

Mr. Vusi Mahlangu
Air Quality Officer
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Private bag X11215
NELSPRUIT
1200

Date:
2024/05/28

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Dear Mr. Mahlangu

ARNOT POWER STATION'S ANNUAL EMISSIONS REPORT: 2024 / 2025 FINANCIAL YEAR.

1. EXECUTIVE SUMMARY.

This serves as the annual report required in terms of Section 7.6 in Arnot Power Station's Atmospheric Emission License. The emissions are for Eskom Arnot Power Station's 2024/2025 financial year, which is from 1 April 2024 to 31 March 2025. Verified measured emissions of particulates, SO₂ and NO_x (as NO₂) and calculated greenhouse gas emissions are included. Conditions 7.2.1 requires the License Holder to report its operational performance against the conditions of license on a regular basis and at least on an annual basis, to the licensing authority.

This annual report will cover the following: Daily particulate emissions, Gaseous emissions (NO_x and Sox) in mg/Nm³ for 2023/2024 financial year.

AEL FACILITIES DETAILS:

Name of facility	Eskom Holding SOC Limited: Arnot Power Station
Description of facility	Power Station- Electricity Generation
AEL Reference Number	17/4/AEL/MP312/11/15
Current Responsible Person	Marcus Nematodzi

Table 1. Pollutants Tonnages 01 April 2024- 30 March 2025

Month	Arnot PM (tons)	Arnot SO ₂ (tons)	Arnot NO ₂ (tons)	Arnot CO ₂ (tons)	GWh (COAL FIRED)	N ₂ O tons (Coal Fired)
24-Apr	261.6	4755	3962	967250	718	13.92
24-May	243.3	4356	3564	870804	700	12.52
24-Jun	148.2	3277	2923	724320	577	10.38
24-Jul	107.8	3190	3171	779478	618	11.15
24-Aug	142.4	2653	3616	872389	700	12.58
24-Sep	207.1	3690	4024	940358	706	14.44
24-Oct	150.2	3764	3796	879161	670	13.44
24-Nov	176.4	3908	3539	696286	651	13.52
24-Dec	151.4	3731	2847	995881	475	12.71
25-Jan	272.3	4421	4045	995881	757	10
25-Feb	230.1	3873	3231	792701	607	11.5
25-Mar	242.09	3445	2923	721326	563	10.33
Total	2332.89	45063	41641	10235835	7742	146.49

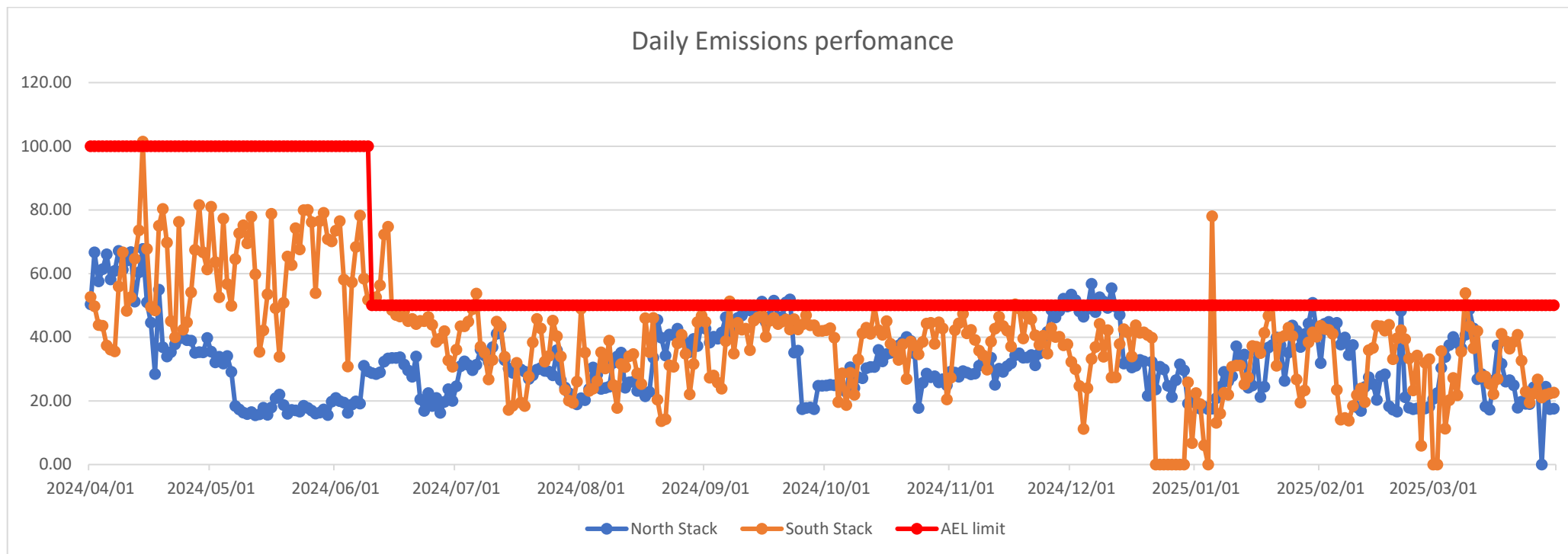


Figure 1. Particulate Matter Daily Emissions Performance 01 April 2024 - 30 March 2025

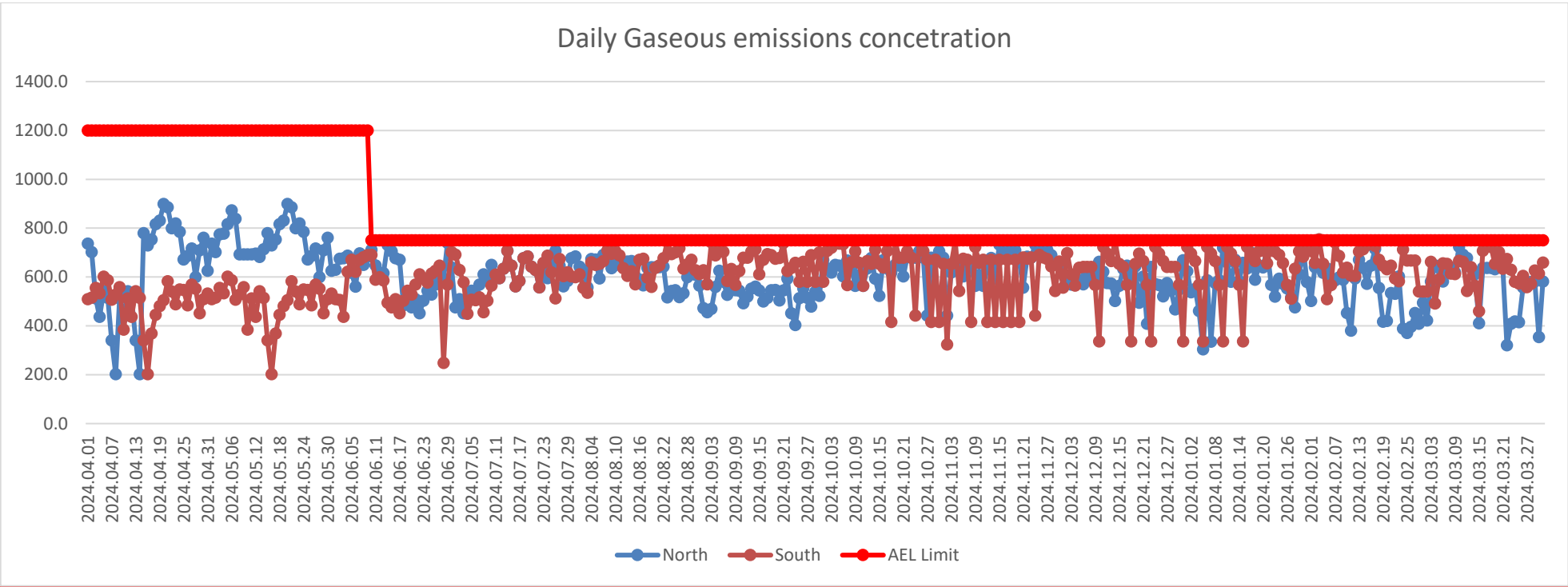


Figure 2. NOX Daily Emissions Performance 01 April 2024 - 30 March 2025

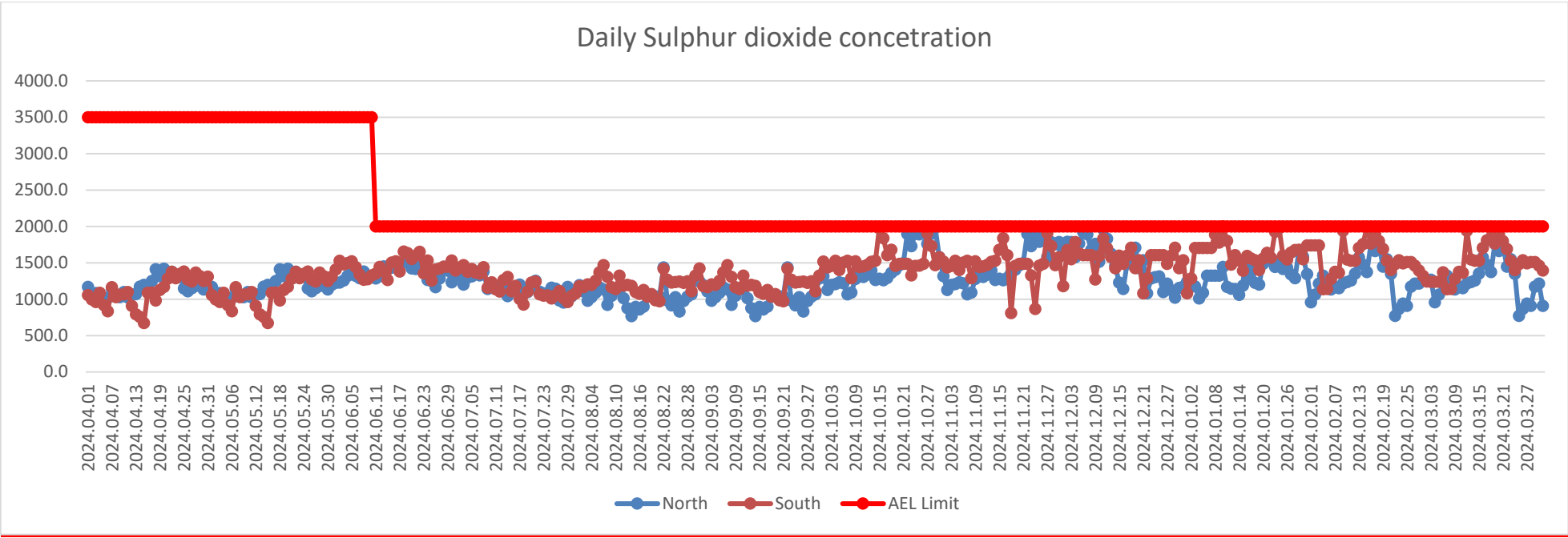


Figure 3. NOX Daily Emissions Performance 01 April 2024 - 30 March 2025

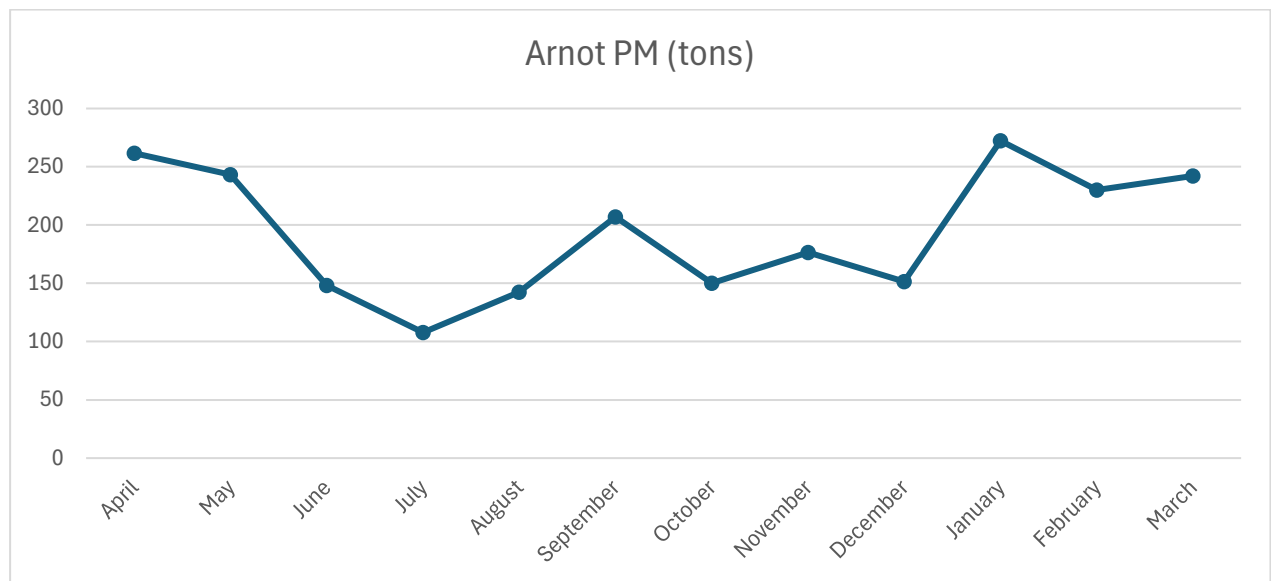


Figure 4. Particulate Matter (tons) 01 April 2024- 31 March 2025

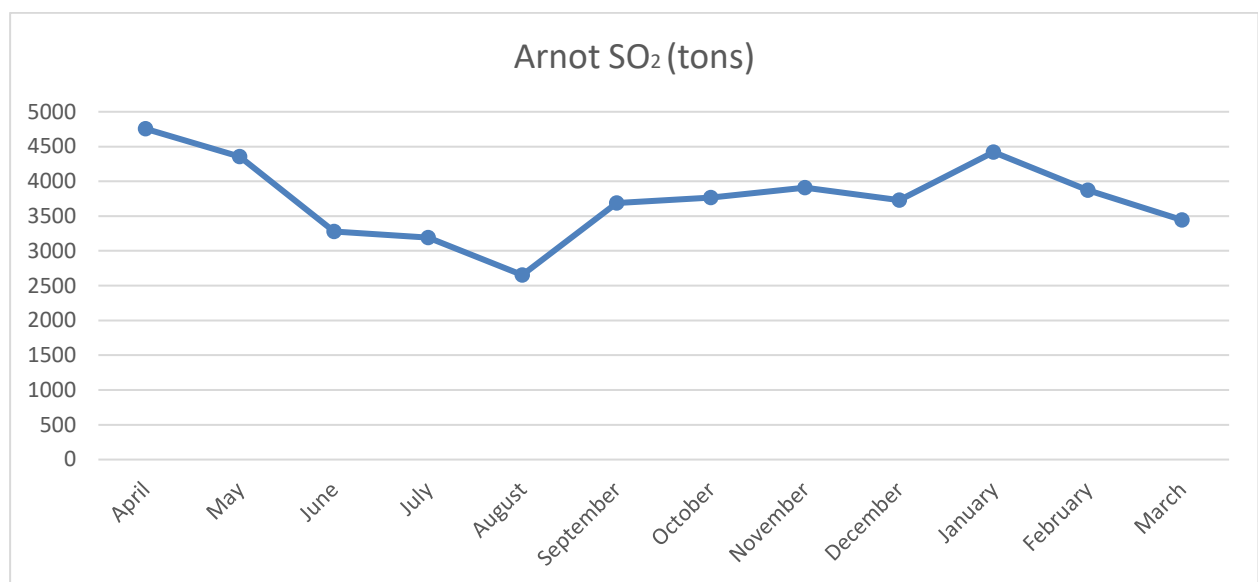


Figure 5. SO₂ (tons) 01 April 2024 - 31 March 2025

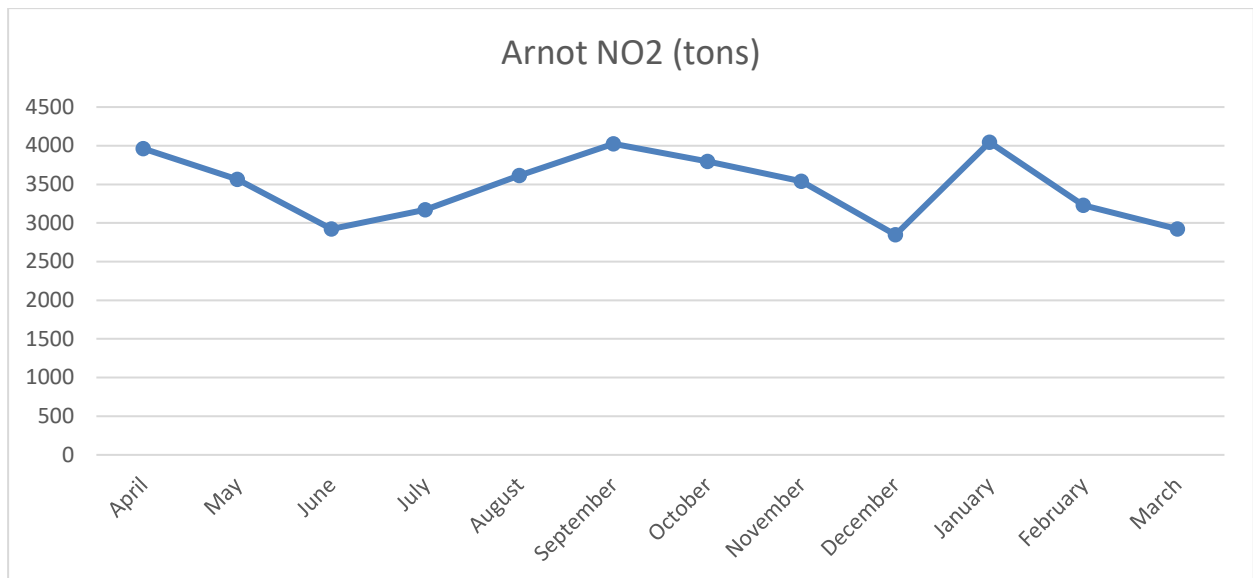


Figure 6. NO2 (tons) 01 April 2024 - 31 March 2025

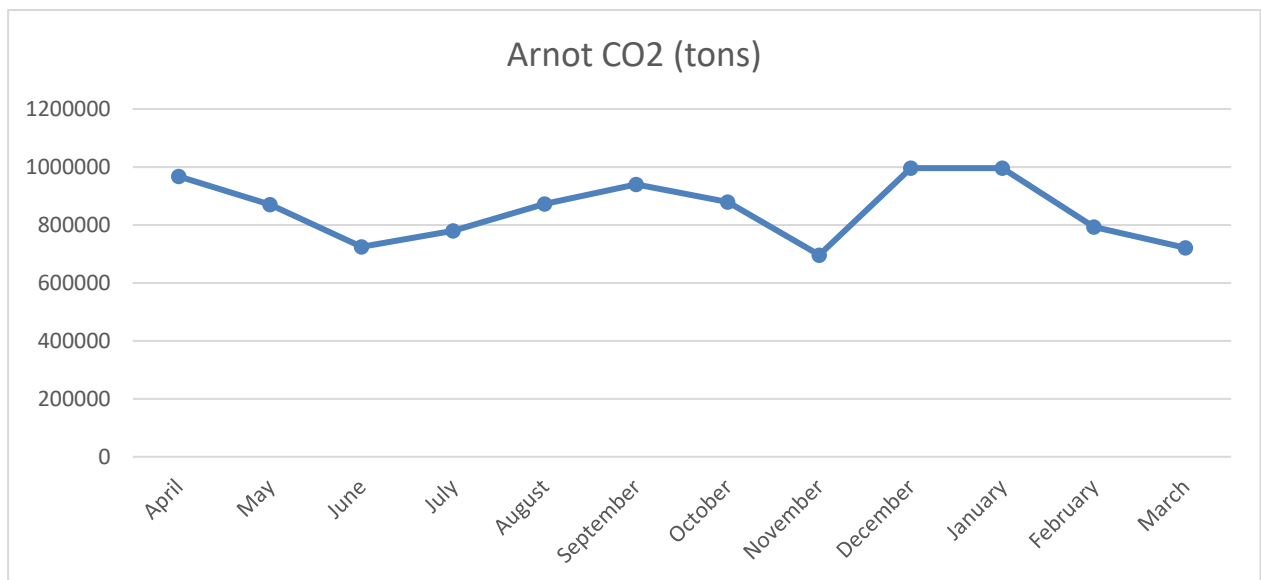


Figure 7. CO2 (tons) April 3 31 March 2025

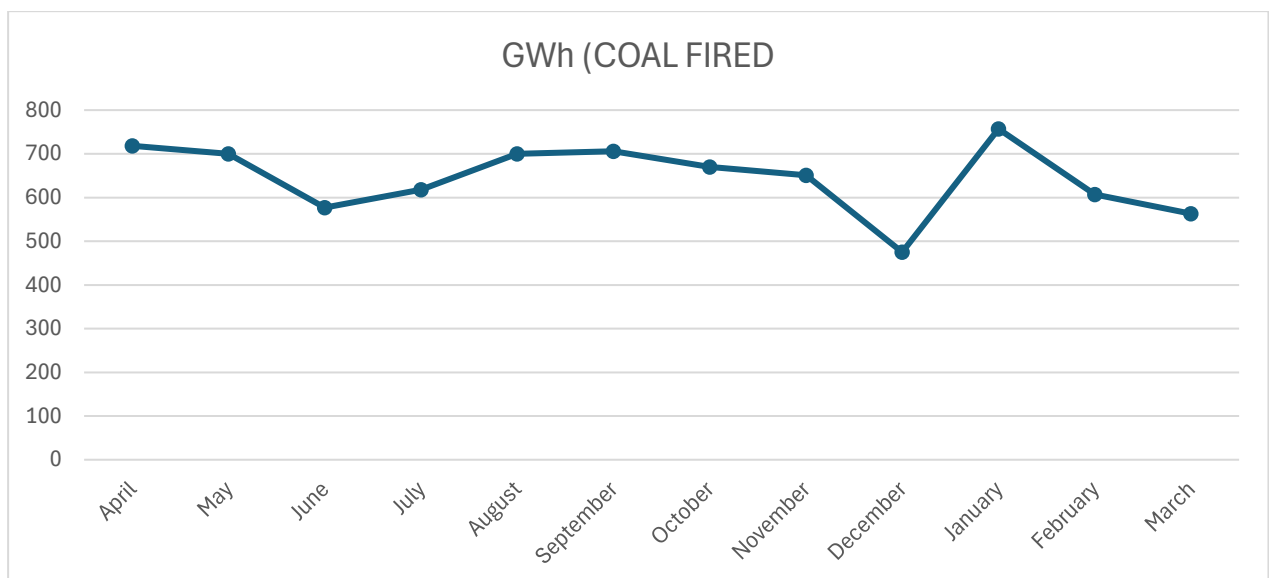


Figure 6 GWh (tons) 01 April 2024- 31 March 2025

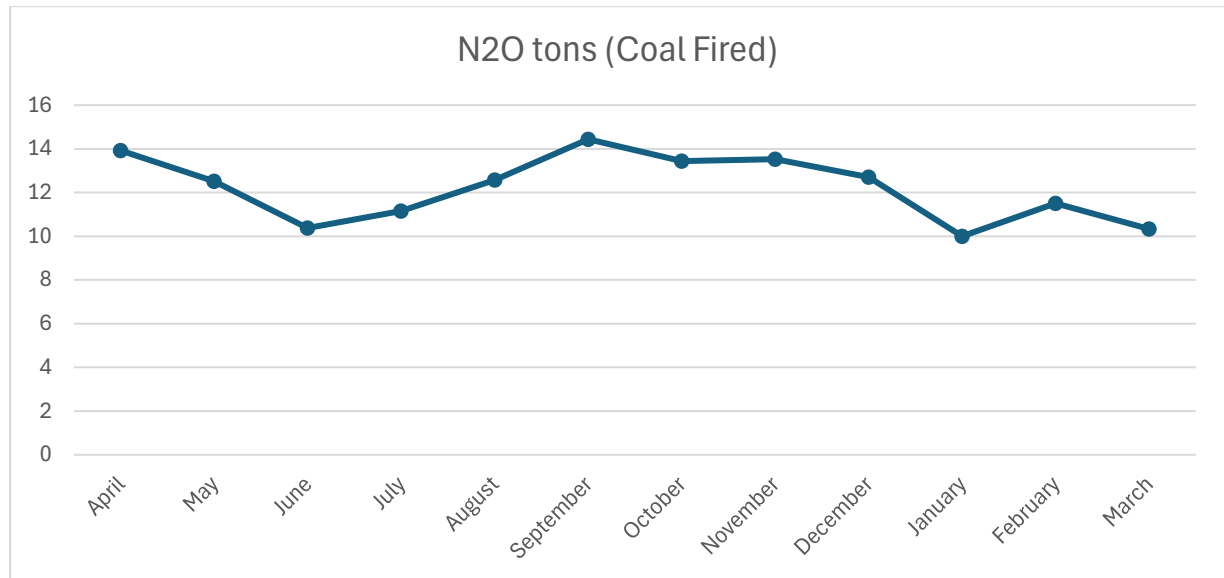


Figure 7 N₂O (tons) 01 April 2023- 31 April 2025

Compliance Audit Report(s):

No compliance audit was conducted during the reporting period.

Major upgrades projects:

No major projects related to the atmospheric emissions license were done for the financial year.

Greenhouse gas emissions:

Please refer to table 1 and figure 1-7

Gaseous and Particulate Monitoring Data availability

The Table below indicates the availability of the PM and Gaseous monitors on both the south and north stack for each month between 01 April 2024 and 31 March 2025

Table 2. Monitoring System Availability (%)

	North Stack PM	South Stack PM	North Stack SO ₂	South Stack SO ₂	North Stack NO ₂	South Stack SO ₂
Apr-2024	100	100	98.1	99.3	100	98.3
May-2024	100	99.9	100	100	100	100
June-2024	99.7	100	99.7	100	100	100
July-2024	100	100	99.4	91.4	100	100
Aug-2024	100	100	100	99.6	100	100
Sep- 2024	100	100	98.4	98.1	100	100
Oct-2024	100	100	99.6	99.6	99.6	100
Sep-2024	100	100	99.8	98.2	99.8	100
Nov-2024	100	100	99.9	99.7	99.7	100
Dec-2024	100	100	100	95.6	93.6	99.6
Jan-2025	100	100	54.1	99.7	51.9	99.7
Feb-2025	98.9	98.4	100	100	94.4	99.6
Mar-2025	100	100	100	96.8	100	100
Total	99.8	99.8	96.8	98.3	95.9	99

For instances in case the gaseous monitors were performing below 80%, it was due to the analyzers being out of commission. The station has a contract with SI Analytics who are responsible for the maintenance, repairs; when monitors are found to be out of commission the supplier is called out to do repairs.

Complaints Register

Table 2. Complaints for 01 April 2024- 31 March 2025

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident and dispersion modelling of pollutants, where applicable	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None	0	0	0	0	0

No emissions related complaints registered for the past financial year 2024/2025

Most recent correlation/ spot tests

Correlation test was conducted on the North Stack in August 2024 and South Stack in November 2023.

Parallel Tests

Parallel test on the North Stack was conducted on September 2024
and South Stack August 2024

NAIES

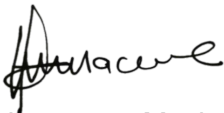
Arnot Power Station is still busy with the NAIES report and it will be submitted before it is overdue.

General

The rest of the information demonstrating compliance with the emission license conditions is
supplied in the monthly emission reports sent to your office.

Hoping the above will meet your satisfaction.

Compile by



Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT POWER STATION

Date: 2025/05/29

Supported By

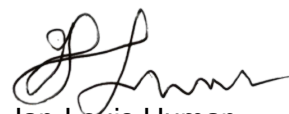


Rofhiwa Tshikovha

SENIOR ENVIRONMENTAL ADVISORT: ARNOT POWER STATION

Date: 2025.05.29

Verified By



Jan-Louis Human

System Engineer

Date: 29-05-2025

Yours sincerely

pp 

Marcus Nematodzi

GENERAL MANAGER: ARNOT POWER STATION

Date: 02/06/2025