

Sasol South Africa Limited

Secunda Site

Monthly Dust fall Monitoring Report

Dated 25 Aug 2020

Prepared for

Gert Sibande District Municipality

Regarding dust fall monitoring for:

**Sasol South Africa Limited Secunda Synfuels Operations – atmospheric emission
license number 0016/2019/F03**

**Sasol South Africa Limited Secunda Chemicals Operations – Nitro fertilizers and
explosives division – atmospheric emission license number 0020/2019/F03**

Sasol Mining operations

Reporting period: 1 July until 31 July 2020

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Standard abbreviation list

AEL	atmospheric emissions license
D	dust fall rate
mg/m ² /day	milligram per square meter per day
SHE	safety health and environment
SSO	Secunda Synfuels Operations
SCO	Secunda Chemicals Operations
SCS	Sasol coal supply
RESM	receiving environmental surface monitoring
FAD	Fine Ash Dam

1. DUSTFALL RESULTS FOR SECUNDA SYNFUELS OPERATIONS

Dust fall monitoring is conducted in accordance with the 1970 standard specification for American Society for Testing and Materials D1739 (ASTM 1970). The reporting format is in line with Government Gazette number 36 974 of 1 November 2013.

Rainfall was recorded from the various Sasol monitoring stations in Secunda for June 2020. Rainfall has the ability to reduce dust entrainment by increasing soil moisture, particle cohesion and thus, resistance to particle entrainment. It is likely that the absence of rainfall, combined with increased wind speeds (and other environmental factors), may increase dust fall rates, normal trend for dry winter periods. From Table 1 below it can be seen that there is a significant increase in dust fall at Fine Ash West 1 for July 2020, 449 mg/m²/day, which was expected due to strong surface winds during the sampling period, no rainfall was recorded for sampling period. FAD 6 sample bucket was damaged due to grass fire no sample analysed

Table 1: Dust fall results for SSO

Restriction areas	Dust fall rate (D) (mg/m ² /day, 30- days average)	Permitted frequency of exceeding dust fall rate			
Residential area	D < 600	Two within a year, not sequential months			
Non-residential area	600 < D < 1200	Two within a year, not sequential months			
Site	Site classification	Apr-20	May-20	Jun-20	Jul-20
RESM 3	Non-residential	112	147	134	176
eMbalenhle / Langverwacht	Non-residential	109	126	105	167
RESM 9	Non-residential	140	152	150	224
Pump station	Non-residential	58	207	186	244
SCS	Non-residential	104	117	104	239
Fine ash west	Non-residential	103	172	196	223
Fine ash west 1	Non-residential	133	270	337	449
Coal separation east	Non-residential	147	230	197	251
Coal separation west	Non-residential	219	206	231	390
FAD 6 North	Non-residential	89	275	932	damaged
FAD 6 North West	Non-residential	108	176	198	180
FAD 6 South West	Non-residential	83	161	142	63
Fad 6 South East	Non-residential	97	100	135	119

2. DUSTFALL RESULTS FOR SASOL MINING OPERATIONS

From Table 2 below it can be seen that the Twistdraai Export 4 monitoring point recorded 358 mg/m²/day which is the highest concentration measured during this time period, no rainfall was recorded for measurement time period

Table 2: Dust fall results for Sasol Mining operations

Restriction areas	Dust fall rate (D) (mg/m ² /day, 30- days average)	Permitted frequency of exceeding dust fall rate			
Residential area	D < 600	Two within a year, not sequential months			
Non-residential area	600 < D < 1200	Two within a year, not sequential months			
Site	Site classification	Apr-20	May-20	Jun-20	Jul-20
Thubelisha north	Non-residential	46	97	69	191
Thubelisha south	Non-residential	33	69	57	134
Thubelisha west	Non-residential	131	77	82	222
Thubelisha east	Non-residential	66	36	49	137
Syferfontein veld	Non-residential	217	165	66	387
Syferfontein dam	Non-residential	51	48	203	110
Syferfontein farm	Non-residential	147	186	151	202
Syferfontein main road	Non-residential	76	52	95	160
Twistdraai export 1 (west)	Non-residential	47	68	70	155
Twistdraai export 2 (south)	Non-residential	71	88	100	246
Twistdraai export 3 (east)	Non-residential	79	116	87	217
Twistdraai export 4 (north)	Non-residential	63	183	180	358
Shondoni south	Non-residential	147	159	195	219
Shondoni west	Non-residential	92	43	286	154
Shondoni east	Non-residential	207	108	164	282
Shondoni north	Non-residential	94	88	95	167
Impumelelo west	Non-residential	49	293	67	40
Impumelelo south	Non-residential	43	83	70	62
Impumelelo east	Non-residential	40	71	74	47
Impumelelo north	Non-residential	53	84	70	100
Impumelelo conveyor	Non-residential	31	69	71	139

3. DUST FALL RESULTS FOR SECUNDA CHEMICALS OPERATIONS – NITRO FERTILISERS AND EXPLOSIVES DIVISION

From Table 3 below it can be seen that all the results for Jul 2020 are low, no rainfall was recorded for sampling period dust fall rates are below the residential area (600 mg/m²/day) threshold.

Table 3: Dust fall results for SCO – Nitro fertilisers and explosives division

Restriction areas	Dust fall rate (D) (mg/m ² /day, 30-days average)	Permitted frequency of exceeding dust fall rate			
Residential area	D < 600	Two within a year, not sequential months			
Non-residential area	600 < D < 1200	Two within a year, not sequential months			
Site	Site Classification	Apr-20	May-20	Jun-20	Jul-20
Nitro dam wall	Non-residential	27	76	63	124
Nitro export entrance	Non-residential	91	103	148	215
Nitro cell phone tower	Non-residential	75	64	61	139
Nitro explosives entrance	Non-residential	95	95	110	191

CONCLUSION

Sasol appointed Gondwana to manage the dust fall networks at the Secunda Complex. An independent report has provided the findings for the current monitoring period.

A valid sample return of 100% was achieved for the current monitoring period. Sample exposure was 31 days.

All sites are classified as Non-Residential. The Non-Residential Standard (1,200 mg/m²/day) was not exceeded during the current monitoring period. The dust fall network is 100% compliant based on the NDCR (2013).