is being conducted on the instruments in question. Station availability is reported as a measure of the percentage of time that electrical power was available to the monitoring station.

Table 1: Percentage data recovery per parameter monitored in March 2025

Stations name	SO_2	NO_2	O_3	$PM_{2.5}$	PM_{10}	WSP	WDR	Station Availability
Balmoral (BL)	98.3	98.1	NM	NM	NM	99.2	99.2	98.5
Phola (PO)	99.2	68.5	99.1	99.2	59.0	99.7	99.7	99.7
Wilge (WL)	40.5	99.5	88.4	NM	NM	99.9	99.7	99.9

NM – not monitored.

Good representative percentage data was recovered for most of parameters monitored during the monitoring period under review at the other monitoring stations, however Wilge recorded low data for SO_2 due to instrument failure. The SO_2 instrument has been removed and taken to the laboratory for repairs. Phola recorded low data for NO_2 due to low response and damaged pump diaphragm, however the NO_2 has been repaired and taken back to the site.

4.2. METEOROLOGICAL OBSERVATIONS

The distributions of wind direction and wind speed for daytime and night-time hours for the reporting period are summarised on polar diagrams. The centre of the wind rose depicts the position of the air quality monitoring site. The positions of the spokes in the polar diagram represent directions from which the wind was blowing. The length of the segment indicates the percentage of the time the wind blew from that direction and the speed in the various categories are denoted by colours and width.

4.2.1. BALMORAL AIR QUALITY MONITORING STATION

The wind at Balmoral monitoring station was coming from the north, north-north-east, north-east, east-south-east and south-south-east directions during the day and from the east-south-east and south-south-east directions during the night time. The monitoring station is north-east of Kusile power station.

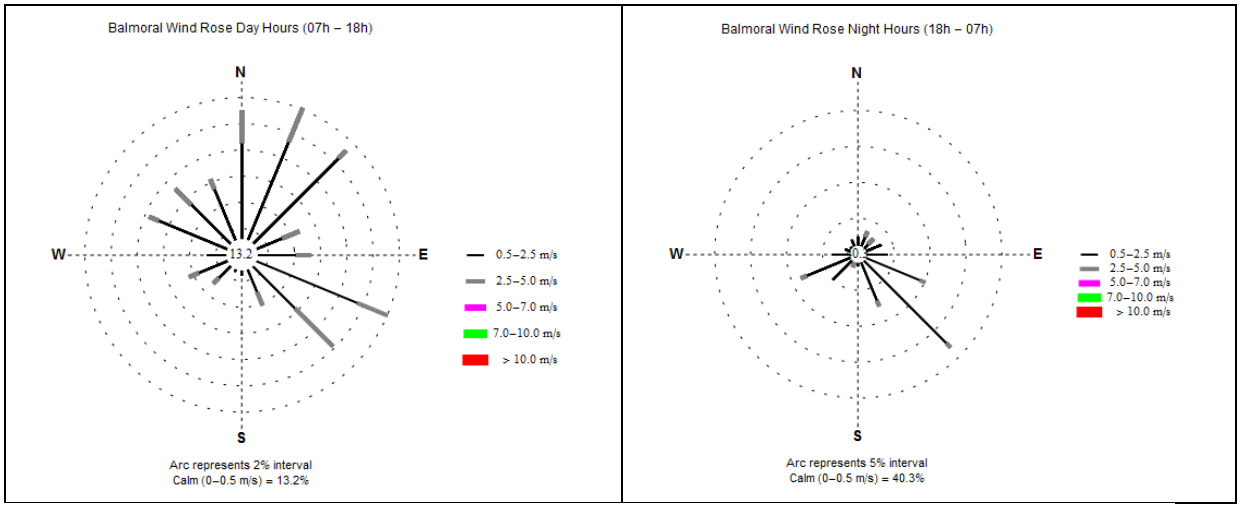


Figure 2: Wind profiles at Balmoral monitoring station

4.2.2. PHOLA AIR QUALITY MONITORING STATION

The dominant wind directions at Phola monitoring station during the day were east-north-east, east to west-north-west and north-west. During the night, the dominant wind directions were east-north-east, east-north-east and east. The monitoring station is south-east of Kusile power station.

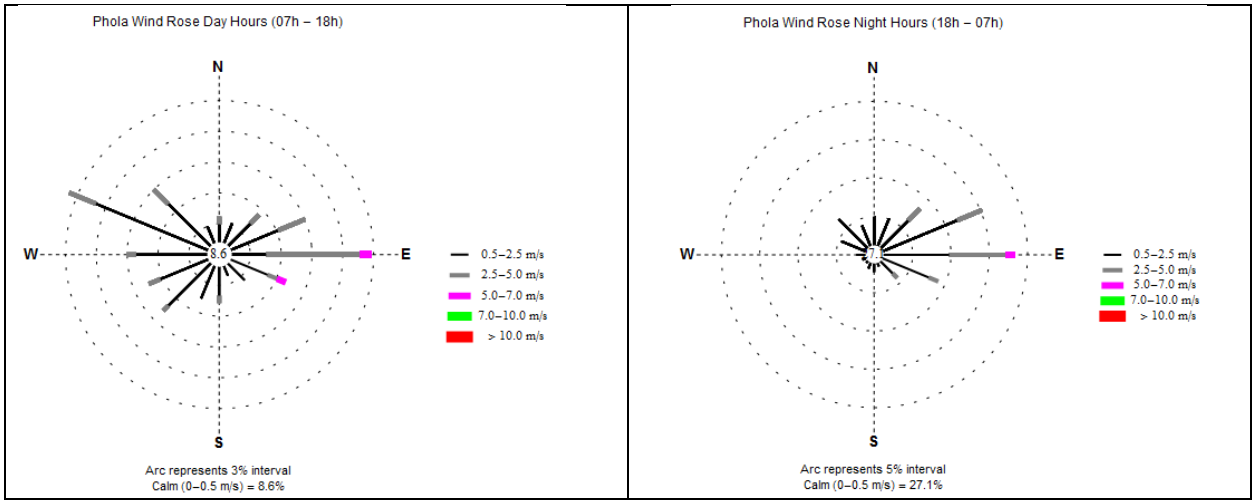
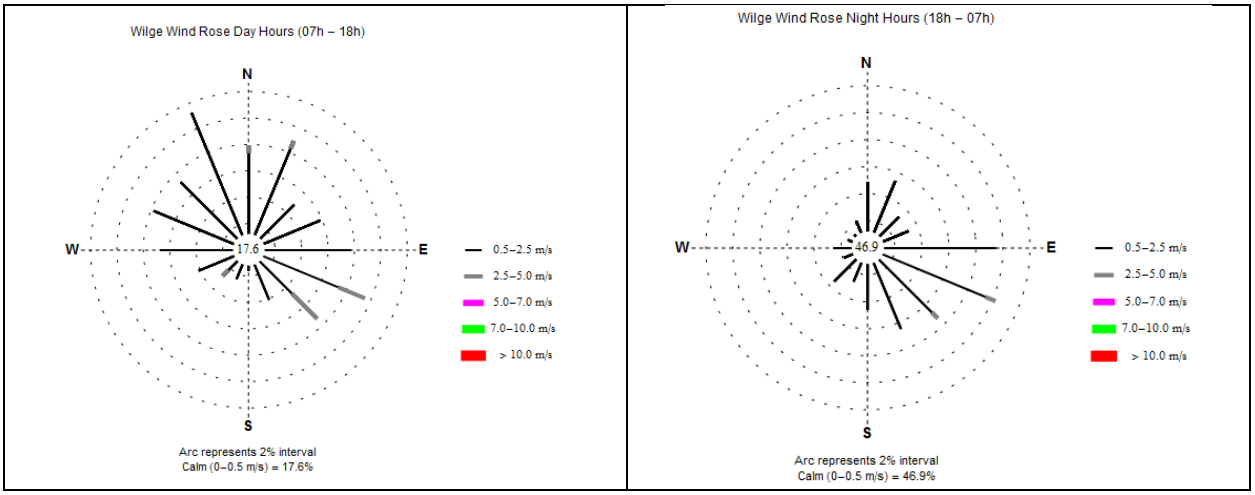


Figure 3: Wind profiles at Phola monitoring station.

4.2.3. WILGE AIR QUALITY MONITORING STATION

The wind at Wilge monitoring station was coming from the north, north-north-east, east, east ,south-south-east to north-west and north-north-west directions during the day. The dominant wind sectors during the night are east, east-south-east and south-south-east. The monitoring station is south-east of Kusile power station.



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Pollutant	Unit	Period	Limit	Number of annual exceedances allowed	Source
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Sulphur dioxide	Ppb	24hr	48.	4.	DFFE
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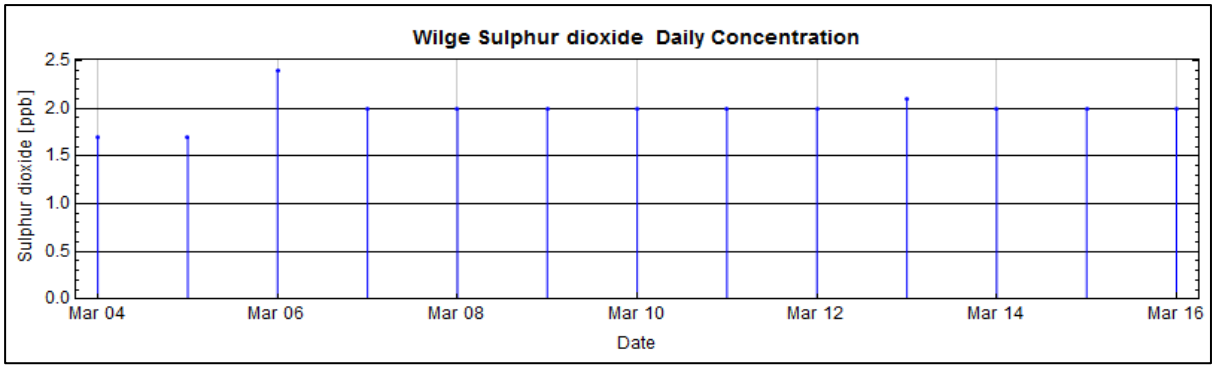
The National Department of Forestry, Fisheries and the Environment (DFFE) has set the South African Ambient Air Quality Standards for the criteria pollutants as illustrated in Table 2.

Table 3: Highest SO_2 concentration recorded (in ppb). (NAAQS in brackets)

Monitoring Stations	10-min average (191 ppb)	Date	Hourly average (134 ppb)	Date	Daily average (48 ppb)	Date
Balmoral	44.1	15/03/2025 09:10	30.4	15/03/2025 10:00	13.7	06/03/2025
Phola	77.2	22/03/2025 05:10	60.1	20/03/2025 06:00	20.6	20/03/2025
Wilge	13.5	06/03/2025 19:30	9.7	06/03/2025 08:00	2.4	06/03/2025

NM – not monitored.

There were no exceedances of SO_2 10-minutes limit of 191 ppb and SO_2 hourly limit of 134 ppb at all the monitoring station under review. The highest SO_2 concentrations recorded at the monitoring stations are indicated in Table 3 and figures 6 to 8 below.



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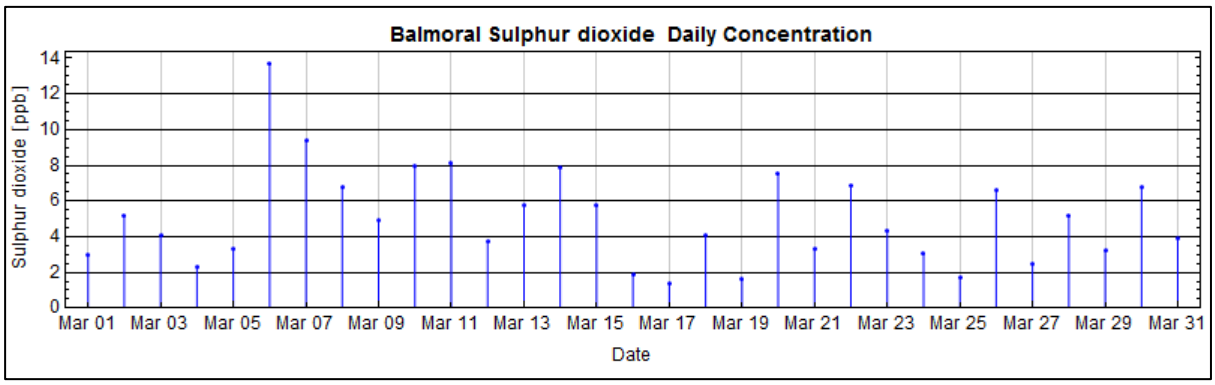

Figure 7: Time series graph for the SO_2 daily mean concentrations at Balmoral AQM station (NAAQS 48 ppb)

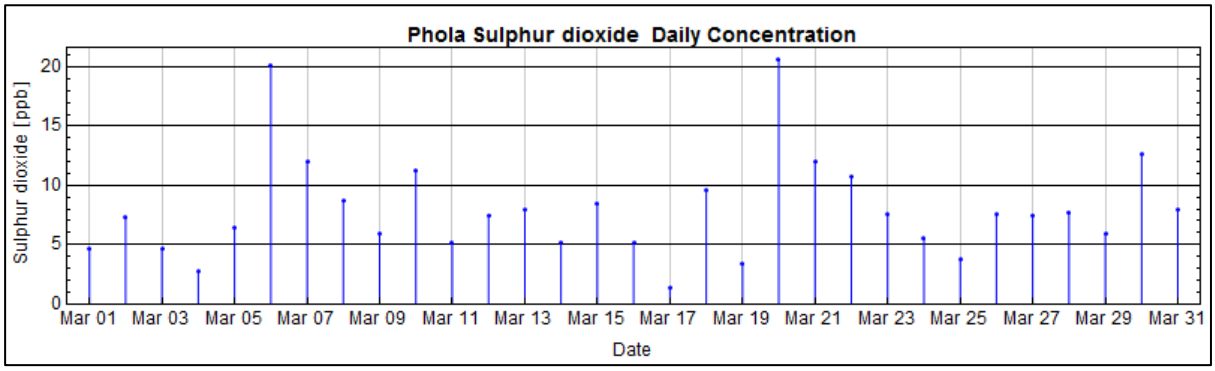

Figure 8: Time series graph for the SO_2 daily mean concentrations at Phola AQM station (NAAQS 48 ppb)

There were no exceedances of the NO_2 hourly limit of 106 ppb recorded at the monitoring stations during the March 2025 monitoring period. There was one (1) exceedance of the $PM_{2.5}$ daily limit of 40 µg/m^3 and four (4) exceedances of PM_{10} daily limit of 75 µg/m^3 at Phola monitoring station. See Figure 09 to 10 below.

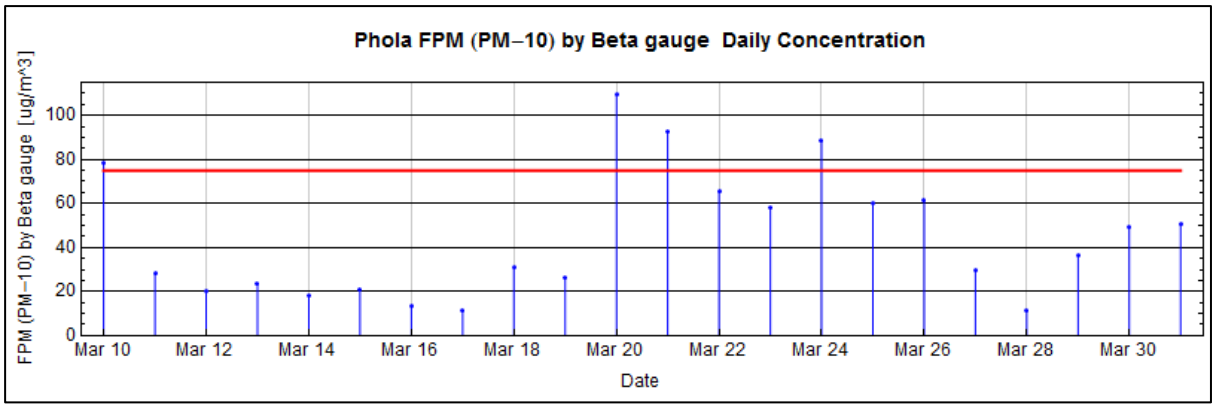

Figure 09: Time series graph for the PM_{10} daily mean concentrations at Phola AQM station (NAQS = 75 ppb)

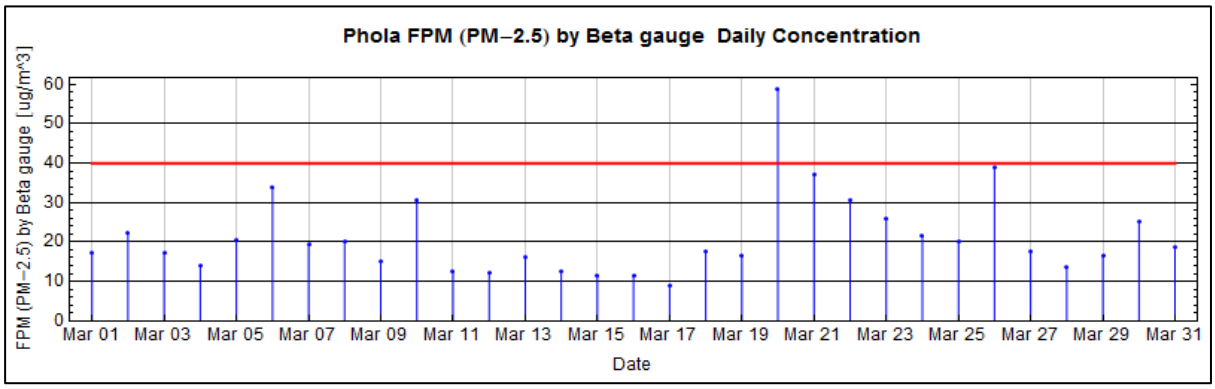

Figure 10: Time series graph for the $PM_{2.5}$ daily mean concentrations at Phola AQM station (NAAQS = 40 ppb)

Table 4: Exceedances above national ambient air quality limits – March 2025

PM_{10} Daily Exceedances (Phola)					
Pollutant	**Limit**	**Year**	**Month**	**Day**	**Conc. (µg/m³)**
$PM_{10.}$	75	2025	March	10	78.5
$PM_{10.}$	75	2025	March	20	109.4
$PM_{10.}$	75	2025	March	21	92.9
$PM_{10.}$	75	2025	March	24	88.9
$PM_{2.5}$ Daily Exceedances (Phola)					
$PM_{2.5}$	40	2025	March	20	58.7

Table 5: Exceedances of the NAAQ Limits per pollutant- March 2025

Averaging Period	**Balmoral**	**Phola**	**Wilge**
SO_2 10-min	0	0	0
SO_2 Hourly	0	0	0
SO_2 Daily	0	0	0
NO_2 Hourly	0	0	0
O_3 8-hourly	NM	18	0
$PM_{2.5}$ Daily	NM	1	NM
PM_{10} Daily	NM	4	NM

NM – not monitored.

A summary of all exceedances per pollutant for March 2025 is shown in Table 5.

SO_2 trigger levels or emergency response levels will be based on the United States Acute Exposure Guideline Levels for Hazardous Substances. (AEGL) as amended for South African circumstances. Levels confirmed with the authorities are as follows.

a. AEGL 1 – the cautionary notification level (non-disabling level) - is based on the South African NAAQS limit – for SO_2 this will be 191 ppb over 10-minute for exposure more than 4 hours.

b. AEGL 2 – the warning notification level (disabling level for those with asthma) – is aligned to the US AEGL approach – for SO_2 will be 744 ppb over a 10-minute for exposure up to 8 hours.

c. AEGL – the lethality level – for SO_2, this will be 29 771 ppb over a 10-minute period.

As indicated in the tables and figures above there were no events that triggered the notification of stakeholders in terms of the agreed AEGL recorded in March 2025.

Table 6: Number of exceedances recorded from January 2025 to March 2025

SITES	Phola	Balmoral	Wilge	Allowed No. of Exceedances per year)
PM_{10} (Daily)	0	NM	NM	4
$PM_{2.5}$ (Daily)	0	NM	NM	4
NO_2 (hourly)	0	0	0	88
SO_2 (Hourly	0	0	0	88
SO_2 (Daily)	0	0	0	4
O_3 (8h moving)	38	NM	85	11
SO_2 (10 minute)	0	0	0	526

NM – not monitored. Exceedance of permitted rate show in red

The monitoring of particulate matter ($PM_{2.5}$) at Phola air quality monitoring was started with the temporary stack project in November 2023. There was one (1) exceedance of the $PM_{2.5}$ daily limit of 40 µg/m^3 and four (4) exceedances of PM_{10} daily limit of 75 µg/m^3 at Phola monitoring station.

Phola and Wilge air quality monitoring station sites are in non-compliance with O_3 8 hourly limit of 61 ppb.

5. DFFE AND SAAQIS REPORTING

The raw monitoring data, downloaded at 1-minute averages is available in real-time to the DFFE-managed South African Air Quality Information System (SAAQIS) since the 14th of December 2023 for all Eskom air quality monitoring stations daily. Data not submitted on a real time basis is provided to DFFE for inclusion in the data base for historical reporting. In the event that the data is not available on the SAAQIS portal the stakeholders are advised to contact Eskom air quality monitoring team at RT&D.

6. CONCLUSIONS

There were no exceedances of the NO_2 hourly limit of 106 ppb recorded at the monitoring stations during the March 2025 monitoring period.

There were no exceedances of SO_2 10-minutes limit of 191 ppb and SO_2 hourly limit of 134 ppb at all the monitoring station under review.

There was one (1) exceedance of the $PM_{2.5}$ daily limit of 40 µg/m^3 and four (4) exceedances of PM_{10} daily limit of 75 µg/m^3 at Phola monitoring station. Phola and Wilger air quality monitoring sites are in non-compliance with O_3 8 hourly limit of 61 ppb.

There were no events that triggered the notification of stakeholders in terms of the agreed AEGL recorded in March 2025.

AB Moatshe

Report Compiled by:
Abel Moatshe

Reviewed and Authorised by: Date of Issue: 17-April 2025

Lufuno Tshidzumba
Middle Manager Environmental Management
Research, Testing and Development (RT&D)

7. . DISTRIBUTION LIST

SUSTAINABILITY ENVIRONMENTAL
Attention: Bryan McCourt MWP

KUSILE ENVIRONMENTAL MANAGER KUSILE
Attention: Lesiba Kgobe

Online Electronic Air Quality System RT&D
Project Leader: Abel Moatshe

8. . ABBREVIATIONS

µ/m^3	Microgram per cubic meter
DEA	Department of Environmental Affairs
deg	Degree
deg C	Degree Celsius
E	East
ENE	East-north-east
ESE	East-south-east
FPM	Fine particulate matter
HUM	Humidity
m/s	Meters per second
MWP	Megawatt Park
N	North
NE	North-east
NNE	North-north-east
NNW	North-north-west
NO_1	Nitric oxide
NO_2	Nitrogen dioxide
NOX	Oxides of nitrogen
NW	North-west
O_3	Ozone
PM-10	Particulate matter < 10 microns in diameter
PM-2.5	Particulate matter < 2.5 microns in diameter
ppb	Parts per billion
ppm	Parts per million
S	South
SE	South-east
SGT	Sigma theta
SSE	South-south-east
SSW	South-south-west
SW	South-west
TMP	Ambient temperature
W	West
WDR	Wind direction from true North
WNW	West-north-west
WSP	Wind speed
WSW	West-south-west
WVL	Wind velocity

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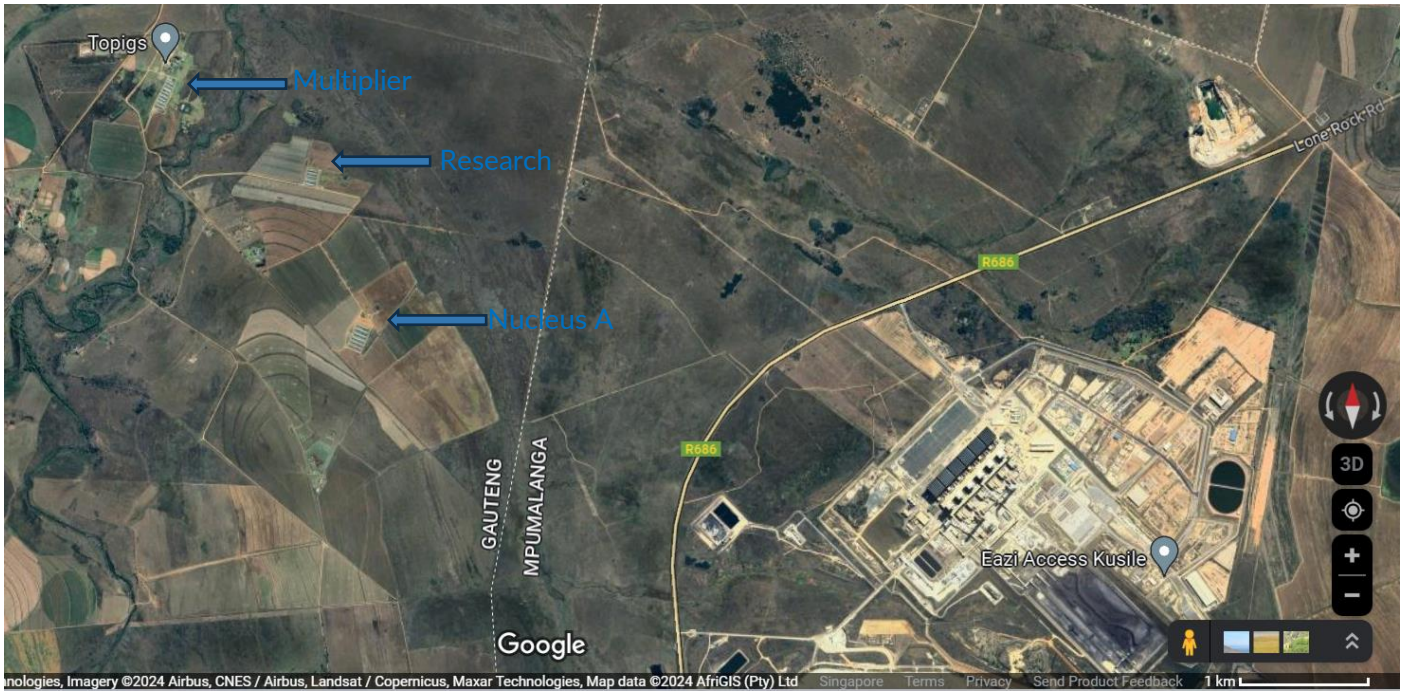
Animal Health Monitoring Summary Report February 2025



Rietfontein (Control Piggery in Mpumalanga province near Villiers):

The clinical assessment confirmed that all piglets, gilts, and sows were clinically normal, with no respiratory signs observed apart from two animals with neck abscesses that were otherwise clinically healthy. Haemoglobin levels have declined, with anaemic cases increasing to 10.0% and normal cases dropping to 10.0%, indicating a widespread reduction in haemoglobin status. Full blood counts were mostly within normal ranges, though mild lymphocytopenia and neutrophilia were observed in a few cases, suggesting potential subclinical infections. Amyloid A levels remained within the normal reference range. Nasal swabs detected Glaesserella parasuis in three gilts, with one weak positive, but no clinical signs of Glässer's disease were noted, suggesting possible subclinical carriage.

Nucleus A:

All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. One gilt had a neck abscess but was otherwise clinically healthy. Haemoglobin analysis showed a slight increase in anaemic cases (10.0%), a decrease in low haemoglobin cases (76.7%), and an increase in normal haemoglobin levels (13.3%), with the average remaining at 10.4 g/dL. While this suggests a small improvement, ongoing monitoring is necessary due to the high proportion of low haemoglobin cases. Full blood count results were normal for all gilts, while a few sows exhibited mild lymphocytopenia, possibly indicating a mild immune response or subclinical infection, though no clinical signs were observed. Nasal swab results showed a low-level presence of Glaesserella parasuis, with one positive and one weak positive result, but no clinical cases of Glässer's disease. Continued surveillance is advised to monitor any potential disease progression.

Multiplier:

The clinical assessment found all animals to be clinically normal, except for one sow with a neck abscess. Haemoglobin levels showed positive trends, with no anaemic pigs (0.0%), a decrease in pigs with low haemoglobin levels from 56.7% to 50.0%, and an increase in pigs within the normal range from 43.3% to 50.0%. The average haemoglobin concentration remained stable at 11.8 g/dL. Amyloid A levels were within normal limits, indicating no significant inflammatory response. Full blood counts were all normal, with no deviations observed in haemoglobin levels, and no signs of anaemia, infections, or immune system abnormalities. PCR testing for Glaesserella parasuis showed some positive results, but no clinical signs of Glässer's disease were observed. Overall, the herd health remains stable, with no immediate concerns, though continued monitoring is recommended.

Research:

All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. Haemoglobin analysis showed that no animals were anaemic, while 33.3% had low haemoglobin levels and 66.7% had normal haemoglobin levels, with an improved average concentration of 12.7 g/dL. This indicates

a positive trend in haemoglobin status compared to previous results. Full blood count results showed that most gilts and sows had normal haematology parameters, with only a few sows showing mild lymphocytopenia, which may suggest a mild immune response or subclinical infections. Nasal swab results for Glaesserella parasuis returned negative for all samples, indicating no active infection at this time. Overall, the herd is in good health, but ongoing monitoring is recommended for early detection of any potential issues.

GHB Spitskop:

The clinical assessment showed that all animals appeared healthy, with no observed signs of illness. Haemoglobin testing indicated that 33.3% of piglets were anaemic, and 46.7% had low haemoglobin levels, though the average haemoglobin level remained stable at 10.0 g/dL. Amyloid A levels remained within the normal range, and haematology results for gilts and sows were largely unremarkable, except for mild lymphocytopenia in two sows and mild neutropenia with lymphocytopenia in one sow, suggesting minor immune activity or subclinical infection. PCR testing detected one weak positive case for Glaesserella parasuis, but no clinical signs of Glässer's disease or indications of active infection were observed. Continued monitoring is recommended.

Discussion:

The clinical assessments across all units indicate stable overall health but variations in haemoglobin trends and blood profiles are evident. Rietfontein showed a decline from previous results, with the average haemoglobin dropping to 11.1 g/dL and anaemia cases increasing to 10.0%; full blood counts (FBC) remained mostly normal, though mild lymphocytopenia and neutrophilia were noted, suggesting possible subclinical infections. Nucleus A showed slight improvement, with anaemia stable at 10.0%, an increase in normal haemoglobin cases (now 13.3%), and an average haemoglobin of 10.4 g/dL; FBCs were normal in gilts, but a few sows showed mild lymphocytopenia, possibly indicating subclinical immune activity. The Multiplier unit improved further, with no anaemic pigs, normal haemoglobin cases increasing to 50.0%, and an average of 11.8 g/dL; FBCs were all normal with no immune deviations, suggesting a healthier status overall. The Research unit showed the most notable improvement, with no anaemia, normal haemoglobin levels rising to 66.7%, and the highest average haemoglobin at 12.7 g/dL; FBCs were largely unremarkable apart from mild lymphocytopenia in a few sows. In contrast, GHB Spitskop declined, with anaemia increasing to 33.3%, the average haemoglobin stagnating at 10.0 g/dL, and FBCs showing mild lymphocytopenia in two sows and mild neutropenia with lymphocytopenia in another, suggesting possible subclinical immune challenges. Glaesserella parasuis was detected at low levels in all units except Research, with no clinical signs of Glässer's disease. While health remains stable overall, Multiplier and Research show positive trends, whereas GHB Spitskop and Nucleus A warrant closer monitoring due to persistent haemoglobin challenges and subtle immune irregularities.

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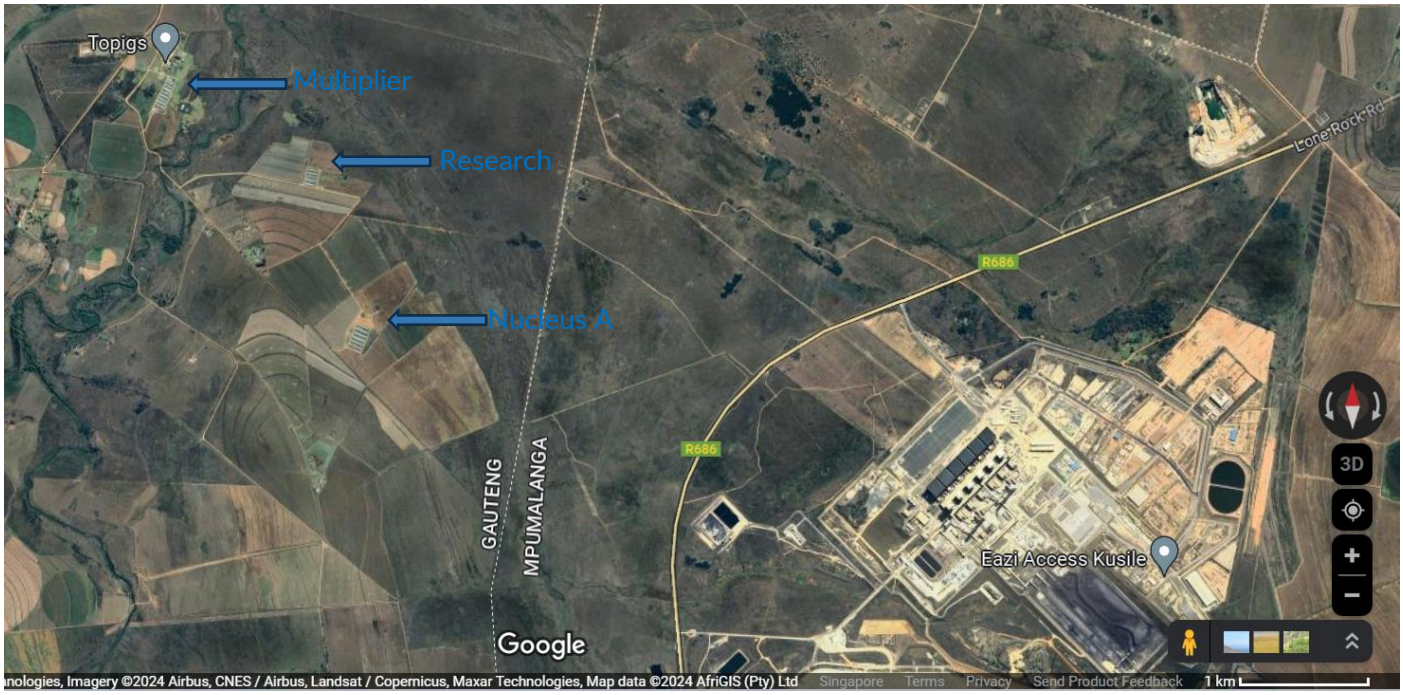
Animal Health Monitoring Summary Report March 2025



Rietfontein (Control Piggery in Mpumalanga province near Villiers):
All animals were clinically normal at the time of assessment, with no signs of respiratory disease or fever observed. Full blood count results confirmed normal haematological parameters in all gilts and sows tested. The latest haemoglobin results show a decline in overall haemoglobin status compared to the previous results. Although the percentage of anaemic pigs remained unchanged at 10.0%, the average haemoglobin concentration has dropped from 10.7 g/dL to 10.3 g/dL, indicating a general downward trend in haemoglobin levels across the group. All Amyloid A values were within the normal reference range, suggesting no active inflammatory process. One gilt tested positive for *Glaesserella parasuis* on nasal swab PCR, which may reflect subclinical carriage, though no clinical signs of Glässer's disease were observed

Nucleus A:
All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. The latest haemoglobin results showed no change, with 10.0% of pigs classified as anaemic and an average haemoglobin level of 10.4 g/dL, remaining stable across the last three groups with no upward trend observed. Full blood count results were normal for most animals, although one neutrophilia and one lymphocytosis were observed, possibly indicating a subclinical immune response. Nasal swab results for Glaesserella parasuis were negative across all gilts, confirming the absence of active infection.

Multiplier:
The clinical assessment revealed that all animals were clinically normal, with no respiratory signs or abnormalities. Average haemoglobin concentrations are stable at 11.6 g/dL, and Amyloid A levels were within normal limits, indicating no significant inflammatory response. Full blood counts were mostly normal, with one sow showing neutrophilia, suggesting a mild inflammatory response or subclinical infection, but no signs of anaemia or immune system abnormalities. PCR testing for Glaesserella parasuis indicated one weak positive result, but there were no clinical signs of Glässer's disease. Overall, the herd's health remains stable, and while no serious concerns were identified in this group, ongoing monitoring is advised.

Research:
All animals examined were clinically normal with no signs of respiratory distress or systemic illness. Haemoglobin results indicate a decline in status, with 20.0% of pigs now classified as anaemic and the average Hb concentration dropping from 12.7 g/dL to 10.2 g/dL, warranting continued monitoring. Full blood counts were within normal limits for all sows and gilts except for one gilt showing neutropenia, possibly indicating a subclinical immune response. Amyloid A levels were within the normal range for all animals; however, one gilt recorded a value close to the upper threshold, though still considered normal. PCR results for *Glaesserella parasuis* were negative in all nasal swab samples, indicating no active infection.

GHB Spitskop:

The clinical assessment of all animals revealed no signs of illness, with one sow exhibiting a neck abscess, but otherwise, no abnormalities were observed. Haemoglobin testing showed a decline in average levels from 10.0 to 9.3 g/dL and this trend appears to have remained low in previous test results. Amyloid A levels were within the normal range, and haematology results for gilts and sows were mostly normal, except for mild neutropenia in one gilt (which also tested positive for Glässer's, though no clinical signs were observed), possibly indicating a mild immune response or subclinical infection. PCR testing for Glaesserella parasuis showed a mix of positive and negative results, with no clinical signs of Glässer's disease or active infection. Continuous monitoring is still advised.

Discussion:

Across the five pig units assessed—Rietfontein (Control), Nucleus A, Multiplier, Research, and GHB Spitskop all animals were clinically normal at the time of examination, with no signs of respiratory disease or systemic illness noted, except for one sow at GHB Spitskop presenting with a neck abscess. Full blood counts were largely within normal limits, though isolated abnormalities were noted: neutrophilia in one animal each at Nucleus A and Multiplier, lymphocytosis at Nucleus A, neutropenia at Research, and mild neutropenia in a gilt at GHB Spitskop. Haemoglobin results showed variable trends: Multiplier maintained a stable and healthy average of 11.6 g/dL, while Nucleus A remained unchanged at 10.4 g/dL with 10% anaemic pigs. Rietfontein showed a slight decline in haemoglobin from 10.7 to 10.3 g/dL, with anaemia prevalence steady at 10%. More concerning trends were seen at Research and GHB Spitskop, with Research showing a significant drop in average haemoglobin from 12.7 to 10.2 g/dL and anaemia rising to 20%, while GHB Spitskop's average haemoglobin fell to 9.3 g/dL, consistent with a chronically low trend. Amyloid A values remained within the normal reference range across all sites, indicating no active systemic inflammation, though one gilt at Research recorded a value near the upper threshold. PCR testing for *Glaesserella parasuis* revealed a mix of results: mostly negative findings, but weak or single positives at Rietfontein, Multiplier, and GHB Spitskop, suggesting possible subclinical carriage rather than active infection, as no clinical signs of Glässer's disease were observed.

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GHB Spitskop Health Monitoring Report 2025-02-18

Assessment and Sampling date: 2025-02-18

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal

9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal, Abscess on the neck
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically healthy, with no respiratory signs observed. All piglets, gilts, and sows presented normal habitus, respiratory rates, nasal discharge, coughing, sneezing, and rectal temperatures. The only exception was one sow, which showed an abscess on the neck, but no other abnormalities were noted.

Laboratory analysis:

Haemoglobin:

% Anaemic	33,3%
% Low	46,7%
% Normal	20,0%
Average g/dL	10,0

Number	Hb result (g/dL)	Interpretation
1	6,1	Anaemic
2	6,6	Anaemic
3	7,3	Anaemic
4	7,5	Anaemic
5	7,8	Anaemic
6	7,9	Anaemic

7	8,0	Anaemic
8	8,2	Anaemic
9	8,8	Anaemic
10	8,8	Anaemic
11	9,1	Low
12	9,4	Low
13	9,8	Low
14	9,8	Low
15	9,9	Low
16	10,0	Low
17	10,2	Low
18	10,8	Low
19	10,8	Low
20	11,2	Low
21	11,4	Low
22	11,4	Low
23	11,5	Low
24	11,7	Low
25	12,1	Normal
26	12,4	Normal
27	12,4	Normal
28	12,8	Normal
29	12,9	Normal
30	14,1	Normal

Remarks

The percentage of anaemic piglets has increased to 33.3%, while the proportion with low haemoglobin has decreased to 46.7%, and 20% of the piglets are now within the normal range. The average haemoglobin level remains stable at 10.0 g/dL, indicating no significant change from the previous results. Despite the slight improvement in the distribution, the anaemia levels are still a concern, and continuous monitoring is recommended to address this issue and ensure optimal haemoglobin levels.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	4,80	Normal
2	Gilt	<3	Normal
3	Gilt	<3	Normal
4	Gilt	15,20	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	<3	Normal
8	Gilt	6,70	Normal
9	Gilt	<3	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal

12	Sow	<3	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal
15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	10,50	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range(<42,7mg/L) for pigs. No significant rise in inflammatory markers is noted.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Neutropenia and mild Lymphocytopenia	Low neutrophil count and lowered lymphocyte count
20	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count

Remarks

The latest full blood count results for gilts and sows indicate that haematology parameters are generally within normal ranges, with stable haemoglobin levels. However, mild lymphocytopenia was observed in two sows, and one sow exhibited neutropenia along with mild lymphocytopenia, which may suggest a subclinical infection or a low-grade immune response. Continued monitoring is recommended to monitor any potential disease trends.

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Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Negative
2	PCR	Glaesserella parasuis	Negative
3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Weak Positive
5	PCR	Glaesserella parasuis	Negative
6	PCR	Glaesserella parasuis	Negative
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Negative
9	PCR	Glaesserella parasuis	Negative
10	PCR	Glaesserella parasuis	Negative

Remarks:

The latest PCR results for Glaesserella parasuis show one weak positive case, while the remaining samples tested negative. This suggests the presence of the pathogen at low levels, but without clinical signs of Glässer's disease or supportive laboratory findings of active infection. Continued monitoring is advised to track any changes in pathogen presence and potential disease development.

Conclusion

The clinical assessment showed that all animals appeared healthy, with no observed signs of illness. Haemoglobin testing indicated that 33.3% of piglets were anaemic, and 46.7% had low haemoglobin levels, though the average haemoglobin level remained stable at 10.0 g/dL. Amyloid A levels remained within the normal range, and haematology results for gilts and sows were largely unremarkable, except for mild lymphocytopenia in two sows and mild neutropenia with lymphocytopenia in one sow, suggesting minor immune activity or subclinical infection. PCR testing detected one weak positive case for Glaesserella parasuis, but no clinical signs of Glässer's disease or indications of active infection were observed. Continued monitoring is recommended.

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GHB Spitskop Health Monitoring Report 2025-03-31

Assessment and Sampling date: 2025-03-31

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal

9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal, Abscess on the neck
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically healthy. There was one sow, which showed an abscess on the neck, but no other abnormalities were noted.

Laboratory analysis:

Haemoglobin:

% Anaemic	33,3%
% Low	63,3%
% Normal	3,3%
Average g/dL	9,3

Number	Hb result (g/dL)	Interpretation
1	7,8	Anaemic
2	7,9	Anaemic
3	8,2	Anaemic
4	8,2	Anaemic
5	8,6	Anaemic
6	8,6	Anaemic
7	8,7	Anaemic
8	8,7	Anaemic

9	8,9	Anaemic
10	8,9	Anaemic
11	9,0	Low
12	9,0	Low
13	9,0	Low
14	9,0	Low
15	9,1	Low
16	9,3	Low
17	9,4	Low
18	9,5	Low
19	9,7	Low
20	9,9	Low
21	9,9	Low
22	10,0	Low
23	10,0	Low
24	10,1	Low
25	10,1	Low
26	10,1	Low
27	10,2	Low
28	10,4	Low
29	10,9	Low
30	11,1	Normal

Remarks

The percentage of anaemic piglets remains unchanged at 33.3%, but the average haemoglobin level has decreased from 10.0 to 9.3 g/dL, indicating an overall decline in haemoglobin status from the previous results. The average haemoglobin levels seem to maintain similar trends across previous test results, without the levels going up significantly. Monitoring is still advised to monitor this trend.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	<3	Normal
2	Gilt	<3	Normal
3	Gilt	<3	Normal
4	Gilt	<3	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	<3	Normal
8	Gilt	<3	Normal
9	Gilt	<3	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal
12	Sow	5,50	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal

15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range(<42,7mg/L) for pigs. No significant rise in inflammatory markers is noted.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Neutropenia	Lowered neutrophil count
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results for gilts and sows show that haematology parameters are predominantly within normal ranges, with stable haemoglobin levels. Notably, one gilt showed neutropenia, which may indicate a mild immune response or sub clinical infection. This gilt tested positive for Glässer's disease, but did not show any clinical signs or other abnormalities.

Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Negative
2	PCR	Glaesserella parasuis	Positive

3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Positive
5	PCR	Glaesserella parasuis	Positive
6	PCR	Glaesserella parasuis	Positive
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Positive
9	PCR	Glaesserella parasuis	Negative
10	PCR	Glaesserella parasuis	Positive

Remarks:

The latest PCR results for Glaesserella parasuis show a mix of positive and negative cases. Gilt 5 exhibited mild neutropenia, but without any clinical signs of illness, indicating that while the pathogen is present in some samples, there are no overt signs of active infection or Glässer's disease.

Conclusion

The clinical assessment of all animals revealed no signs of illness, with one sow exhibiting a neck abscess, but otherwise, no abnormalities were observed. Haemoglobin testing showed a decline in average levels from 10.0 to 9.3 g/dL and this trend appears to have remained low in previous test results. Amyloid A levels were within the normal range, and haematology results for gilts and sows were mostly normal, except for mild neutropenia in one gilt (which also tested positive for Glässer's, though no clinical signs were observed), possibly indicating a mild immune response or subclinical infection. PCR testing for Glaesserella parasuis showed a mix of positive and negative results, with no clinical signs of Glässer's disease or active infection. Continuous monitoring is still advised.

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Topigs SA Dalplaas Health Monitoring Report 2025-02-17

Assessment and Sampling date: 2025-02-17

Nucleus A

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal

9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal, Neck Abscess
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All examined animals were clinically normal, with no respiratory signs or abnormalities detected. One gilt presented with a neck abscess but was otherwise clinically normal.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	10,0%
% Low	76,7%
% Normal	13,3%
Average g/dL	10,4

Number	Hb result (g/dL)	Interpretation
1	7,1	Anaemic
2	8,3	Anaemic
3	8,9	Anaemic
4	9,1	Low
5	9,4	Low
6	9,4	Low
7	9,4	Low
8	9,5	Low

9	9,7	Low
10	9,7	Low
11	9,9	Low
12	9,9	Low
13	10,0	Low
14	10,1	Low
15	10,1	Low
16	10,2	Low
17	10,3	Low
18	10,6	Low
19	10,8	Low
20	11,0	Low
21	11,1	Low
22	11,1	Low
23	11,3	Low
24	11,4	Low
25	11,7	Low
26	11,9	Low
27	12,1	Normal
28	12,4	Normal
29	13,2	Normal
30	13,7	Normal

Remarks

The latest haemoglobin results show a slight increase in anaemic cases (from 6.7% to 10.0%), while the proportion of low haemoglobin cases has decreased from 83.3% to 76.7%, with a corresponding increase in the percentage of normal haemoglobin cases (from 10.0% to 13.3%). The average haemoglobin level remains unchanged at 10.4 g/dL. While there is a small shift towards improvement, a significant proportion of pigs still fall into the low category, highlighting the continued need for monitoring.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	<3	Normal
2	Gilt	<3	Normal
3	Gilt	<3	Normal
4	Gilt	<3	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	<3	Normal
8	Gilt	<3	Normal
9	Gilt	<3	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal
12	Sow	<3	Normal
13	Sow	<3	Normal

14	Sow	<3	Normal
15	Sow	4,10	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range (<42,7mg/L) for pigs. No increase in Amyloid A levels is seen and results are therefore interpreted as normal.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
12	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
13	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
17	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results show that all gilts had haematology values within normal parameters, while a few sows exhibited mild lymphocytopenia. This could indicate a mild immune response or subclinical infection, though no clinical signs have been observed. The overall haemoglobin levels remain normal. Regular monitoring is advised to assess any trends.

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Nasal Swabs (Glässer's disease)

Number	Animal	Test	Pathogen tested for	Result
1	Gilt	PCR	Glaesserella parasuis	Weak Positive
2	Gilt	PCR	Glaesserella parasuis	Negative
3	Gilt	PCR	Glaesserella parasuis	Negative
4	Gilt	PCR	Glaesserella parasuis	Negative
5	Gilt	PCR	Glaesserella parasuis	Negative
6	Gilt	PCR	Glaesserella parasuis	Positive
7	Gilt	PCR	Glaesserella parasuis	Negative
8	Gilt	PCR	Glaesserella parasuis	Negative
9	Gilt	PCR	Glaesserella parasuis	Negative
10	Gilt	PCR	Glaesserella parasuis	Negative

Remarks:

The latest nasal swab results for Glaesserella parasuis indicate one gilt testing positive and one weak positive, while the rest were negative. This suggests a low-level presence of the pathogen without widespread detection. No clinical signs of Glässer's disease have been observed, but continued monitoring is advised to track any potential disease progression.

Conclusion

All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. One gilt had a neck abscess but was otherwise clinically healthy. Haemoglobin analysis showed a slight increase in anaemic cases (10.0%), a decrease in low haemoglobin cases (76.7%), and an increase in normal haemoglobin levels (13.3%), with the average remaining at 10.4 g/dL. While this suggests a small improvement, ongoing monitoring is necessary due to the high proportion of low haemoglobin cases. Full blood count results were normal for all gilts, while a few sows exhibited mild lymphocytopenia, possibly indicating a mild immune response or subclinical infection, though no clinical signs were observed. Nasal swab results showed a low-level presence of Glaesserella parasuis, with one positive and one weak positive result, but no clinical cases of Glässer's disease. Continued surveillance is advised to monitor any potential disease progression.

Multiplier

Clinical Assessment:

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal

11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal, Neck abscess
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically normal. One sow exhibited a neck abscess but was otherwise clinically normal and does not show any additional health concerns at this time.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	0,0%
% Low	50,0%
% Normal	50,0%
Average g/dL	11,8

Number	Hb result (g/dL)	Interpretation
1	9,0	Low
2	9,9	Low
3	9,9	Low
4	10,0	Low
5	10,2	Low
6	10,4	Low
7	10,7	Low
8	10,8	Low
9	11,0	Low

10	11,2	Low
11	11,2	Low
12	11,6	Low
13	11,6	Low
14	11,8	Low
15	11,9	Low
16	12,0	Normal
17	12,0	Normal
18	12,2	Normal
19	12,2	Normal
20	12,3	Normal
21	12,4	Normal
22	12,5	Normal
23	12,7	Normal
24	12,7	Normal
25	12,9	Normal
26	13,3	Normal
27	13,3	Normal
28	13,5	Normal
29	14,2	Normal
30	14,8	Normal

Remarks

The haemoglobin status has shown further improvement compared to the previous results. The percentage of anaemic pigs remains at 0.0%, while the percentage of pigs with low haemoglobin levels has decreased slightly from 56.7% to 50.0%. The proportion of pigs within the normal range has increased from 43.3% to 50.0%. The average haemoglobin concentration has remained stable at 11.8 g/dL, indicating consistent results. Overall, these findings suggest that there is a positive trend in haemoglobin levels, with a notable increase in the proportion of pigs within the normal range.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	4,20	Normal
2	Gilt	3,80	Normal
3	Gilt	<3	Normal
4	Gilt	<3	Normal
5	Gilt	3,80	Normal
6	Gilt	<3	Normal
7	Gilt	<3	Normal
8	Gilt	<3	Normal
9	Gilt	<3	Normal
10	Gilt	18,30	Normal
11	Sow	<3	Normal
12	Sow	<3	Normal

13	Sow	<3	Normal
14	Sow	8,60	Normal
15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range (<42,7mg/L) for pigs. No significant increase in Amyloid A levels is seen and results are therefore interpreted as normal.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest results show that all gilts and sows have haematology values within normal parameters, with no deviations observed in their haemoglobin levels. All 20 animals, including both gilts and sows, are within the expected normal range. There are no signs of anaemia, infections, or immune system abnormalities. Monitoring can continue as usual to ensure ongoing health.

Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Positive
2	PCR	Glaesserella parasuis	Positive
3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Negative
5	PCR	Glaesserella parasuis	Weak Positive
6	PCR	Glaesserella parasuis	Negative
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Positive
9	PCR	Glaesserella parasuis	Negative
10	PCR	Glaesserella parasuis	Negative

Remarks:

The latest PCR testing for Glaesserella parasuis revealed three positive results and one weak positive result, while five tests returned negative results. Despite the detection of the pathogen in some animals, no clinical signs of Glässer's disease were observed, and other laboratory parameters remain within normal ranges. This indicates that while G. parasuis is present in the population, there is no evidence of active clinical disease at this time. Continued monitoring and regular testing are recommended to track any potential changes in the situation.

Conclusion

The clinical assessment found all animals to be clinically normal, except for one sow with a neck abscess. Haemoglobin levels showed positive trends, with no anaemic pigs (0.0%), a decrease in pigs with low haemoglobin levels from 56.7% to 50.0%, and an increase in pigs within the normal range from 43.3% to 50.0%. The average haemoglobin concentration remained stable at 11.8 g/dL. Amyloid A levels were within normal limits, indicating no significant inflammatory response. Full blood counts were all normal, with no deviations observed in haemoglobin levels, and no signs of anaemia, infections, or immune system abnormalities. PCR testing for Glaesserella parasuis showed some positive results, but no clinical signs of Glässer's disease were observed. Overall, the herd health remains stable, with no immediate concerns, though continued monitoring is recommended.

Research

Clinical Assessment:

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal

8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically normal and within expected parameters for healthy pigs.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	0,0%
% Low	33,3%
% Normal	66,7%
Average g/dL	12,7

Number	Hb result (g/dL)	Interpretation
1	10,4	Low
2	10,4	Low
3	10,6	Low
4	11,0	Low
5	11,1	Low
6	11,3	Low
7	11,4	Low
8	11,5	Low

9	11,5	Low
10	11,9	Low
11	12,1	Normal
12	12,4	Normal
13	12,5	Normal
14	12,5	Normal
15	12,8	Normal
16	13,0	Normal
17	13,0	Normal
18	13,2	Normal
19	13,3	Normal
20	13,3	Normal
21	13,4	Normal
22	13,6	Normal
23	13,8	Normal
24	14,2	Normal
25	14,3	Normal
26	14,5	Normal
27	14,6	Normal
28	14,6	Normal
29	14,9	Normal
30	15,3	Normal

Remarks

The latest haemoglobin (Hb) results show a positive trend, with no pigs classified as anaemic (down from 3.3%). The percentage of pigs with low Hb has decreased from 76.7% to 33.3%, while the proportion of pigs with normal Hb has increased from 20.0% to 66.7%. The average Hb level has improved from 11.3 g/dL to 12.7 g/dL, reflecting a general improvement in the pigs' haemoglobin status.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	<3	Normal
2	Gilt	<3	Normal
3	Gilt	6,00	Normal
4	Gilt	<3	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	<3	Normal
8	Gilt	<3	Normal
9	Gilt	<3	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal
12	Sow	<3	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal

15	Sow	11,80	Normal
16	Sow	<3	Normal
17	Sow	6,10	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	3,10	Normal

Remarks:

The Amyloid A test results for all sows and gilts are below the threshold of 42.7 mg/L, indicating no significant inflammatory or chronic disease processes.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Mild Lymphocytopenia	Lowered lymphocyte count
16	Sow	Normal	Mild Lymphocytopenia	Lowered lymphocyte count
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Lymphocytopenia	Low Lymphocyte count

Remarks

The latest full blood count results show that all gilts and most sows have haematology values within normal parameters, with the exception of mild lymphocytopenia observed in a few sows. Specifically, sows 15, 16, and 20 showed a lowered lymphocyte count, which may indicate a mild immune response or subclinical infections. Ongoing monitoring is recommended.

Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Negative
2	PCR	Glaesserella parasuis	Negative

3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Negative
5	PCR	Glaesserella parasuis	Negative
6	PCR	Glaesserella parasuis	Negative
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Negative
9	PCR	Glaesserella parasuis	Negative
10	PCR	Glaesserella parasuis	Negative

Remarks:

The latest PCR results for Glaesserella parasuis show all ten samples returning negative results. This indicates that there is no evidence of active infection with Glaesserella parasuis in the herd at this time. Continuous monitoring will be maintained to ensure early detection of any potential issues.

Conclusion

All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. Haemoglobin analysis showed that no animals were anaemic, while 33.3% had low haemoglobin levels and 66.7% had normal haemoglobin levels, with an improved average concentration of 12.7 g/dL. This indicates a positive trend in haemoglobin status compared to previous results. Full blood count results showed that most gilts and sows had normal haematology parameters, with only a few sows showing mild lymphocytopenia, which may suggest a mild immune response or subclinical infections. Nasal swab results for Glaesserella parasuis returned negative for all samples, indicating no active infection at this time. Overall, the herd is in good health, but ongoing monitoring is recommended for early detection of any potential issues.

Dr A.H. Westerink

D18/11784

cs vet
Veterinary Consultancy

Topigs SA Dalplaas Health Monitoring Report 2025-03-17

Assessment and Sampling date: 2025-03-17

Nucleus A

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal

9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All examined animals were clinically normal, with no respiratory signs or abnormalities detected.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	10,0%
% Low	53,3%
% Normal	36,7%
Average g/dL	10,4

Number	Hb result (g/dL)	Interpretation
1	6,5	Anaemic
2	8,2	Anaemic
3	8,9	Anaemic
4	9,1	Low
5	9,3	Low
6	9,4	Low
7	9,4	Low
8	9,6	Low
9	9,7	Low

10	9,7	Low
11	9,9	Low
12	10,0	Low
13	10,1	Low
14	10,4	Low
15	10,5	Low
16	10,5	Low
17	10,7	Low
18	10,7	Low
19	10,8	Low
20	11,0	Normal
21	11,2	Normal
22	11,2	Normal
23	11,2	Normal
24	11,5	Normal
25	11,6	Normal
26	11,7	Normal
27	11,8	Normal
28	12,0	Normal
29	12,8	Normal
30	13,5	Normal

Remarks

The latest haemoglobin results remain unchanged, with 10.0% of pigs classified as anaemic and an average haemoglobin level of 10.4 g/dL. This average haemoglobin level has remained stable at the same level for the last 3 groups, with no upward trend observed.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	3,80	Normal
2	Gilt	<3	Normal
3	Gilt	11,20	Normal
4	Gilt	3,10	Normal
5	Gilt	<3	Normal
6	Gilt	3,10	Normal
7	Gilt	<3	Normal
8	Gilt	5,20	Normal
9	Gilt	<3	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal
12	Sow	3,30	Normal
13	Sow	3,20	Normal
14	Sow	<3	Normal
15	Sow	10,10	Normal
16	Sow	<3	Normal

17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range (<42,7mg/L) for pigs. No increase in Amyloid A levels is seen and results are therefore interpreted as normal.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Lymphocytosis	Increased lymphocyte count
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Neutrophilia	Increased neutrophil count
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results show that most animals had haematology values within normal parameters. However, 1 gilt exhibited lymphocytosis (increased lymphocyte count), and 1 sow showed neutrophilia (increased neutrophil count), which could point to an immune response or subclinical infection, despite the absence of clinical signs. Overall, haemoglobin levels remained normal. Regular monitoring is advised to track any potential changes or trends

Nasal Swabs (Glässer's disease)

Number	Animal	Test	Pathogen tested for	Result
1	Gilt	PCR	Glaesserella parasuis	Negative
2	Gilt	PCR	Glaesserella parasuis	Negative
3	Gilt	PCR	Glaesserella parasuis	Negative

4	Gilt	PCR	Glaesserella parasuis	Negative
5	Gilt	PCR	Glaesserella parasuis	Negative
6	Gilt	PCR	Glaesserella parasuis	Negative
7	Gilt	PCR	Glaesserella parasuis	Negative
8	Gilt	PCR	Glaesserella parasuis	Negative
9	Gilt	PCR	Glaesserella parasuis	Negative
10	Gilt	PCR	Glaesserella parasuis	Negative

Remarks:

The latest nasal swab results for Glaesserella parasuis indicate that all 10 gilts tested negative for the pathogen. This suggests that there is no active presence of Glaesserella parasuis in the sampled animals at this time.

Conclusion

All animals examined were clinically normal, with no signs of respiratory distress or systemic illness. The latest haemoglobin results showed no change, with 10.0% of pigs classified as anaemic and an average haemoglobin level of 10.4 g/dL, remaining stable across the last three groups with no upward trend observed. Full blood count results were normal for most animals, although one neutrophilia and one lymphocytosis were observed, possibly indicating a subclinical immune response. Nasal swab results for Glaesserella parasuis were negative across all gilts, confirming the absence of active infection.

Multiplier

Clinical Assessment:

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal

21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically normal, with no respiratory signs or other abnormalities detected.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	3,3%
% Low	23,3%
% Normal	73,3%
Average g/dL	11,6

Number	Hb result (g/dL)	Interpretation
1	8,1	Anaemic
2	9,0	Low
3	9,1	Low
4	9,2	Low
5	9,9	Low
6	10,6	Low
7	10,7	Low
8	10,8	Low
9	11,3	Normal
10	11,4	Normal
11	11,4	Normal
12	11,5	Normal
13	11,6	Normal
14	11,7	Normal
15	11,7	Normal
16	11,7	Normal
17	11,8	Normal
18	11,9	Normal
19	12,0	Normal
20	12,2	Normal

21	12,6	Normal
22	12,7	Normal
23	12,7	Normal
24	13,0	Normal
25	13,2	Normal
26	13,2	Normal
27	13,2	Normal
28	13,5	Normal
29	13,7	Normal
30	13,8	Normal

Remarks

The haemoglobin status remains relatively stable compared to previous results. The percentage of anaemic pigs has increased slightly to 3.3%, while the average haemoglobin concentration has decreased marginally to 11.6 g/dL. Overall, the trend in haemoglobin levels shows no significant changes, indicating relatively consistent results

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	3,50	Normal
2	Gilt	4,90	Normal
3	Gilt	<3	Normal
4	Gilt	<3	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	3,70	Normal
8	Gilt	11,10	Normal
9	Gilt	4,60	Normal
10	Gilt	<3	Normal
11	Sow	<3	Normal
12	Sow	<3	Normal
13	Sow	20,10	Normal
14	Sow	<3	Normal
15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

All Amyloid A test results are below the cutoff reference range (<42,7mg/L) for pigs. No significant increase in Amyloid A levels is seen and results are therefore interpreted as normal.

cs vet
Veterinary Consultancy

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Neutrophilia	Increased neutrophil count
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest results show that most animals, including gilts and sows, have haematology values within normal parameters, with no deviations in their haemoglobin levels. However, one sow shows neutrophilia, indicating an increased neutrophil count, which may suggest a mild inflammatory response or sub clinical infection. Despite this, there are no signs of anaemia or other immune system abnormalities in the group.

Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Negative
2	PCR	Glaesserella parasuis	Negative
3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Negative
5	PCR	Glaesserella parasuis	Negative
6	PCR	Glaesserella parasuis	Negative
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Negative
9	PCR	Glaesserella parasuis	Weak Positive

10	PCR	Glaesserella parasuis	Negative

Remarks:

The latest PCR testing for Glaesserella parasuis showed one weak positive result and nine negative results. Despite the presence of the pathogen in one animal, no clinical signs of Glässer's disease have been observed, and other laboratory parameters remain within normal ranges. This suggests that while G. parasuis is present, there is no active clinical disease at this time.

Conclusion

The clinical assessment revealed that all animals were clinically normal, with no respiratory signs or abnormalities. Average haemoglobin concentrations are stable at 11.6 g/dL, and Amyloid A levels were within normal limits, indicating no significant inflammatory response. Full blood counts were mostly normal, with one sow showing neutrophilia, suggesting a mild inflammatory response or subclinical infection, but no signs of anaemia or immune system abnormalities. PCR testing for Glaesserella parasuis indicated one weak positive result, but there were no clinical signs of Glässer's disease. Overall, the herd's health remains stable, and while no serious concerns were identified in this group, ongoing monitoring is advised.

Research

Clinical Assessment:

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal
10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal

25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were found to be clinically normal and within expected parameters for healthy pigs.

Laboratory analysis:

Haemoglobin (Hb):

% Anaemic	20,0%
% Low	56,7%
% Normal	23,3%
Average g/dL	10,2

Number	Hb result (g/dL)	Interpretation
1	6,5	Anaemic
2	6,5	Anaemic
3	8,2	Anaemic
4	8,5	Anaemic
5	8,5	Anaemic
6	8,6	Anaemic
7	9,2	Low
8	9,3	Low
9	9,4	Low
10	9,4	Low
11	9,5	Low
12	9,6	Low
13	10,1	Low
14	10,2	Low
15	10,3	Low
16	10,3	Low
17	10,4	Low
18	10,6	Low
19	10,6	Low
20	10,7	Low
21	10,8	Low
22	10,9	Low
23	10,9	Low
24	11,3	Normal
25	11,5	Normal

26	11,5	Normal
27	12,3	Normal
28	12,5	Normal
29	13,4	Normal
30	13,5	Normal

Remarks

The latest haemoglobin results indicate a decline in haemoglobin status, with 20.0% of pigs now classified as anaemic up from 0% previously. The average Hb concentration has dropped from 12.7 g/dL to 10.2 g/dL, reflecting a significant drop in overall haemoglobin levels across the group. Continued monitoring is required to track the trend.

Amyloid A:

Number	Sow/Gilt	Result (mg/L)	Interpretation
1	Gilt	5,60	Normal
2	Gilt	14,90	Normal
3	Gilt	<3	Normal
4	Gilt	19,10	Normal
5	Gilt	6,20	Normal
6	Gilt	42,00	Normal
7	Gilt	13,60	Normal
8	Gilt	16,20	Normal
9	Gilt	9,50	Normal
10	Gilt	18,90	Normal
11	Sow	<3	Normal
12	Sow	3,30	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal
15	Sow	8,60	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	<3	Normal

Remarks:

The Amyloid A results for all sows and gilts fall within the normal range (<42.7 mg/L). One gilt recorded a value of 42.00 mg/L, which is close to the upper threshold but still considered normal. At the time of sampling, no clinical abnormalities and signs of infection were observed in the group.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal

2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Neutropenia	Lowered neutrophil count
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results indicate that all sows and gilts have haematology values within normal parameters, except for one gilt (Gilt 3) which showed a lowered neutrophil count, which may suggest a subclinical immune response. With the lack of clinical disease in the group it does not raise concern at this stage.

Nasal Swabs (Glässer's disease)

Number	Test	Pathogen tested for	Result
1	PCR	Glaesserella parasuis	Negative
2	PCR	Glaesserella parasuis	Negative
3	PCR	Glaesserella parasuis	Negative
4	PCR	Glaesserella parasuis	Negative
5	PCR	Glaesserella parasuis	Negative
6	PCR	Glaesserella parasuis	Negative
7	PCR	Glaesserella parasuis	Negative
8	PCR	Glaesserella parasuis	Negative
9	PCR	Glaesserella parasuis	Negative
10	PCR	Glaesserella parasuis	Negative

Remarks:

The latest PCR results for Glaesserella parasuis show all ten samples returning negative results. This indicates that there is no evidence of active infection with Glaesserella parasuis in the herd at this time. Continuous monitoring will be maintained to ensure early detection of any potential issues.

Conclusion

All animals examined were clinically normal with no signs of respiratory distress or systemic illness. Haemoglobin results indicate a decline in status, with 20.0% of pigs now classified as anaemic and the average Hb concentration dropping from 12.7 g/dL to 10.2 g/dL, warranting continued monitoring. Full blood counts were within normal limits for all sows and gilts except for one gilt showing neutropenia, possibly indicating a subclinical immune response. Amyloid A levels were within the normal range for all animals; however, one gilt recorded a value close to the upper threshold, though still considered normal. PCR results for *Glaesserella parasuis* were negative in all nasal swab samples, indicating no active infection.

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D18/11784

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Topigs SA Rietfontein Health Monitoring Report 2025-02-10

Assessment and Sampling date: 2025-02-10

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal

10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal, neck abscess
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal, neck abscess
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were within normal health parameters, showing no signs of respiratory distress, nasal discharge, or elevated rectal temperatures. However, one gilt and one sow were noted to have neck abscesses but were otherwise clinically healthy.

Laboratory analysis:

Haemoglobin*:

% Anaemic	10,0%
% Low	80,0%
% Normal	10,0%
Average (g/dL)	10,7

Number	Hb result (g/dL)	Interpretation
1	8,0	Anaemic
2	8,1	Anaemic
3	8,6	Anaemic
4	9,3	Low
5	9,8	Low
6	10,0	Low
7	10,2	Low

8	10,3	Low
9	10,3	Low
10	10,4	Low
11	10,6	Low
12	10,6	Low
13	10,7	Low
14	10,7	Low
15	10,8	Low
16	10,9	Low
17	10,9	Low
18	11,0	Low
19	11,1	Low
20	11,1	Low
21	11,2	Low
22	11,2	Low
23	11,3	Low
24	11,5	Low
25	11,5	Low
26	11,6	Low
27	11,9	Low
28	12,1	Normal
29	12,2	normal
30	12,6	Normal

Remarks

The latest haemoglobin results indicate a decrease in overall haemoglobin status compared to the previous assessment. The percentage of anaemic pigs has increased from 3.3% to 10.0%, while the proportion of pigs classified as low has risen from 46.7% to 80.0%. Consequently, the percentage of pigs within the normal range has dropped from 50.0% to only 10.0%. Additionally, the average haemoglobin concentration has decreased from 11.1 g/dL to 10.7 g/dL.

Amyloid A:

Number	Gilt/Sow	Result	Interpretation
1	Gilt	<3	Normal
2	Gilt	5,7	Normal
3	Gilt	<3	Normal
4	Gilt	<3	Normal
5	Gilt	<3	Normal
6	Gilt	<3	Normal
7	Gilt	12	Normal
8	Gilt	8,5	Normal
9	Gilt	8,9	Normal
10	Gilt	<3	Normal
11	Sow	14,1	Normal

12	Sow	<3	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal
15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	<3	Normal
19	Sow	<3	Normal
20	Sow	4,8	Normal

Remarks:

All Amyloid A test results remain within the reference range for pigs (below 42.7 mg/L), with no significant elevations detected.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Neutrophilia	Increase in neutrophil count
9	Gilt	Normal	Neutrophilia	Increase in neutrophil count
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Mild Lymphocytopenia	Lowered Lymphocyte count
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results show that the majority of gilts and sows have haematological parameters within normal ranges. However, two gilts presented with neutrophilia, which may indicate an inflammatory response or possible subclinical infection, while one sow exhibited mild lymphocytopenia, potentially suggesting immune modulation.

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Nasal Swabs (Glässer's disease)

Number	Animal	Test	Pathogen tested for	Result
1	Gilt	PCR	Glaesserella parasuis	Weak Positive
2	Gilt	PCR	Glaesserella parasuis	Negative
3	Gilt	PCR	Glaesserella parasuis	Positive
4	Gilt	PCR	Glaesserella parasuis	Negative
5	Gilt	PCR	Glaesserella parasuis	Negative
6	Gilt	PCR	Glaesserella parasuis	Negative
7	Gilt	PCR	Glaesserella parasuis	Negative
8	Gilt	PCR	Glaesserella parasuis	Negative
9	Gilt	PCR	Glaesserella parasuis	Positive
10	Gilt	PCR	Glaesserella parasuis	Positive

Remarks:

The latest nasal swab PCR results for Glaesserella parasuis indicate three positive cases and one weak positive among the ten gilts tested, while the remaining six were negative. Although the presence of the pathogen suggests potential colonization, no clinical signs of Glässer's disease were observed, indicating that these gilts are likely subclinical carriers.

Conclusion

The clinical assessment confirmed that all piglets, gilts, and sows were clinically normal, with no respiratory signs observed apart from two animals with neck abscesses that were otherwise clinically healthy. Haemoglobin levels have declined, with anaemic cases increasing to 10.0% and normal cases dropping to 10.0%, indicating a widespread reduction in haemoglobin status. Full blood counts were mostly within normal ranges, though mild lymphocytopenia and neutrophilia were observed in a few cases, suggesting potential subclinical infections. Amyloid A levels remained within the normal reference range. Nasal swabs detected Glaesserella parasuis in three gilts, with one weak positive, but no clinical signs of Glässer's disease were noted, suggesting possible subclinical carriage.

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Topigs SA Rietfontein Health Monitoring Report 2025-03-10

Assessment and Sampling date: 2025-03-10

Clinical Assessment:

Clinical examination of 30 pigs (10 sows, 10 suckling piglets, 10 replacement gilts)

Clinical assessments will be scored as follows:

- Habitus:
  - 0 – normal
  - 1 – listless
- Respiratory rate:
  - 0 – normal
  - 1 – slightly elevated
  - 2 – moderately elevated
  - 3 – clearly elevated, distinct abdominal breathing
- Nasal Discharge:
  - 0 – absent
  - 1 – present
- Coughing:
  - 0 – normal
  - 1 – mild
  - 2 – moderate
  - 3 – severe
- Sneezing:
  - 0 – absent
  - 1 – present
- Rectal temperature:
  - 0 – normal
  - 1 – elevated (above 40°C)

Number	Piglet/Gilt/Sow	Habitus	Respiratory rate	Nasal Discharge	Coughing	Sneezing	Rectal temp	Comment
1	Piglet	0	0	0	0	0	0	Clinically Normal
2	Piglet	0	0	0	0	0	0	Clinically Normal
3	Piglet	0	0	0	0	0	0	Clinically Normal
4	Piglet	0	0	0	0	0	0	Clinically Normal
5	Piglet	0	0	0	0	0	0	Clinically Normal
6	Piglet	0	0	0	0	0	0	Clinically Normal
7	Piglet	0	0	0	0	0	0	Clinically Normal
8	Piglet	0	0	0	0	0	0	Clinically Normal
9	Piglet	0	0	0	0	0	0	Clinically Normal

10	Piglet	0	0	0	0	0	0	Clinically Normal
11	Gilt	0	0	0	0	0	0	Clinically Normal
12	Gilt	0	0	0	0	0	0	Clinically Normal
13	Gilt	0	0	0	0	0	0	Clinically Normal
14	Gilt	0	0	0	0	0	0	Clinically Normal
15	Gilt	0	0	0	0	0	0	Clinically Normal
16	Gilt	0	0	0	0	0	0	Clinically Normal
17	Gilt	0	0	0	0	0	0	Clinically Normal
18	Gilt	0	0	0	0	0	0	Clinically Normal
19	Gilt	0	0	0	0	0	0	Clinically Normal
20	Gilt	0	0	0	0	0	0	Clinically Normal
21	Sow	0	0	0	0	0	0	Clinically Normal
22	Sow	0	0	0	0	0	0	Clinically Normal
23	Sow	0	0	0	0	0	0	Clinically Normal
24	Sow	0	0	0	0	0	0	Clinically Normal
25	Sow	0	0	0	0	0	0	Clinically Normal
26	Sow	0	0	0	0	0	0	Clinically Normal
27	Sow	0	0	0	0	0	0	Clinically Normal
28	Sow	0	0	0	0	0	0	Clinically Normal
29	Sow	0	0	0	0	0	0	Clinically Normal
30	Sow	0	0	0	0	0	0	Clinically Normal

Remarks:

All animals examined during the clinical assessment were within normal health parameters, showing no signs of respiratory distress, nasal discharge, or elevated rectal temperatures.

Laboratory analysis:

Haemoglobin*:

% Anaemic	10,0%
% Low	56,7%
% Normal	33,3%
Average (g/dL)	10,3

Number	Hb result (g/dL)	Interpretation
1	8,0	Anaemic
2	8,0	Anaemic
3	8,7	Anaemic
4	9,2	Low
5	9,3	Low
6	9,4	Low
7	9,5	Low
8	9,5	Low
9	9,7	Low

10	9,9	Low
11	9,9	Low
12	10,2	Low
13	10,3	Low
14	10,3	Low
15	10,3	Low
16	10,4	Low
17	10,4	Low
18	10,7	Low
19	10,8	Low
20	10,9	Low
21	11,1	Normal
22	11,1	Normal
23	11,2	Normal
24	11,2	Normal
25	11,3	Normal
26	11,5	Normal
27	11,5	Normal
28	11,7	Normal
29	11,9	Normal
30	12,4	Normal

Remarks

The latest haemoglobin results show a decline in overall haemoglobin status compared to the previous results. Although the percentage of anaemic pigs remained unchanged at 10.0%, the average haemoglobin concentration has dropped from 10.7 g/dL to 10.3 g/dL, indicating a general downward trend in haemoglobin levels across the group.

Amyloid A:

Number	Gilt/Sow	Result	Interpretation
1	Gilt	3,4	Normal
2	Gilt	10,9	Normal
3	Gilt	10,9	Normal
4	Gilt	12,9	Normal
5	Gilt	7,4	Normal
6	Gilt	21,75	Normal
7	Gilt	10	Normal
8	Gilt	10	Normal
9	Gilt	11	Normal
10	Gilt	17,6	Normal
11	Sow	<3	Normal
12	Sow	<3	Normal
13	Sow	<3	Normal
14	Sow	<3	Normal

15	Sow	<3	Normal
16	Sow	<3	Normal
17	Sow	<3	Normal
18	Sow	22	Normal
19	Sow	<3	Normal
20	Sow	3,1	Normal

Remarks:

All Amyloid A test results remain within the reference range for pigs (below 42.7 mg/L), with no significant elevations detected.

Full blood counts:

Number	Gilt/Sow	Hb	Result	Interpretation
1	Gilt	Normal	Haematology results within normal parameters	Haematology normal
2	Gilt	Normal	Haematology results within normal parameters	Haematology normal
3	Gilt	Normal	Haematology results within normal parameters	Haematology normal
4	Gilt	Normal	Haematology results within normal parameters	Haematology normal
5	Gilt	Normal	Haematology results within normal parameters	Haematology normal
6	Gilt	Normal	Haematology results within normal parameters	Haematology normal
7	Gilt	Normal	Haematology results within normal parameters	Haematology normal
8	Gilt	Normal	Haematology results within normal parameters	Haematology normal
9	Gilt	Normal	Haematology results within normal parameters	Haematology normal
10	Gilt	Normal	Haematology results within normal parameters	Haematology normal
11	Sow	Normal	Haematology results within normal parameters	Haematology normal
12	Sow	Normal	Haematology results within normal parameters	Haematology normal
13	Sow	Normal	Haematology results within normal parameters	Haematology normal
14	Sow	Normal	Haematology results within normal parameters	Haematology normal
15	Sow	Normal	Haematology results within normal parameters	Haematology normal
16	Sow	Normal	Haematology results within normal parameters	Haematology normal
17	Sow	Normal	Haematology results within normal parameters	Haematology normal
18	Sow	Normal	Haematology results within normal parameters	Haematology normal
19	Sow	Normal	Haematology results within normal parameters	Haematology normal
20	Sow	Normal	Haematology results within normal parameters	Haematology normal

Remarks

The latest full blood count results indicate that all gilts and sows have haematological parameters within normal ranges, with no abnormalities or signs of subclinical issues detected in this assessment

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Nasal Swabs (Glässer's disease)

Number	Animal	Test	Pathogen tested for	Result
1	Gilt	PCR	Glaesserella parasuis	Negative
2	Gilt	PCR	Glaesserella parasuis	Negative
3	Gilt	PCR	Glaesserella parasuis	Negative
4	Gilt	PCR	Glaesserella parasuis	Negative
5	Gilt	PCR	Glaesserella parasuis	Positive
6	Gilt	PCR	Glaesserella parasuis	Negative
7	Gilt	PCR	Glaesserella parasuis	Negative
8	Gilt	PCR	Glaesserella parasuis	Negative
9	Gilt	PCR	Glaesserella parasuis	Negative
10	Gilt	PCR	Glaesserella parasuis	Negative

Remarks:

The latest nasal swab PCR results for Glaesserella parasuis show one positive case among the ten gilts tested, with the remaining nine testing negative. The low detection rate suggests limited colonization within the tested group, and no clinical signs of Glässer's disease were noted, indicating the positive gilt may be a subclinical carrier.

Conclusion

All animals were clinically normal at the time of assessment, with no signs of respiratory disease or fever observed. Full blood count results confirmed normal haematological parameters in all gilts and sows tested. The latest haemoglobin results show a decline in overall haemoglobin status compared to the previous results. Although the percentage of anaemic pigs remained unchanged at 10.0%, the average haemoglobin concentration has dropped from 10.7 g/dL to 10.3 g/dL, indicating a general downward trend in haemoglobin levels across the group. All Amyloid A values were within the normal reference range, suggesting no active inflammatory process. One gilt tested positive for *Glaesserella parasuis* on nasal swab PCR, which may reflect subclinical carriage, though no clinical signs of Glässer's disease were observed

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D18/11784