	<b>Medupi Power Station Monthly Emissions Report</b>	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

Phumudzo Thivhafuni

*Date: 2020/05/31*

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Ref: 12/4/12L-W2/A3 – May 2020

Dear Phumudzo

## **MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF MAY 2020**

This document serves as the monthly report required in terms of Section 7.7.1 of Medupi Power Station Provisional Atmospheric Emission License (AEL), 12/4/12L-W2/A3.

This report is a reflection of Unit 2, 3, 4, 5 and 6 gaseous and particulate emissions performance against the AEL limit for the month of May 2020 only.

### **1. Raw Materials and Products**


**Table 1: Quantity of raw materials and products for Unit 2, 3, 4, 5 and 6 in May 2020**

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 2,3, 4, 5 and 6 consumption May 2020
	Coal	Tons/month	1 875 000	731 029
	Fuel Oil	Tons/month	40 000	659
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 2, 3, 4, 5 and 6 Production Rate in Month of May 2020
	Energy	MW	4 800	2042
	Ash Emitted	Tons/month	not specified	191.9

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**Table 2: Daily consumption and production rates**

Date	Reportable hours of Operation					Fuel Consumption (tons)				Production (MW)
	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Oil			Coal	Units
						Aux Boiler	Units	Total	Units	2,3,4,5 &6
01- May -19	24.0	21.3	9.4	24.0	0.0	0.0	0	0	22377	2041.447
02- May -19	24.0	0.0	24.0	24.0	0.0	0.0	17	17	18528	1718.031
03- May -19	24.0	19.4	24.0	24.0	0.0	0.0	0	0	20092	1843.055
04- May -19	24.0	24.0	24.0	24.0	0.0	0.0	20	20	24324	2146.583
05- May -19	24.0	24.0	22.3	24.0	0.0	0.0	53	53	26668	2338.897
06- May -19	24.0	24.0	0.0	24.0	0.0	0.0	59	59	19566	1678.472
07- May -19	24.0	24.0	0.0	24.0	0.0	0.0	7	7	20801	1801.205
08- May -19	24.0	24.0	0.0	24.0	0.0	0.0	5	5	19436	614.1693
09- May -19	24.0	24.0	0.0	24.0	0.0	0.0	9	9	16161	516.457
10- May -19	24.0	24.0	0.0	24.0	0.0	0.0	0	0	18003	689.3539
11- May -19	24.0	24.0	0.0	24.0	0.0	0.0	0	0	20277	1954.135
12- May -19	24.0	24.0	13.8	24.0	0.0	0.0	15	15	24748	2217.116
13- May -19	24.0	24.0	24.0	24.0	0.0	0.0	3	3	25222	2284.71
14- May -19	24.0	24.0	24.0	24.0	0.0	0.0	21	21	26796	2404.542
15- May -19	24.0	24.0	24.0	24.0	0.0	0.0	17	17	26097	2353.141
16- May -19	24.0	24.0	24.0	24.0	0.0	0.0	6	6	26780	2359.7
17- May -19	24.0	24.0	24.0	24.0	0.0	0.0	0	0	26180	2327.997
18- May -19	24.0	24.0	24.0	24.0	0.0	0.0	13	13	24183	2122.283
19- May -19	24.0	24.0	24.0	24.0	0.0	0.0	0	0	23985	2190.333
20- May -19	24.0	24.0	24.0	24.0	0.0	0.0	0	0	25899	2383.98
21- May -19	24.0	24.0	24.0	24.0	0.0	0.0	23	23	24784	2216.366
22- May -19	24.0	24.0	24.0	24.0	0.0	0.0	26	26	24619	2194.522
23- May -19	24.0	24.0	24.0	24.0	0.0	0.0	33	33	24844	2315.426
24- May -19	24.0	24.0	24.0	24.0	0.0	0.0	13	13	25575	2275.998
25- May -19	24.0	24.0	23.0	24.0	0.0	0.0	45	45	26630	2368.185
26- May -19	24.0	24.0	0.0	24.0	0.0	0.0	0	0	21443	2191.016
27- May -19	24.0	24.0	7.9	24.0	0.0	0.0	142	142	27723	2474.46
28- May -19	24.0	24.0	24.0	24.0	0.0	0.0	11	11	26649	2422.274
29- May -19	24.0	24.0	1.0	24.0	0.0	0.0	2	2	24516	2395.29
30- May -19	24.0	24.0	13.8	24.0	0.0	0.0	94	94	25730	2378.167
31- May -19	24.0	24.0	24.0	24.0	0.0	0.0	0	0	22398	2090.4

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## 2. Abatement Technology

Table 3: Abatement Equipment Control Technology utilisation for month of May 2020

Associated Unit/Stack	Technology Type	Efficiency
Unit 1	<i>Fabric Filter Plant (FFP)</i>	0
Unit 2	<i>Fabric Filter Plant (FFP)</i>	99.927%
Unit 3	<i>Fabric Filter Plant (FFP)</i>	99.968%
Unit 4	<i>Fabric Filter Plant (FFP)</i>	99.903%
Unit 5	<i>Fabric Filter Plant (FFP)</i>	99.842%
Unit 6	<i>Fabric Filter Plant (FFP)</i>	0

## 3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of May 2020

Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
	<b>Coal</b>	
<b>Sulphur Content</b>	1.3 - 2.2	1.53
<b>Ash Content</b>	35 - 39	34.88

## 4. Emissions Reporting

Medupi Power Station uses Continuous Emission Monitoring System which uses the extractive method for analysis.

The emission limits are as follows:

SO<sub>2</sub> Monthly = 3500 mg/Nm<sup>3</sup>    Dust Daily= 50 mg/Nm<sup>3</sup>    NO<sub>2</sub> Daily= 750 mg/Nm<sup>3</sup>

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Date	Final PM mg/Nm <sup>3</sup> (minus 24 hrs for tonnage calc.)				Velocity (m/s) to Gas Volume (Nm <sup>3</sup> /s)				Unit 2 Final CEM mg/Nm <sup>3</sup>			Unit 2 Other CEMS Data				Unit 3 Final CEM mg/Nm <sup>3</sup>			Unit 3 Other CEMS Data			
	U2	U3	U4	U5	U2	U3	U4	U5	SOx	NOx	CO	O <sub>2</sub>	°C	kPa	m/s	SOx	NOx	CO	O <sub>2</sub>	°C	kPa	m/s
2020/05/01	31.9	3.3	50.7	50.0	1164.6	352.1	427.2	633.7	2 864	421	15	7.0	127.0	90.0	25.3	2 247	400	5	8.9	123.2	84.0	10.8
2020/05/02	31.9		37.0	44.0	1038.9	302.7	382.7	476.3	2 842	372	15	7.6	127.1	90.0	23.9	3 011	288	1	8.7	135.3	84.0	10.0
2020/05/03	31.0	3.2	36.4	49.6	1005.4	320.8	420.4	544.1	2 767	344	14	7.8	129.2	89.8	23.7	1 762	324	1	8.7	128.1	83.8	10.2
2020/05/04	36.1	3.8	38.6	44.5	1122.9	371.5	369.9	625.2	2 867	407	14	7.2	130.3	89.9	25.1	2 607	472	13	10.4	123.4	83.9	12.5
2020/05/05	32.1	2.7	39.4	32.1	1145.2	703.2	431.1	600.5	3 009	496	14	6.9	128.7	90.1	24.9	2 845	393	29	6.2	132.3	84.0	15.8
2020/05/06	35.4	4.8		36.4	1137.1	634.1		533.5	3 036	535	12	6.8	128.3	90.1	24.5	3 008	406	27	6.5	126.9	84.0	14.2
2020/05/07	33.7	6.3		52.6	1178.0	599.0		658.9	3 139	528	12	6.7	128.7	90.1	25.0	3 179	370	24	6.9	123.7	84.1	13.7
2020/05/08	33.6	6.8		51.1	1139.8	587.7		614.5	2 948	505	12	6.8	127.5	90.1	24.3	3 005	351	28	6.8	127.0	84.1	13.5
2020/05/09	34.0	8.3		29.6	1020.5	396.0		514.3	2 942	459	14	7.4	124.5	90.2	22.8	2 975	404	17	9.3	120.2	84.1	11.4
2020/05/10	36.7	8.8		51.4	1057.7	362.8		711.1	2 985	388	16	7.1	125.3	90.2	23.1	3 202	395	10	10.0	120.4	84.2	11.1
2020/05/11	33.1	7.9		47.6	1003.0	465.9	348.4	591.1	2 914	372	15	7.5	123.4	90.0	22.5	3 138	368	8	8.9	125.3	84.0	12.9
2020/05/12	21.9	7.8	30.7	41.9	1032.6	483.3	466.4	604.9	2 870	355	15	7.2	124.0	89.7	22.7	3 105	366	9	8.7	124.0	83.8	13.1
2020/05/13	31.2	6.0	29.3	36.3	1028.4	500.2	489.0	648.2	2 949	384	14	7.3	121.7	89.6	22.8	3 179	372	10	8.5	125.4	83.7	13.3
2020/05/14	38.1	11.7	31.7	37.5	1220.0	506.5	477.1	645.1	2 937	405	39	6.6	125.6	89.8	25.7	3 115	364	10	8.5	125.5	83.9	13.5
2020/05/15	37.3	14.5	37.6	41.0	1085.1	408.5	622.3	678.8	2 895	450	27	6.7	123.7	89.9	22.9	3 179	395	10	9.8	119.6	83.9	12.2
2020/05/16	39.3	13.5	39.7	38.6	1070.7	538.4	540.8	617.3	2 931	468	38	6.9	123.2	89.9	23.0	3 056	365	9	7.9	125.9	83.9	13.6
2020/05/17	38.3	12.1	41.3	30.3	1113.7	543.0	604.4	535.3	3 097	474	27	6.5	123.3	90.3	23.0	3 108	368	10	8.0	125.4	84.2	13.7
2020/05/18	41.6	9.8	33.7	38.3	1047.8	443.6	430.8	615.2	2 768	443	34	7.0	122.4	90.2	22.6	3 079	338	12	9.3	122.5	84.1	12.6
2020/05/19	26.5	8.8	33.6	44.6	1074.5	492.2	431.2	640.2	2 723	445	32	7.2	124.3	90.1	23.6	3 084	305	9	9.1	126.6	84.1	13.9
2020/05/20	10.5	7.9	35.7	35.9	1144.8	445.3	538.5	573.9	2 663	392	19	7.5	119.7	90.2	25.4	2 972	287	14	9.5	124.9	84.2	13.1
2020/05/21	10.2	7.4	25.9	39.6	1126.2	448.9	425.6	586.5	2 631	418	15	7.6	119.5	90.3	25.2	2 990	292	13	9.3	125.2	84.2	12.8
2020/05/22	8.7	7.8	24.1	38.6	1112.9	445.7	469.9	599.4	2 688	453	19	7.6	119.6	90.3	25.0	3 029	308	13	9.3	125.9	84.2	12.8
2020/05/23	8.0	7.9	27.3	39.3	1070.0	471.0	466.6	635.7	2 645	464	15	8.0	119.3	90.1	24.8	2 972	283	12	9.2	126.0	84.1	13.3
2020/05/24	9.6	7.6	29.9	51.3	1118.6	414.7	436.4	701.5	2 683	485	13	7.6	120.7	89.9	25.3	3 036	308	15	9.6	125.7	83.9	12.3
2020/05/25	10.9	8.0	31.0	52.4	1120.4	486.5	526.3	604.2	2 879	525	13	7.6	120.8	89.4	25.5	3 156	288	16	8.9	128.1	83.6	13.7
2020/05/26	14.2	7.5		38.2	1148.2	559.9	606.3	512.1	3 011	477	15	7.5	119.9	89.2	26.0	3 231	294	8	7.7	127.3	83.5	14.0
2020/05/27	18.1	7.8	30.6	50.3	1168.4	556.1	632.9	620.9	3 018	433	15	7.4	118.4	89.6	25.9	3 217	287	7	7.9	124.7	83.8	14.0
2020/05/28	20.3	8.2	24.9	44.1	1196.5	506.3	512.5	641.8	3 017	433	16	6.9	120.8	89.8	25.5	3 279	326	7	8.6	123.4	84.0	13.6
2020/05/29	16.3	8.0	25.9	46.8	1223.9	557.5	476.8	615.0	2 993	430	15	6.2	126.9	89.8	24.9	3 221	325	6	8.1	125.7	83.9	14.3
2020/05/30	15.1	7.5	32.7	41.4	1182.0	531.9	475.3	636.5	2 937	446	15	6.4	126.3	89.9	24.4	3 211	339	8	7.9	125.3	83.9	13.4
2020/05/31	15.1	7.3	23.6	23.1	1068.6	486.2	423.0	494.9	2 816	364	15	7.0	124.1	90.2	23.0	3 152	340	7	8.3	125.0	84.1	12.6

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Date	Unit 4 Final CEM mg/Nm <sup>3</sup>			Unit 4 Other CEMS Data				Unit 5 Final CEM mg/Nm <sup>3</sup>			Unit 5 Other CEMS Data			
	SOx	NOx	CO	O <sub>2</sub>	°C	kPa	m/s	SOx	NOx	CO	O <sub>2</sub>	°C	kPa	m/s
2020/05/01	3 537	493	11	7.8	127.0	90.3	9.4	3 106	497	26	6.4	127.2	90.2	12.7
2020/05/02	3 516	459	16	8.0	127.0	90.2	8.6	3 060	433	7	7.8	119.3	90.2	10.4
2020/05/03	3 411	411	20	7.5	127.0	90.0	9.1	3 028	431	24	7.4	121.6	90.0	11.6
2020/05/04	3 488	441	7	8.2	127.0	90.1	8.5	3 115	502	27	6.7	127.1	90.0	12.8
2020/05/05	3 612	499	8	7.7	127.0	90.3	9.5	3 232	510	21	6.9	129.0	90.3	12.5
2020/05/06								3 048	549	4	7.6	126.6	90.3	11.6
2020/05/07								3 309	495	14	6.5	132.0	90.3	13.5
2020/05/08								3 173	474	22	6.8	129.4	90.3	12.8
2020/05/09								3 158	432	11	7.7	126.2	90.4	11.2
2020/05/10								3 278	474	29	6.1	131.8	90.4	14.1
2020/05/11	3 196	440	12	9.4	127.0	90.2	8.8	3 242	485	14	7.2	130.2	90.2	12.6
2020/05/12	3 521	452	39	6.8	127.0	90.0	9.7	3 274	496	5	7.1	128.8	89.9	12.8
2020/05/13	3 648	409	92	7.1	127.0	89.9	10.3	3 371	499	12	6.7	128.9	89.8	13.4
2020/05/14	3 440	420	31	7.2	127.0	90.1	10.1	3 138	459	12	6.9	127.1	90.0	13.4
2020/05/15	3 451	406	105	6.2	127.0	90.1	12.3	3 134	486	10	6.3	131.6	90.1	13.7
2020/05/16	3 512	449	50	6.8	127.0	90.2	11.1	3 120	515	4	6.8	131.9	90.1	12.9
2020/05/17	3 646	414	103	6.4	127.0	90.5	12.1	3 250	455	8	7.6	124.2	90.5	11.6
2020/05/18	3 336	443	14	7.9	127.0	90.4	9.6	3 111	492	8	6.9	131.7	90.4	12.9
2020/05/19	3 484	407	11	8.0	127.0	90.4	9.7	3 219	504	11	7.0	132.2	90.3	13.5
2020/05/20	3 396	416	39	6.9	127.0	90.5	11.2	3 118	450	8	7.2	126.7	90.4	12.2
2020/05/21	3 278	440	6	8.4	127.0	90.6	9.9	3 115	449	11	7.3	125.3	90.6	12.4
2020/05/22	3 297	465	8	7.7	127.0	90.5	10.3	3 053	497	14	7.1	127.9	90.5	12.6
2020/05/23	3 307	520	14	7.4	127.0	90.4	10.0	3 044	465	16	6.7	128.5	90.4	13.0
2020/05/24	3 319	511	3	7.9	127.0	90.2	9.8	3 256	503	44	6.2	132.5	90.1	14.0
2020/05/25	3 647	501	15	7.1	127.0	89.7	11.1	3 403	537	13	7.0	128.0	89.7	12.7
2020/05/26	3 566	544	20	8.2	127.0	89.4	14.0	3 303	482	7	7.9	117.8	89.4	11.2
2020/05/27	3 618	504	18	6.7	127.0	89.9	13.0	3 328	496	33	6.8	125.6	89.9	12.8
2020/05/28	3 619	485	32	6.9	127.0	90.1	10.6	3 339	494	32	6.7	128.0	90.1	13.1
2020/05/29	3 582	441	41	7.6	127.0	90.0	10.4	3 314	527	29	6.7	129.4	90.0	12.7
2020/05/30	3 604	412	34	7.0	127.0	90.2	10.0	3 361	502	24	6.2	129.0	90.1	12.7
2020/05/31	3 468	383	35	7.5	127.0	90.5	9.1	2 803	486	27	7.2	122.5	90.4	10.4

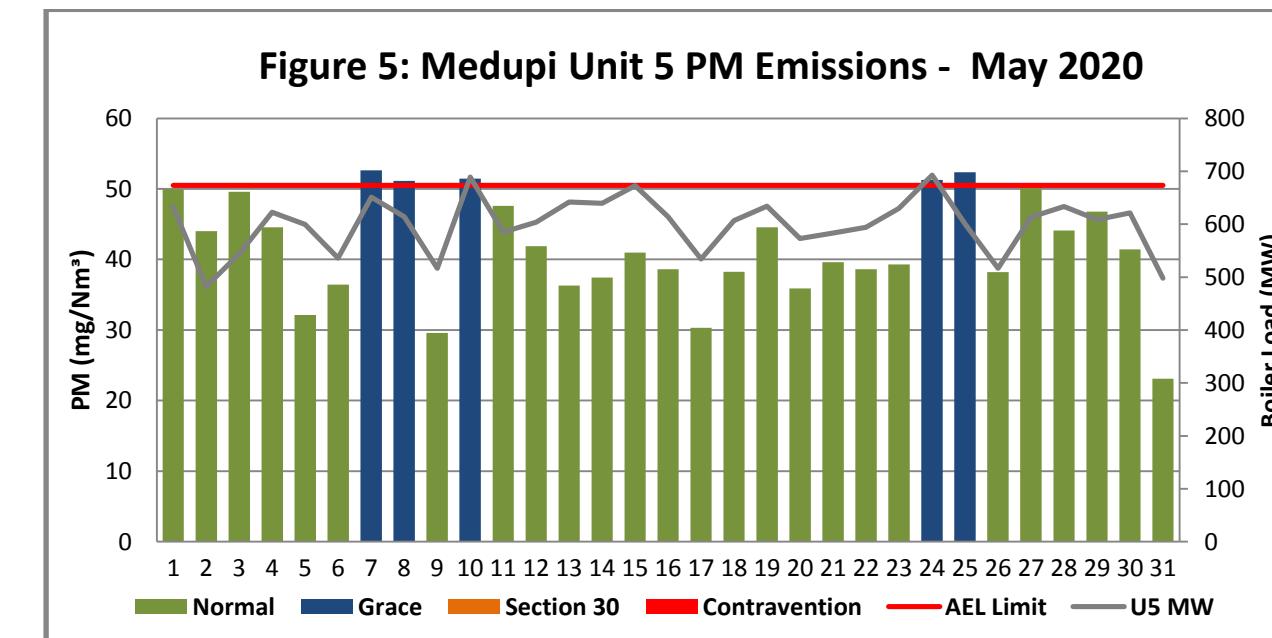
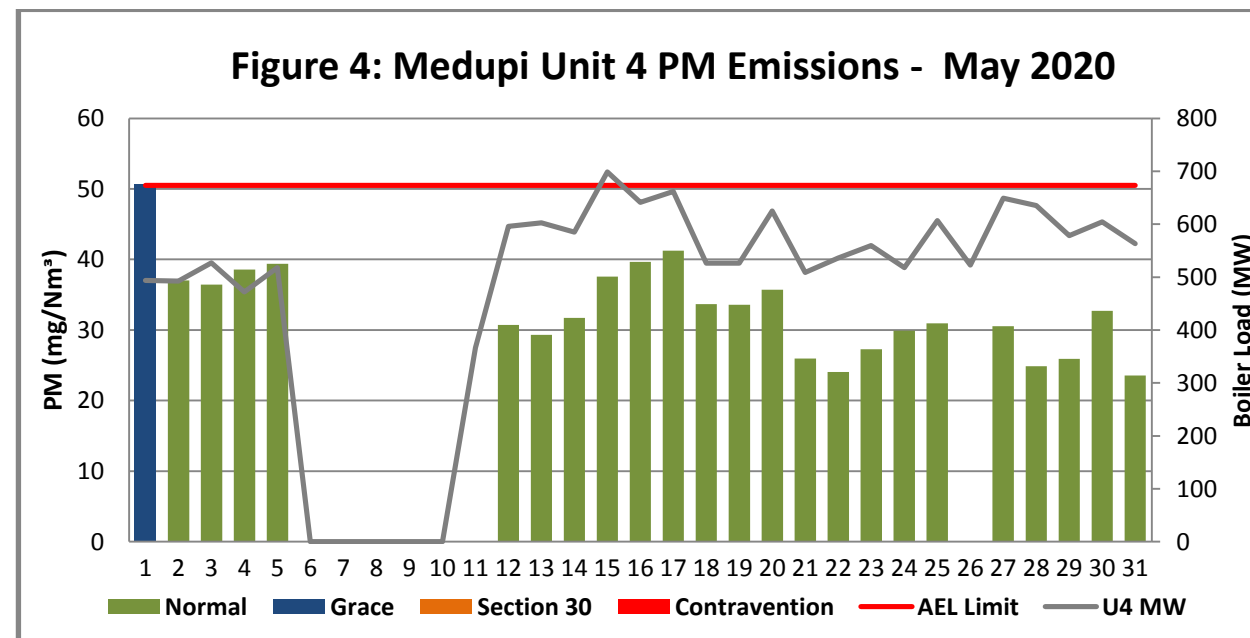
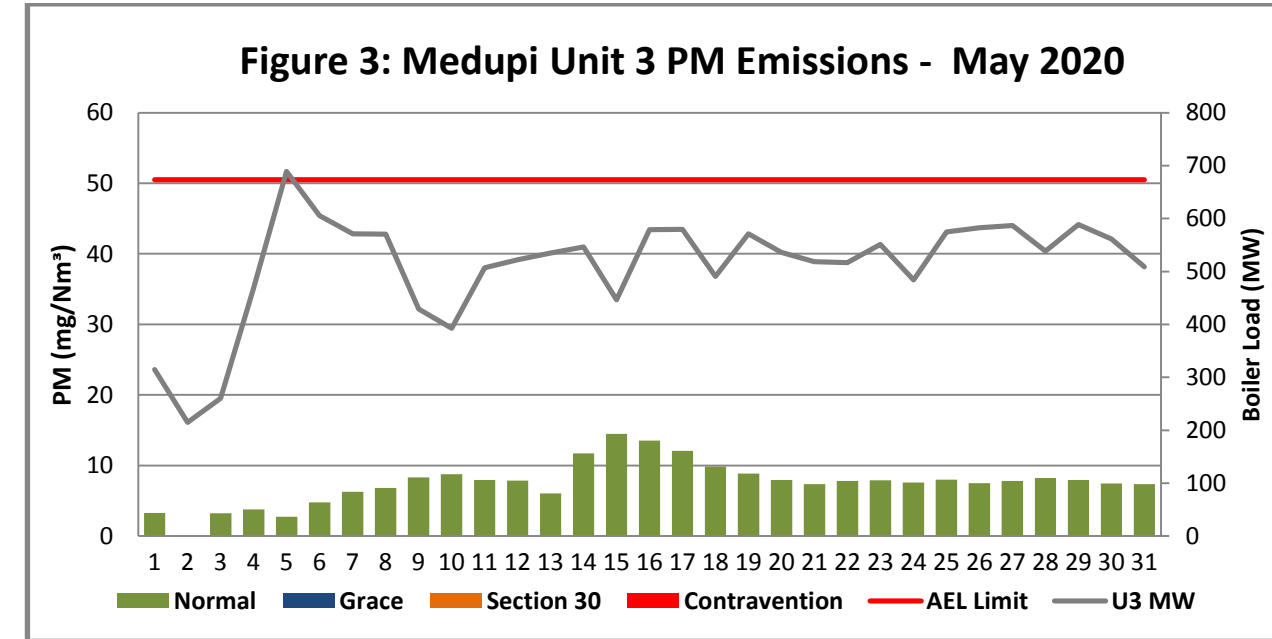
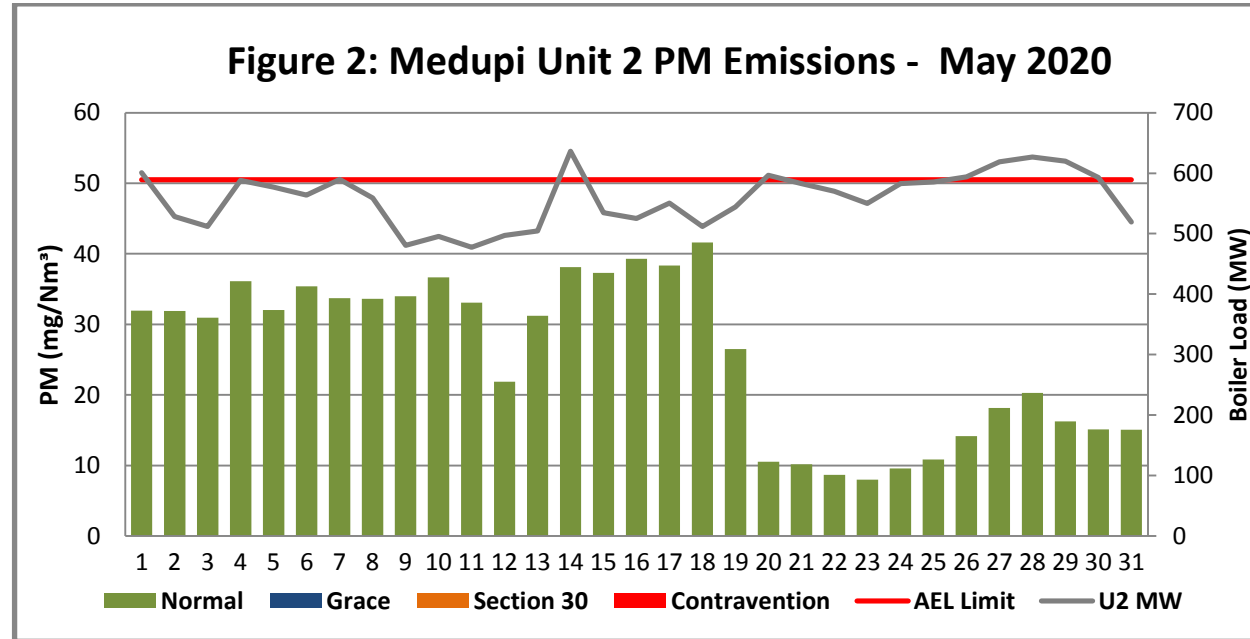
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Medupi Power Station graphical representation of emissions data



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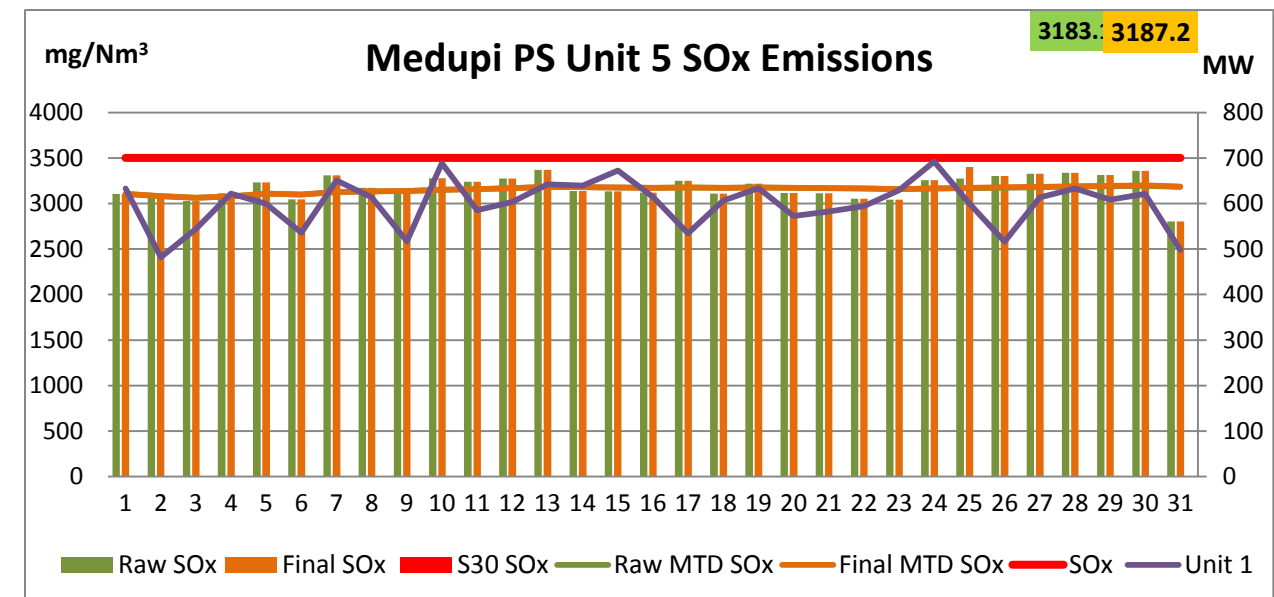
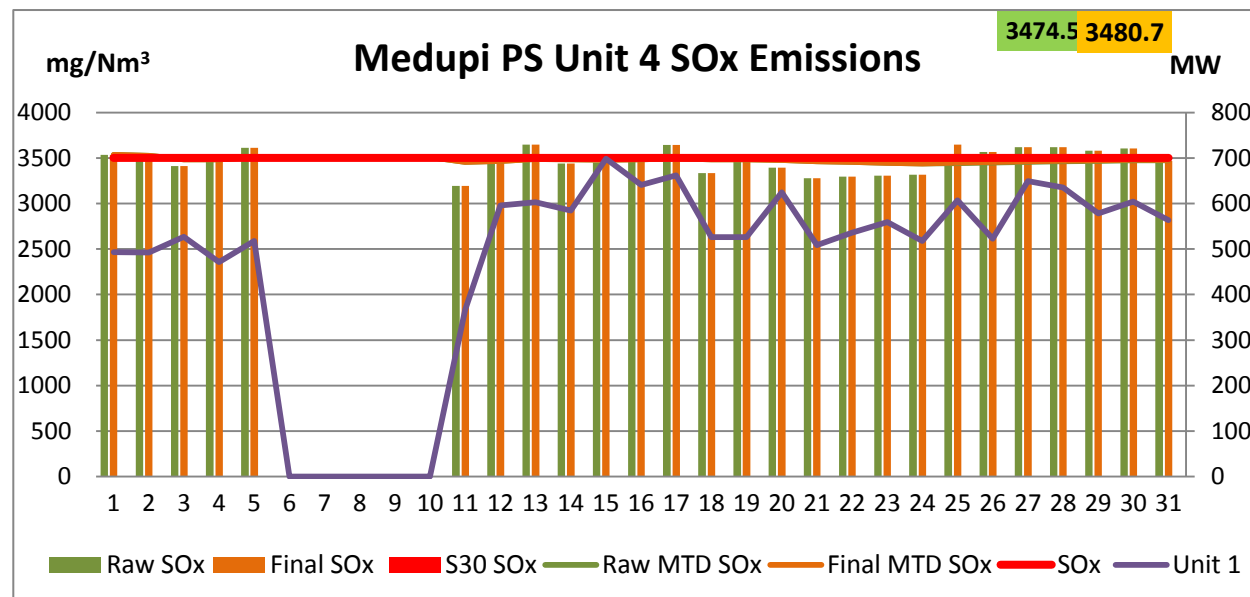
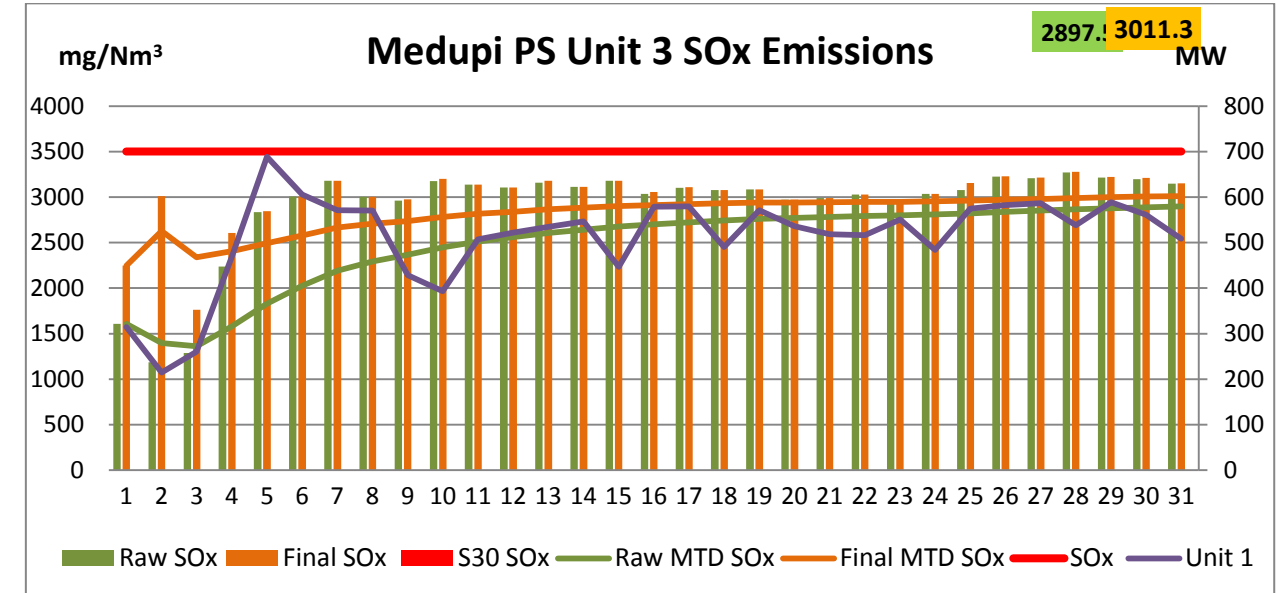
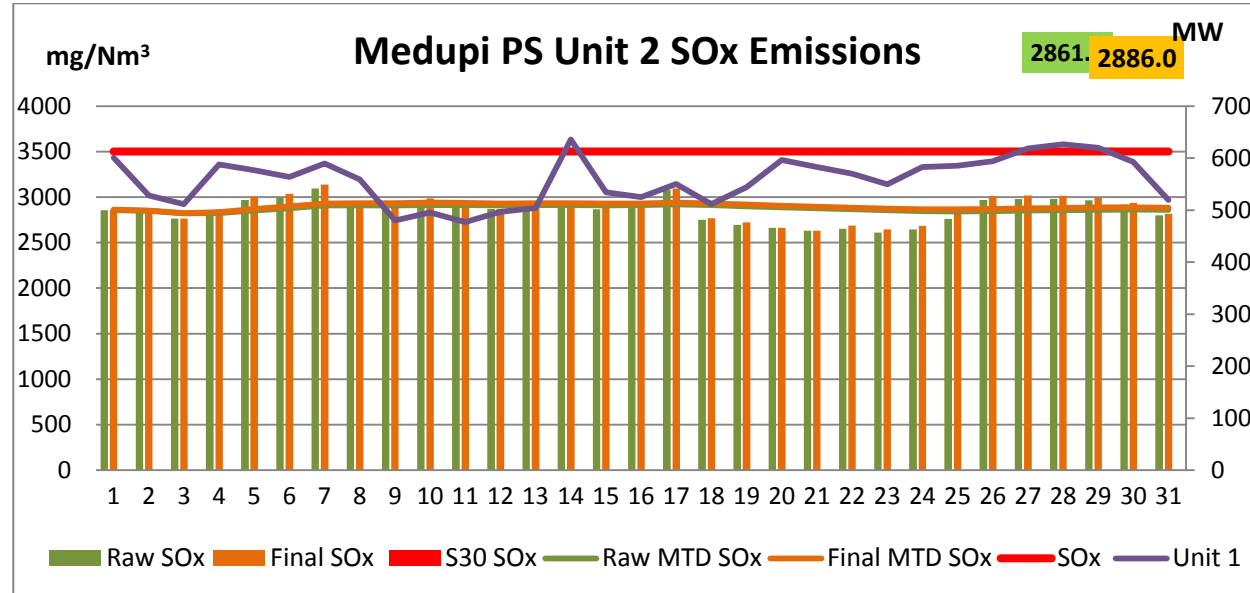
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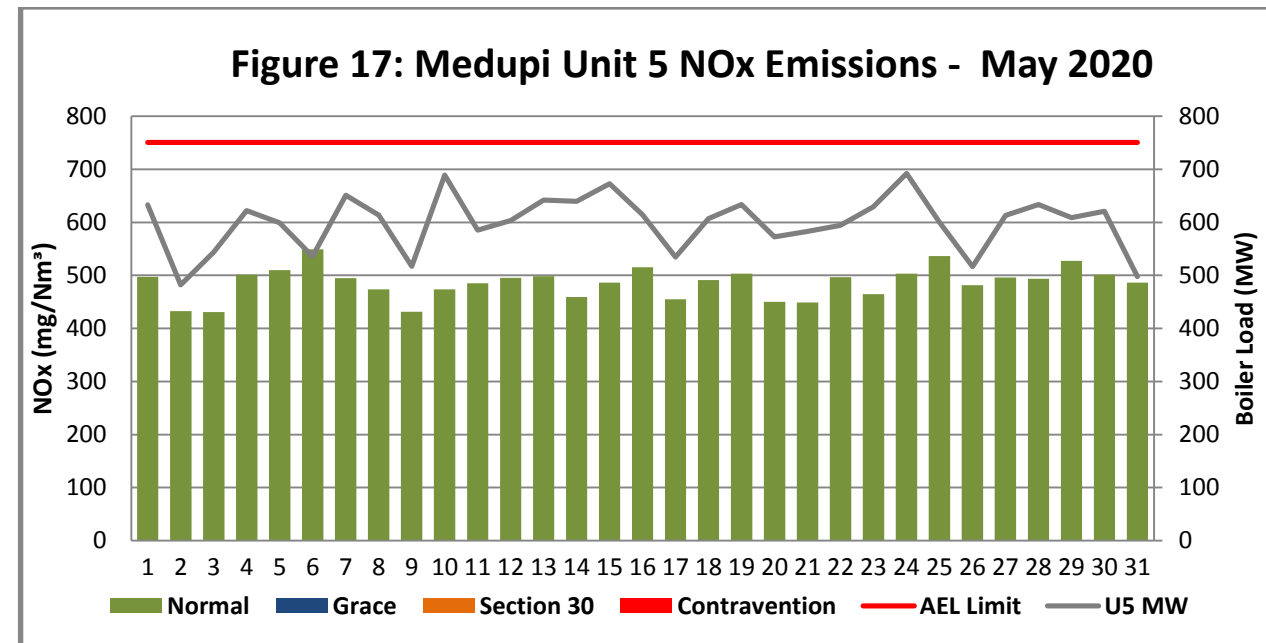
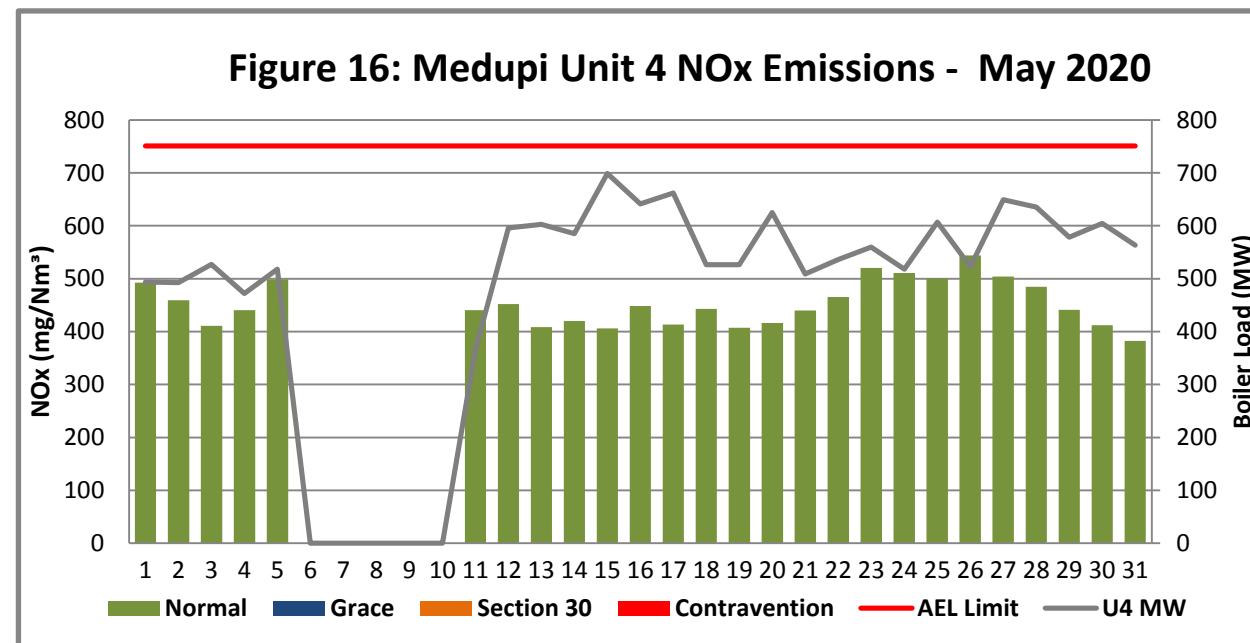
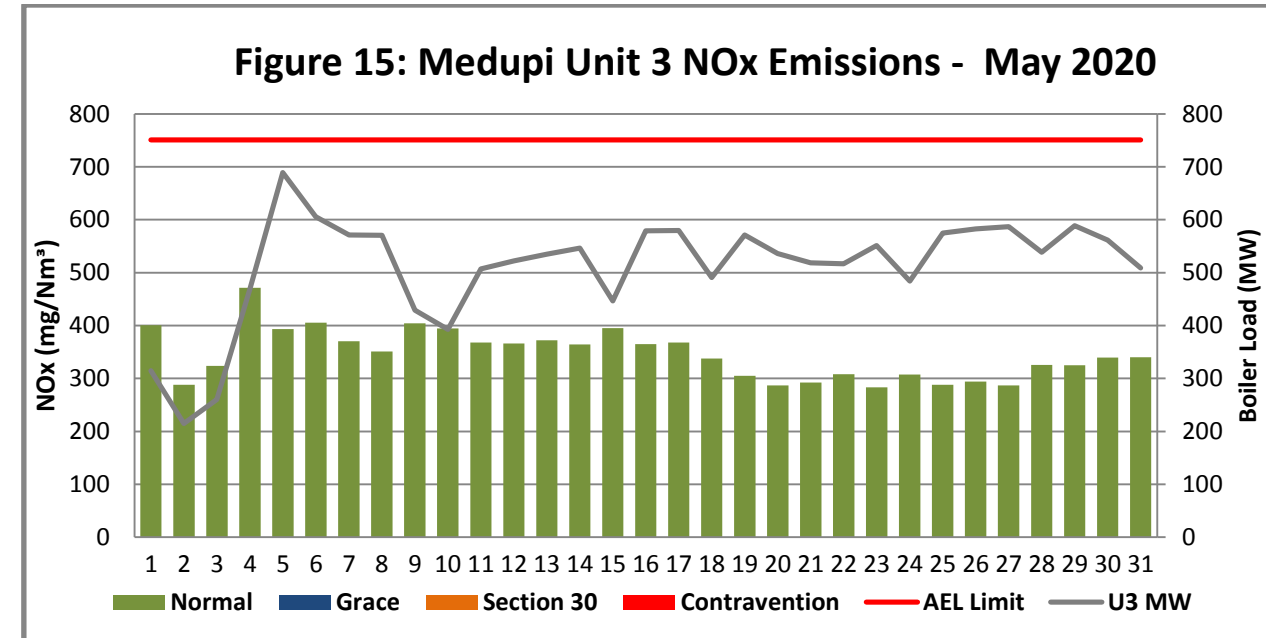
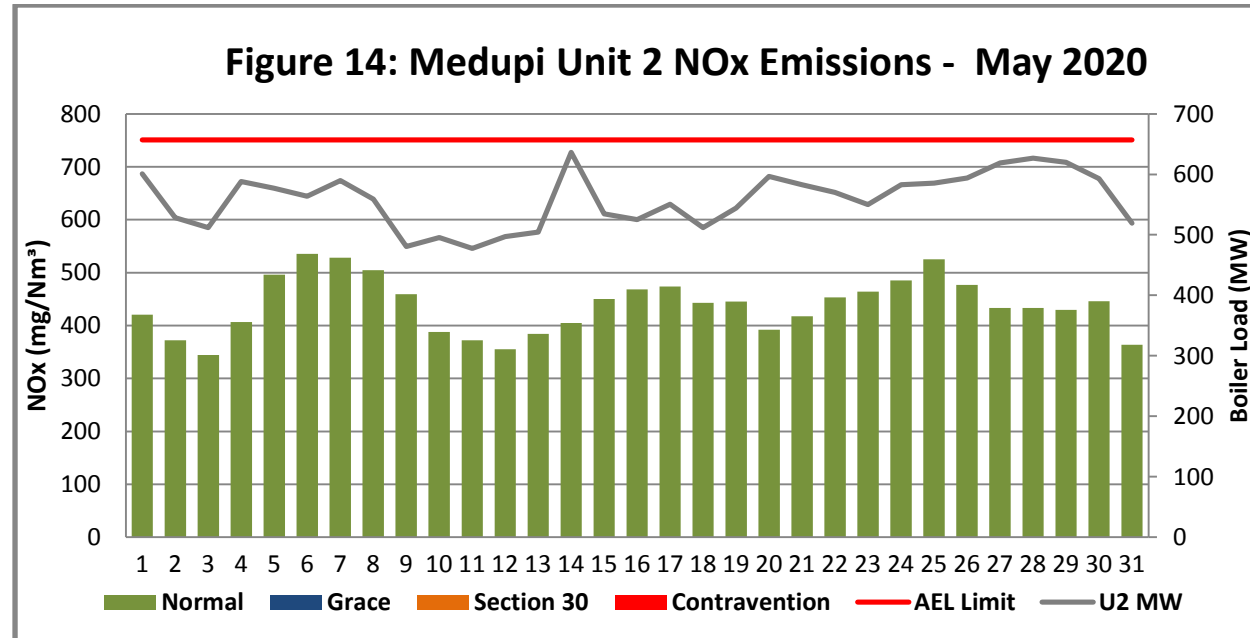


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**Table 5: Monthly tonnages for the month of May 2020**

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>	CO
Unit 1	0.0	0	0	0
Unit 2	47.4	5 332	811	33
Unit 3	10.9	4 276	491	18
Unit 4	42.8	5 144	660	50
Unit 5	89.6	6 769	1 033	37
Unit 6	0.0	0	0	0
<b>SUM</b>	190.8	21 522	2 994	138

## 5. Comments on the performance and availability of each unit

Gaseous emissions on all units were within the limit for May reporting period. Unit 2 and 3 PM emissions were within the limit throughout the reporting period. Exceedances due to upset conditions were evident on unit 4 and 5. Unit 6 was on bag replacement outage during the month of May 2020.

## 6. Continuous Emission Monitoring Systems (CEMS)

Unit 2, 4, 5 and 6 Continuous Emission Monitoring Systems were in operation at all times when the unit was on load.


**Table 6: Periods during which CEMS was inoperative**

Date	Time	CEMS status	Comments
N/A	N/A	N/A	Data for the reporting period is available

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**Table 7: CEMS Monitor Reliability**

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>	O <sub>2</sub>
Unit 2	100.0	99.9	99.9	99.9
Unit 3	99.9	89.3	99.3	88.1
Unit 4	99.9	99.8	99.8	99.6
Unit 5	100.0	99.9	95.6	99.9

**7. CEMS Calibration certificates and equipment used for calibration**

See attached Appendix A

**8. Ambient Air Quality Monitoring Report**

The Ambient Air Quality Monitoring and Dust fall-out report are emailed to the Licensing authority on a monthly basis.

**9. Visual inspection of the exterior walls of the fuel oil tanks and TVOC Estimation**

Visual inspection was conducted and there were no leaks observed on the exterior walls of the fuel oil tanks.

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Table 8: Total Volatile Organic Compound (TVOC) for May 2020

		
<b>CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*</b>		
<b>Date:</b>	31 May 2020	
<b>Station:</b>	Medupi Power Station	
<b>Province:</b>	Limpopo Province	
<b>Tank no.</b>	1-2	
<b>Description:</b>	Outdoor fuel oil storage tank	
<b>Tank Type:</b>	Vertical fixed roof (vented to atmosphere)	
<b>Material stored:</b>	Fuel Oil 150	
<b>MONTHLY INPUT DATA FOR THE STATION</b> Please only insert relevant monthly data inputs into the <i>blue cells</i> below Choose from a dropdown menu in the <i>green cells</i> The total VOC emissions for the month are in the <i>red cells</i> IMPORTANT: Do not change <i>any</i> other cells without consulting the AQ CoE		
<b>MONTH:</b>	May	
<b>GENERAL INFORMATION:</b>	<b>Data</b>	<b>Unit</b>
Total number of fuel oil tanks:	2	NA
Height of tank*:	14.2	m
Diameter of tank:	12	m
Net fuel oil throughput for the month:	659	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
<b>METEROLOGICAL DATA FOR THE MONTH</b>	<b>Data</b>	<b>Unit</b>
Daily average ambient temperature	19.51	°C
Daily maximum ambient temperature	28.42	°C
Daily minimum ambient temperature	12.06	°C
Daily ambient temperature range	15.04	°C
Daily total insolation factor	3.91	kWh/m <sup>2</sup> /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
<b>FINAL OUTPUT:</b>	<b>Result</b>	<b>Unit</b>
<b>Breathing losses:</b>	0.70 kg/month	
<b>Working losses:</b>	0.02 kg/month	
<b>TOTAL LOSSES (Total TVOC Emissions for the month):</b>	0.72 kg/month	
<small>*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, Tritech Consulting Engineers, 85-93 Chevy Chase Street, Jamaica, NY 11432 USA, Tel - 718-454-3920, Fax - 718-454-6330, e-mail - PeressJ@nyc.rr.com.</small>		

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## 10. Air quality improvements initiatives and public education and awareness campaigns

No awareness campaign.

## 11. Complaints Register


Table 9: Complaints for the month of May 2020

Source Code/ Name	Air pollution complaints received	Calculation of Impacts/ emissions associated with the incident	Date of complaint and date of response by the license holder	Results of investigation	Action taken to resolve the complaint
N/A	No complaints received	N/A	N/A	N/A	N/A

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Compiled by:

Lufuno Tshidzumba   
**Senior Environmental Advisor**

Verified by:

Benjamin Rahlogo   
**Chief Technologist Boiler**

Supported by:

Sithokozile Hlongwa   
**Boiler Engineering Manager**

Supported by:

Rosetta Rammutla   
**Environmental Manager**

Supported by:

Jabulani Mkhathshwa   
**Engineering Group Manager**

I Wikus Janse Van Rensburg, declares that the information provided in this report is accurate and correct.


Yours sincerely

   
 Wikus Janse Van Rensburg  
**GENERAL MANAGER: MEDUPI POWER STATION**


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### APPENDIX 1: CEMS Calibration certificates



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CO REG #: 2004/007607/07  
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### CALIBRATION CERTIFICATE

		<b>CERTIFICATE NO:</b>	
		3416	
<b>CUSTOMER:</b>	Eskom Medupi	<b>JOB NO:</b>	SC1865
<b>CONTACT NAME:</b>	Lerato Sehume	<b>PHONE:</b>	078 012 9038
<b>MODEL:</b>	Dr Fodisch MGA 23	<b>SERIAL NO:</b>	13669
<b>AUXILIARY EQUIPMENT:</b>	Unit 8		


CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	1 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	834 ppm	835 ppm	CO	834.6 ppm	3204	03-02-2021
2	ZERO	-2 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	908 ppm	877 ppm	NO	876.7 ppm	12598	21-01-2021
3	ZERO	-47 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	2584 ppm	2584 ppm	SO2	2161.7 ppm	5905E	15-05-2020
4	ZERO	0.03 %	0.0 %	N2	99.99 %	82410	31-08-2020
	SPAN	20.39 %	20.95 %	O2	20.95 %	Air	N/A

**REPORT:** SO2 cell diagnostics is low and cell module should be inspected. Inspect all sample lines, filters and rotameter. Calibrate analyser with zero and span gas, calibration was done according to cylinder standards, analyser was responding to all test gas.


**Date of Calibration:** 25 Feb 2020

**Calibration Due Date:** May 2020

**Technician:** J Faber



**Biator + Lang**  
**SERVOMEX**  
A TRADEMARK OPPORTUNITY  
Document Number: TH-PFC-002-F1 Rev 2





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### CALIBRATION CERTIFICATE


**CERTIFICATE NO:**  
**3415**

<b>CUSTOMER:</b>	Eskom Medupi	<b>JOB NO:</b>	SC1665
<b>CONTACT NAME:</b>	Lerato Sehume	<b>PHONE:</b>	078 012 9038
<b>MODEL:</b>	Dr Fodisch MGA 23	<b>SERIAL NO:</b>	13670
<b>AUXILIARY EQUIPMENT:</b>	Unit 5		


CHAN	PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE	
1	ZERO	3 ppm	0 ppm	Air	21.0 %	N/A	
	SPAN	856 ppm	835 ppm	CO	834.6 ppm	3204	03-02-2021
2	ZERO	0 ppm	0 ppm	Air	21.0 %	N/A	
	SPAN	944 ppm	877 ppm	NO	876.7 ppm	12598	21-01-2021
3	ZERO	-19 ppm	0 ppm	Air	21.0 %	N/A	
	SPAN	2262 ppm	2262 ppm	SO2	2161.7 ppm	5905E	15-05-2020
4	ZERO	0.06 %	0.0 %	N2	99.99 %	82410	31-08-2020
	SPAN	20.69 %	20.95 %	O2	20.95 %	Air	N/A

**REPORT:** SO2 cell diagnostics is low and cell module should be inspected. Inspect all sample lines, filters and rotameter. Calibrate analyser with zero and span gas, calibration was done according to cylinder standards, analyser was responding to all test gas.

**Date of Calibration:** 25 Feb 2020  
**Calibration Due Date:** May 2020  
**Technician:** J Faber



**Bialer + Lang**  
**SERVOMEX**  
A METROHM COMPANY  
Document Number: TH-PFC-002-F1 Rev 2





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### CALIBRATION CERTIFICATE


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		<b>3414</b>	
<b>CUSTOMER:</b>	Eskom Medupi	<b>JOB NO:</b>	SC1885
<b>CONTACT NAME:</b>	Lerato Sehume	<b>PHONE:</b>	078 012 9038
<b>MODEL:</b>	Dr Fodisch MGA 23	<b>SERIAL NO:</b>	13668
<b>AUXILIARY EQUIPMENT:</b>	Unit 4		


CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	1 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	846 ppm	835 ppm	CO	834.6 ppm	3204	03-02-2021
2	ZERO	-1 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	920 ppm	877 ppm	NO	876.7 ppm	12598	21-01-2021
3	ZERO	-31 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	2384 ppm	2384 ppm	SO2	2161.7 ppm	5905E	15-05-2020
4	ZERO	0.07 %	0.0 %	N2	99.99 %	82410	31-08-2020
	SPAN	21.15 %	20.95 %	O2	20.95 %	Air	N/A

**REPORT:** *SO2 cell diagnostics is low and cell module should be inspected. Inspect all sample lines, filters and rotameter. Calibrate analyser with zero and span gas, calibration was done according to cylinder standards, analyser was responding to all test gas.*


**Date of Calibration:** 25 Feb 2020  
**Calibration Due Date:** May 2020  
**Technician:** J Faber







Document Number: TH-PFC-002-F1 Rev 2




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### CALIBRATION CERTIFICATE


**CERTIFICATE NO:**  
**3412**

<b>CUSTOMER:</b>	Eskom Medupi	<b>JOB NO:</b>	SC1665
<b>CONTACT NAME:</b>	Lerato Sehume	<b>PHONE:</b>	078 012 9038
<b>MODEL:</b>	Dr Fodisch MGA 23	<b>SERIAL NO:</b>	15711
<b>AUXILIARY EQUIPMENT:</b>	Unit 2		


CHAN	PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE	
1	ZERO	-2 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	839 ppm	835 ppm	CO	834.6 ppm	3204	03-02-2021
2	ZERO	-4 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	856 ppm	877 ppm	NO	876.7 ppm	12598	21-01-2021
3	ZERO	-38 ppm	0 ppm	Air	21.0 %	Air	N/A
	SPAN	2220 ppm	2220 ppm	SO2	2161.7 ppm	5905E	15-05-2020
4	ZERO	0.14 %	0.0 %	N2	99.99 %	82410	31-08-2020
	SPAN	21.11 %	20.95 %	O2	20.95 %	Air	N/A

**REPORT:** SO2 cell diagnostics is low and cell module should be replaced in future. Inspect all sample lines, filters and rotameter. Calibrate analyser with zero and span gas, calibration was done according to cylinder standards, analyser was responding to all test gas.

**Date of Calibration:** 25 Feb 2020  
**Calibration Due Date:** May 2020  
**Technician:** J Faber



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