

Dr. Patience Gwaze
National Air Quality Officer
Department of Forestry, Fisheries and the Environment
473 Steve Biko Street,
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0001

Date: 15 November 2023
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simelanenl@nkangaladm.gov.za

Dear Dr Gwaze,

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

Eskom was issued with Minimum Emission Standards (MES) postponement in respect of Kusile's SO₂ levels by the DFFE on 05 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 Flue Gas Desulphurization plant (FGD). The approvals are issued subject to several conditions, including that Eskom implement measure to minimise the impact on human health.

In condition 3.4, National Air Quality Officer included the following conditions to be reported monthly:

- 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 remains the 31 December 2024.
 - II. The actual Load Transfer from 151 to 180 m level took place on the 08 Nov 2023 and 151 m level recovered successfully. This confirms Western stack stable and safe to continue with the rest of recovery activities.
 - III. Schedules will be prepared considering learning during load transfer process.
Permanent Stack recovery progress attached (**Annexure A**).

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

2. Temporary Stack Progress and Emission Monitoring

Progress:

- I. Unit 3 and Unit 1 returned to service on the 29 September and 16 October 2023, respectively.
- II. Unit 2 return to service date to be confirmed.

CEMS:

- I. Unit 1 and 3 Continuous Emission Monitoring (CEMS) for the temporary stacks are installed and commissioned. Unit 2 CEMS installed and will be commissioned when the Unit is operational.
- II. Correlation for Unit 3 was completed successfully on the 12th of November 2023 and correlation reports will be made available after 2 weeks Unit 1 correlation test is planned commenced on the 01 December 2023.
- III. Unit 2 correlation will be done after the Unit is commissioned and return to service.

Stack Performance:

- I. Monitoring of stack emission levels has commenced with the start of unit operations. Internal procedures for response to high stack levels have been developed and are being implemented based on presently available data.
- II. The report shows that the daily emission levels are well within the specified atmospheric emission levels.
- III. Kusile Monthly Emission report for October 2023 is attached (Annexure B).
- IV. The emission reports for Unit 1 and 3 will be repeated after the correlation test are completed and correlation factors implemented.

3. Health Screening for the increased SO₂ emission and associated health impacts

- I. INFOTOX / The Bureau of Market Research (Pty) Ltd (BMR) was appointed on 18 September 2023 to collect data for the Eskom health screening and monitoring on selected communities of the Kusile Power Station.
- II. The purpose of the health screening was to identify the groups of individuals who are vulnerable to the exposure of high level of Sulphur dioxide that will be emitted by the Kusile Power Station temporary stacks.
- III. Letter of introduction was endorsed by Eskom, INFOTOX and BMR on the 08 October 2023.
- IV. BMR was issued with an Ethical clearance letter by BMR Research Ethics Review Committee on the 12 October 2023.

Detail health screening progress is attached (**Annexure C**).

4. Ambient Air Quality Monitoring

- I. Balmoral air quality monitoring station was commissioned on 20 September 2023 and Wilge air quality monitoring station on 19 September 2023 in addition to existing monitoring stations at Phola and Kendal Poultry Farm with Ogies to be commission in March 2024.
- II. All the ambient air quality monitoring stations are equipped for continuous monitoring of ambient SO₂ and meteorological parameters, i.e. ambient temperature, atmospheric pressure, rainfall, solar radiation, relative humidity, wind speed and wind direction.

Detailed report attached (**Annexure D**).

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

5. Poultry Health Monitoring

Service provider had been appointed for Kendal Poultry monitoring as per condition of RoD and MES, however execution is on hold due to the outbreak of Avian Influenza. Letter was written to Kendal Poultry to inform Eskom to resume monitoring when the outbreak had been lifted.

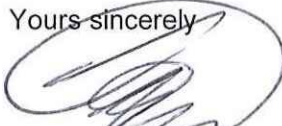
6. Animal Health Monitoring

- I. Topigs and GHB farms monitoring were engaged to discussion and receiving some baseline information for animal health (pigs) monitoring on the 27 September 2023.
- II. Topigs and GHB farms provided Eskom with monitoring proposal on the 10 October 2023, which was reviewed by Eskom, and subsequently Eskom request further discussion to clarify the scope and proposal on the 20 October 2023.
- III. Meeting was held with Topigs and GHB farms on the 10 November 2023 to clarify scope and monitoring program and engagements are ongoing.

7. Emergency Response Plan

- i. It must be noted that there have not been any incidents related to the operation of the temporary stacks affecting the community were experienced thus far.
- ii. To ensure continuity, the following has been achieved with the eMalahleni Emergency Services and Disaster Management
 - ✓ The establishment of monthly meetings commencing during the month of November 2023.
 - ✓ A WhatsApp group has been created which allows for prompt communication with the Municipality

Yours sincerely



**CHRISTOPHER NANI
POWER STATION ACTING GENERAL MANAGER**

DATE: 15/11/2023

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

List of annexures

Annexure A: Kusile Permanent Stack Recovery progress status

Annexure B: Kusile Monthly Emission Report – October 2023

Annexure C: Kusile Power Station Health Screening progress

Annexure D: Kusile Ambient Air Quality Report – October 2023

Annexure A1



Dr P Gwaze
National Air Quality Officer
Department of Forestry, Fisheries and Environment
Private Bag X 447
PRETORIA
0001

Date: 10 November 2023

Enquiries S Mahlangu
Tel: 013 699 7097

Monthly Progress Report for Kusile Power Station West Stack Recovery:

#	Monitoring	Status	Start Date	End Date
1	Procure Deflection Monitoring equipment	100%	30 Jan 23	17 Feb 23
2	Install Monitoring equipment	100%	20 Feb 23	24 Feb 23
	Alimak Hoist			
3	Procure Alimak Hoist	100%	30 Jan 23	10 Mar 23
4	Construct Base	100%	27 Mar 23	31 Mar 23
5	Install Alimak	100%	21 Apr 23	6 Jun 23
6	Commission Alimak	100%	7 Jun 23	7 Jun 23
	Cleaning Roof			
7	Clean top of Stack Roof	100%	7 Jun 23	17 Jul 23
	Load Transfer to 180 Platform			
8	Jack capacity & Procurement (Enerpack)	100%	10 Mar 23	23 Jun 23
9	Design & Engineering of load transfer system	100%	14 Mar 23	05 Jul 23
10	Procure Dywidag Jack Rods and Connection Couplers	100%	30 May 23	06 Sep 23
11	Erect scaffolding ramp for Spider Crane – CPGP	100%	28 Aug 23	29 Aug 23
12	Setup Spider crane on Roof – NGR	100%	18 Sep 23	19 Sep 23
13	Deflection survey of 151m & 180m platforms – NGR	100%	15 Jun 23	21 Jun 23
14	Procure of Hydraulics & Jacks	100%	30 May 23	29 Sep 23
15	Install Dywidag Jack Rods & Connection Couplers – NGR	100%	20 Sep 23	13 Oct 23
16	Procure Temporary works to seat (pedestals) the jacks and transfer to 180m platform	100%	03 Jul 23	06 Oct 23
17	Install Temporary works to seat (pedestals) the jacks and transfer to 180m platform - NGR	100%	21 Aug 23	13 Oct 23
18	Delivery of Jack Equipment (Enerpack)	100%	02 Oct 23	06 Oct 23
19	Setup Jacking Equipment – NGR	100%	12 Oct 23	20 Oct 23
20	Install Measure & Monitor system	90%	23 Oct 23	18 Oct 23
21	Remove Spider Crane on Roof – NGR	100%	16 Oct 23	06 Nov 23
22	Install Jacking Platform (Scaffolding) – CPGP	100%	23 Oct 23	07 Nov 23
23	Remove Scaffold Ramp for spider crane - CPGP		15 Nov 23	21 Nov 23

Generation Division - Group Capital
Kusile Power Station Project
R545 Kendal/Balmoral Rd Haartebeesfontein Farm Witbank
Postnet Suite 46 Emalahleni 1035 SA
Tel +27 13 699 7097 www.eskom.co.za
Eskom Holdings SOC Ltd Reg No 2002/015527/30

24	Deflection Survey of 151m & 180m platforms – PVR Surveyor (Pre-Jacking)		09 Nov 23	14 Nov 23
25	Commission Hydraulics & transfer load equipment – NGR Final before Jacking	100%	07 Nov 23	07 Nov 23
26	Jack to transfer load 151m to 180m – NGR	100%	08 Nov23	08 Nov 23

NOTES:

West Stack:

- The target date for the recovery of the West stack remains the 31 December 2024
- The actual Load Transfer from 151m to 180 m level took place on 08 November 2023 and 151m level recovered successfully
 - This confirmed that West stack stable and safe to continue with the rest of recovery activities
- Schedules will be prepared considering learning during load transfer process
- Alimak operation is not possible during windy conditions and wind direction can result in flue gas contamination at the top of the stack from units 1 or 3 preventing safe access to the stack

Temporary Stacks:

- Unit 3 Synchronized on 30 September 2023
- Unit 1 Synchronized the 16 October 2023

Trust you find the above in order

Kind Regards,

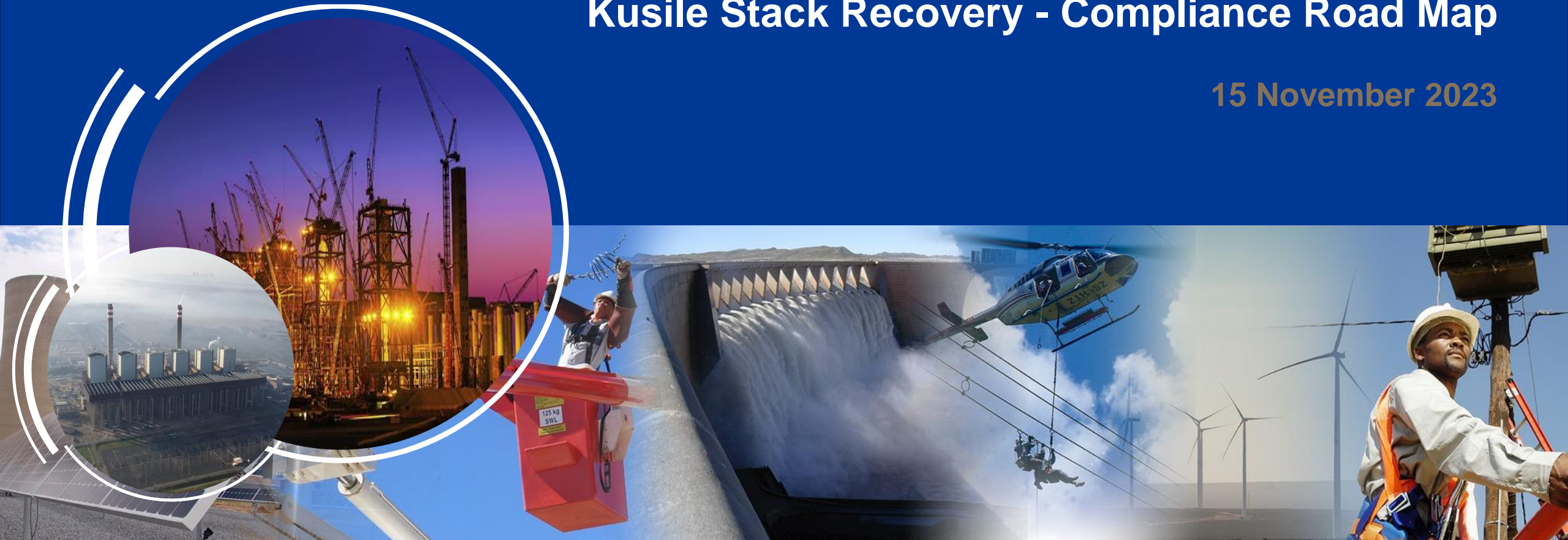


Zandi Shange
General Manager - Kusile Power Station Project

Kusile Power Station Project

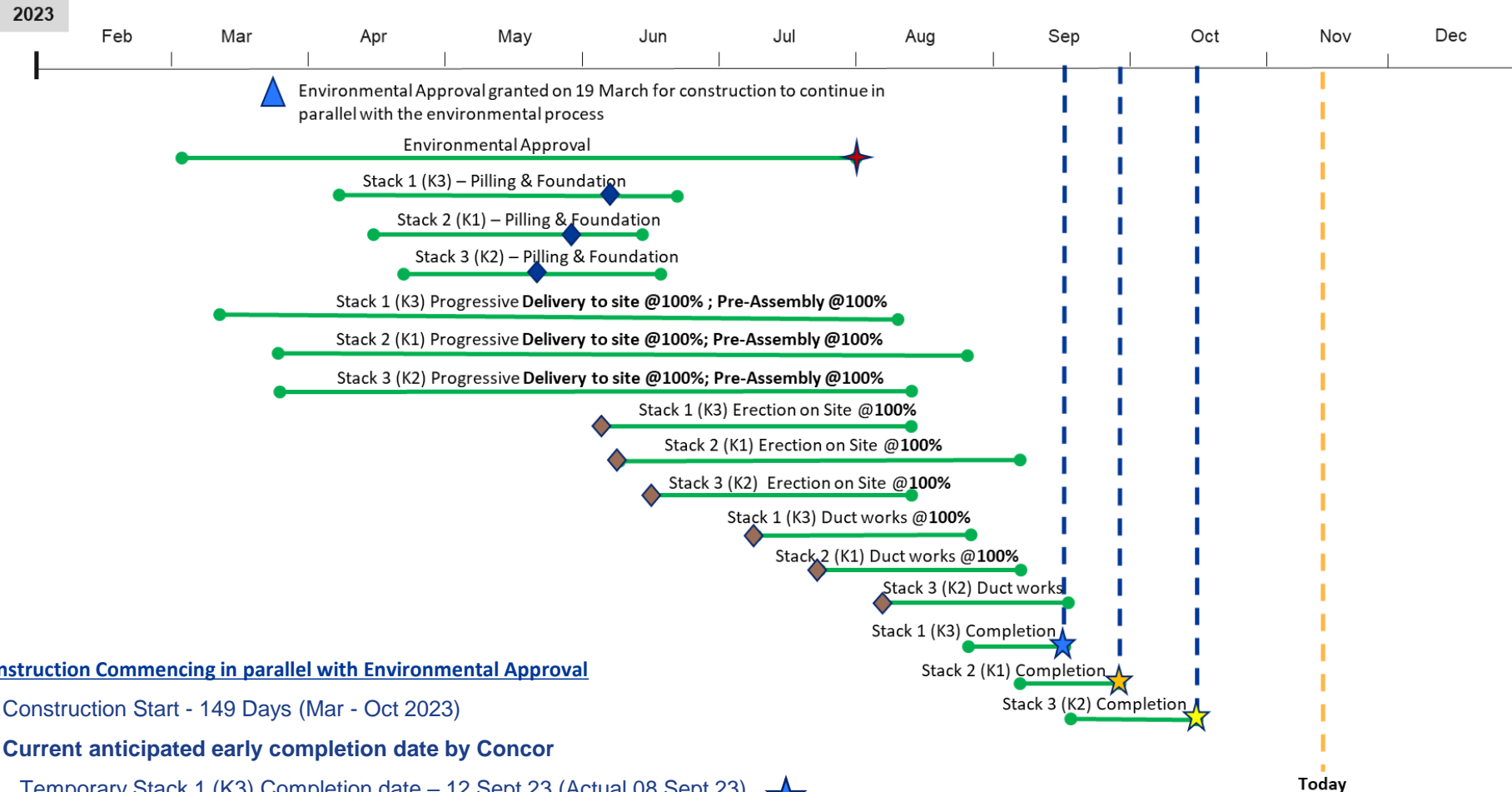
Kusile Stack Recovery - Compliance Road Map

15 November 2023



1. The required MES postponement was issued by the DFFE on 5 June 2023. The approvals were issued subject to several conditions, key of which is that Eskom implement measure to minimise the impact on human health. A draft AEL was responded to on 6 November 2023.
2. The decisions were appealed by the Centre for Environmental Rights and neighbouring landowners. Minister DFFE responded 26 September and upheld the positive decision of the DFFE. Nkangala District upheld the appeal on 28 September. The station is now able to legally operate subject to conditions which it must comply with.
3. CER has sent additional information after the Ministers decision – they are probably setting up for a court review.
4. Engagements with lenders on their requirements continue.
5. Operations and monitoring of operations is ongoing. Key issues:
 1. No non-compliance to air stack or ambient triggers noted to date. DFFE requires reporting by 15th of the following month – reports to be made available on the Eskom website. Report will be submitted as required.
 2. Stack monitoring is ongoing and correlation tests was completed successfully on the 12 November 2023. Ambient monitoring has commenced for SO₂ at Phola, Chicken farm, Balmoral and results will be live on SAAQIS by end November 2023
 3. Chicken farming testing on hold due to avian flu. Engagements with pig farmers/Topigs ongoing – support of NW University or FOA being explored.
 4. Health screening has started on Kusile site and in all affected surrounding areas. Sensitive individual database should be available for the end of November 2023.

Temporary Stack Timelines – Current Status



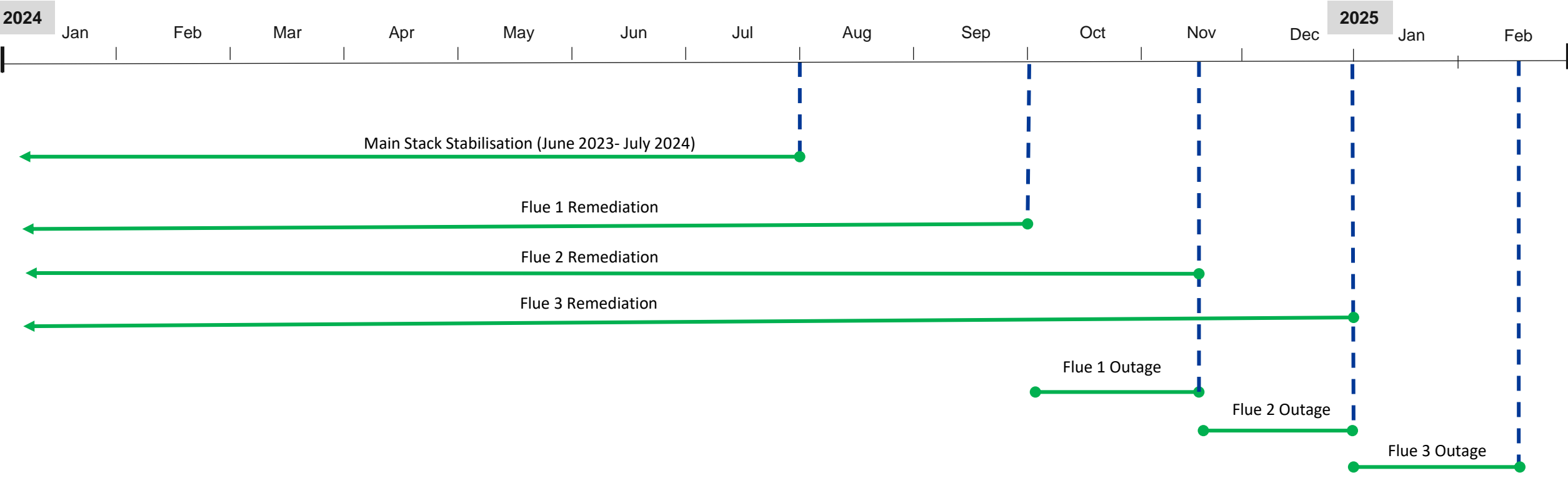
Construction Commencing in parallel with Environmental Approval

- Construction Start - 149 Days (Mar - Oct 2023)
- **Current anticipated early completion date by Concor**
 - Temporary Stack 1 (K3) Completion date – 12 Sept 23 (Actual 08 Sept 23) ★
 - Temporary Stack 2 (K1) Completion date – 22 Sept 23 (Actual 16 Sept 23) ★
 - Temporary Stack 3 (K2) Completion date – 14 Oct 23 (Actual 12 Oct 23) ★
- ◆ Erection started ahead of schedule
- ◆ Planned Start Ahead of schedule

Insights

- All 3 stacks at full height of 116m and completed
- PJFF bags for Unit 2 installation (93%)
- CEMS analyzer for Unit 1-3 has been installed
- Unit 3 was Synched on 30 September 2023
- Unit 1 was Synched on 16 October 2023
- Unit 2 Synch forecasted by 30 November 2023
- Permanent Stack repairs forecasted by December 2024 (In progress)

Main Stack - Projected Timelines



Main Stack Remediation

- Main Stack Stabilisation – June 2023- July 2024
- **Flue 1 Outage to reinstate FGD and Main Stack**– 01 Oct 2024 – Synch 15 Nov 2024
- **Flue 2 Outage to reinstate FGD and Main Stack**– 16 Nov 2024 – Synch 30 Dec 2024
- **Flue 3 Outage to reinstate FGD and Main Stack**– 31 Dec 2024 – Synch 15 Feb 2025

- **Permanent stack remediation** – Access to the bottom of the stack is prohibited due to safety concerns. The Alimak has been installed, securing access into the permanent stack from the top. The associated rigging methodologies can be finalised to secure the compromised levels.
 - Risk: Collapse of the lobsters and damage/collapse of concrete windshield at flue openings is a worst-case scenario.
 - Risk: The stabilising / reinstating of the 151m & 55m level could be worse than anticipated resulting in a longer time to remediate.
 - Mitigation: Load distribution from 151m level secured to the 181m level completed – thus the risk of catastrophic failure has been reduced significantly.
 - Mitigation: Engineering proposals involve continuous monitoring of the internals to assess if there is any further movement within the stack. This will serve as an early warning system against any further movement and potential catastrophic failure.
 - Mitigation: Temporary stacks have alleviated the time constraint associated with the permanent stack remediation.

- **Temporary stack remediation** – Temporary stacks have been constructed as the fastest way of getting K1-3 back into service. K1 and K3 in service, K2 in progress/
 - Risk: Environmental approval to operate the temporary stacks was granted, appeals or court action against the decisions remain possible risk that needs to be managed.
 - Mitigation: The station is now able to legally operate subject to conditions which it must comply with. Continuous engagement with DFFE and mitigation monitoring plan/actions need to be monitored and complied to.
 - Mitigation: Expedite the final stack remediation once access to the permanent stack is established and final details regarding to the stabilisation methodology has been concluded.

- **General Project Risks**
 - Risk: Inclement weather conditions could potentially hamper construction progress.
 - Mitigation: Resequencing construction activities and working times.
 - Risk: Potential safety incidents and work stoppages.
 - Mitigation: Continuous monitoring and site supervision to manage safety risks.

1. The outages required to reinstate FGD and Main Stack will be granted as required in line with the scheduled philosophy outages for each unit.
2. Removal of slurry from the flue ducts will be successful without damage to the duct liner.
3. Rig out the lobsters or stabilising lobsters and the 55m level platform without any further complications/ damage.
4. No further movement to the internals of the stack is anticipated, however should additional movement be detected we will need to re-access our current remediation strategy.

1. During construction of the temporary stacks no emissions will come from units 1, 2 and 3. Unit 4 and 5 will comply with the existing AEL limits $\text{PM} = 50 \text{ mg/Nm}^3$, $\text{NO}_x = 750 \text{ mg/Nm}^3$, $\text{SO}_2 = 500 \text{ mg/Nm}^3$.
2. Once the temporary stacks are commissioned (by December 2023) temporary stacks on units 1, 2 and 3 will operate without FGD at $\text{PM} = 50 \text{ mg/Nm}^3$, $\text{NO}_x = 750 \text{ mg/Nm}^3$, $\text{SO}_2 = 3500 \text{ mg/Nm}^3$. Units 4, 5 and 6 will comply with the existing AEL limits $\text{PM} = 50 \text{ mg/Nm}^3$, $\text{NO}_x = 750 \text{ mg/Nm}^3$, $\text{SO}_2 = 500 \text{ mg/Nm}^3$.
3. When the West stack is recovered (by December 2024) all units will operate in compliance to the existing AEL limits, $\text{PM} = 50 \text{ mg/Nm}^3$, $\text{NO}_x = 750 \text{ mg/Nm}^3$, $\text{SO}_2 = 500 \text{ mg/Nm}^3$.



Ms. Nompumelelo Simelane
Nkangala District Municipality
PO Box 437
Middleburg
1050

Date:

November 2023

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 OCTOBER 2023

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 October 2023. Please take note that Unit 2 is off due to the flue gas duct collapse incident that occurred in Oct 2022.

Hoping the above will meet your satisfaction.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Christopher Nani', enclosed in a large, loopy oval.

Christopher Nani
ACTING GENERAL MANAGER

DATE: *15/11/2023*

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 Oct-2023
	Coal	Tons	1 818 083	477 181
	Fuel Oil	Tons	5 533	3751.202
	Limestone	Tons	72 917	4620

Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Oct-2023
	Energy	GWh	3 321.216	897.577
	Ash	Tons	663 583	125 355.441
	Gypsum	Tons	129 250	2 587.200
	RE PM	kg/MWh	<i>not specified</i>	0.006
	RE SOx	kg/MWh	<i>not specified</i>	3.752

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	<i>not specified</i>	21.920
Coal Sulphur	%	1.3	0.660
Ash in Coal	%	38	26.270
Ash in FO	%	0.02	0.010

4 Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
East	50	3500	750
West	50	1000	750

5 Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Oct-2023	Technology Type	Efficiency Oct-2023
Unit 1	FFP	99.998%	FGD	Out of service
Unit 2	FFP	Off	FGD	Out of service
Unit 3	FFP	99.999%	FGD	Out of service
Unit 4	FFP	99.987%	FGD	99.947%

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	O ₂
Unit 1	51.7	100.0	100.0	99.5
Unit 2	Off	Off	Off	Off
Unit 3	80.1	100.0	100.0	99.5
Unit 4	100.0	97.2	100.0	100.0

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of October-2023

Associated Unit/Stack	PM	SO ₂	NO _x
Unit 1	0.4	961	209
Unit 2	Off	Off	Off
Unit 3	0.9	2 321	558
Unit 4	4.1	86	452
SUM	5.3	3 368	1 218

Table 7.2: Operating days in compliance to PM AEL Limit - October 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	13	0	0	0	0	0.8
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	30	0	0	0	0	0.7
Unit 4	23	0	0	0	0	4.4
SUM	66	0	0	0	0	

Table 7.3: Operating days in compliance to SO₂ AEL Limit - October 2023

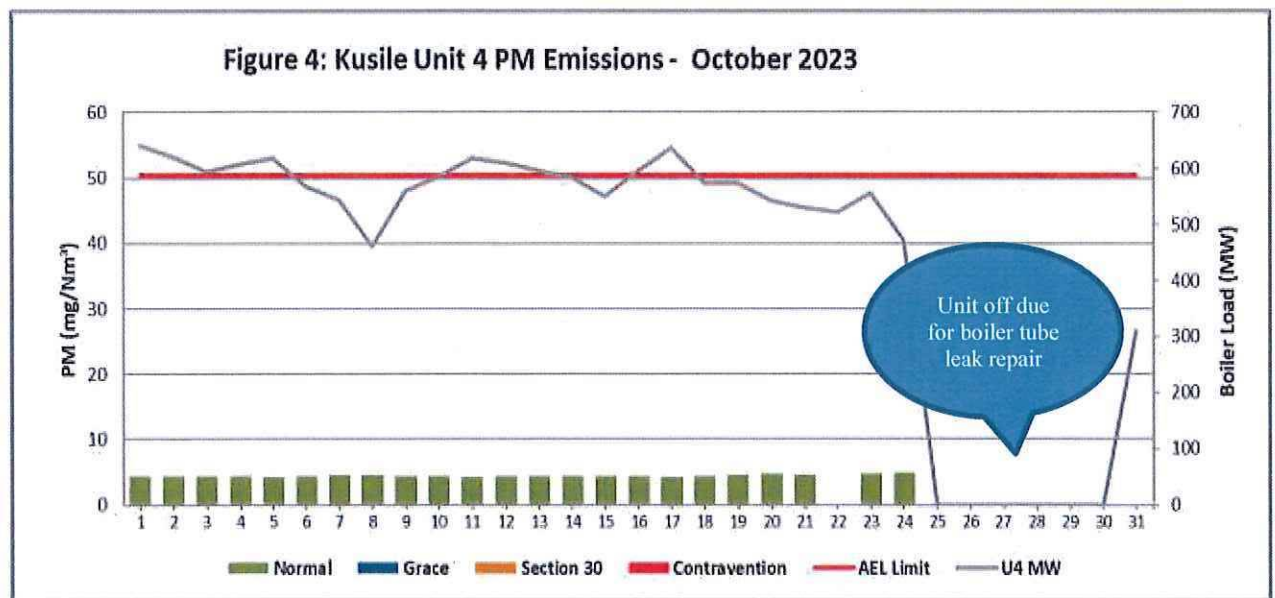
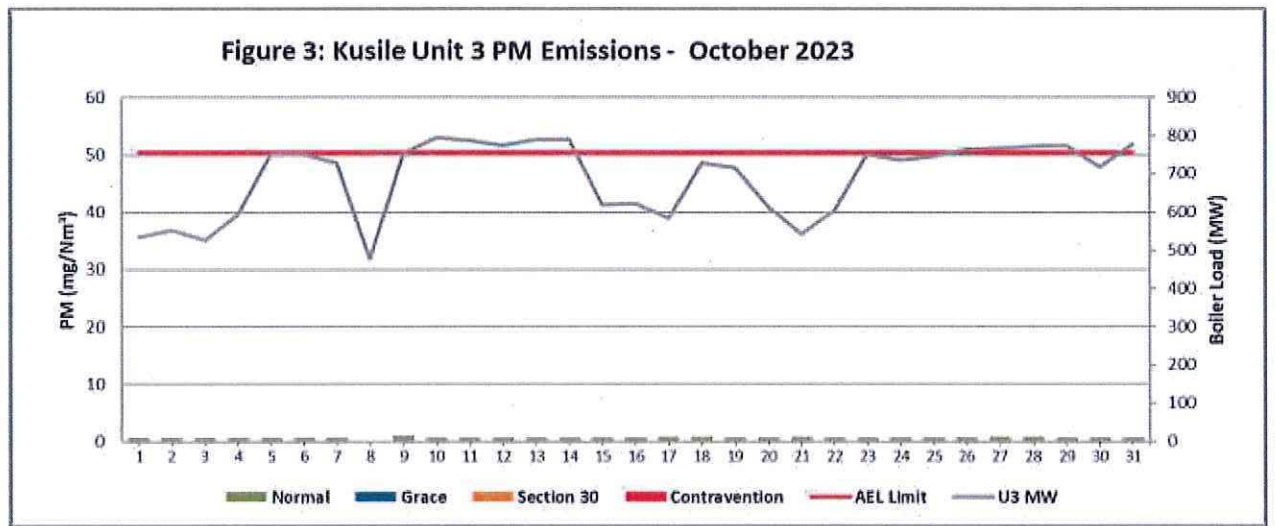
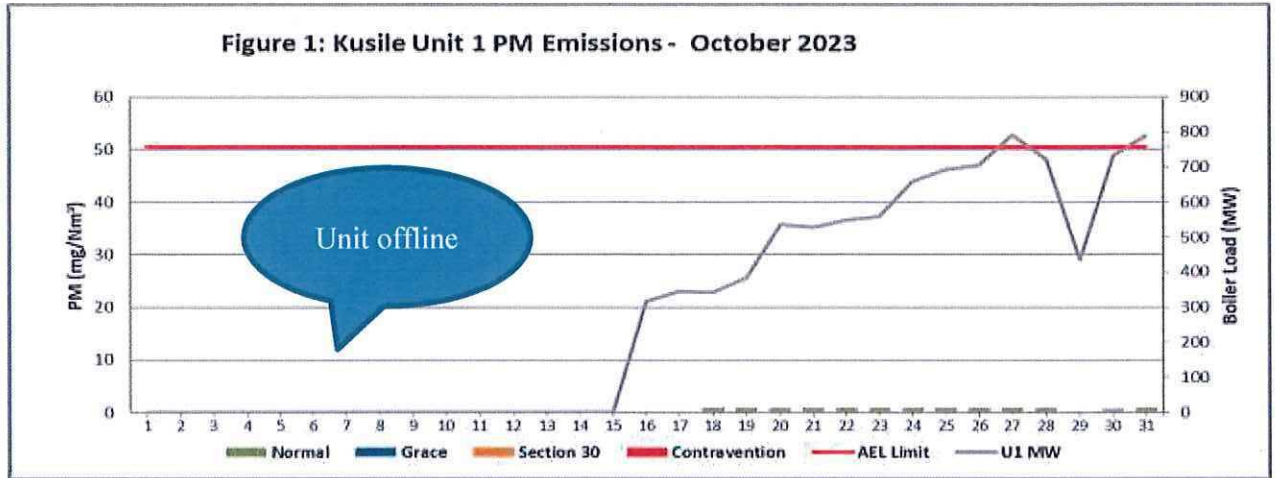
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	16	0	0	0	0	1 755.6
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	31	0	0	0	0	1 651.4
Unit 4	25	0	0	0	0	82.3
SUM	72	0	0	0	0	

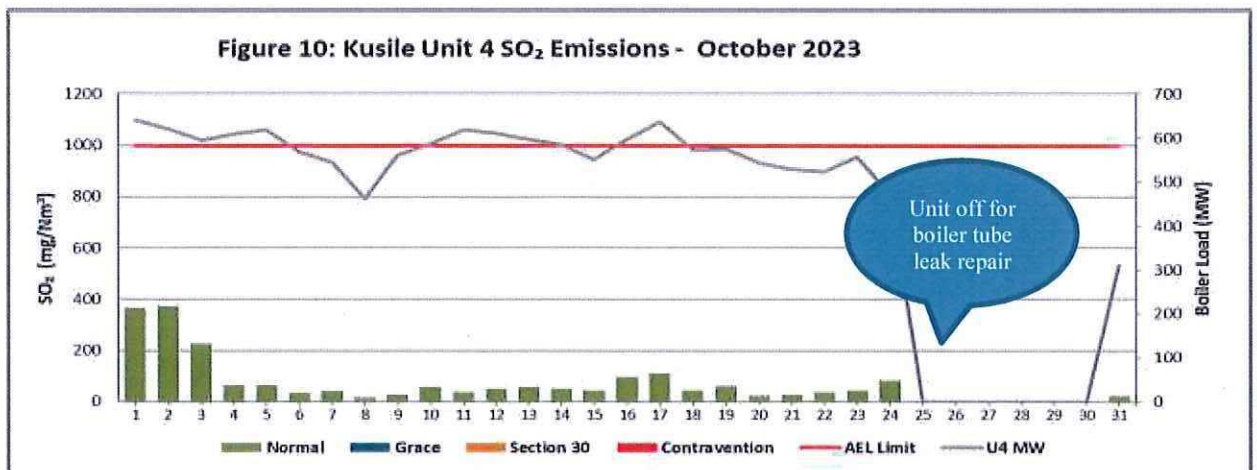
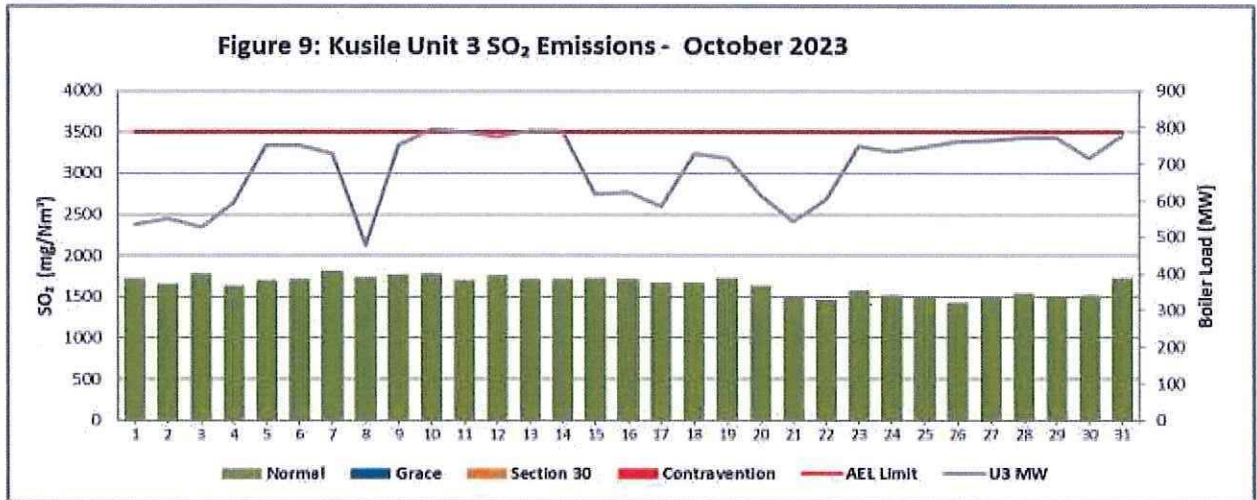
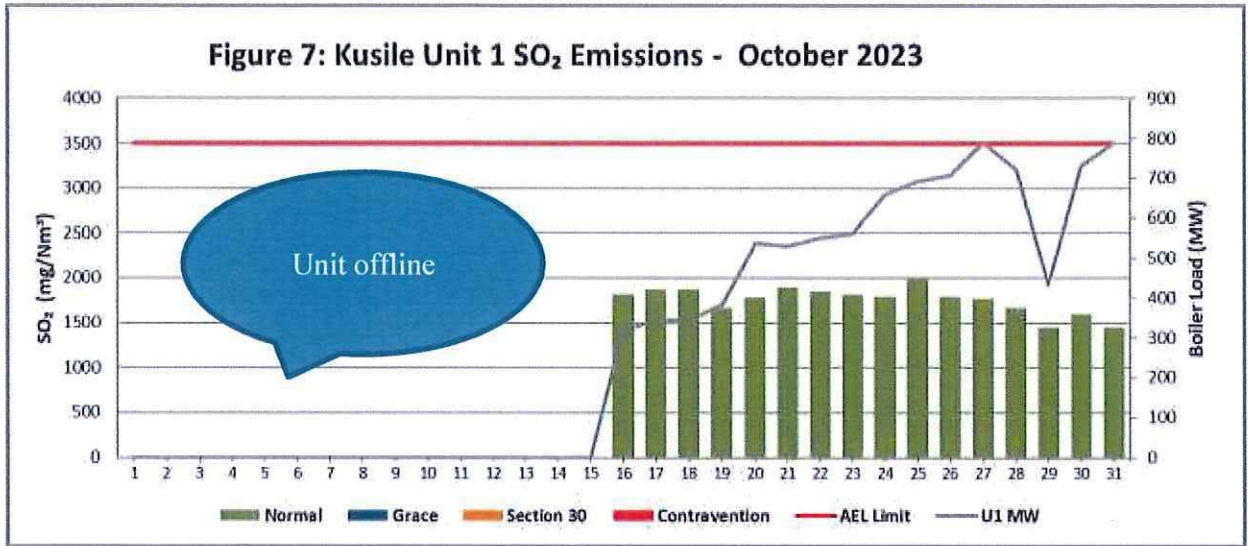
Table 7.4: Operating days in compliance to NO_x AEL Limit - October 2023

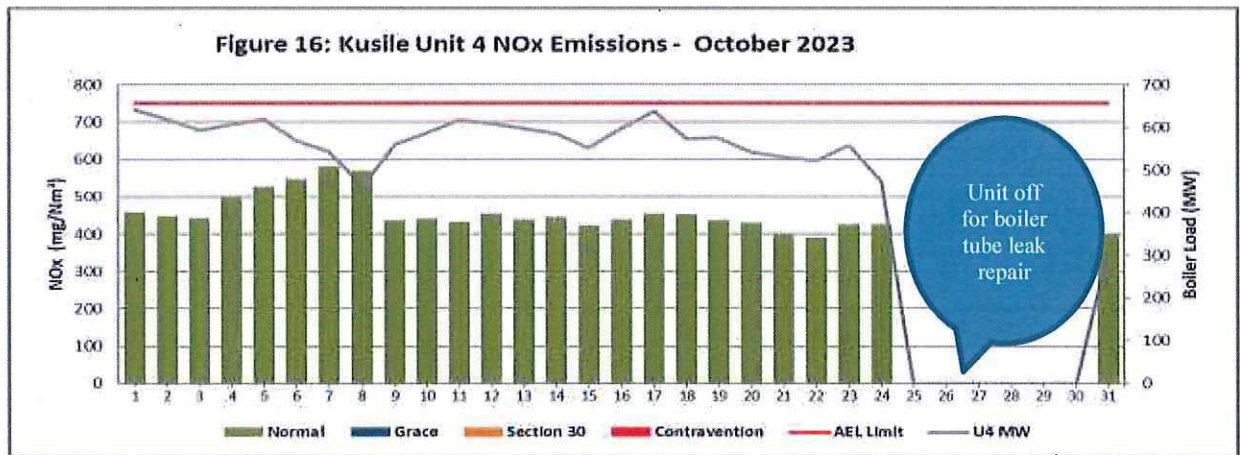
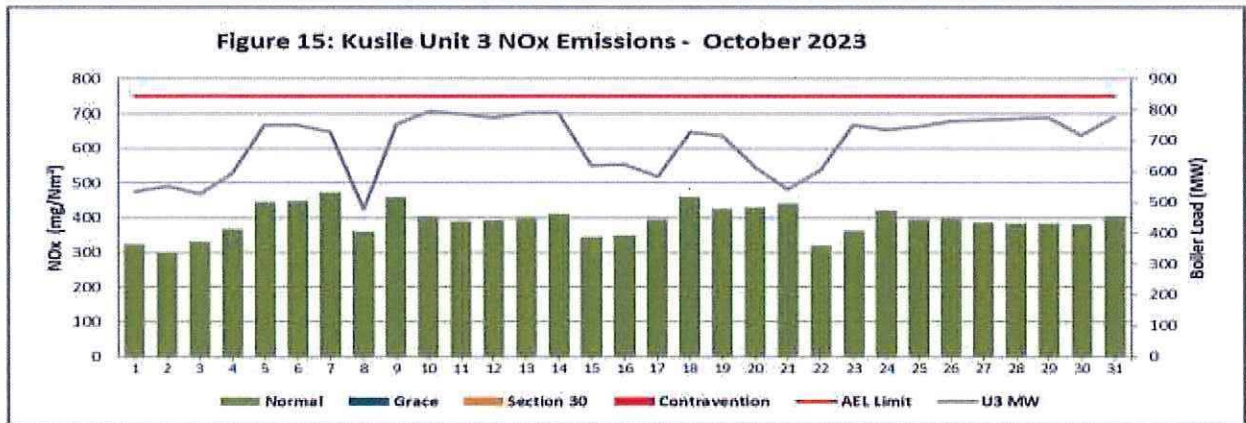
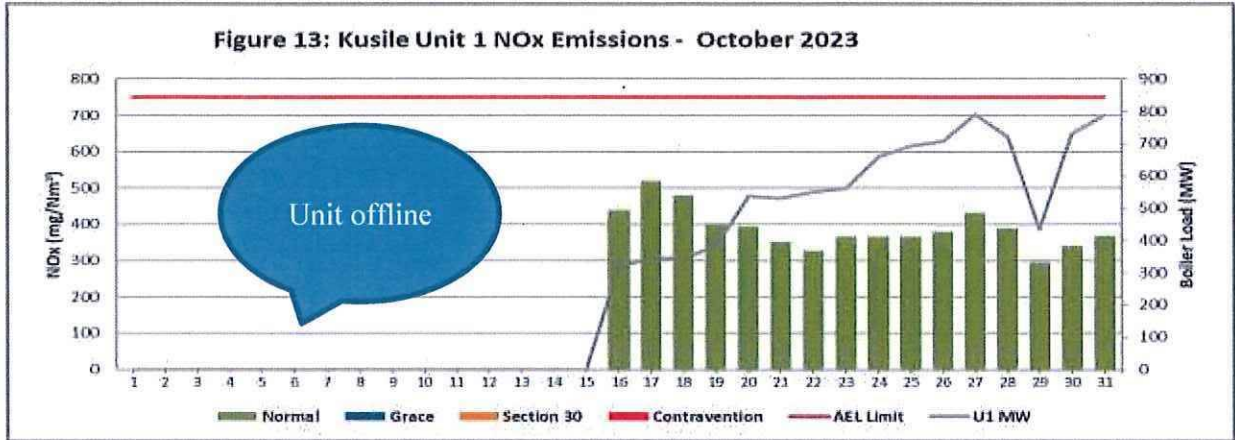
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	16	0	0	0	0	388.2
Unit 2	Off	Off	Off	Off	Off	Off
Unit 3	31	0	0	0	0	393.4
Unit 4	25	0	0	0	0	455.9
SUM	72	0	0	0	0	

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







Note: Please take note that Unit 1 and 3 emissions are indicative values and will be retrofitted upon completion of correlation test.

8. Shut down and Light up information

Table 7.1. PM Start-up information for the month of October-2023

Unit No. 1	Event 1		Event 2	
Breaker Open (BO)	BO previously	BO previously	10:30 am	2023/10/28
Draught Group (DG) Shut Down (SD)	n/a	n/a	10:30 pm	2023/10/28
BO to DG SD (duration)	n/a	DD:HH:MM	00:12:00	DD:HH:MM
Fires in time	1:55 am	2023/10/19	11:00 pm	2023/10/28
Synch. to Grid (or BC)	10:55 am	2023/10/19	3:10 pm	2023/10/29
Fires in to BC (duration)	00:09:00	DD:HH:MM	00:16:10	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

Unit No. 3	Event 1		Event 2		Event 3	
Breaker Open (BO)	BO previously	BO previously	12:35 pm	2023/10/07	10:15 am	2023/10/15
Draught Group (DG) Shut Down (SD)	n/a	n/a	DG did not trip or SD	DG did not trip or SD	11:10 am	2023/10/15
BO to DG SD (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	00:00:55	DD:HH:MM
Fires in time			3:19 am	2023/10/08	12:25 pm	2023/10/15
Synch. to Grid (or BC)			6:05 am	2023/10/08	4:35 pm	2023/10/15
Fires in to BC (duration)		DD:HH:MM	00:02:45	DD:HH:MM	00:04:10	DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

Unit No. 4	Event 1		Event 2	
Breaker Open (BO)	5:35 pm	2023/10/21	4:55 am	2023/10/24
Draught Group (DG) Shut Down (SD)	5:35 pm	2023/10/21	7:25 am	2023/10/25
BO to DG SD (duration)	00:00:00	DD:HH:MM	01:02:30	DD:HH:MM
Fires in time	6:08 am	2023/10/22		
Synch. to Grid (or BC)	6:10 am	2023/10/22		
Fires in to BC (duration)	00:00:02	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit		
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM

9. Complaints

No complaints reported for the month of Oct 2023

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
N/A						

Annexure C



To whom it may concern
Dr P Gwaze
National Air Quality Officer
Department of Forestry, Fisheries and the Environment
473 Steve Biko Street,
PRETORIA
0001

Date:
15 November 2023

Enquiries:
Jerry Thumbatha
Tel +27 13 699 7052

Dear Dr Gwazi

RE: PROGRESS ON HEALTH SCREENING.

Community Health Screening:

- Household questionnaires completed and collected by main cluster up to 31 October 2023

Main Cluster	Number
Gauteng Cluster	458
Mpumalanga Cluster	666
Total (31/10/2023)	1124

- Household questionnaires completed, collected and outstanding by sub-cluster up to 6 November 2023

Sub-cluster	Total
Bronkhorstspuit	333
Zithobeni	125
Balmoral/Wilge	150
Phola	277
Ogies/Blesboklaagte	120
Arbor/Kendal	30
Clewer	60
Kwa-Guqa/Vosman	29
Total: 31/11/2023	1124
OUTSTANDING	51
GRAND TOTAL	1 213
Target	1 200

- Data capturing has started.

Number of questionnaires captured as at 06/11/2023

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

Eskom Holdings SOC Ltd Reg No 2002/015527/30

Adults: 18 years+	439
Children: 0-5 years	125
Children: 6 - 12 years	98
Children: 13 - 17 years	84
Total questionnaires completed	746

Onsite- Contractors and Third party Employees

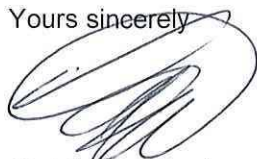
- The on-site survey was conducted over 3 weeks. 2 days each week, totalling 6 days starting from 24/10/2023 to 09/11/2023
- A total of 806 questionnaires were filled in and received.
- In parallel with the questionnaire survey, a Google Forms online questionnaire was developed by INFOTOX and distributed by Eskom to contractors from 23 October 2023.
- To date, 367 responses were submitted, with 98.4 per cent of the respondents agreeing to participate and answering the health questions.
- The on-site questionnaire survey was concluded on 9 November 2023
- Eskom made considerable efforts in informing supervisors of contract workers of the purpose of the survey, and the benefits of participation to the workers.
- Despite these efforts, the turnout of contract workers was rather poor, considering that over 4 000 contract workers are active at Kusile.
- The online questionnaire will remain active until 23:59 on 17 November 2023
- After the closing date, the information will be captured in the database designed to identify workers that are sensitive to the respiratory effects of SO₂.
- A final report will be issued to Eskom after capturing all data and calculation of ratings for identifying vulnerable individuals

Eskom Permanent Employees

- An Online Link a questionnaire to be sent out on : 15/11/2023
- A hard copy questionnaire will also be made available at the site medical center for those with no internet access
- The screening will run until 24 November 2023

For enquiries, please do not hesitate to contact Lesiba Kgobe on 013 699 7817 or Jerry Thumbatha 013 699 7052

Yours sincerely



Christopher Nani

ACTING GENERAL MANAGER: KUSILE POWER STATION



Kusile Ambient Air Quality Monitoring

October 2023

1. INTRODUCTION

The data for this reporting period (01 – 31 October 2023) were analysed for ambient SO₂ as monitored at Balmoral, Chicken Farm, Phola and Wilge air quality monitoring stations.

2. SO₂ DATA ANALYSIS

Table 1: Highest SO₂ concentration recorded (in ppb).

	%Data Rec	10-min average	Date	Hourly average	Date	Daily average	Date
Balmoral	97.6	65.1	04/10/2023 08:40	56.7	04/10/2023 09:00	14.4	12/10/2023
Chicken Farm	96.8	199.2	04/10/2023 10:10	120.8	26/10/2023 10:00	23.8	27/10/2023
Phola	97.3	114.3	28/10/2023 02:20	59.3	28/10/2023 03:00	18.3	19/10/2023
Wilge	96.1	148.8	03/10/2023 09:40	99.1	03/10/2023 10:00	20.5	03/10/2023

There were no exceedances of the SO₂ 10-minute, hourly and daily limits recorded at all the air quality monitoring stations, except only at Chicken Farm air quality monitoring station where the SO₂ 10-minute limit of 191 ppb was exceeded.

3. SO₂ HOURLY TIME SERIES GRAPHS

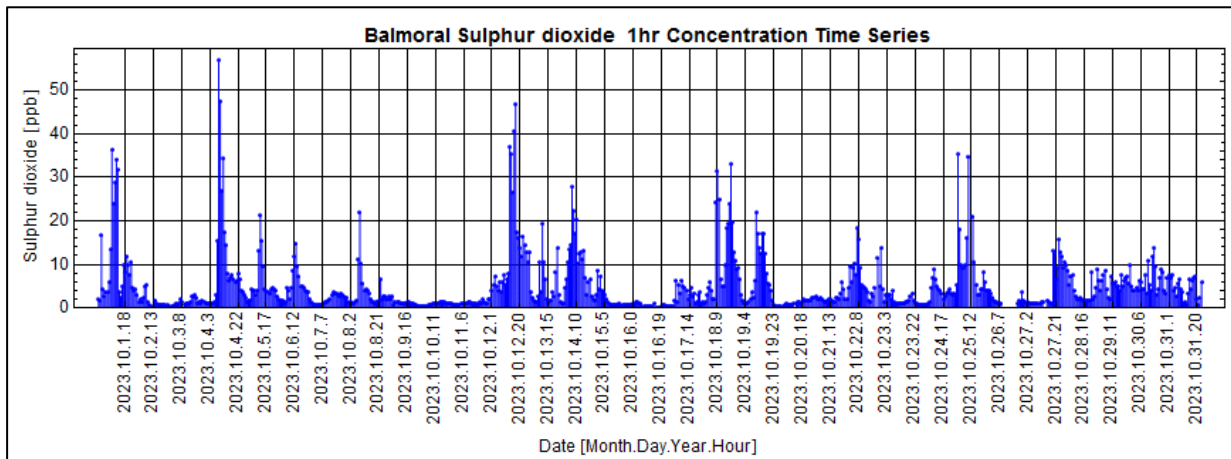
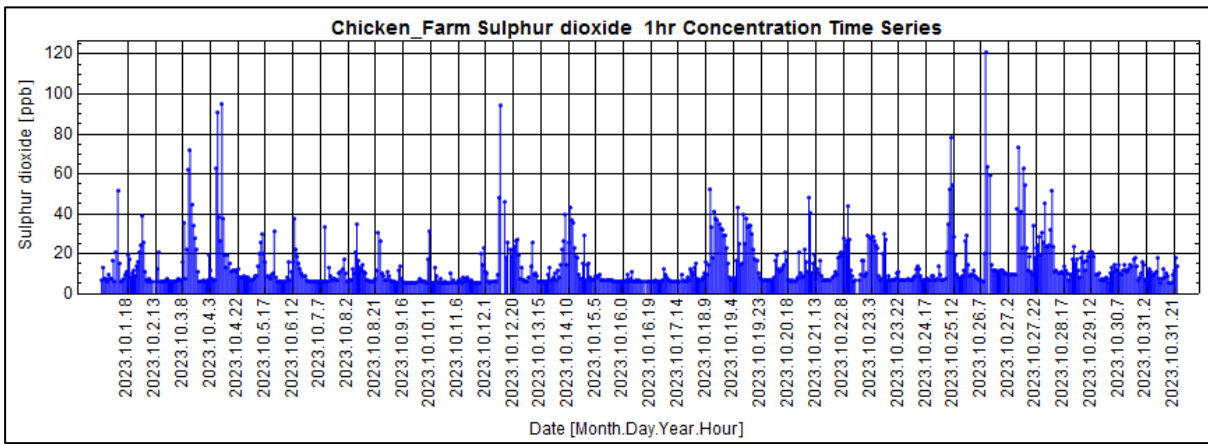
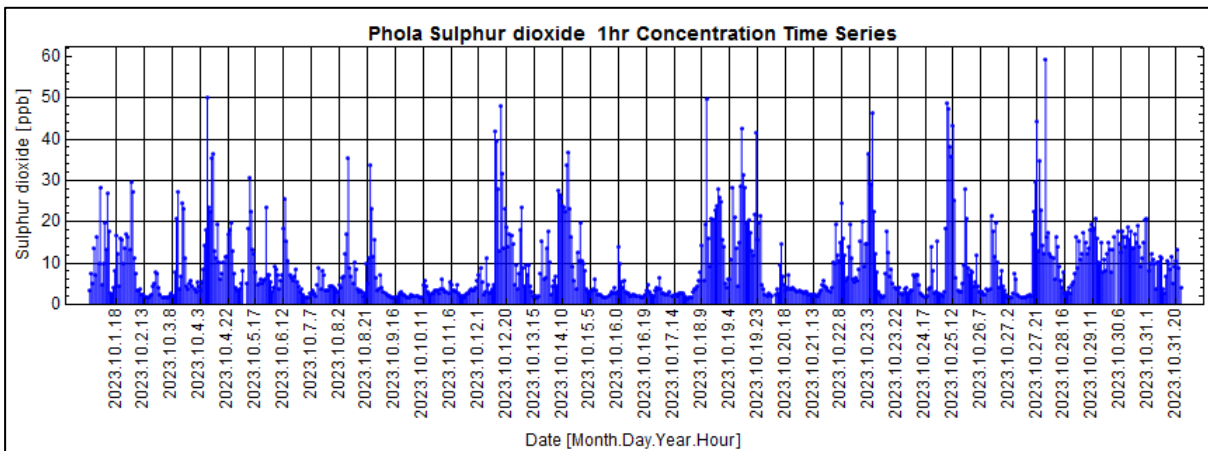


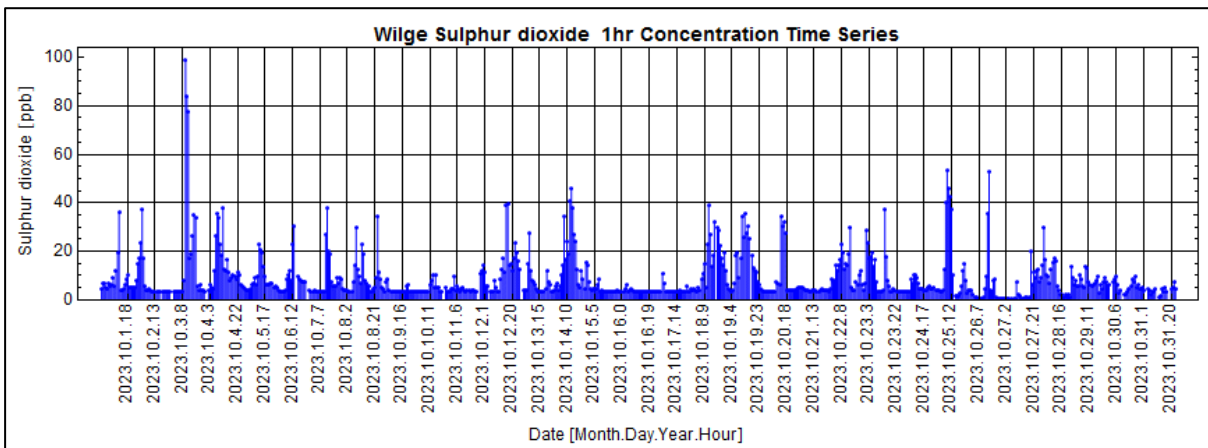
Figure 1: Time series graph for the SO₂ hourly mean concentrations at Balmoral AQM station



Time series graph for the SO₂ hourly mean concentrations at Chicken Farm AQM station



Time series graph for the SO₂ hourly mean concentrations at Phola AQM station



Time series graph for the SO₂ hourly mean concentrations at Wilge AQM station