Stanley Koenaite

Waterberg District Municipality
Private Bag X1018
Modimole
0510

skoenaite@waterberg.gov.za

Date: 2026/03/03

Enquiries: MF Dikgale
Tel: 014 762 6820
Email: DikgalMF@eskom.co.za

Ref: H16/1/13-AEL/M1/R1 – Jan 2026

Dear Mr Koenaite

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF JAN 2026

This document serves as the monthly emissions report required in terms of Section 7.7.1 of Medupi Power Station Provisional Atmospheric Emission License (AEL), H16/1/13-AEL/M1/R1.

This report reflects Unit 1,2,3,4,5, and 6 gaseous and particulate emissions performance against the AEL limit for the month of Jan 2026 only.

1. Raw Materials and Products

TABLE 1: QUANTITY OF RAW MATERIALS AND PRODUCTS CONSUMPTION IN JAN 2026

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption – Jan 2026
	Coal	Tons/month	1 875 000	915 275
	Fuel Oil	Tons/month	20 000	1844
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of Jan 2026
	Energy	GWh	3 571.2	1 790.089
	Ash Emitted	Tons/month	not specified	279.08

Date	Daily Reportable Hours of Operation						Coal usage	Production rate (MW)					
	U1	U2	U3	U4	U5	U6		U1	U2	U3	U4	U5	U6
01-Jan	24.0	24.0	24.0	0.0	0.6	24.0	32844	473	645	684	0	616	635
02-Jan	24.0	24.0	24.0	0.0	24.0	24.0	32767	534	696	610	0	614	675
03-Jan	24.0	24.0	24.0	0.0	24.0	24.0	36662	710	620	673	0	607	681
04-Jan	24.0	24.0	24.0	0.0	24.0	4.6	36685	716	633	650	0	684	117
05-Jan	24.0	24.0	24.0	0.0	24.0	0.0	35121	702	664	556	0	626	433
06-Jan	24.0	24.0	24.0	0.0	24.0	21.0	36196	715	732	637	0	613	675
07-Jan	24.0	24.0	24.0	0.0	24.0	24.0	32973	516	729	565	0	531	621
08-Jan	1.9	24.0	24.0	0.0	24.0	24.0	30785	177	729	645	0	580	560
09-Jan	8.3	24.0	24.0	0.0	24.0	24.0	33569	652	568	665	0	580	562
10-Jan	24.0	12.6	24.0	0.0	24.0	24.0	28318	598	286	553	0	562	551
11-Jan	24.0	2.8	24.0	0.0	24.0	1.9	31833	679	663	628	0	615	180
12-Jan	24.0	24.0	24.0	0.0	24.0	7.6	37399	751	722	678	0	655	670
13-Jan	24.0	24.0	24.0	0.0	24.0	24.0	38189	757	683	723	0	663	695
14-Jan	24.0	24.0	24.0	0.0	24.0	24.0	34831	669	661	636	0	605	641
15-Jan	24.0	24.0	24.0	0.0	24.0	24.0	32539	624	575	685	0	482	658
16-Jan	24.0	11.1	24.0	0.0	24.0	24.0	29623	555	264	674	0	556	666
17-Jan	24.0	0.0	24.0	0.0	24.0	24.0	28781	685	0	707	0	627	660
18-Jan	24.0	0.0	24.0	0.0	24.0	24.0	27092	634	0	653	0	627	549
19-Jan	24.0	0.0	11.3	0.0	24.0	24.0	23230	586	0	245	0	614	614
20-Jan	24.0	0.0	0.0	0.0	24.0	24.0	23977	601	0	462	0	622	584
21-Jan	24.0	0.0	23.4	0.0	24.0	24.0	25197	719	0	606	0	616	522
22-Jan	24.0	0.0	24.0	0.0	24.0	24.0	23985	707	0	556	0	561	510
23-Jan	24.0	0.0	24.0	0.0	24.0	24.0	26466	760	0	614	0	630	541
24-Jan	22.0	0.0	24.0	0.0	24.0	24.0	26574	677	0	625	0	602	550
25-Jan	0.0	0.0	24.0	0.0	16.4	24.0	23396	0	117	700	0	418	670
26-Jan	0.0	0.0	24.0	0.0	0.0	24.0	19328	0	396	707	0	0	684
27-Jan	0.0	13.0	24.0	0.0	0.0	24.0	25918	0	707	660	0	366	684
28-Jan	0.0	24.0	24.0	0.0	16.8	5.8	22194	0	692	615	0	551	237
29-Jan	0.0	24.0	24.0	0.0	24.0	5.6	27195	0	707	616	0	545	657
30-Jan	0.0	24.0	24.0	0.0	24.0	24.0	25855	0	649	593	0	578	579
31-Jan	0.0	24.0	24.0	0.0	24.0	24.0	25753	0	661	581	0	551	589

NB: Operating hours less than 24 highlighted in pink.

2. Abatement Technology

TABLE 2: ABATEMENT EQUIPMENT CONTROL TECHNOLOGY EFFICIENCY FOR MONTH OF JAN 2026

Associated Unit/Stack	Technology Type	Efficiency	FFP Utilization
Unit 1	Fabric Filter Plant (FFP)	99.882%	100%
Unit 2	Fabric Filter Plant (FFP)	99.924%	100%
Unit 3	Fabric Filter Plant (FFP)	99.924%	100%
Unit 4	Fabric Filter Plant (FFP)	Off-line	Off-line
Unit 5	Fabric Filter Plant (FFP)	99.854%	100%
Unit 6	Fabric Filter Plant (FFP)	99.884%	100%

Note: FFP does not have bypass mode operation, hence plant 100% Utilised.

3. Energy Source Characteristics

TABLE 3: ENERGY SOURCE MATERIAL CHARACTERISTICS FOR THE MONTH OF JAN 2026

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	1.2
Ash Content	35 - 39	36.0

TABLE 4: ENERGY SOURCE MATERIAL CHARACTERISTICS FOR THE MONTH OF JAN 2026

Characteristic	Stipulated Range (%)	Monthly Average Content (%)
	Oil	
Sulphur Content	0.5 - 3.5	2.1
Ash Content	0.02 - 0.1	0.020

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_2 Monthly = 3500 mg/Nm^3 Dust Daily= 50 mg/Nm^3 NO_2 Daily= 750 mg/Nm^3

4.1 PM Daily Averages

Figure 1: Medupi Unit 1 PM Emissions - January 2026

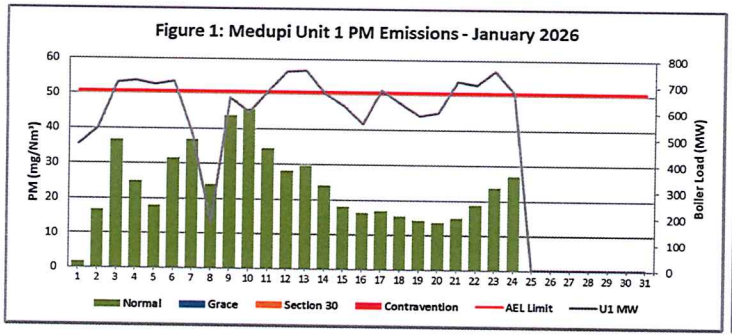


Figure 2: Medupi Unit 2 PM Emissions - January 2026

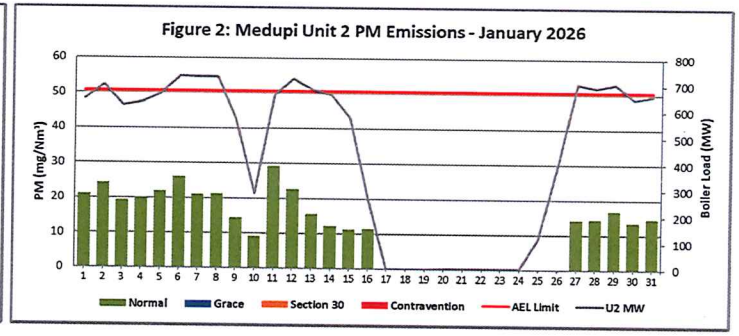


Figure 3: Medupi Unit 3 PM Emissions - January 2026

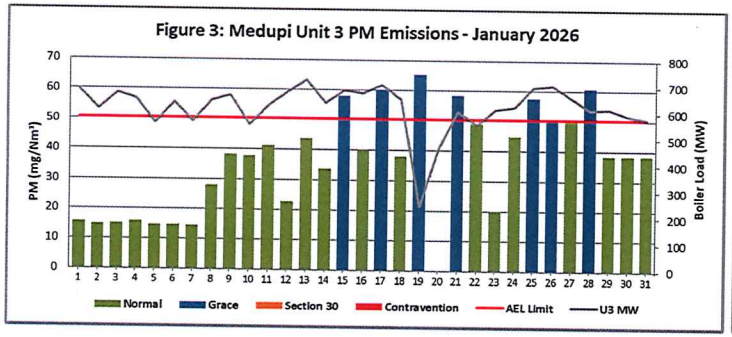


Figure 4: Medupi Unit 4 PM Emissions - January 2026

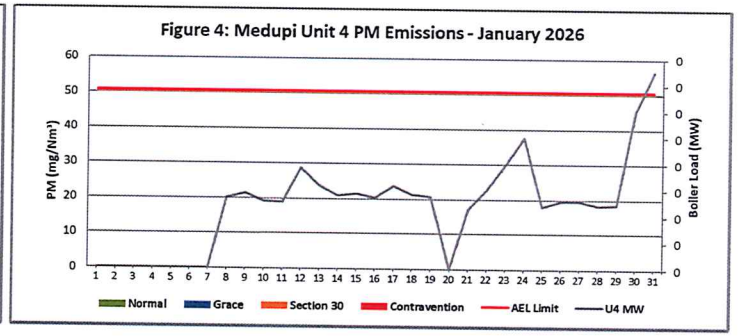


Figure 5: Medupi Unit 5 PM Emissions - January 2026

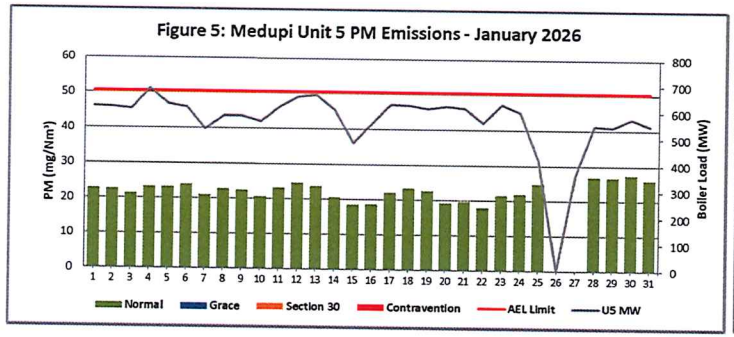
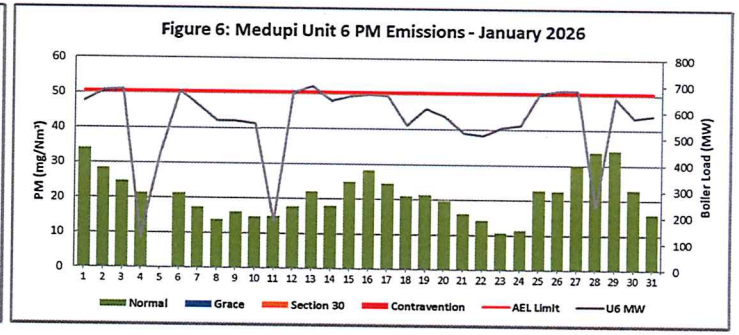


Figure 6: Medupi Unit 6 PM Emissions - January 2026



4.2 SO_2 Daily Averages

Figure 7: Medupi Unit 1 SO_2 Emissions - January 2026

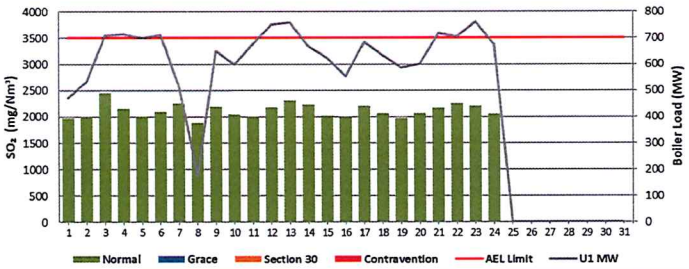


Figure 8: Medupi Unit 2 SO_2 Emissions - January 2026

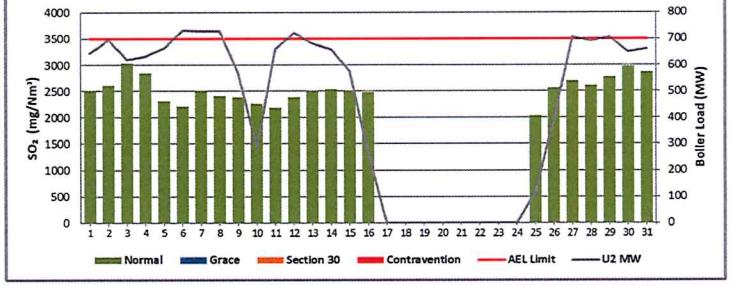


Figure 9: Medupi Unit 3 SO_2 Emissions - January 2026

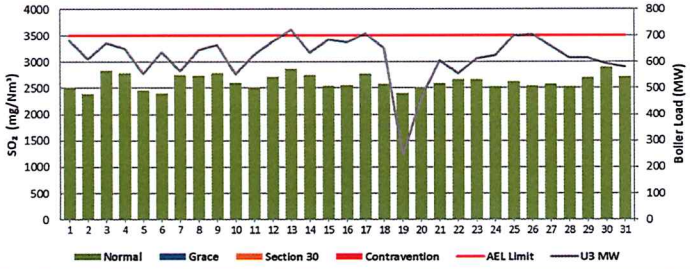


Figure 10: Medupi Unit 4 SO_2 Emissions - January 2026

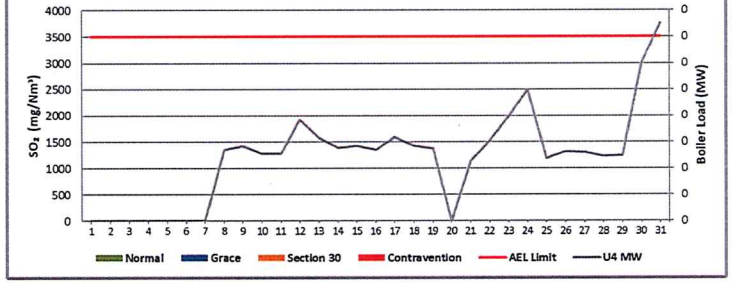


Figure 11: Medupi Unit 5 SO_2 Emissions - January 2026

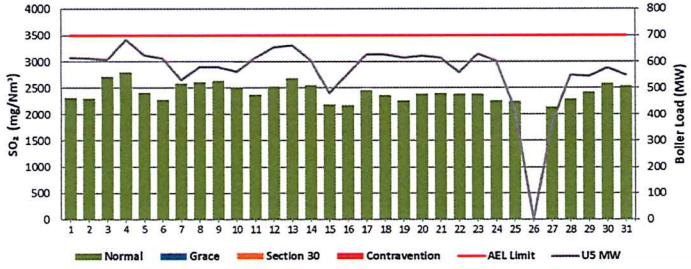
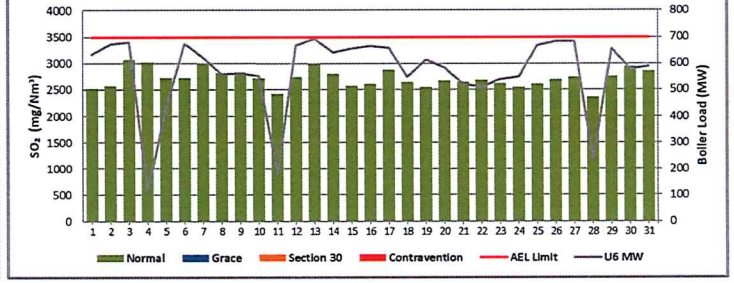


Figure 12: Medupi Unit 6 SO_2 Emissions - January 2026



4.3 NOx Daily Averages

Figure 13: Medupi Unit 1 NO_x Emissions - January 2026

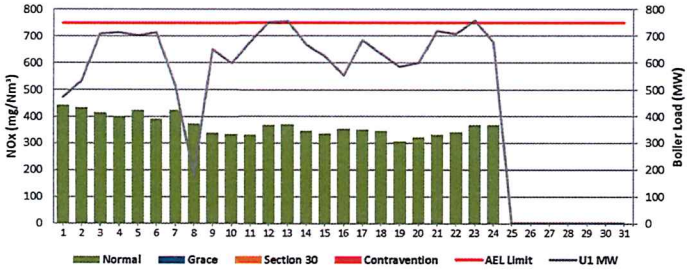


Figure 14: Medupi Unit 2 NO_x Emissions - January 2026

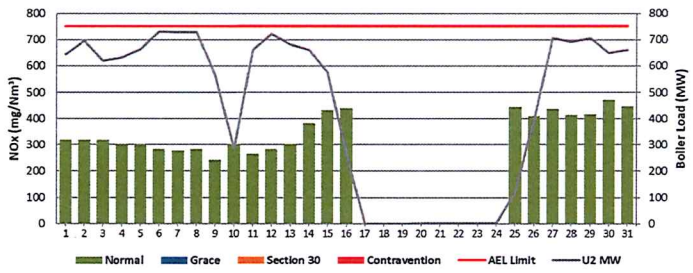


Figure 15: Medupi Unit 3 NO_x Emissions - January 2026

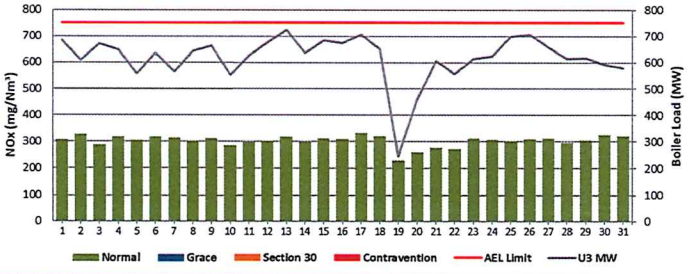


Figure 16: Medupi Unit 4 NO_x Emissions - January 2026

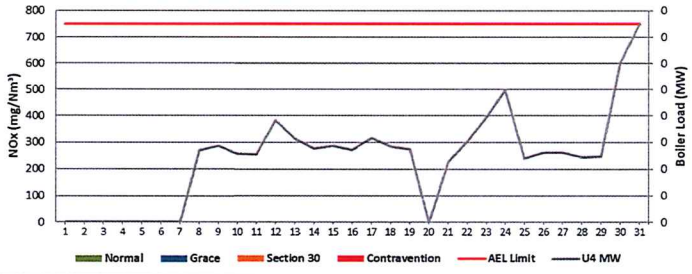


Figure 17: Medupi Unit 5 NO_x Emissions - January 2026

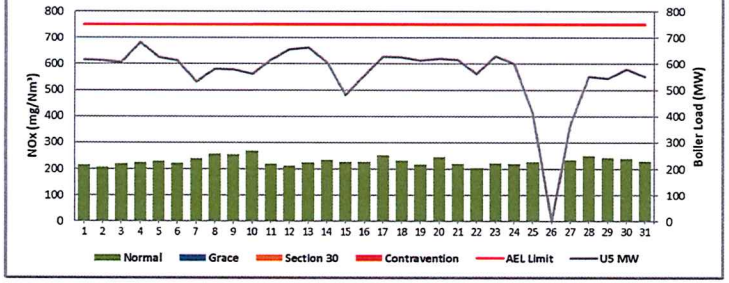


Figure 18: Medupi Unit 6 NO_x Emissions - January 2026

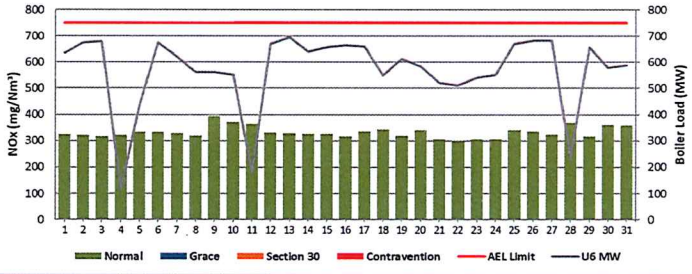


TABLE 5: MONTHLY TONNAGES FOR THE MONTH OF JAN 2026

Associated Unit/Stack	PM	SO_2	NO_2
Unit 1	58.4	5 530	952
Unit 2	33.5	5 338	725
Unit 3	46.8	3 470	401
Unit 4	Off	Off	Off
Unit 5	74.5	8 656	818
Unit 6	65.8	9 460	1 147
SUM (Tons)	**279.08**	**32 454**	**4 042**

TABLE 6: MONTHLY AVERAGES FOR THE MONTH OF JAN 2026

Associated Unit/Stack	Average PM (mg/Nm^3)	Average SO_2 (mg/Nm^3)	Average NOx (mg/Nm^3)
Unit 1	24.0	2 119.8	367.8
Unit 2	17.9	2 531.7	351.9
Unit 3	37.3	2 632.0	303.6
Unit 4	Off	Off	Off
Unit 5	22.6	2 429.4	230.7
Unit 6	21.3	2 722.7	333.3

5. Continuous Emission Monitoring Systems (CEMS)

Unit 1,2,3,4,5 and 6 Continuous Emission Monitoring Systems were always in operation when the unit was on load.

TABLE 7: PERIODS DURING WHICH CEMS WAS INOPERATIVE/MALFUNCTIONING

Date	CEMS status	Comments
January 2026	Faulty Unit 3 CEMS	Unit 3 monitoring reliability was lowest compared to the rest of the Units.

TABLE 8: CEMS MONITOR RELIABILITY PERCENTAGE (%)

Associated Unit/Stack	PM	SO_2	NO_2	O_2
Unit 1	100.0	100.0	100.0	100.0
Unit 2	100.0	100.0	100.0	98.3
Unit 3	90.0	96.8	96.8	96.8
Unit 4	Off	Off	Off	Off
Unit 5	93.8	100.0	99.9	99.6
Unit 6	96.0	92.1	91.1	92.6

6. CEMS Calibration certificates and equipment used for calibration.

A service provider was appointed to calibrate CEMS equipment at Medupi Power Station, calibration certificates are in place and are made available upon request. Verification of the CEMS after calibration is conducted internally by Eskom.

7. Ambient Air Quality Monitoring Report

The Ambient Air Quality Monitoring report and Dust Fallout report for the month of January 2026 were submitted in February 2026.

8. 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.

TABLE 9: TOTAL VOLATILE ORGANIC COMPOUND (TVOC) FOR JAN 2026

Eskom

CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*

Date:	Tuesday, 03 March 2026
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 *blue cells* below

Choose from a dropdown menu in the *green cells*

The total VOC emissions for the month are in the *red cells*

IMPORTANT: Do not change ***any*** other cells without consulting the AQ CoE

MONTH:	January	
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:	*1 844*	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	25.11	°C
Daily maximum ambient temperature	31.57	°C
Daily minimum ambient temperature	17.48	°C
Daily ambient temperature range	14.10	°C
Daily total insolation factor	5.87	kWh/m²/day
Tank paint colour	*Aluminum/Specular*	NA
Tank paint solar absorbtance	0.39	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0.74 kg/month	
Working losses:	0.05 kg/month	
TOTAL LOSSES (Total TVOC Emissions for the month):	0.79 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.

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

No awareness campaign was conducted for Jan 2026.

10. Complaints Register

TABLE 10: COMPLAINTS FOR THE MONTH OF JAN 2026

Name/ Source Code	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
01	Strange smell compliant from a farmer located about 10km away from the station at the south-eastern side of the Power Station.	NA	Received: 27 January 2026 Closed: 16 February 2026	Yes	The farmer was visited to investigate the compliant. Eskom RT&D also contacted the farmer, and it was concluded that the smell was not emanating from the station. Eskom RT&D will re-examine the ambient air quality data for those particular days, focusing specifically on SO_2 and NO_2 concentrations

Compiled By:	Thabo Khoza **Senior Advisor Environmental Management**		Date: 03/03/2026
Verified by:	Malose Langa **System Engineer Boiler**		Date: 2026/03/04
Verified by:	Shu Mpangase **System Engineer C&I**		Date: 2026/03/05
Supported by:	Mokgadi Dikgale **Environmental Manager**		Date: 2026/03/23
Supported by:	Khathu Mudzielwana **Engineering Group Manager (Acting)**	K.C. Mudzielwana	Date: 2026/03/27

I Thozama Gangi, declares that the information provided in this report is accurate and correct.

Yours sincerely

Thozama Gangi
GENERAL MANAGER: MEDUPI POWER STATION

Date: 14/04/2026