



Medupi Power Station Monthly Emissions Report

Identifier	240-43921804	Rev	6
Document Identifier	240-88543153	Rev	1
Effective Date	January 2018		
Review Date	January 2021		

Phumudzo Thivhafuni

Date: 2018/08/20

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Ref: 12/4/12L-W2/A3 – Jul 2018

Dear Phumudzo

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2018

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 4, 5 and 6 gaseous and particulate emissions performance against the AEL limit for the month of July 2018 only.

1. Raw Materials and Products

Table 1: Quantity of raw materials and products used/produced for Unit 4, 5 and 6 in July 2018

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 4, 5 and 6 consumption July 2018
	Coal	Tons/month	1 875 000	476 484
	Fuel Oil	Tons/month	40 000	2347.47
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 4, 5 and 6 Production Rate in Month of July 2018
	Energy	MW	4800	1682
	Ash Emitted	Tons/month	not specified	102.6

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Table 2: Daily consumption and production rates

Date	Reportable hours of Operation			Fuel Consumption (tons)				Production rate (MW)		
	Unit 4	Unit 5	Unit 6	Oil			Coal	U4	U5	U6
				Aux Boiler	Unit 4, 5 & 6	Total	Unit 4, 5 & 6)			
01-July -18	24.0	24.0	24.0	14.06	13	27.05	19104	611	626	622
02-July -18	24.0	24.0	24.0	0.00	26	26	20357	622	668	667
03-July -18	14.7	20.8	24.0	0.00	33	33	18182	628	655	682
04-July -18	3.1	0.0	24.0	0.00	130	130	16933	630	557	623
05-July -18	24.0	13.8	24.0	0.00	130	130	20242	659	709	606
06-July -18	24.0	24.0	24.0	0.00	23	23	18212	654	707	445
07-July -18	24.0	24.0	24.0	0.00	5	5	19051	674	715	505
08-June -18	24.0	24.0	24.0	0.00	22	22	20132	652	673	615
09-July -18	24.0	24.0	24.0	0.00	11	11	19407	644	647	619
10-July -18	24.0	24.0	24.0	0.00	30	30	18439	621	628	549
11-July -18	24.0	24.0	20.8	0.00	35	35	18153	613	648	587
12-July -18	24.0	24.0	0.0	0.00	66	66	11979	467	657	
13-July -18	24.0	24.0	0.0	0.00	7	7	12004	463	704	
14-July -18	24.0	24.0	0.0	5.46	15	20.42	10805	370	660	
15-July -18	24.0	24.0	0.0	0.00	0	0	10869	365	648	
16-July -18	24.0	24.0	0.0	0.00	0	0	12757	512	696	
17-July -18	24.0	24.0	0.0	0.00	0	0	10706	426	524	28
18-July -18	24.0	24.0	0.9	0.00	120	120	16217	398	584	535
19-July -18	19.7	24.0	24.0	0.78	70	70.74	16414	487	697	469
20-July -18	0.0	13.5	21.3	0.00	36	36	10047	417	488	444
21-July -18	8.1	0.0	0.0	0.00	308	308	11555	625	524	
22-July -18	24.0	0.0	0.0	0.00	191	191	8613	492	489	
23-July -18	14.4	0.0	0.0	0.00	241	241	9089	519	589	
24-July -18	4.8	14.6	0.0	0.00	270	270	11968	594	494	
25-July -18	24.0	24.0	0.0	0.00	92	92	15847	616	402	502
26-July -18	24.0	11.8	18.7	0.00	123	123	14994	586	471	423
27-July -18	24.0	4.8	24.0	6.54	185	191.54	16854	584	578	397
28-July -18	24.0	24.0	24.0	0.00	108	108	17336	561	559	459
29-July -18	24.0	24.0	24.0	0.00	10	10	17791	545	563	524
30-July -18	24.0	24.0	24.0	0.00	14	14	19422	591	671	567
31-July -18	23.9	9.9	23.9	0.64	6	6.63	13014	600	611	538

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2. Abatement Technology

Table 3: Abatement Equipment Control Technology utilisation for month of July 2018

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of July 2018
Unit 4,5 and 6	Low NO _x Burners	100
	Pulse Jet Fabric Filter Plant	100

3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of July 2018

Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
Coal		
Sulphur Content	1.3 - 2.2	1.51
Ash Content	35 - 39	34.43

Table 5: Energy Source Material Characteristics for the month of July 2018

Characteristic	Stipulated Range (%)	Monthly Average Content (%)
Oil		
Sulphur Content	0.5 - 3.5	2.4
Ash Content	0.02 - 0.1	0.02

4. Emissions Reporting

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

The daily emission limits are as follows:

SO₂= 3500 mg/Nm³

Dust= 50 mg/Nm³

NO₂= 750 mg/Nm³

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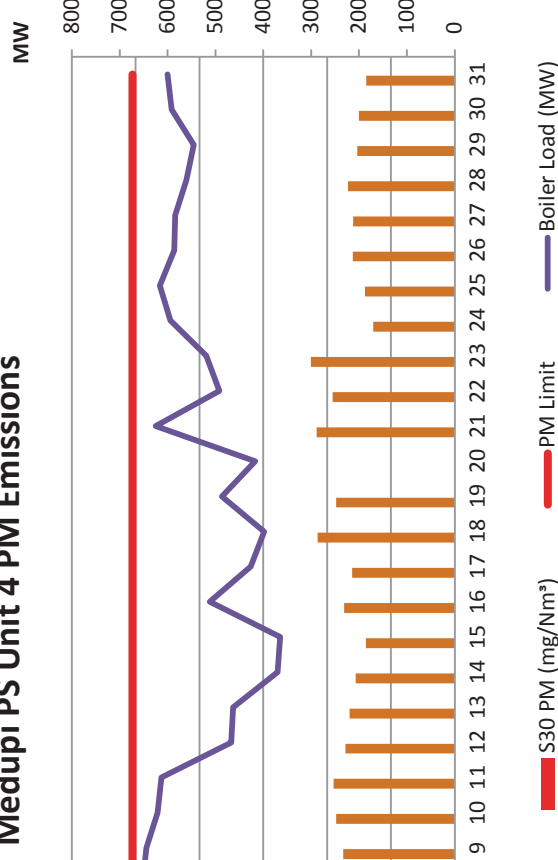
Readings for the month of July 2018

	SO ₂ (mg/Nm ³)		NO ₂ (mg/Nm ³)		CO (mg/Nm ³)		Temp (°C)		Press (kPa)		Velocity (m/s)				
	4	5	4	5	4	5	4	5	4	5	4	5			
1	3425.3	3311.4	535.3	345.1	358.3	358.3	5.7	8.7	11.8	127.6	125.1	90.0	89.9	90.0	17.3
2	3511.2	3445.9	555.2	418.0	366.6	366.6	14.1	2.6	25.6	128.6	125.5	89.9	89.9	89.9	17.9
3	3616.5	3544.1	550.7	434.6	374.1	374.1	7.5	7.9	29.3	124.8	125.6	90.4	90.3	90.4	17.8
4	3491.0	3210.2	583.4	465.7	367.2	367.2	7.6	5.9	11.9	128.8	126.3	90.8	90.8	90.9	16.3
5	3396.3	3399.2	565.2	470.9	354.4	354.4	9.9	5.3	18.5	128.4	124.5	90.4	90.4	90.5	11.7
6	3433.4	3427.0	569.2	445.6	424.9	424.9	8.2	5.3	2.8	125.7	111.8	90.4	90.4	90.5	11.7
7	3416.0	3236.5	589.8	446.5	364.4	364.4	8.9	4.7	26.3	127.0	113.2	90.4	90.4	90.5	11.8
8	3411.9	3404.2	607.2	446.7	380.5	380.5	6.8	4.0	13.3	128.3	123.5	90.8	90.7	90.8	17.9
9	3414.6	3315.2	606.1	441.1	389.7	389.7	8.3	4.6	8.8	125.0	122.1	90.6	90.6	90.6	17.4
10	3666.7	3469.7	656.4	424.1	473.9	473.9	5.4	5.0	3.8	125.8	117.5	90.5	90.5	90.5	17.4
11	3583.4	3382.4	649.6	413.1	437.0	437.0	7.0	3.2	23.7	127.0	120.7	90.6	90.5	90.6	17.7
12	3389.5	3248.8	668.8	425.3			6.2	3.4		129.1		90.5	90.4		18.0
13	3211.6	3085.2	630.0	426.6			7.3	2.6		129.4		90.2	90.1		18.6
14	3317.7	3262.0	705.4	387.4			3.2	8.8		128.0		90.2	90.1		17.9
15	3308.6	3219.2	727.3	369.3			2.8	5.1		127.0		90.6	90.5		17.6
16	3351.2	3423.4	674.2	384.3			8.6	8.0		126.2		91.0	91.0		18.2
17	3396.3	3345.9	680.3	381.5	429.0	429.0	5.4	4.3	22.1	118.4	124.6	91.0	91.0	91.3	15.5
18	3586.3	3403.3	688.6	362.2	219.5	219.5	8.4	5.8	65.1	120.2	121.0	90.9	90.9	91.2	16.4
19	3635.9	3495.3	654.8	400.4	418.1	418.1	7.1	6.0	17.7	126.9	125.7	90.8	90.7	90.9	18.4
20	3533.1	3128.0	744.4	470.4	446.3	446.3	6.5	5.9	5.0	118.3	120.1	90.5	90.6	90.8	14.9
21	3293.6	3008.6	671.0	440.4			58.8	7.3		132.1		90.6	90.6		15.9
22	3260.7	2832.0	657.5	482.8			7.9	9.5		137.3		90.8	90.7		15.9
23	3455.8	3045.5	615.3	429.0			10.7	6.5		131.8		90.9	90.8		16.9
24	3541.3	3135.4	601.7	499.3			18.3	11.9		128.4		90.7	90.7		15.6
25	3220.9	2843.9	664.7	517.9	845.2	845.2	5.6	5.0	150.1	125.7	124.6	89.8	89.8	91.0	13.2
26	2813.6	2708.7	689.4	595.3	466.8	466.8	8.7	12.1	25.1	130.9	128.7	90.3	90.4	89.9	15.5
27	2815.4	2620.9	703.9	626.0	490.7	490.7	8.4	4.2	7.2	137.3	127.8	90.2	90.2	90.3	17.8
28	2746.2	2536.8	718.9	588.4	477.8	477.8	8.1	5.9	4.2	130.9	131.0	90.1	90.1	90.3	16.3
29	2583.6	2507.2	719.9	519.9	458.6	458.6	5.5	4.7	5.9	129.2	131.0	90.2	90.1	90.1	16.2
30	2798.2	2624.6	628.7	415.7	477.4	477.4	7.0	6.3	10.4	131.6	131.4	90.0	89.9	90.2	18.2
31	2924.9	2717.5	570.1	388.0	510.3	510.3	5.1	7.3	5.0	129.9	132.8	89.9	89.8	89.9	18.5

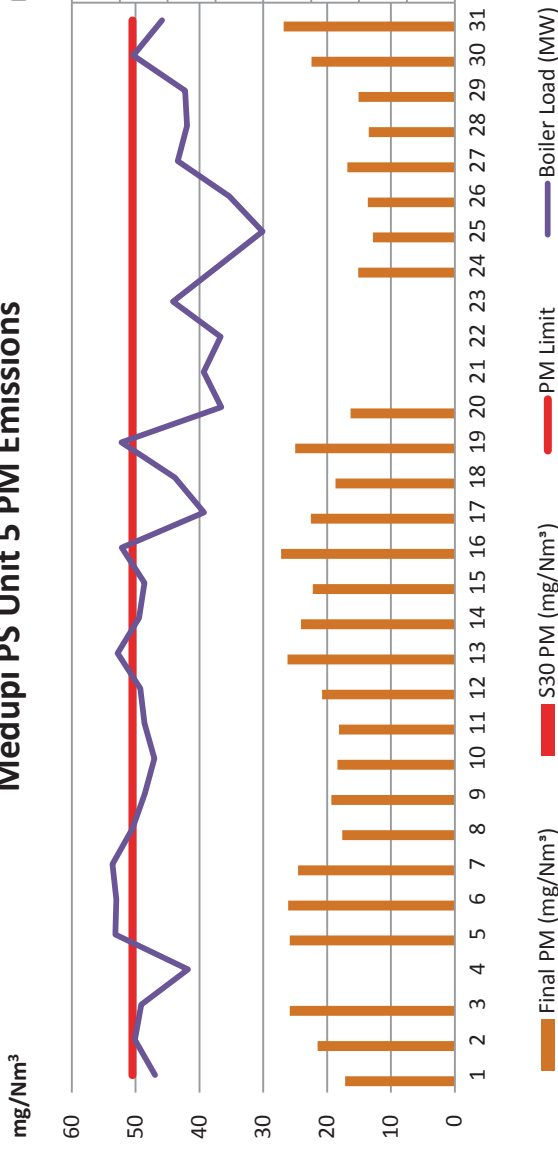
are faulty. A notification has been loaded for the maintenance team to fix the instrument. There is no reportable data on areas shaded black.

Emissions for the July 2018

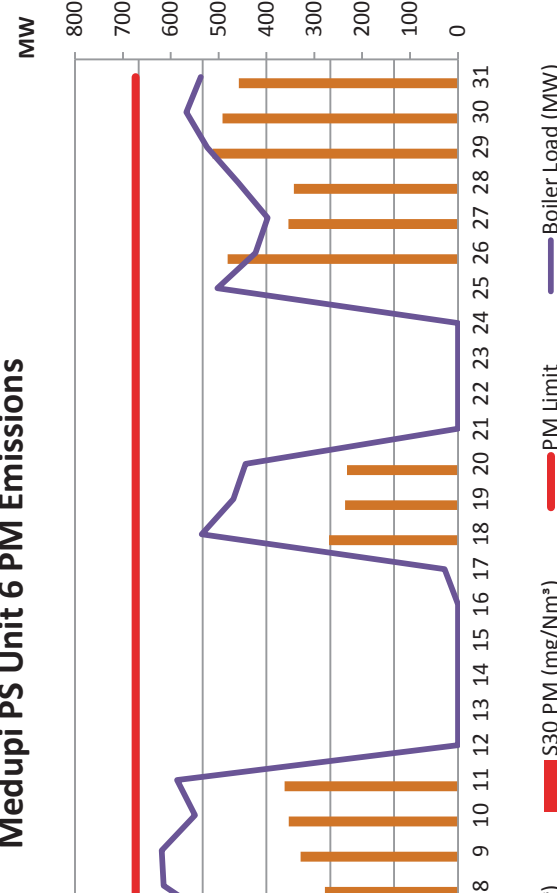
Medupi PS Unit 4 PM Emissions



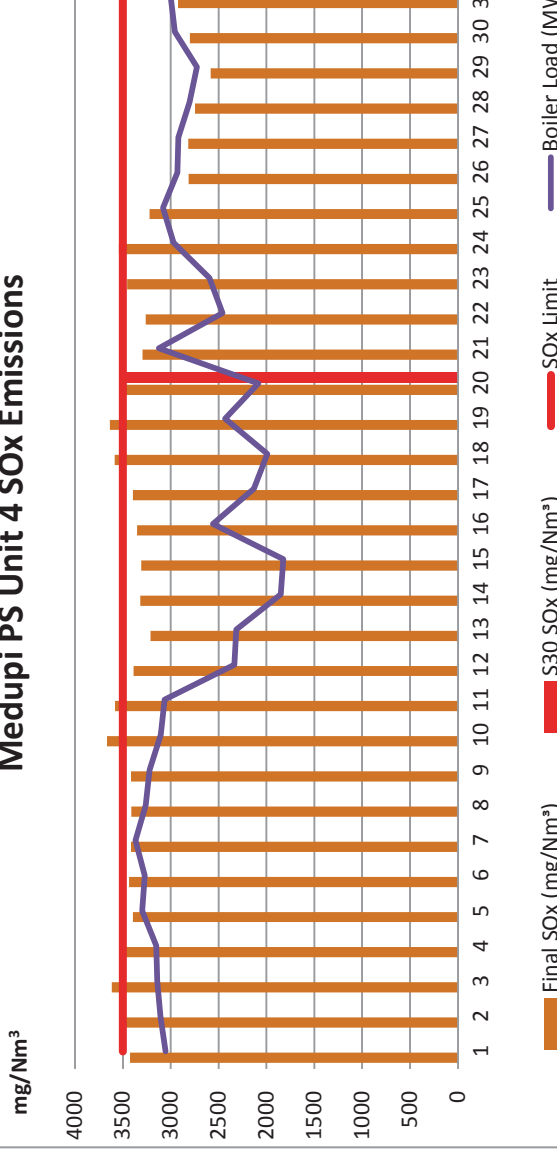
Medupi PS Unit 5 PM Emissions



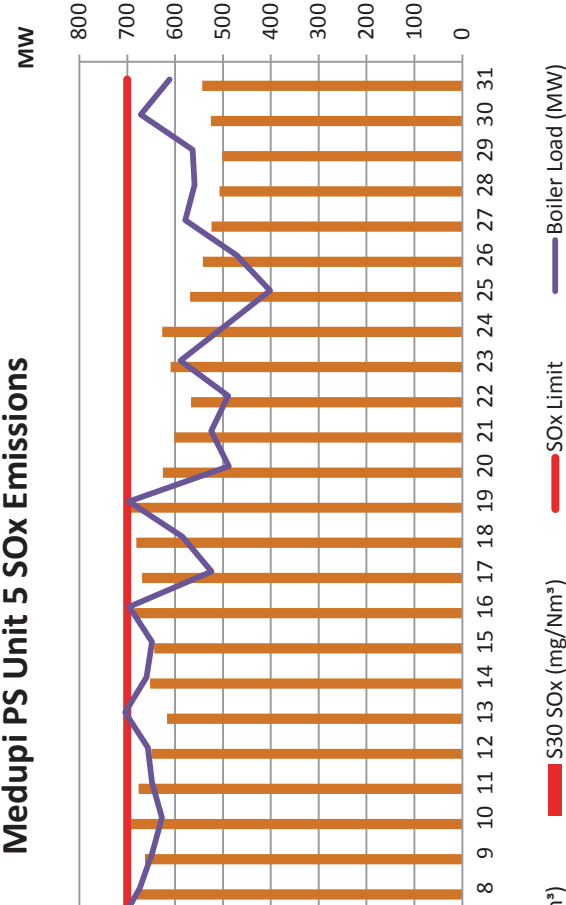
Medupi PS Unit 6 PM Emissions



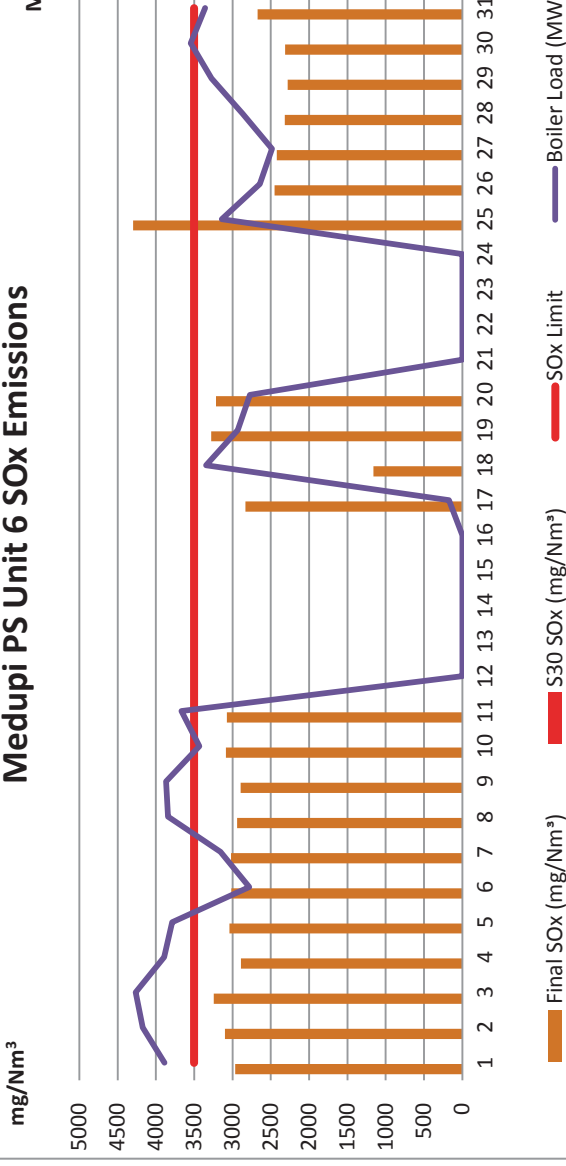
Medupi PS Unit 4 SOx Emissions



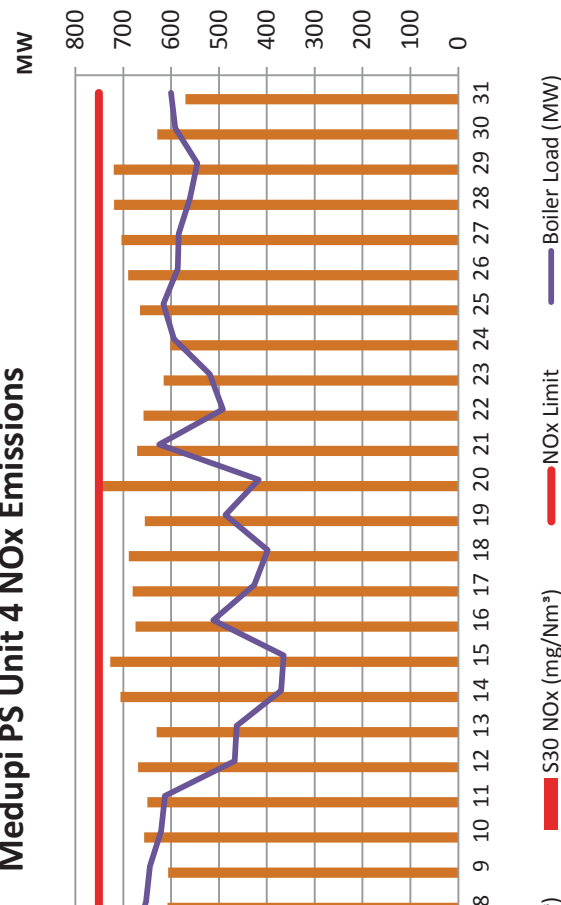
Medupi PS Unit 5 SOx Emissions



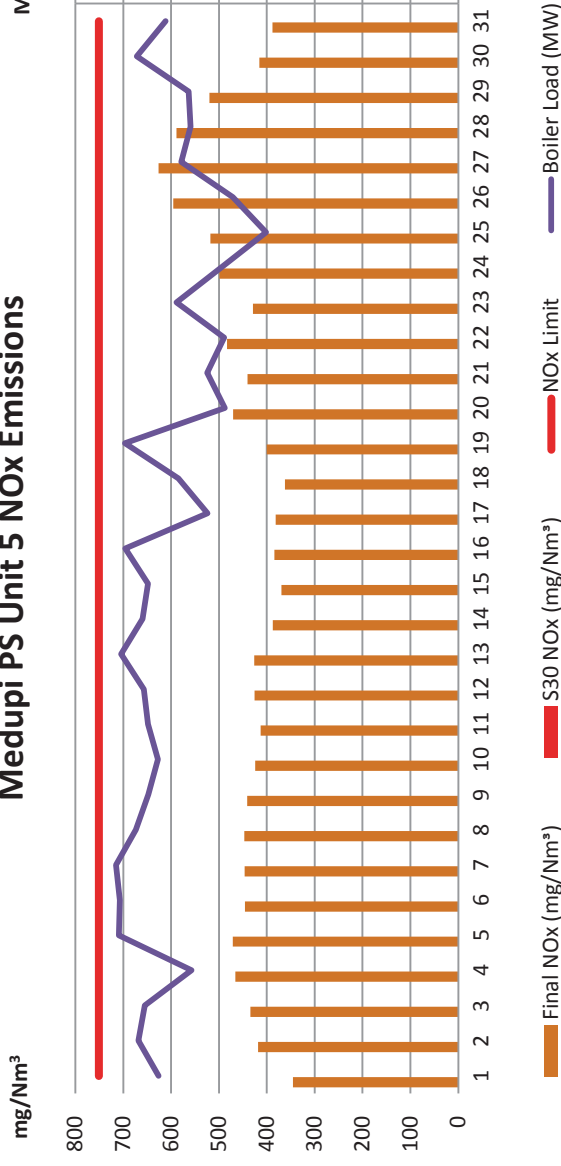
Medupi PS Unit 6 SOx Emissions



Medupi PS Unit 4 NOx Emissions



Medupi PS Unit 5 NOx Emissions





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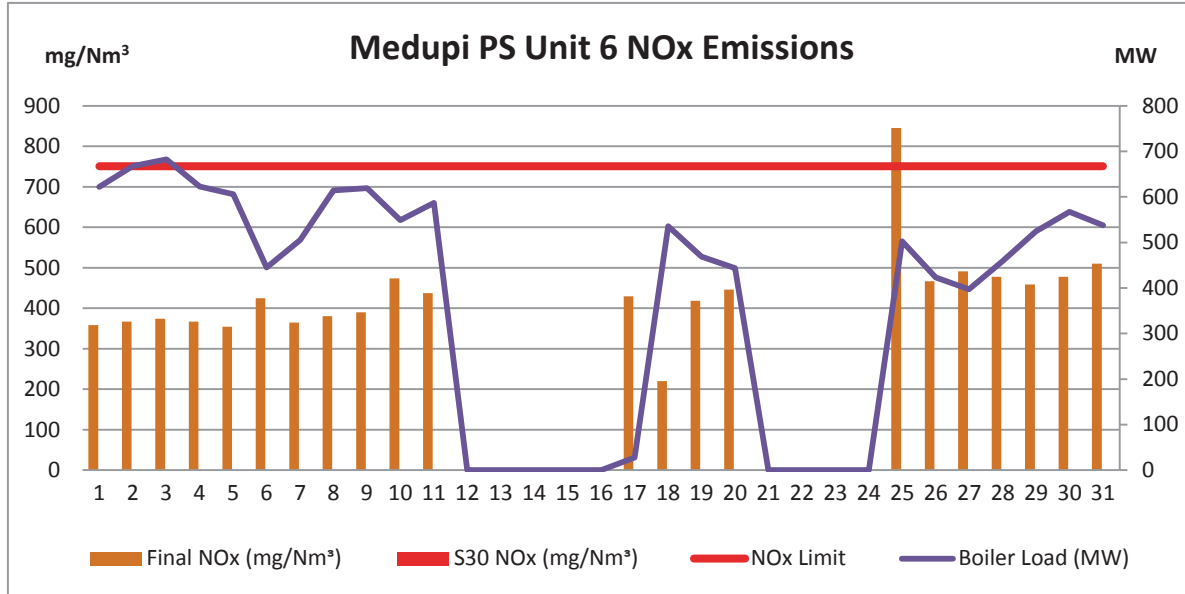



Table 7: Monthly tonnages for the month of July 2018

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO (tons)	CO ₂ (tons)
1	0.0	0	0	0	
2	0.0	0	0	0	
3	0.0	0	0	0	
4	28.1	6 249	1 228	15	
5	35.1	5 347	722	9	
6	39.4	4 383	638	21	
SUM	102.6	15 980	2 589	46	

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5. Shutdown/start-up information

Table 8: Days operating under normal operation, days in grace period and section 30 days respectively

Unit	Operating Days (DD:HH:MM)			
	Normal operation	In grace period	Under S 30	Unit off load
1	00:00:00	00:00:00	00:00:00	31:00:00
2	00:00:00	00:00:00	00:00:00	31:00:00
3	00:00:00	00:00:00	00:00:00	31:00:00
4	29:16:35	00:00:00	00:00:00	01:07:25
5	28:12:15	00:00:00	00:00:00	02:11:45
6	20:13:35	00:00:00	00:00:00	10:10:25


Table 9: Days declared Emergency level one

Date	Hours Declared EL1	
	EL1 Start	EL1 End
2 July 2018	17:36	19:40
4 July 2018	17:18	20:26
5 July 2018	17:08	19:37
6 July 2018	15:45	21:16
7 July 2018	17:02	19:36
8 July 2018	17:13	18:40
9 July 2018	15:44	19:49
10 July 2018	17:25	19:00
12 July 2018	17:54	19:18
13 July 2018	17:20	19:06
14 July 2018	18:01	18:59
15 July 2018	17:26	19:02
16 July 2018	08:56	12:08
16 July 2018	17:25	20:03
17 July 2018	17:17	20:13
18 July 2018	16:51	20:39
23 July 2018	17:27	20:13

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Hours Declared EL1		
Date	EL1 Start	EL1 End
24 July 2018	17:33	19:52
25 July 2018	17:34	19:46
26 July 2018	17:52	19:18
30 July 2018	17:10	21:40
31 July 2018	08:35	21:40

6. Comments on the performance and availability of each unit

Medupi power station operating units performed well within the ambit of the Atmospheric emissions licence except during start up. Unit 4 SO₂ emissions performance exceeded the limit on 8 occasions; this was as a result of high sulphur content in coal.

7. Light up information

Table 10: PM Start-up information for the month of July

Event No.	Event 1		Event 2		Event 3	
Unit	Unit 4		Unit 4		Unit 4	
Fires in	2018/07/03	2018/07/03	09:25 AM	2018/07/20	02:25 PM	2018/07/23
Synchronisation with Grid	08:50 PM	2018/07/03	03:50 PM	2018/07/20	07:10 PM	2018/07/23
Emissions below limit from Sync (Date and Time)	did not go above limit	did not go above limit	did not go above limit	did not go above limit	did not go above limit	did not go above limit
Fires in to synchronization	00:04:55	Hrs (dd:hh:mm)	00:06:25	Hrs (dd:hh:mm)	00:04:45	Hrs (dd:hh:mm)
Synchronization to < limit (Duration)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)

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Event No.	Event 1		Event 2		Event 3	
Unit	Unit 5		Unit 5		Unit 5	
Fires in	08:50 PM	2018/07/03	01:30 PM	2018/07/20	01:00 PM	2018/07/26
Synchronisation with Grid	10:05 AM	2018/07/04	09:20 AM	2018/07/23	07:05 PM	2018/07/26
Emissions below limit from Sync (Date and Time)	did not go above limit	did not go above limit	did not go above limit	did not go above limit	did not go above limit	did not go above limit
Fires in to synchronization	00:13:15	Hrs (dd:hh:mm)	02:19:50	Hrs (dd:hh:mm)	00:06:05	Hrs (dd:hh:mm)
Synchronization to < limit (Duration)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)

Event No.	Event 1		Event 2	
Unit 6	Unit 6		Unit 6	
Fires in	05:25 PM	2018/07/17	10:45 PM	2018/07/24
Synchronisation with Grid	11:00 PM	2018/07/17	05:15 AM	2018/07/25
Emissions below limit from Sync (Date and Time)	did not go above limit	did not go above limit	did not go above limit	did not go above limit
Fires in to synchronization	00:05:35	Hrs (dd:hh:mm)	00:06:30	Hrs (dd:hh:mm)
Synchronization to < limit (Duration)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)

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Table 11: Emission Average from Fires-in to Synchronisation

South Stack Emission Average from Fires-in to Synchronisation (Date and Time)							
Unit	Fires-In		Synchronisation		PM	SO ₂	NO _x
Unit 4	2018/07/03	03:55 PM	2018/07/03	08:50 PM	85.8	3075.1	668.7
Unit 4	2018/07/20	09:25 AM	2018/07/20	03:50 PM	27.1	3227.1	677.1
Unit 4	2018/07/23	02:25 PM	2018/07/23	07:10 PM	20.0	3368.9	646.3
Unit 5	2018/07/03	08:50 PM	2018/07/04	10:05 AM	5.4	2983.0	444.5
Unit 5	2018/07/20	01:30 PM	2018/07/23	09:20 AM	14.2	2913.2	451.0
Unit 5	2018/07/26	01:00 PM	2018/07/26	07:05 PM	3.6	2279.3	657.8
Unit 6	2018/07/17	05:25 PM	2018/07/17	11:00 PM	23.6	12.6	4.0
Unit 6	2018/07/24	10:45 PM	2018/07/25	05:15 AM	0	0	4.8

Table 12: Point Source emissions released during Shut-down

South Stack Emission Average Breaker Open (BO) to Draft Group Shut Down (SD) (Date & Time)							
Unit	Breaker Open		DG SD		PM	SO ₂	NO _x
Unit 4	2018/07/03	02:40 PM	2018/07/03	02:40 PM	27.8	3395.9	0.0
Unit 4	2018/07/19	07:40 PM	2018/07/19	10:10 PM	35.0	3694.7	607.6
Unit 5	2018/07/26	11:50 AM	2018/07/26	11:50 AM	12.4	2667.9	571.9
Unit 6	2018/07/11	08:50 PM	2018/07/12	09:45 AM	17.9	2875.2	528.9
Unit 6	2018/07/20	09:15 PM	2018/07/21	11:05 AM	17.6	3023.3	464.5

8. Continuous Emission Monitoring Systems (CEMS)

Unit 4, 5 and 6 Continuous Emission Monitoring Systems were in operation at all times when the unit was on load. CEMS CO₂ monitor verification test not yet conducted, the Licencing Authority will be notified prior to conducting the test.

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Table 13: Periods during which CEMS was inoperative

Date	Time	Duration	Nature of Repair/Adjustment
N/A	N/A	N/A	N/A

Table 14: CEMS Monitor Reliability

Variable	Unit 4	Unit 5	Unit 6
Dust	100	100	100
SO2	99.9	99.8	94.8
NOx	99.6	99.5	94.0
CO	99.7	100	99.8
O2	99.4	99.7	98.1
Temperature	0	99.7	94.3
Pressure	89.9	88.7	85.0
Velocity	0	100	100
CO ₂	0	0	0

9. CEMS Calibration certificates and equipment used for calibration

See attached Appendix A

10. Ambient Air Quality Monitoring Report

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

11. Visual inspection of the exterior walls of the fuel oil tanks, fuel oil inventory data 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 15: Total Volatile Organic Compound (TVOC) for July 2018

		
CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*		
Date:	31 July 2018	
Station:	Medupi Power Station	
Province:	Limpopo Province	
Tank no.	1-2	
Description:	Outdoor fuel oil storage tank	
Tank Type:	Vertical fixed roof (vented to atmosphere)	
Material stored:	Fuel Oil 150	
MONTHLY INPUT DATA FOR THE STATION 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		
MONTH:	July	
GENERAL INFORMATION:	Data	Unit
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:	5475.596	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	Data	Unit
Daily average ambient temperature	17.66	°C
Daily maximum ambient temperature	25.87	°C
Daily minimum ambient temperature	10.47	°C
Daily ambient temperature range	15.40	°C
Daily total insolation factor	3.47	kWh/m ² /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
FINAL OUTPUT:	Result	Unit
Breathing losses:	0.69 kg/month	
Working losses:	0.16 kg/month	
TOTAL LOSSES (Total TVOC Emissions for the month):	0.85 kg/month	
*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.		

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12. Air quality improvements initiatives and public education and awareness campaigns

Medupi Power Station environmental team engaged the local community during the July Bosveld fees. Community members were invited to the Eskom stall, wherein the power station electricity generation process was shared from coal receiving to waste generation i.e. ash and smoke from the stack. Furthermore, Eskom Medupi emissions strategy was also shared communities during the three day period. Emission reduction games were also played and handed over to participants together with gifts as a token of appreciation for the participation.

13. Complaints Register


Table 16: Complaints for the month of July 2018

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:

Senior Environmental Advisor

Reviewed by:

Boiler System Engineer

Supported by:

Boiler Engineering Manager

Supported by:

Environmental Manager

Supported by:

Engineering Group Manager (Acting)

I Rudi van der Wal, declares that the information provided in this report is accurate and correct.


Yours sincerely

GENERAL MANAGER: MEDUPI POWER STATION

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APPENDIX 1

CEMS Calibration certificates



12 Angeller street, Bardene,
Bokaburg, 1459
P.O.BOX 328, ISANDI, 1600
TEL: +27 11 918 6994
FAX: +27 11 894 1037

VAT REG #: 421 021 2249
CO REG #: 2004/007607/07

CALIBRATION CERTIFICATE

					CERTIFICATE NO:	
					2555	
					Doc. No: EA_5656	
Customer:	Medupi Power				Job No:	SC943
Contact Name:	Christo Vorster	Phone:	014 762 2255	Fax:		
Model:	Foedisch MGA 23		Serial No:	16339		
Auxiliary Equipment:	Unit 6					

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	7 ppm	0 ppm	Air	21 %	Air
	SPAN	881 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	3 ppm	0 ppm	Air	21 %	Air
	SPAN	829 ppm	834 ppm	NO	833.8 ppm	3207
3	ZERO	5 ppm	0.0 ppm	Air	21 %	Air
	SPAN	2507 ppm	2428 ppm	SO2	2427.7 ppm	0034
4	ZERO	0.06 %	0.0 %	N2	99.99 %	12635
	SPAN	21.07 %	20.95 %	O2	20.95 %	Air

Report: Diagnostics OK, coolers running, but one parastelic pump on cooler 1 not working, calibration was done with zero and span gas, analyser respond to all test gas, all in place and in working order.

Date: 09 Apr 2018

Cal Due Date: Jul 2018

Service Engineer:



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FAX: +27 11 894 1037

VAT REG #: 421 021 2249
CO REG #: 2004/007607/07

CALIBRATION CERTIFICATE

					CERTIFICATE NO:	
					2553	
					Doc. No: EA_5656	
Customer:	Medupi Power			Job No:	SC943	
Contact Name:	Christo Vorster	Phone:	014 762 2255	Fax:		
Model:	Foedisch MGA 23		Serial No:	13668		
Auxiliary Equipment:	Unit 4					

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	0 ppm	0 ppm	Air	21 %	Air
	SPAN	874 ppm	879 ppm	CO	879.2 ppm	12636
2	ZERO	10 ppm	0 ppm	Air	21 %	Air
	SPAN	816 ppm	834 ppm	NO	833.9 ppm	3207
3	ZERO	0 ppm	0 ppm	Air	21 %	Air
	SPAN	2347 ppm	2428 ppm	SO2	2427.7 ppm	0034
4	ZERO	0.33 %	0.0 %	N2	99.99 %	12636
	SPAN	21.49 %	20.96 %	O2	20.96 %	Air

Report: Diagnostics OK, cooler parastatic pump not working, has to be replaced, calibration was done with zero and span gas, analyser respond to all test gas, all in working order.

Date: 09 Apr 2018

Cal Due Date: Jul 2018

Service Engineer:



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VAT REG #: 421 021 2249
CO REG #: 2004/007607/07

CALIBRATION CERTIFICATE

				CERTIFICATE NO:	
				2554	
				Doc. No: EA_5656	
Customer:	Medupi Power			Job No:	SC943
Contact Name:	Christo Vorster	Phone:	014 762 2255	Fax:	
Model:	Foedisch MGA 23		Serial No:	13670	
Auxiliary Equipment:	Unit 5				

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	1 ppm	0 ppm	Air	21 %	Air
	SPAN	882 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	2 ppm	0 ppm	Air	21 %	Air
	SPAN	838 ppm	834 ppm	NO	833.9 ppm	3207
3	ZERO	4 ppm	0 ppm	Air	21 %	Air
	SPAN	2387 ppm	2428 ppm	SO2	2427.7 ppm	0034
4	ZERO	0.02 %	0.0 %	N2	99.99 %	12635
	SPAN	21.39 %	20.95 %	Air	20.95 %	Air

Report: All diagnostics ok. Calibration was done with zero and span gas, analyser responding to all test gas.

Date: 09 Apr 2018

Cal Due Date: Jul 2018

Service Engineer:



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