

Mr. Chakane Sibaya Air Quality Officer Fezile Dabi District Municipality P.O Box 10 Sasolberg 1947 Date: 19 May 2023

Enquiries: W de Klerk

Tel +27 16 457 5308

LRP02PLA000 _0358/20230505

Dear Mr. Sibaya

LETHABO POWER STATION ANNUAL EMISSION REPORT FOR THE 2022/2023 FINANCIAL YEAR

This serves as Lethabo Power Station's Annual Emission Report as required in terms of section 7.7 in the Atmospheric Emission License issued to Lethabo Power Station.

The emissions reported is for Eskom's 2022/2023 financial year which is from 01 April 2022 to 31 March 2023.

For any additional information please do not hesitate to contact us.

Yours sincerely

Bongani Mvelase GENERAL MANAGER



REPORT

Lethabo Power Station

Lethabo Power Station Annual Emission Title:

Report 2022/23

Unique Identifier:

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W de Klerk

Senior Advisor

Date: 2023 05 12

Verified by:

P Parag

System Engineer

Reviewed by:

M Hariram

Environmental Manager

Date: 2023/05/15

Date: 2023/05/17

Reviewed by:

C Govinden

PE Manager

Reviewed by:

L Nel

C & I Eng Manager

Reviewed by:

S Zulu

BPE Manager (Acting)

Date: 16/05/2023

Date: 2023-05-17

17/05/2023

Approved by:

Engineering Manager

(Acting)

H Sewsunker

Approved by:

Technical Manager

2023/05/25

Date: 2023-05-22.....

Date:

Page 2 of 26

1 TOTAL EMISSIONS TONNAGES FOR THE 2022/2023 FINANCIAL YEAR

The emissions in the table below are for the 2022/2023 financial year.

Table 1: Total Emissions for 2022/2023 Financial year

Power Station	Coal-fired emissions (tons/annum)	Fuel-oil emissions (tons/annum)	Total (tons/annum)
Lethabo Power Station	PM : 11 339	PM: Not Calculated	PM : 11 339
	SO₂: 183 736	SO₂: 517	SO₂ : 184 253
	NO _x : 99 544	NO _x : Not Calculated	NO _x : 99 544

Greenhouse Gases such as CO_2 and N_2O are no longer reported at station level and is included in the Eskom Greenhouse Gas Emissions Report as per the communication from the National Air Quality Officer (see Annexure A).

Eskom Research Technology and Development (RT&D) calculated figures were used for reporting gaseous emissions and are subject to data integrity reviews by external service providers. Particulate Matter (PM) are recorded CEMS data.

2 POLLUTION EMISSION TRENDS:

Table 2: Monthly Emissions Trends 2022/2023 financial year coal fired

Month	PM (tons)	SO ₂ (tons)	NO _x (tons)
April 2022	925	13507	8157
May 2022	712	11035	7059
June 2022	1033	12981	7488
July 2022	874	15791	8958
August 2022	916	15876	9085
September 2022	820	15428	8385
October 2022	970	18766	9559
November 2022	993	14712	8625
December 2022	1152	15461	8116
January 2023	1129	16948	8953
February 2023	855	13878	6592
March 2023	959	19869	8565

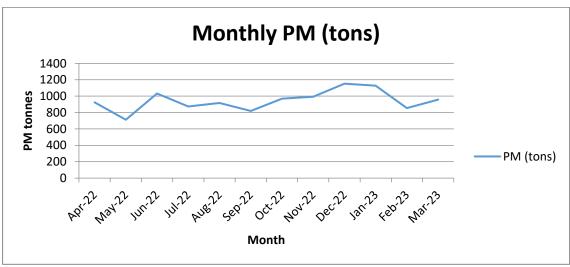


Figure 1: Graphical representation of PM monthly data

Page 3 of 26

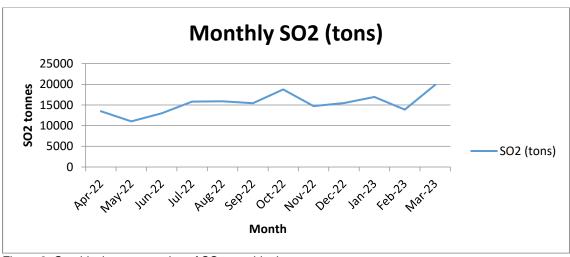


Figure 2: Graphical representation of SO₂ monthly data

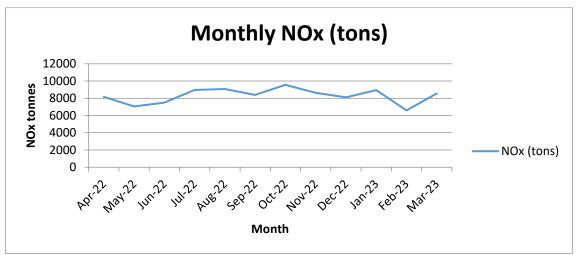


Figure 3: Graphical representation of NO_x monthly data

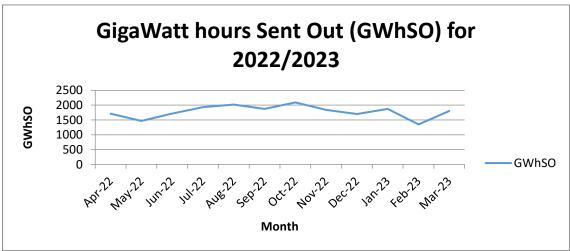


Figure 4: Graphical representation of GigaWatt hours sent out

The emission trends shown in the above table and graphs largely reflect the load of the power station as can be seen in the last graph.

LRP02PLA000 _0358/20230505

Page 4 of 26

3 MONITORING DATA AVAILABILITY

Table 3: General oversight of monitoring data availability for Lethabo Power Station 2022/2023 in terms of the number of full hours per annum that result was obtained for the CEMS in question.

Table 3:Hours of CEMS operation

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
PM	8553.7	8468.0	8635.8	6436.7	6189.7	8649.1
SO ₂	8726.1	8747.7	8751.4	7146.3	6532.6	8694.3
NO _x	8576.6	8751.7	8754.1	7152.1	6525.9	8697.2

NOTE: Hours reported for when units were online only

4 LEGAL COMPLIANCE (AUDIT) REPORT/S

Open Legal Notices

Department of Forestry, Fisheries and the Environment (DFFE) issued Lethabo Power Station with a pre-compliance notice (PCN) on 19th May 2020, following a compliance inspection conducted during August 2019. A response was submitted to the department on the 2nd June 2020 to dispute the allegations made in the pre-compliance notice. The station continues to provide quarterly feedback to the Department on the improvement plan submitted during the response to the PCN, the latest feedback was submitted in April 2023.

NEMA S30 Incidents and Legal Contraventions

Five NEMA Section 30 incidents were reported for Particulate Matter (PM) exceedances during the 2022/2023 financial year. Summary of the incidents are reflected in Table 4 below.

Table 4: NEMA S30 incidents

Incident	Date of Incident	Summary of Event
Unit 2 NEMA S30	14 April 2022	Damaged RH Side Draught Group ID fan electrical cable
Unit 1 NEMA S30	28 April 2022	Sustained high hopper levels for 4 days due to standing and constant tripping of ash conveyor belts.
Unit 4 NEMA S30	25 June 2022	Leaking Sulphur supply isolation valve and defective air combustion inlet valve gasket.
Unit 4 NEMA S30	10 August 2022	Damaged combustion air supply control valve
Unit 5 NEMA S30	25 December 2022	Steam leak on the Sulphur line

Eskom Sustainability received communication from DFFE regarding the nature of NEMA Section 30 incidents reported by the organisation, especially referring to incidents related to atmospheric emissions licences (AEL). It is the opinion of DFFE that the majority of the AEL related NEMA Sections 30, do not meet the definition of an incident as these are not "unexpected", nor "sudden". As such, the power stations were requested to refrain from reporting emissions related incidents to DFFE as per the guidelines; but rather report such incidents to the local licencing authority as non-compliances. In the light of the request

LRP02PLA000 _0358/20230505

Page 5 of 26

from DFFE it means that any emissions related exceedances lasting for longer than 72 hours, is regarded as the legal contraventions (noncompliance to the AEL). Table 5 illustrate incidents where the PM emissions were exceeded for more than 72 hours and were reported to the licencing authority as legal contraventions to the station's AEL.

Table 5: Legal contravention incidents

Incident	Date of Incident	Summary of Event
Unit 5 PI Exceedances	1 14 January 2023	There was an oversight when this revision of the Emissions Reporting Tool was created causing certain values to be misrepresented, as such the exceedances were only realised when the weekly emissions report were generated, and the organization realized that the PM emissions exceeded for two additionally days.
Unit 5 PI Exceedances	6 February 2023	Steam leak occurred within the SO ₃ plant combustion chamber resulting in upset conditions exceeding 72 hours.
Unit 6 PI Exceedances	15 February 2023	Unavailability of ash overland conveyor system led to tripping-out of Dust Handling Plant resulting in high ESP ash hopper levels and poor precipitation of particulate emissions

5 MAJOR UPGRADES OR PROJECTS:

High Frequency Transformer Upgrades

Lethabo Power Station is currently busy with implementing of the retrofitting the Electrostatic Precipitators (ESP) with High Frequency Transformers (HFT) to improve efficiency of the flue gas cleaning system. The following units have been completed to date:

- Unit 3 completed January 2021
- Unit 2 completed February 2022
- Unit 5 completed June 2022
- Unit 4 completed February 2023
- Unit 1 currently being implemented under outage
- The last unit (Unit 6) will be implemented in 2024 financial year.

Sulphur Trioxide (SO₃) Plant Upgrades

The station is currently implementing a project to completely replace the SO_3 plant skids which will greatly improve the reliability and efficiency of the system. Additionally, it will give the assurance of Original Equipment Manufacturer (OEM) support on the SO_3 plants for future maintenance to be conducted on the plants. The station is implementing the project in a phased approach as this work can only be done on extended outages (more than 70 days). To date, Unit 4 was completed in February 2023 and thus far the project is showing positive results with improved reliability as well as efficiency. Unit 1 is currently being implemented and is planned to be commissioned in June 2023.

LRP02PLA000 _0358/20230505

Page 6 of 26

Pulverised Fuel (PF) Burner Refurbishment

From 2020 to 2022, Lethabo Operating Units had extended outages and extensive refurbishment work was completed on the pulverised fuel (PF) burners, with the intention of improving the combustion process and heat absorption in the furnace. All 36 burners were refurbished where, historically, only partial refurbishments were conducted on the burners during outages. After thorough investigation, it was determined that the refurbishment of all 36 burners at once caused elevated NO_x to be generated during the combustion process. This was also confirmed by the Original Equipment Manufacturer (OEM). The higher NO_x would mean that any deviation in the monitors or process conditions may ultimately result in NO_x exceedances being experienced, this is due to no abatement technology available for NO_x generation. Through continuous optimising the combustion process and maintenance on the CEMS monitors, the station was able to keep the NO_x generation to a minimum and had not incurred any Nox exceedances since March 2022.

6 GREENHOUSE GAS EMISSIONS:

Greenhouse gas emissions such as CO_2 and N_2O are no longer reported at station level and is included in the Eskom Greenhouse Gas Emissions Report as per the communication in Annexure 1.

7 RESULTS OF SPOT MEASUREMENTS OR CORRELATION TESTS

Overview of dates of last conducted CEMS verification tests for PM, SO₂ and NO_x as indicated in the table below.

Table 6: Dates of spot measurements and correlation tests

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Unit	PM	SO ₂	NO _x			
Unit 1	May 2022	May 2022	May 2022			
Unit 2	April 2022	March 2022	March 2022			
Unit 3	March 2022	March 2022	March 2022			
Unit 4	April 2022	April 2022	April 2022			
Unit 5	September 2022	September 2022	September 2022			
Unit 6	April 2022	April 2022	April 2022			

The previous parallel test for Unit 5 gaseous measurements expired in July 2022 and could only be conducted in September 2022 due to the being on extended outage. The new correlation curves were implemented in December 2022, therefore the monthly AEL reports for this period were resubmitted in February 2023 after backfitting the data with the new correlation report. No exceedances were incurred as a result of the backfitting exercise.

8 NAEIS REPORTING:

The National Atmospheric Emissions Inventory System (NAEIS) report for 2022 reporting period was submitted in March 2023.

Unique Identifier: LRP02PLA000 _0358/20230505

Page 7 of 26

9 AN EXPLANATION OF ALL INSTANCES WHERE MINIMUM EMISSION STANDARDS WERE EXCEEDED:

All PM exceedances occurred within the 72-hour grace period for start-ups, shutdown, upset and maintenance conditions as stipulated in section 7.3. of the Lethabo Power Station Atmospheric Emission Licence (FDDM-MET-2011-08-P1). Where the 72 hour grace periods were exceeded a NEMA S30 was reported and indicated as such indicated in Table 4. Note remediation measure and effectiveness – Load losses and Plant repairs were carried out were taken where possible. Table 7 reflect an overview of Particulate Matter (PM) daily average limit exceedances for 2022/2023 financial year. No gaseous exceedances were incurred by Lethabo Power Station during the 2022-2023FY

Table 7: Particulate Matter Exceedances

Exceedance	Unit	Exceedance Date	Reason for exceedance
1	2	03 April 2022	RHO Casing outages
2	3	03 April 2022	Dust handling plant challenges
3	3	04 April 2022	RHO Poor performance
4	3	06 April 2022	Manual rapping implemented and dust handling plant challenges
5	3	07 April 2022	Manual rapping implemented and dust handling plant challenges
6	3	09 April 2022	ESP Poor performance and dust handling plant challenges
7	3	10 April 2022	ESP Poor performance
8	2	11 April 2022	Dust handling plant challenges
9	1	12 April 2022	ESP Poor performance and dust handling plant challenges
10	2	12 April 2022	ESP Poor performance and dust handling plant challenges
11	3	12 April 2022	Unit tripped yesterday and synchronized later the afternoon.
12	1	13 April 2022	ESP Poor performance and dust handling plant challenges
13	2	13 April 2022	One draught group tripped, and ESP were switched off.
14	2	14 April 2022	Exceedances reported as NEMA Section 30 for extended upset conditions.
15	3	14 April 2022	ESP Poor performance
16	2	16 April 2022	Casing outage
17	3	17 April 2022	SO₃ Plant challenges
18	2	18 April 2022	ESP Poor performance and dust handling plant challenges
19	3	18 April 2022	SO₃ Plant challenges

Unique Identifier: LRP02PLA000 _0358/20230505

Page 8 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
20	4	18 April 2022	ESP Poor performance
21	6	20 April 2022	ESP Poor performance
22	6	22 April 2022	ESP Poor performance
23	1	23 April 2022	Unit Shut down
24	3	23 April 2022	ESP Poor performance
25	4	23 April 2022	RHO casing outage
26	4	24 April 2022	LHI casing outage
27	1	25 April 2022	ESP Poor performance and dust handling plant challenges
28	2	25 April 2022	RHO ESP Poor performance
29	1	26 April 2022	ESP Poor performance and dust handling plant challenges
30	4	26 April 2022	SO₃ Plant challenges
31	1	27 April 2022	ESP Poor performance and dust handling plant challenges
32	4	27 April 2022	SO₃ Plant challenges
33	1	28 April 2022	ESP Poor performance and dust handling plant challenges. Exceedances reported as NEMA Section 30 for extended upset conditions.
34	1	29 April 2022	ESP Poor performance and dust handling plant challenges
35	1	30 April 2022	ESP Poor performance and dust handling plant challenges
36	2	30 April 2022	ESP Poor performance
37	1	01 May 2022	ESP Poor performance and dust handling plant challenges
38	2	01 May 2022	ESP Poor performance
39	1	03 May 2022	Manual rapping implemented; ESP Poor performance and SO ₃ Plant challenges
40	2	03 May 2022	ESP Poor performance
41	1	04 May 2022	Manual rapping implemented and ESP Poor performance
42	2	04 May 2022	Manual rapping implemented and ESP Poor performance
43	6	04 May 2022	ESP Poor performance
44	2	05 May 2022	Casing outage and ESP Poor performance
45	1	06 May 2022	ESP Poor performance

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 9 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
46	3	06 May 2022	ESP Poor performance
47	6	06 May 2022	Manual rapping implemented and ESP Poor performance
48	2	08 May 2022	ESP Poor performance
49	1	09 May 2022	Planned Upset condition Correlation test (SO₃ plant off load)
50	2	09 May 2022	ESP Poor performance
51	1	10 May 2022	Planned upset correlation test (Various ESP fields Switched off)
52	2	10 May 2022	Manual rapping implemented and ESP Casing outage
53	1	11 May 2022	RHO Casing outage
54	2	12 May 2022	ESP Poor performance
55	2	13 May 2022	ESP Poor performance
56	3	13 May 2022	ESP Poor performance
57	6	13 May 2022	Manual rapping implemented and ESP Poor performance
58	2	14 May 2022	RHI Casing Outage
59	3	14 May 2022	Unit Shut down
60	1	15 May 2022	Unit light up
61	1	16 May 2022	Unit light up
62	1	19 May 2022	ESP Poor performance
63	1	20 May 2022	Manual rapping implemented and ESP Poor performance
64	2	20 May 2022	ESP Poor performance
65	1	21 May 2022	ESP Poor performance
66	6	22 May 2022	Unit light up
67	1	23 May 2022	ESP Poor performance and dust handling plant challenges
68	2	23 May 2022	ESP Poor performance
69	6	23 May 2022	Unit light up
70	1	24 May 2022	Manual rapping implemented and ESP Poor performance
71	2	25 May 2022	Manual rapping implemented and ESP Poor performance
72	1	26 May 2022	ESP Poor performance

Unique Identifier: LRP02PLA000

-0358/20230505

Page 10 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
73	1	27 May 2022	ESP Poor performance
74	1	28 May 2022	Casing Outage
75	2	29 May 2022	Casing Outage
76	1	30 May 2022	ESP Poor performance
77	1	31 May 2022	ESP Poor performance
78	2	31 May 2022	Manual rapping implemented and ESP Poor performance
79	1	02 June 2022	ESP Poor performance
80	2	02 June 2022	ESP Poor performance
81	1	03 June 2022	ESP Poor performance
82	2	03 June 2022	ESP Poor performance
83	1	04 June 2022	LHI Casing outage
84	2	05 June 2022	ESP Poor performance
85	4	05 June 2022	Unit light up
86	6	05 June 2022	RHO Casing outage
87	4	06 June 2022	Unit light up
88	2	07 June 2022	SO₃ Plant challenges
89	1	09 June 2022	Common Sulphur line challenges
90	2	09 June 2022	Common Sulphur line challenges
91	4	09 June 2022	Common Sulphur line challenges
92	6	09 June 2022	Common Sulphur line challenges
93	1	10 June 2022	ESP Poor performance
94	2	10 June 2022	ESP Poor performance
95	1	11 June 2022	Manual rapping implemented and ESP Poor performance
96	1	13 June 2022	Manual rapping implemented and ESP Poor performance
97	2	13 June 2022	ESP Poor performance
98	4	13 June 2022	SO₃ Plant challenges
99	6	13 June 2022	Manual rapping implemented and ESP Poor performance

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 11 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
100	1	14 June 2022	LHO casing outages
101	2	14 June 2022	ESP Poor performance
102	4	14 June 2022	SO₃ Plant challenges
103	1	15 June 2022	ESP Poor performance
104	2	15 June 2022	LHO casing outage
105	4	15 June 2022	SO₃ Plant challenges
106	1	17 June 2022	ESP Poor performance
107	2	17 June 2022	ESP Poor performance
108	4	17 June 2022	SO₃ Plant challenges
109	6	17 June 2022	ESP Poor performance
110	1	18 June 2022	ESP Poor performance
111	2	18 June 2022	RHI Casing outage
112	4	18 June 2022	SO₃ Plant challenges
113	2	19 June 2022	Manual rapping implemented and ESP Poor performance
114	4	19 June 2022	SO₃ Plant challenges
115	6	19 June 2022	RHO precip casing outage
116	1	20 June 2022	ESP Poor performance and dust handling plant challenges
117	6	20 June 2022	ESP Poor performance
118	1	21 June 2022	ESP Poor performance and dust handling plant challenges
119	2	22 June 2022	ESP Poor performance and dust handling plant challenges
120	4	22 June 2022	SO₃ Plant challenges and manual rapping
121	1	23 June 2022	ESP Poor performance
122	3	23 June 2022	ESP Poor performance
123	4	23 June 2022	SO₃ Plant challenges and manual rapping implemented
124	6	23 June 2022	ESP Poor performance
125	1	24 June 2022	ESP Poor performance
126	2	24 June 2022	ESP Poor performance

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 12 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
127	4	24 June 2022	SO₃ Plant challenges
128	6	24 June 2022	ESP Poor performance
129	1	25 June 2022	LHO ESP casing outage
130	2	25 June 2022	ESP Poor performance
131	4	25 June 2022	S30 reported
132	2	26 June 2022	ESP Poor performance
133	6	26 June 2022	ESP Poor performance
134	1	27 June 2022	ESP Poor performance and Sulphur flow is not corresponding to boiler load
135	1	28 June 2022	ESP Poor performance and Sulphur flow is not corresponding to boiler load
136	2	28 June 2022	ESP Poor performance
137	1	29 June 2022	ESP Poor performance and Sulphur flow is not corresponding to boiler load
138	2	29 June 2022	ESP Poor performance
139	6	30 June 2022	ESP Poor performance
140	2	01 July 2022	ESP Poor performance
141	1	03 July 2022	ESP Poor performance and Sulphur flow not corresponding to boiler load
142	2	03 July 2022	ESP poor performance
143	1	04 July 2022	ESP Poor performance and Sulphur flow not corresponding to boiler load; Dust handling plant challenges; Manual rapping
144	2	04 July 2022	Manual rapping implemented and ESP Poor performance
145	3	05 July 2022	Sulphur flow fluctuating and ESP Poor performance
146	1	06 July 2022	ESP Poor performance and Sulphur flow not corresponding to boiler load
147	2	06 July 2022	ESP Poor performance
148	3	06 July 2022	ESP Poor performance
149	4	06 July 2022	ESP Poor performance
150	1	09 July 2022	ESP Poor performance
151	4	09 July 2022	ESP Poor performance
152	1	10 July 2022	ESP Poor performance

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 13 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
153	1	11 July 2022	Manual rapping implemented and ESP Poor performance
154	4	11 July 2022	Unit light up
155	1	12 July 2022	ESP Poor performance
156	2	12 July 2022	ESP Poor performance
157	1	13 July 2022	ESP Poor performance
158	2	13 July 2022	ESP Poor performance
159	4	14 July 2022	ESP Poor performance, manual rapping implemented and Dust handling plant challenges.
160	1	15 July 2022	ESP Poor performance
161	2	15 July 2022	ESP Poor performance
162	3	15 July 2022	ESP Poor performance
163	1	16 July 2022	ESP Poor performance
164	4	16 July 2022	ESP Poor performance and RHO Casing Outage
165	2	17 July 2022	Poor ESP Performance; RHI Casing Outage
166	4	17 July 2022	ESP Poor Performance
167	6	17 July 2022	Unit trip and unit light up
168	4	21 July 2022	ESP poor Performance
169	4	23 July 2022	RHO casing outage and dust handling plant challenges
170	4	27 July 2022	Dust handling plant challenges and ESP Poor performance
171	4	30 July 2022	ESP Casing outage
172	4	31 July 2022	ESP Casing outage
173	4	01 August 2022	High hopper level and poor ESP performance
174	3	03 August 2022	ESP Poor performance, manual rapping implemented and Dust handling plant challenges.
175	2	04 August 2022	ESP Poor performance, manual rapping implemented and Dust handling plant challenges.
176	1	06 August 2022	LHI Casing outage
177	2	06 August 2022	Poor casing performance
178	3	06 August 2022	ESP Poor performance and manual rapping carried out.
179	4	07 August 2022	SO ₃ Plant challenges and ESP Poor performance

Unique Identifier: LRP02PLA000

-0358/20230505

Page 14 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
180	5	07 August 2022	SO ₃ Plant challenges
181	3	08 August 2022	ESP LHI Casing poor performance
182	4	08 August 2022	Manual rapping implemented; ESP Poor performance and SO ₃ Plant challenges
183	5	08 August 2022	Manual rapping implemented and SO₃ Plant challenges
184	4	09 August 2022	SO ₃ Plant challenges and ESP casing poor performance
185	4	10 August 2022	SO ₃ Plant challenges and ESP casing poor performance. Exceedances reported as NEMA Section 30 for extended upset conditions.
186	2	11 August 2022	ESP poor performance
187	4	11 August 2022	SO ₃ Plant challenges and ESP poor performance
188	2	12 August 2022	ESP poor performance
189	4	12 August 2022	SO ₃ Plant challenges
190	2	13 August 2022	RHI Casing outage
191	3	13 August 2022	ESP Poor performance
192	4	13 August 2022	SO ₃ Plant challenges and ESP casing poor performance
193	4	14 August 2022	SO ₃ Plant challenges and ESP casing poor performance
194	3	15 August 2022	Manual rapping implemented and ESP Poor performance
195	4	15 August 2022	SO ₃ Plant challenges and ESP casing poor performance
196	4	16 August 2022	SO ₃ Plant challenges and ESP casing poor performance
197	5	16 August 2022	Unit light up
198	3	19 August 2022	Manual rapping implemented and ESP Poor performance
199	2	20 August 2022	RHO Casing outage
200	3	22 August 2022	Unit Shut down
201	4	26 August 2022	Unit light up
202	2	27 August 2022	ESP Poor performance
203	5	03 September 2022	RHO Casing outage
204	5	04 September 2022	ESP Poor performance
205	6	10 September 2022	RHO Casing outage

Unique Identifier: LRP02PLA000

-0358/20230505

Page 15 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
206	4	11 September 2022	LHI Casing outage
207	4	12 September 2022	Manual rapping implemented and ESP Poor performance
208	5	12 September 2022	RHO Casing outage and Manual rapping implemented
209	2	13 September 2022	Unit light up
210	5	16 September 2022	LHO casing outage
211	4	17 September 2022	ESP Poor performance
212	4	18 September 2022	SO₃ Plant challenges and ESP poor performance
213	5	19 September 2022	Manual rapping implemented and ESP Poor performance
214	3	21 September 2022	Unit light up
215	1	23 September 2022	Unit light up
216	1	25 September 2022	Unit light up
217	1	26 September 2022	Unit light up
218	4	27 September 2022	Unit light up
219	4	28 September 2022	Unit light up
220	4	29 September 2022	Unit light up
221	1	08 October 2022	Unit light up
222	1	06 October 2022	Unit tripped
223	6	10 October 2022	Manual rapping implemented and ESP Poor performance
224	5	12 October 2022	Manual rapping implemented and ESP Poor performance
225	5	13 October 2022	RHI Casing outage
226	1	15 October 2022	RHO Casing outage
227	3	17 October 2022	Unit light up
228	2	18 October 2022	Manual rapping implemented and ESP Poor performance
229	2	20 October 2022	ESP Poor performance
230	1	22 October 2022	Unit light up
231	2	22 October 2022	Casing outage
232	5	22 October 2022	Unit shut down

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 16 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
233	3	24 October 2022	SO₃ Plant challenges
234	1	25 October 2022	ESP Poor performance
235	3	25 October 2022	SO ₃ Plant challenges
236	5	25 October 2022	Unit light up
237	1	26 October 2022	ESP Poor performance
238	3	26 October 2022	SO ₃ Plant challenges
239	5	26 October 2022	SO ₃ Plant challenges
240	6	26 October 2022	ESP Poor performance
241	1	29 October 2022	LHO casing outage
242	3	30 October 2022	SO ₃ Plant challenges and ESP Poor performance
243	5	31 October 2022	ESP Poor performance
244	5	01 November 2022	Dust handling plant challenges and ESP Poor performance
245	4	03 November 2022	Dust handling plant challenges and ESP Poor performance
246	5	05 November 2022	LHI Casing outage
247	6	06 November 2022	LHO Casing outage
248	1	10 November 2022	ESP Poor performance and Manual rapping implemented
249	5	10 November 2022	Dust handling plant challenges and ESP Poor performance
250	4	11 November 2022	Unit light up
251	4	12 November 2022	Unit light up
252	5	12 November 2022	ESP Poor performance
253	1	13 November 2022	Dust handling plant challenges and ESP Poor performance
254	2	13 November 2022	Dust handling plant challenges and ESP Poor performance
255	1	14 November 2022	Dust handling plant challenges and ESP Poor performance
256	2	14 November 2022	Dust handling plant challenges and ESP Poor performance
257	4	14 November 2022	ESP Poor performance
258	6	14 November 2022	Dust handling plant challenges
259	4	15 November 2022	ESP Poor performance

Unique Identifier: LRP02PLA000

-0358/20230505

Page 17 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
260	6	15 November 2022	ESP Poor performance and dust handling plant challenges
261	1	16 November 2022	ESP Poor performance and dust handling plant challenges
262	4	16 November 2022	Unit shut down
263	5	16 November 2022	Unit light up
264	6	16 November 2022	Dust handling plant challenges
265	5	17 November 2022	Unit light up
266	2	18 November 2022	Unit light up
267	5	18 November 2022	Unit light up and SO₃ Plant challenges
268	3	19 November 2022	Unit light up
269	6	19 November 2022	Dust handling plant challenges
270	6	20 November 2022	Dust handling plant challenges
271	6	21 November 2022	Dust handling plant challenges
272	1	22 November 2022	Manual rapping implemented and ESP Poor performance
273	5	22 November 2022	Dust handling plant challenges and ESP Poor performance
274	5	24 November 2022	Dust handling plant challenges and ESP Poor performance
275	2	24 November 2022	Unit trip
276	1	25 November 2022	ESP Poor performance
277	6	25 November 2022	Dust handling plant challenges and ESP Poor performance
278	6	26 November 2022	ESP Casing Outage
279	1	28 November 2022	Unit shut down
280	3	29 November 2022	SO ₃ Plant challenges
281	5	29 November 2022	Manual rapping implemented and ESP Poor performance
282	1	30 November 2022	Manual rapping implemented; dust handling plant challenges and ESP Poor performance
283	3	30 November 2022	SO ₃ Plant challenges; Manual rapping implemented and dust handling plant challenges
284	5	01 December 2022	Manual rapping implemented and ESP Poor performance
285	2	02 December 2022	Poor ESP Performance
286	2	03 December 2022	Unit shut down

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 18 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
287	3	03 December 2022	ESP Poor performance
288	5	03 December 2022	ESP Poor performance and dust handling plant challenges
289	6	03 December 2022	RHO ESP Casing outage
290	1	04 December 2022	SO₃ Plant challenges and ESP Poor performance
291	3	04 December 2022	SO ₃ Plant challenges and ESP Poor performance
292	5	04 December 2022	Manual Rapping and Dust handling plant challenges
293	1	05 December 2022	SO₃ Plant challenges and ESP Poor performance
294	3	05 December 2022	SO₃ Plant challenges
295	5	05 December 2022	RHO Casing isolated and Dust handling plant challenges
296	2	06 December 2022	Unit light up
297	5	07 December 2022	RHO casing outage
298	3	08 December 2022	Dust handling plant challenges
299	5	08 December 2022	Manual rapping implemented
300	2	09 December 2022	Manual rapping implemented and ESP Poor performance
301	5	10 December 2022	Manual rapping implemented and ESP Poor performance
302	6	10 December 2022	Manual rapping implemented and ESP Poor performance
303	3	11 December 2022	Unit light up
304	6	11 December 2022	RHI Casing outage
305	1	12 December 2022	ESP Poor performance
306	2	13 December 2022	Manual rapping implemented and ESP Poor performance
307	2	14 December 2022	ESP Poor performance
308	6	14 December 2022	Unit tripped
309	1	15 December 2022	ESP Poor performance
310	3	15 December 2022	Manual rapping implemented and ESP Poor performance
311	2	16 December 2022	Unit light up
312	1	17 December 2022	ESP Poor performance
313	2	17 December 2022	Unit light up

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 19 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
314	3	17 December 2022	Manual rapping implemented and ESP Poor performance
315	2	18 December 2022	Unit light up
316	1	19 December 2022	Manual rapping implemented and ESP Poor performance
317	3	19 December 2022	Poor ESP performance
318	1	20 December 2022	Unit shut down
319	5	20 December 2022	SO ₃ Plant challenges
320	2	21 December 2022	RHI Casing outage
321	3	21 December 2022	Manual rapping implemented and ESP Poor performance
322	5	22 December 2022	SO ₃ Plant challenges
323	5	23 December 2022	SO ₃ Plant challenges
324	3	24 December 2022	Poor ESP Performance
325	5	24 December 2022	SO ₃ Plant challenges
326	2	27 December 2022	ESP Poor performance
327	5	25 December 2022	SO ₃ Plant challenges
328	5	26 December 2022	SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
329	5	27 December 2022	
330	2	28 December 2022	Manual rapping implemented and ESP Poor performance
331	3	28 December 2022	Manual rapping implemented and ESP Poor performance
332	5	28 December 2022	SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
333	5	29 December 2022	SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
334	2	30 December 2022	LHO Casing outage
335	5	30 December 2022	SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
336	1	31 December 2022	Unit light up
337	3	31 December 2022	LHO Casing outage
338	5	31 December 2022	Unit light up, SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
339	1	01 January 2023	Unit light up

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 20 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
340	3	01 January 2023	LHO Casing outage
341	5	01 January 2023	Unit light up, SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
342	5	02 January 2023	Unit light up, SO ₃ Plant challenges and exceedances reported as NEMA Section 30 for extended upset conditions.
343	5	06 January 2023	Manual rapping implemented and ESP Poor performance
344	3	07 January 2023	RHO Casing outage
345	3	08 January 2023	RHI Casing outage
346	6	08 January 2023	Manual Rapping and ESP Poor performance
347	2	09 January 2023	ESP Poor performance and dust handling plant challenges
348	5	09 January 2023	ESP Poor performance and dust handling plant challenges
349	2	11 January 2023	Manual rapping implemented and ESP Poor performance
350	3	11 January 2023	ESP Poor performance
351	5	11 January 2023	ESP Poor performance
352	5	12 January 2023	ESP Poor performance
353	2	13 January 2023	RHI Casing outage and Dust handling plant challenges
354	5	13 January 2023	ESP Poor performance
355	2	14 January 2023	SO3 Plant challenges
356	5	14 January 2023	ESP Poor performance, legal contravention due to Emissions reporting tool challenges.
357	5	15 January 2023	ESP Poor performance, legal contravention due to Emissions reporting tool challenges. out.
358	3	17 January 2023	Manual rapping implemented and ESP Poor performance
359	5	18 January 2023	ESP Poor performance
360	5	19 January 2023	ESP Poor performance
361	2	20 January 2023	Manual rapping implemented and ESP Poor performance
362	3	20 January 2023	LHI Casing outage and dust handling plant challenges
363	5	20 January 2023	ESP Poor performance
364	2	21 January 2023	ESP Poor performance
365	2	22 January 2023	SO₃ Plant challenges, Manual rapping implemented and poor ESP performance

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 21 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
366	6	22 January 2023	RHI Casing outage
367	5	23 January 2023	ESP Poor performance
368	6	23 January 2023	LHO Casing Outage
369	2	24 January 2023	Unit Shut Down for Boiler Tube Leak Repairs
370	1	28 January 2023	ESP Poor performance
371	3	28 January 2023	ESP Poor performance
372	1	29 January 2023	ESP Poor performance
373	2	29 January 2023	Unit light up
374	3	29 January 2023	ESP Poor performance
375	2	30 January 2023	Unit light up
376	1	31 January 2023	ESP Poor performance and dust handling plant challenges
377	3	31 January 2023	Manual rapping implemented, ESP Poor performance and dust handling plant challenges
378	6	01 February 2023	Manual rapping implemented, ESP Poor performance and dust handling plant challenges
379	2	02 February 2023	Unit shut down
380	3	02 February 2023	Manual rapping implemented, ESP Poor performance and dust handling plant challenges
381	1	03 February 2023	Dust handling plant challenges and ESP Poor performance
382	1	04 February 2023	ESP Poor performance
383	3	04 February 2023	LHO ESP Casing outage
384	5	04 February 2023	Unit light up
385	2	05 February 2023	Unit light up
386	3	05 February 2023	Manual rapping implemented, ESP Poor performance and dust handling plant challenges
387	5	05 February 2023	Unit light up
388	6	05 February 2023	RHO Casing outage
389	2	06 February 2023	Unit light up
390	3	06 February 2023	Dust handling plant challenges and ESP Poor performance
391	5	06 February 2023	Unit light up
392	6	06 February 2023	Unit shut down

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 22 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
393	5	07 February 2023	SO ₃ Plant challenges and ESP Poor performance. Exceedances reported as noncompliance.
394	5	08 February 2023	SO ₃ Plant challenges
395	1	10 February 2023	SP poor performance and manual rapping
396	3	10 February 2023	Dust handling plant challenges and ESP Poor performance
397	6	10 February 2023	ESP Poor performance, Dust handling plant challenges and manual rapping.
398	3	11 February 2023	LHI casing repairs
399	1	12 February 2023	Manual rapping implemented
400	3	12 February 2023	LHI casing repairs
401	6	12 February 2023	Dust handling plant challenges and ESP Poor performance
402	6	13 February 2023	Dust handling plant challenges and ESP Poor performance
403	2	14 February 2023	Dust handling plant challenges and ESP Poor performance
404	5	14 February 2023	Dust handling plant challenges, poor ESP performance and SO ₃ Plant challenges
405	6	14 February 2023	Dust handling plant challenges, poor ESP performance and SO ₃ Plant challenges
406	1	15 February 2023	Dust handling plant challenges and ESP Poor performance.
407	2	15 February 2023	Dust handling plant challenges and ESP Poor performance
408	5	15 February 2023	Dust handling plant challenges and ESP Poor performance
409	6	15 February 2023	Dust handling plant challenges and ESP Poor performance. Exceedances reported as noncompliance
410	5	16 February 2023	Dust handling plant challenges and manual rapping implemented
411	5	18 February 2023	ESP Poor performance and unit trip
412	6	19 February 2023	ESP poor performance and fust handling plant challenges.
413	2	20 February 2023	Unit light up
414	5	20 February 2023	Unit light up
415	1	22 February 2023	ESP poor performance and fust handling plant challenges.
416	3	22 February 2023	Unit light up
417	6	22 February 2023	Unit light up
418	1	23 February 2023	Manual rapping implemented and poor casing performance
419	5	23 February 2023	Unit light up

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 23 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
420	6	23 February 2023	Unit light up
421	1	24 February 2023	ESP poor performance
422	6	25 February 2023	LHO casing outage
423	1	26 February 2023	RHO casing outage
424	1	27 February 2023	ESP poor performance and dust handling plant challenges
425	1	28 February 2023	ESP poor performance
426	2	28 February 2023	ESP poor performance
427	3	28 February 2023	LHO ESP casing outage
428	2	01 March 2023	Emissions test and RHO casing poor performance (2 x fields off)
429	3	01 March 2023	ESP Poor performance
430	6	03 March 2023	Unit light up and SO₃ Plant challenges
431	1	04 March 2023	LHI casing outage
432	2	04 March 2023	ESP poor performance
433	3	04 March 2023	RHI ESP poor performance
434	6	04 March 2023	Unit light up and SO₃ Plant challenges
435	3	05 March 2023	RHI casing outage
436	1	06 March 2023	Emissions test done at 500 MW (09h00 to 17h00) and manual rapping implemented
437	2	06 March 2023	Manual rapping implemented and ESP poor performance
438	4	06 March 2023	Unit light up
439	5	06 March 2023	Manual rapping implemented and ESP poor performance
440	3	07 March 2023	Dust handling plant challenges and SO₃ Plant challenges
441	6	07 March 2023	Manual rapping implemented and ESP poor performance
442	3	08 March 2023	SO ₃ Plant challenges
443	4	09 March 2023	SO ₃ Plant challenges
444	2	11 March 2023	RHO Casing outage
445	4	11 March 2023	ESP Poor performance and SO₃ Plant challenges
446	4	12 March 2023	ESP Poor performance and SO₃ Plant challenges

Unique Identifier: LRP02PLA000
Unique Identifier: _0358/20230505

Page 24 of 26

Exceedance	Unit	Exceedance Date	Reason for exceedance
447	1	13 March 2023	Unit shut down
448	5	13 March 2023	ESP Poor performance
449	2	14 March 2023	ESP Poor performance, Dust handling plant challenges and manual rapping implemented
450	4	14 March 2023	SO ₃ Plant challenges and ESP Poor performance
451	5	14 March 2023	Manual rapping implemented and ESP Poor performance
452	5	17 March 2023	Manual rapping implemented and ESP Poor performance
453	4	18 March 2023	ESP Poor performance
454	5	18 March 2023	LHI Casing Outage
455	3	19 March 2023	ESP Poor performance
456	6	19 March 2023	LHO Casing Outage
457	5	20 March 2023	Manual rapping implemented and ESP Poor performance
458	3	22 March 2023	Manual rapping implemented and Poor ESP Performance
459	6	22 March 2023	Unit shut down
460	4	23 March 2023	Manual rapping implemented and ESP Poor performance
461	5	23 March 2023	RHO Casing outage
462	5	24 March 2023	RHO casing outage
463	5	25 March 2023	Unit light up
464	3	26 March 2023	ESP Poor performance, Dust handling plant challenges and manual rapping implemented
465	4	27 March 2023	High Emission Correlation tests were done (SO₃ plant off)
466	2	28 March 2023	Manual rapping implemented and ESP Poor performance
467	3	28 March 2023	Manual rapping implemented and ESP Poor performance
468	4	28 March 2023	High Emission Correlation tests were done (3 ESP fields off)
469	3	29 March 2023	Manual rapping implemented and ESP Poor performance
470	4	29 March 2023	Manual rapping implemented and ESP Poor performance
471	4	30 March 2023	Unit tripped
472	5	30 March 2023	High Emission Correlation Test (SO₃ plant off)

LRP02PLA000 _0358/20230505

Page 25 of 26

10 ABBREVIATIONS

Abbreviation	Description
CEMS	Continuous Emissions Monitoring System
CO ₂	Carbon Dioxide
DFFE	Department of Forestry, Fisheries and the Environment
DHP	Dust Handling Plant
ESP	Electrostatic Precipitator
FD	Forced Draft
FY	Financial Year
GHG	Green House Gases
ID	Induced Draft
LH	Left Hand
LHI	Left Hand Inner
LHO	Left Hand Outer
N ₂ O	Nitrous Oxide (dinitrogen oxide)
NAEIS	Nation Atmospheric Emissions Inventory System
NEMA	National Environmental Management Act
NO _x	Nitrogen Oxides
O ₂	Oxygen
PF	Pulverised Fuel
PLC	Programmable Logic Controller
PM	Particulate Matter
PTW	Permit To Work
RH	Right Hand
RHI	Right Hand Inner
RHO	Right Hand Outer
RT&D	Research, Testing and Development Department
SO ₂	Sulphur Dioxide
SO ₃	Sulphur Trioxide
S30	NEMA Section 30 Incident
SSC	Submerged Scraper Conveyor
VSD	Variable Speed Drive

11 LIST OF ANNEXURES

Annexure A	DEA GHG Reporting and AELs Exclusion of CO ₂ from monthly
	reports

LRP02PLA000 _0358/20230505

Page

26 of 26

Annexure A - DEA GHG Reporting and AELs Exclusion of CO2 from monthly reports



Enquiries: Mr Vumile Senene

Tel: (012) 399 9217 Email: VSenene@environment.gov.za

Atmospheric Licensing Authorities Atmospheric Emission License Holders

Dear All.

RE: Clarity on Greenhouse Gas Emission Reporting - According to the National Environmental

Management: Air Quality Act. 39 of 2004 (AQA).

This letter serves to Inform Atmospheric Emission License (AEL) holders and remind Atmospheric Emission Licensing Authorities (AELA) about the agreement reached on reporting of greenhouse gas emissions for the purpose of meeting AEL reporting requirements and the country's reporting requirements to national climate change obligations.

Section 43 of the AQA stipulates the contents of a provisional atmospheric emission license and an atmospheric emission license. In this regard S43 (1)(I); states that – A provisional atmospheric emission license and an atmospheric emission license must specify: greenhouse gas emission measurement and reporting requirements. In the first quarter of the financial year 2017/18 MINTEC and MINMEC management meetings, it was agreed that all AELs shall stipulate the following "Reporting in terms of S43 (1)(I) shall be done in accordance with the National Greenhouse Gas Reporting Regulations".

In light of this, AELs will be reviewed (according to the schedule prepared by the AELAs) to include this same reporting phrase. The reporting phrase will be inserted into existing AELs that are due for renewal during the renewal process. Finally, the AEL application template has been amended to include this phrase.

Yours Sincerely,

Dr Thull Khumalo

National Air Quality Officer

Date: 15 May 2019