



Ms Nompumelelo Simelane
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1050

Date:

July 2025

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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 JUNE 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 June 2025.

Hoping the above will meet your satisfaction.

Yours sincerely,

Christopher Nani

GENERAL MANAGER

DATE: *31/07/2025*

**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 June-2025
	Coal	Tons	1 818 083	948 710
	Fuel Oil	Tons	5 533	3008.16
	Limestone	Tons	72 017	41827
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate June-2025
	Energy	GWh	3 321.216	1 772.31
	Ash	Tons	796 300	300 615.21
	Gypsum	Tons	155 100	23 423.12
	RE PM	kg/MWh	not specified	0.01
	RE SOx	kg/MWh	not specified	1.03

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	0.91
Ash in Coal	%	38	31.69
Fuel Oil Sulphur	%	3.5	2.35

4. Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
North Stack	50	1000	750
South Stack	50	1000	750

5. Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency June-2025	Technology Type	Efficiency June-2025
Unit 1	FFP	99.99%	FGD	99.86%
Unit 2	FFP	99.99%	FGD	99.84%
Unit 3	FFP	99.99%	FGD	99.83%
Unit 4	FFP	99.98%	FGD	99.95%
Unit 5	FFP	99.99%	FGD	99.94%

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	99.7	99.7
Unit 2	100.0	99.2	99.0
Unit 3	100.0	100.0	100.0
Unit 4	100.0	99.7	100.0
Unit 5	100.0	98.8	99.6

7. Emissions Performance

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

Associated Unit/Stack	PM	SO ₂	NO _x
Unit 1	3.9	466	835
Unit 2	1.9	485	796
Unit 3	4.1	535	1 021
Unit 4	8.8	142	495
Unit 5	6.7	198	972
SUM	25.4	1 826	4 120

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	25	0	0	0	0	2.8
Unit 2	24	0	0	0	0	1.5
Unit 3	24	0	0	0	0	2.2
Unit 4	26	0	0	0	0	4.6
Unit 5	30	0	0	0	0	3.4
SUM	129	0	0	0	0	

Table 7.3: Operating days in compliance to SO₂ AEL Limit - June 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
Unit 1	29	0	0	0	0	270.2
Unit 2	25	0	0	0	0	341.7
Unit 3	26	0	0	0	0	268.5
Unit 4	27	0	0	0	0	68.5
Unit 5	30	0	0	0	0	95.9
SUM	137	0	0	0	0	

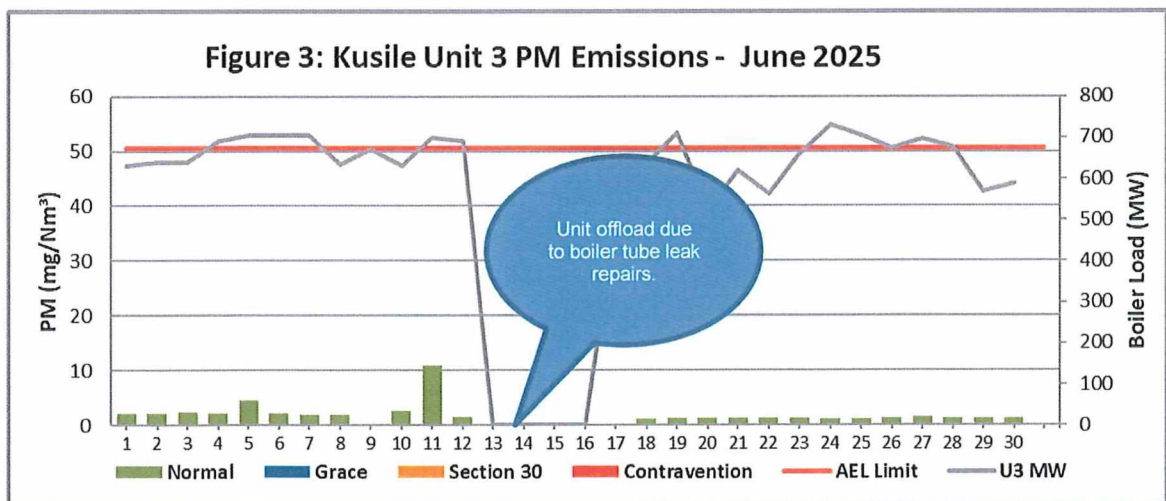
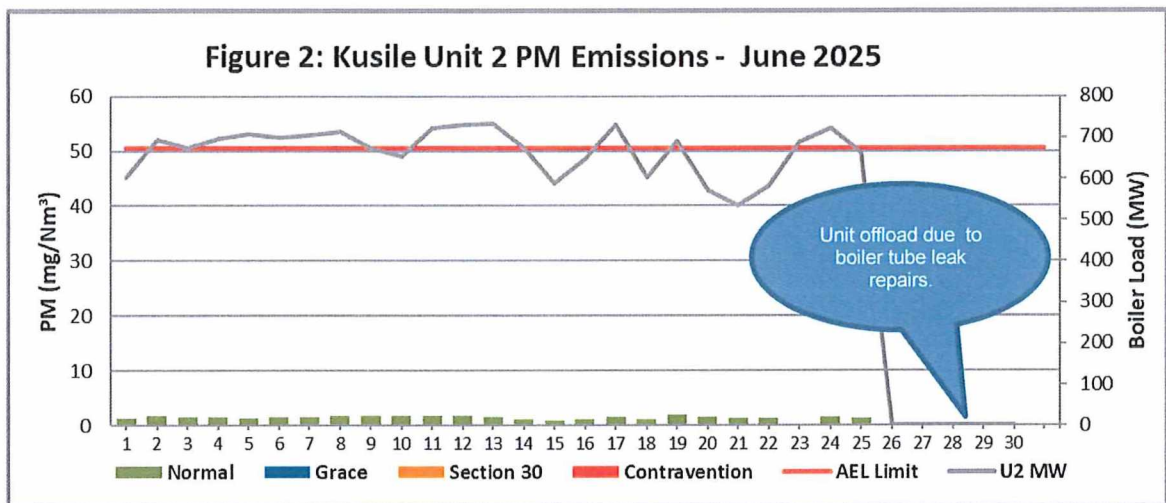
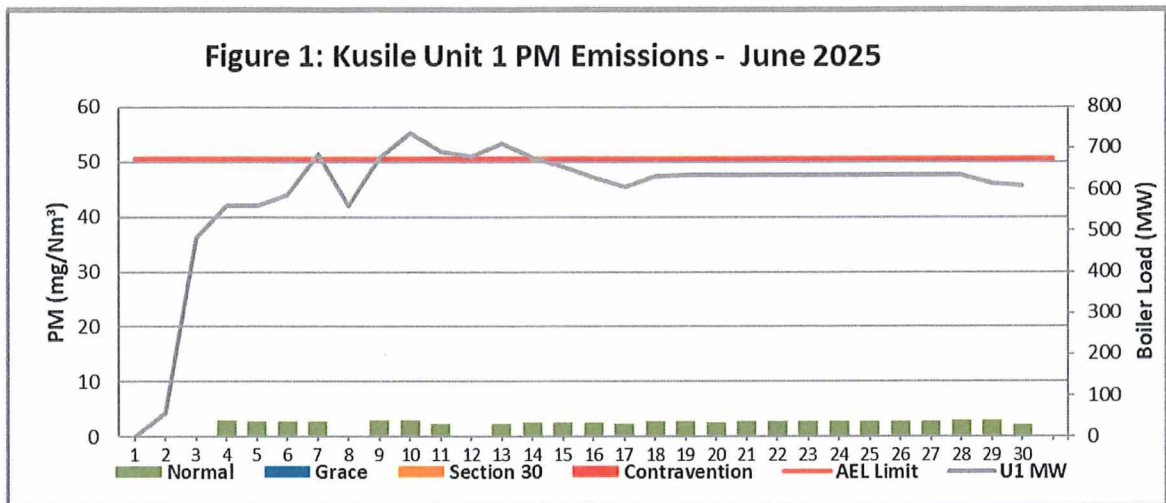
Table 7.4: Operating days in compliance to NO_x AEL Limit – June 2025

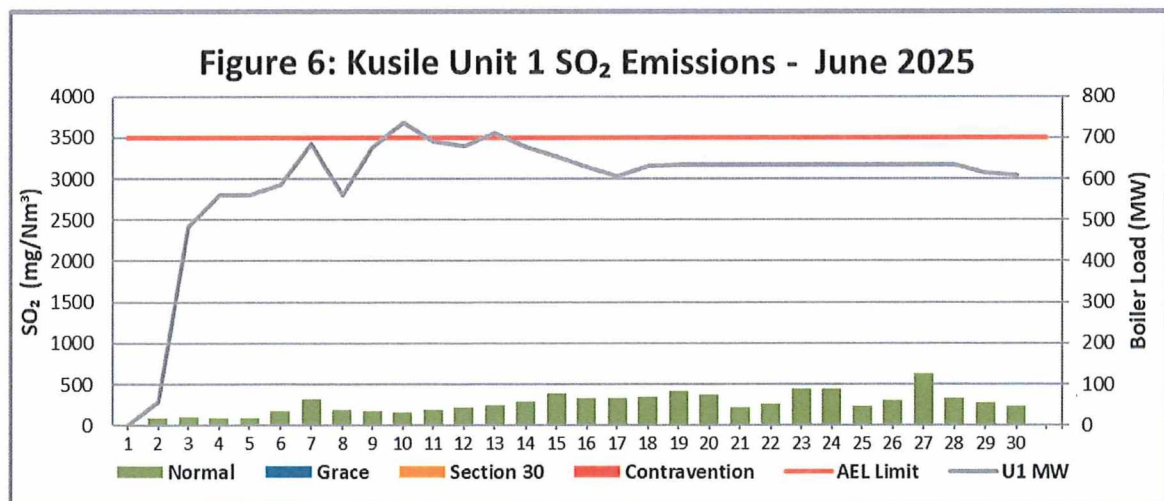
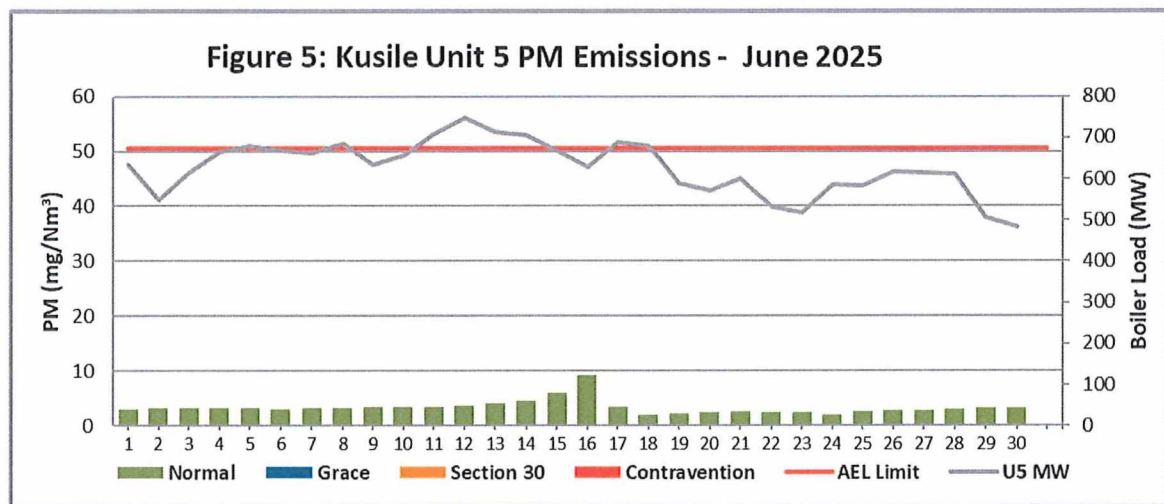
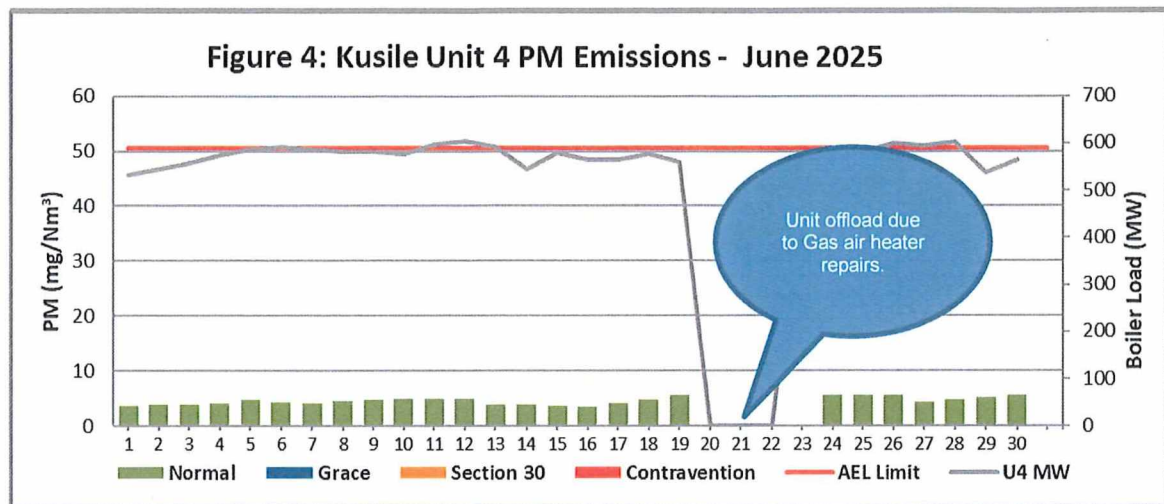
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
Unit 1	29	0	0	0	0	503.1
Unit 2	25	0	0	0	0	561.1
Unit 3	26	0	0	0	0	520.9
Unit 4	27	0	0	0	0	241.7
Unit 5	30	0	0	0	0	474.9
SUM	137	0	0	0	0	

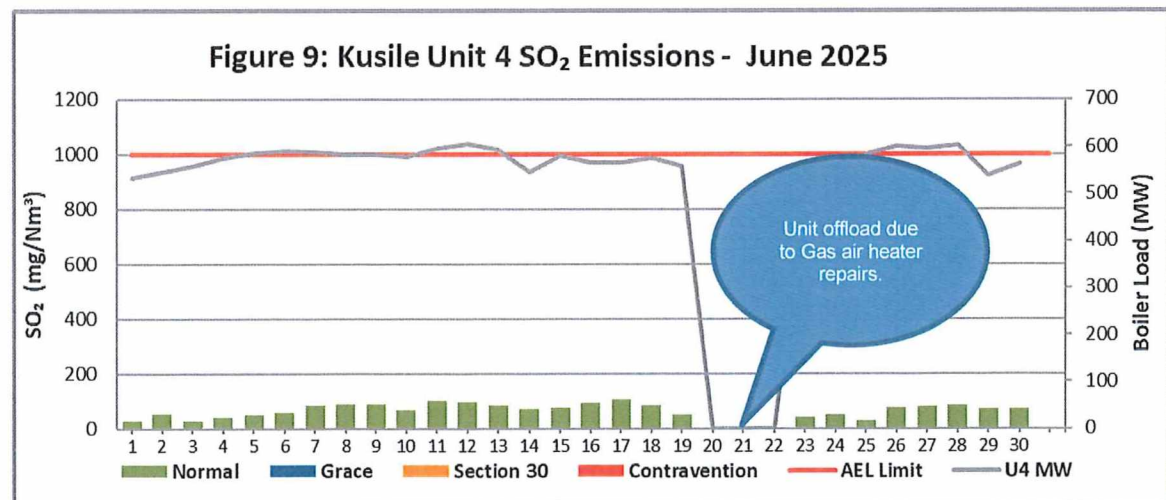
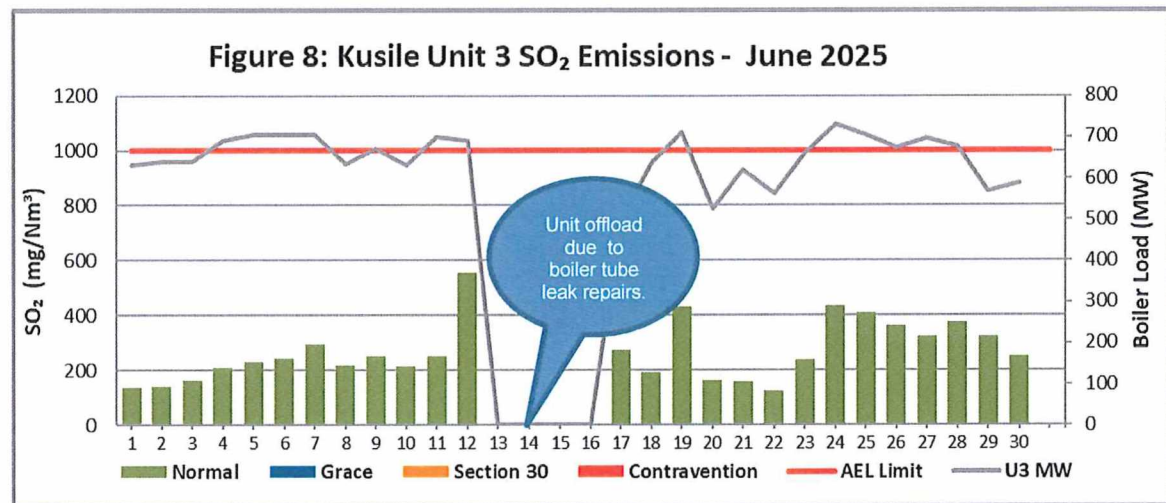
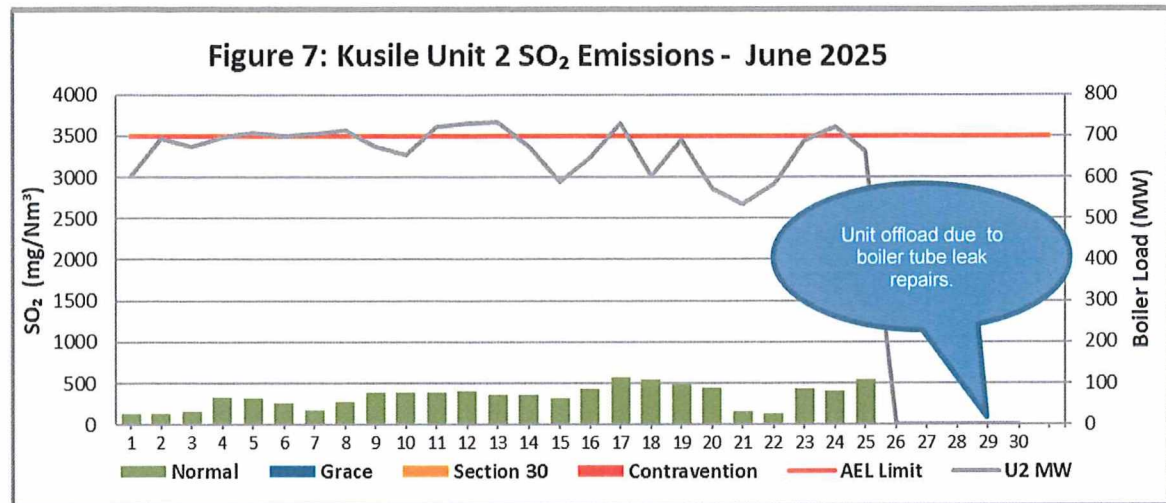
Note: NO_x emissions is measured as NO in PPM. Final NO_x value is expressed as total NO₂

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







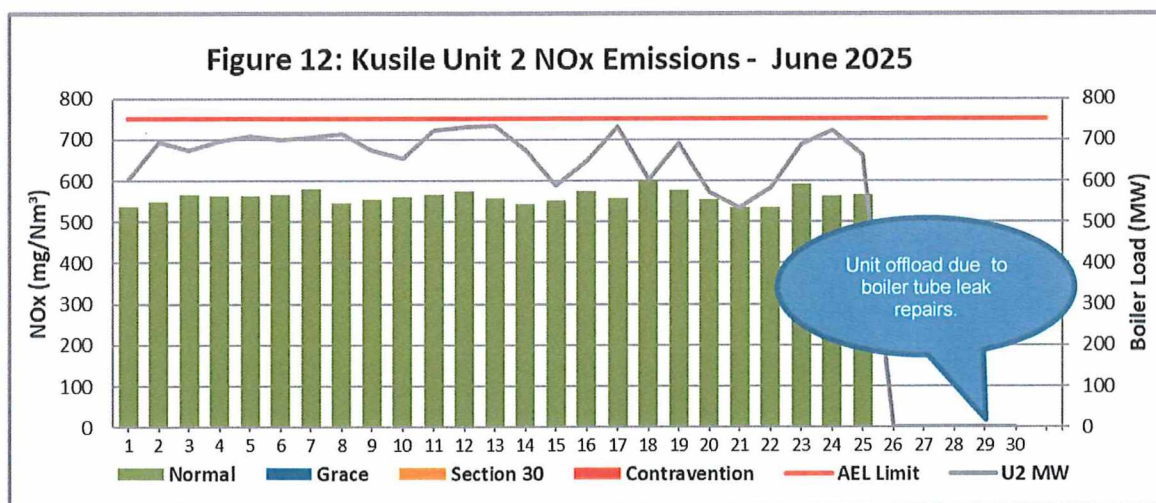
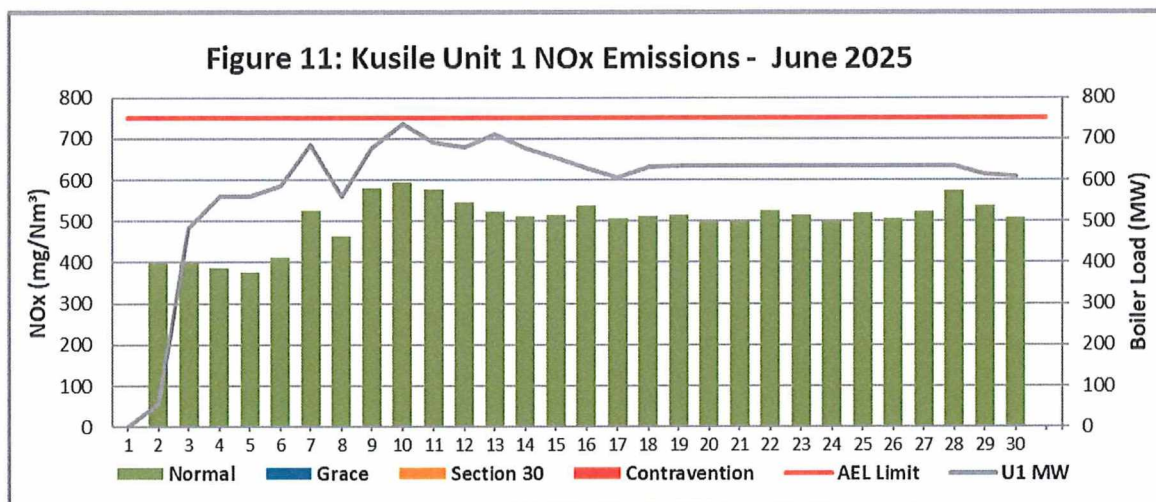
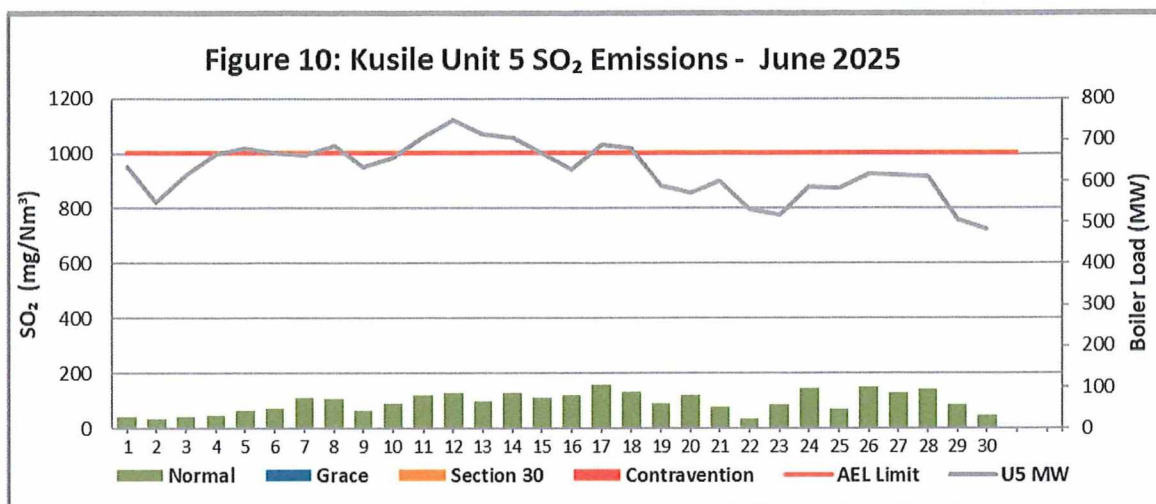


Figure 13: Kusile Unit 3 NOx Emissions - June 2025

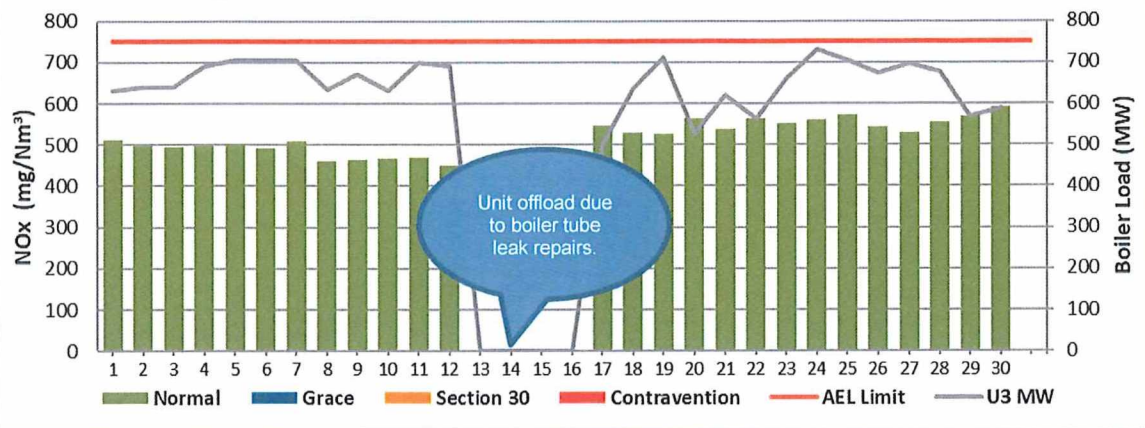


Figure 14: Kusile Unit 4 NOx Emissions - June 2025

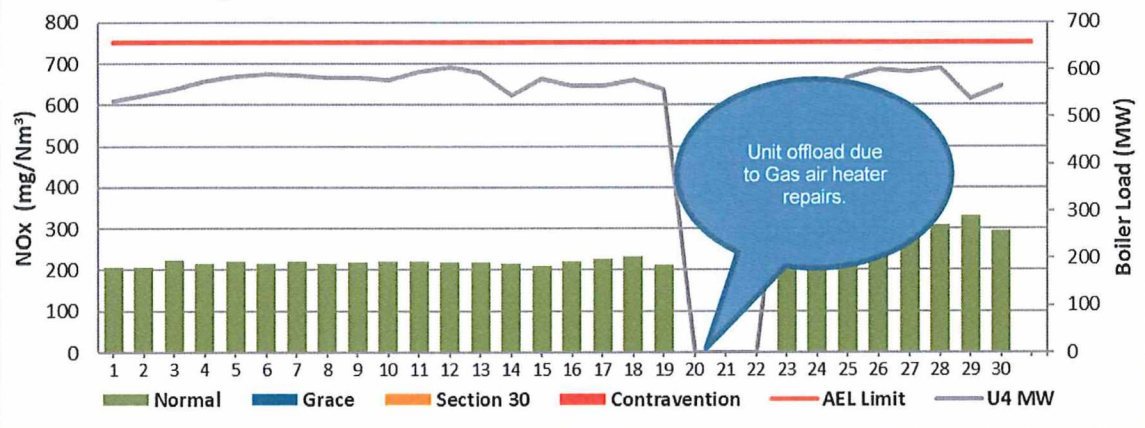
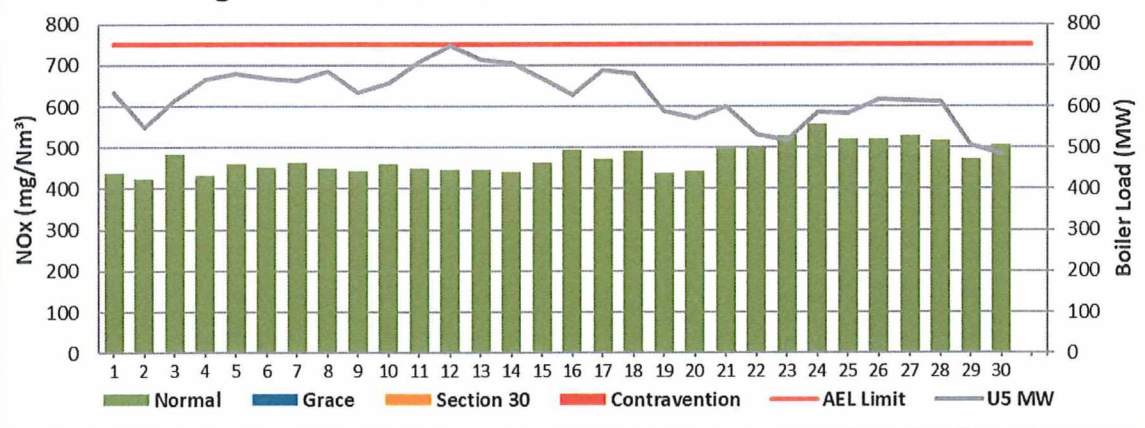


Figure 15: Kusile Unit 5 NOx Emissions - June 2025



8. Correlation and Parallel test status

Unit 1:

- The unit is operating with unity curves for particulate matter and gaseous emissions. The particulate matter and gaseous emissions parallel tests are planned to be conducted on the 28 to 30 July 2025 as the Unit is coming from outage.

Unit 2:

- The unit is operating with unity curves for particulate matter and gaseous emissions. The full PM and gaseous emissions correlation test was completed on the 19th of June 2025. Correlation test reports received and under review.

Unit 3

- Unit 3 is operating with valid correlation curves.
- Unit 3 is operating with Unity curves on the gaseous emissions. The gaseous parallel test was completed on the 8th of April 2025. Correlation test report received and under review.

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	
Breaker Open (BO)	BO previously	BO previously	2:40 am	2025/06/07	3:30 pm	2025/06/11
Draught Group (DG) Shut Down (SD)	n/a	n/a	11:45 pm	2025/06/07	3:30 pm	2025/06/11
BO to DG SD (duration)	n/a	DD:HH:MM	00:21:05	DD:HH:MM	11:15:30	DD:HH:MM
Fires in time	3:55 pm	2025/06/02	5:40 am	2025/06/08	4:05 pm	2025/06/11
Synch. to Grid (or BC)	2:55 pm	2025/06/03	3:05 pm	2025/06/08	1:15 am	2025/06/12
Fires in to BC (duration)	00:23:00	DD:HH:MM	00:09:25	DD:HH:MM	00:09:10	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

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Unit No. 2	Event 1		Event 2		Event 3	
Breaker Open (BO)	4:15 am	2025/06/18	8:20 pm	2025/06/22	9:15 pm	2025/06/25
Draught Group (DG) Shut Down (SD)	4:30 am	2025/06/18	DG did not trip or SD	DG did not trip or SD	12:00 pm	2025/06/26
BO to DG SD (duration)	00:00:15	DD:HH:MM	n/a	DD:HH:MM	00:14:45	DD:HH:MM
Fires in time	12:50 pm	2025/06/18				
Synch. to Grid (or BC)	3:40 pm	2025/06/18				
Fires in to BC (duration)	00:02:50	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)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No. 3	Event 1		Event 2	
Breaker Open (BO)	7:05 am	2025/06/08	8:15 pm	2025/06/12
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	1:45 pm	2025/06/13
BO to DG SD (duration)	n/a	DD:HH:MM	00:17:30	DD:HH:MM
Fires in time			5:10 am	2025/06/17
Synch. to Grid (or BC)			3:30 pm	2025/06/17
Fires in to BC (duration)		DD:HH:MM	00:10:20	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

Unit No. 4	Event 1		Event 2	
Breaker Open (BO)	9:30 am	2025/06/14	10:55 pm	2025/06/19
Draught Group (DG) Shut Down (SD)	9:30 am	2025/06/14	8:05 pm	2025/06/20
BO to DG SD (duration)	00:00:00	DD:HH:MM	00:21:10	DD:HH:MM
Fires in time	11:45 am	2025/06/14	9:05 pm	2025/06/22
Synch. to Grid (or BC)	3:50 pm	2025/06/14	11:25 am	2025/06/23
Fires in to BC (duration)	00:04:05	DD:HH:MM	00:14:20	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

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Unit No. 5	Event 1	
Breaker Open (BO)	10:30 am	2025/06/23
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

10.Complaints

No complaints reported for the month of June 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 June 2025.						