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Date:  
19 May 2021

Enquiries:  
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Ref: **CAM-ENV/ANNUAL/2020-EM001**

Dear Mr. D. Hlanyane

### **CAMDEN POWER STATION'S ANNUAL EMISSIONS REPORT**

This serves as the annual report required in terms of Section 7.6 (Routine reporting and record keeping) in Camden Power Station's Atmospheric Emission License (Msukaligwa/Eskom H SOC Ltd/CPS/0012/2019/F03). The emissions are for Eskom's 2020/2021 financial year which is from 1 April 2020 to 31 March 2021. Verified emissions of particulates, SO<sub>2</sub>, NO<sub>x</sub> (as NO<sub>2</sub>) and the greenhouse gases CO<sub>2</sub> and N<sub>2</sub>O are also included.

<b>Category of Listed Activity</b>	<b>Sub-Category of Listed Activity</b>	<b>Listed Activity Name</b>	<b>Description of the Listed Activity</b>
Category 1	Sub-category 1.1	Solid Fuel Combustion Installations	Solid fuel combustion installation used primarily for steam raising or electricity generation
Category 2	Sub-category 2.4	Storage and handling of Petroleum Products	Storage and Handling of Petroleum Products.

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Category 5	Sub-category 5.1	Storage and handling of ore and coal	Storage and handling of ore and coal not situated on premises of mine or works as defined in the Mines Health and Safety Act 29/1996.
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### Pollutant Emission Trends and Greenhouse Gas Emissions:

Particulate emissions are measured at all power stations with opacity monitors, which are correlated to obtain emission concentrations. Gaseous emissions (CO<sub>2</sub>, N<sub>2</sub>O, SO<sub>2</sub> and NO<sub>x</sub>) are calculated from mass balances for SO<sub>2</sub> and CO<sub>2</sub>, from station-specific emission factors for NO<sub>x</sub> and from a generic emission factor for N<sub>2</sub>O.

Continuous emission monitors are installed on all four stacks and Eskom will report on the gaseous emission measurements in the annual reports once we are satisfied that the continuous emission measurements are at least as accurate as the calculations.

Table 1: General oversight of emissions at Camden Power Station 2020/2021

Power Station	Coal-fired emissions (tons/annum)	Fuel-oil emissions (tons/annum)	Total (tons/annum)
Camden	CO <sub>2</sub> : 3271272	CO <sub>2</sub> : 54014	CO <sub>2</sub> : 3325286
	N <sub>2</sub> O: 16.948	N <sub>2</sub> O: not calculated	N <sub>2</sub> O: 16.948
	PM: 234.90	PM: not calculated	PM: 234.90
	SO <sub>2</sub> : 19538	SO <sub>2</sub> : 1018.75	SO <sub>2</sub> : 20556.75
	NO <sub>x</sub> : 13899	NO <sub>x</sub> : not calculated	NO <sub>x</sub> : 13899

Table 2: Pollutant Emission Trends for 2020/2021

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Month	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)	CO <sub>2</sub> (tons)	N <sub>2</sub> O (tons)
April 2019	71	1878	1370	311369	2
May 2019	0	0	0	0	0
June 2019	0	0	0	0	0
July 2019	0	0	0	0	0
August 2019	2	0	0	0	0
September 2019	18	1596	1392	336346	2
October 2019	30	3322	2254	533629	3
November 2019	21	3297	2198	509275	3
December 2019	22	2502	1841	437186	2
January 2020	24	2119	1582	377041	2
February 2020	26	2110	1510	359230	2
March 2020	21	2712	1752	407195	2

Table 2 above provides information on the monthly emissions for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub> and N<sub>2</sub>O. This will be further illustrated graphically below:

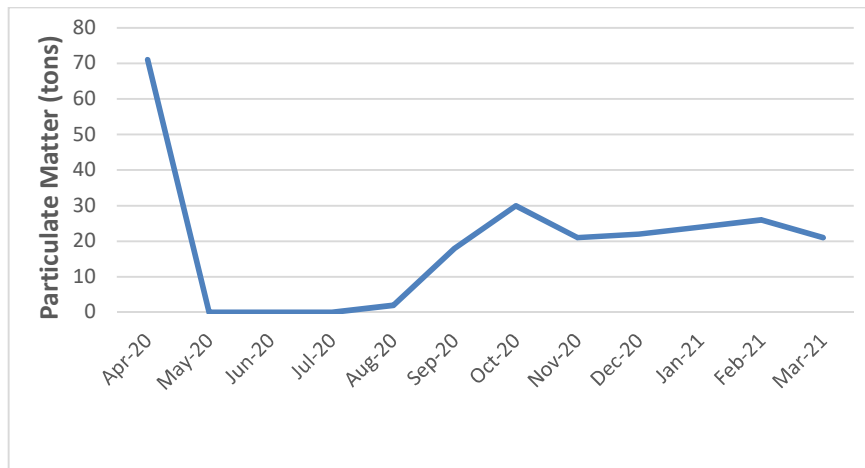


Figure 1: Monthly Particulate Emissions in tons from Camden Power Station 2020/2021

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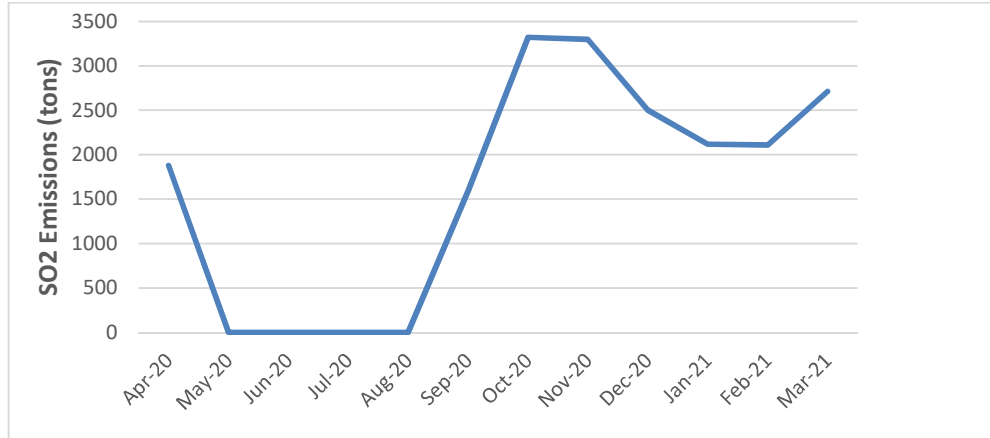


Figure 2: Monthly SO<sub>2</sub> Emissions in tons from Camden Power Station 2020/2021

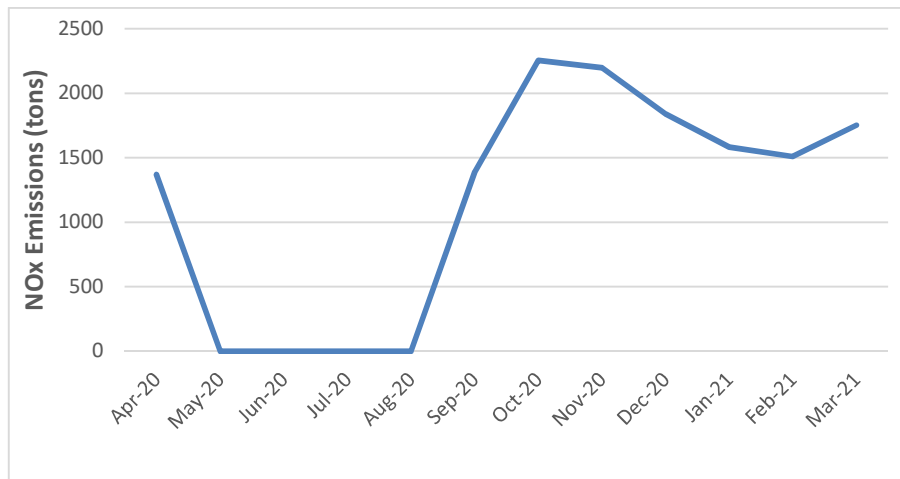


Figure 3: Monthly NO<sub>x</sub> Emissions in tons for Camden Power Station 2020/2021

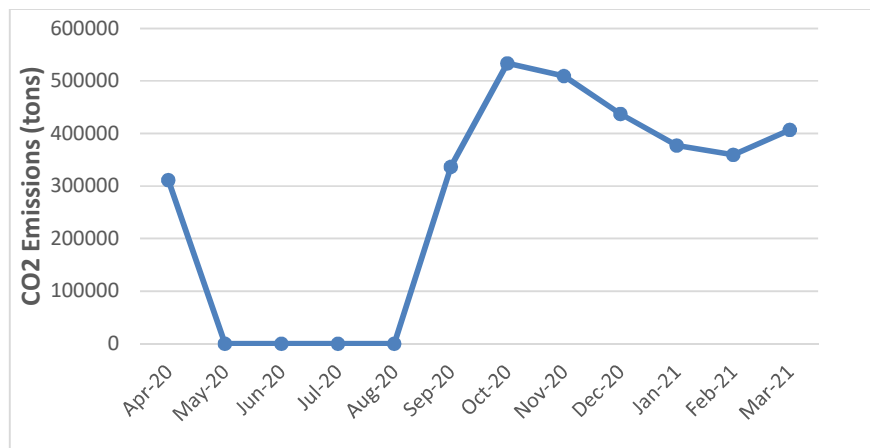


Figure 4: Monthly CO<sub>2</sub> Emissions in tons from Camden Power Station 2020/2021

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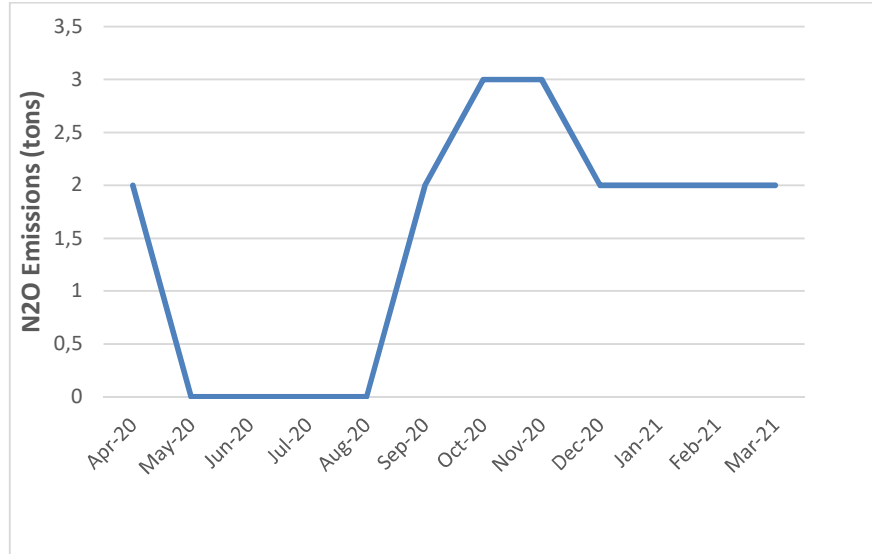


Figure 5: Monthly N<sub>2</sub>O Emissions in tons from Camden Power Station 2020/21

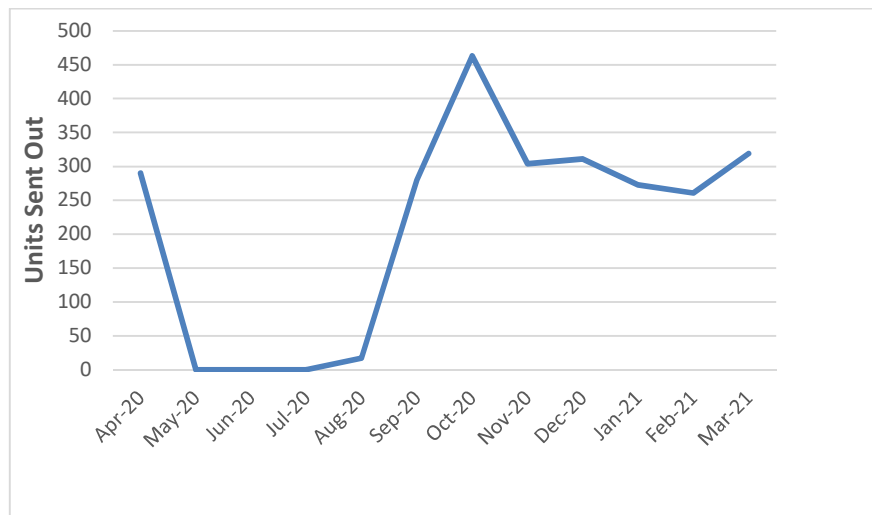


Figure 6: Monthly Energy sent out in GWh at Camden Power Station 2020/2021

**Monitoring data availability:**

	Stack 1	Stack 2	Stack 3	Stack 4
PM	100 %	100 %	100 %	100 %
SO <sub>2</sub>	100 %	100 %	100 %	100 %
NO <sub>x</sub>	100 %	100 %	100 %	100 %

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The next Audit is scheduled for August 2021, once done the report will be submitted to the Licensing Authority.

**Major Upgrade Projects:**

All eight units now have Low NOx burners installed.

**Greenhouse Gas Emissions:**

Greenhouse gas emissions (CO<sub>2</sub> and N<sub>2</sub>O) are included in Table 2 as well as Figures 4 and 5 above.

**Complaints Register:**

No complaints were received during the reporting period.

**National Atmospheric Emissions Inventory System**

In terms of the pollutants and greenhouse emissions, Camden Power Station has reported on the NAEIS portal for 2020.

**Status of Stratification, Parallel and Correlation test.**

Parallel and Correlation tests on all stacks were conducted and completed in 2020 and 2021, see attached reports.

Hoping the above will meet your satisfaction.

Yours sincerely

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Bonga Mashazi

**GENERAL MANAGER: CAMDEN**