



MINISTER  
FORESTRY, FISHERIES AND THE ENVIRONMENT  
REPUBLIC OF SOUTH AFRICA

LSA 234243 /2

APPEAL DECISION

APPEAL AGAINST THE REFUSAL DECISION OF THE NATIONAL AIR QUALITY  
OFFICER ISSUED TO SASOL SOUTH AFRICA LTD, SECUNDA OPERATIONS.

Sasol South Africa Ltd

Appellant

Just Share

Interested and Affected Party (IA&P)

The National Air Quality Officer

Competent Authority

**Appeal:** On 04 April 2024, my predecessor, Minister Creecy issued her appeal decision on the appeal, which was lodged by Sasol South Africa Ltd (Sasol/ the appellant) against the decision that was taken by the National Air Quality Officer (NAQO) of the Department of Forestry, Fisheries and the Environment (the Department), on 11 July 2023, to refuse Sasol's application for an alternate load-based limit for its SO<sub>2</sub> emissions for its Secunda Synfuels Operations. Minister Creecy upheld Sasol's appeal but suspended her appeal decision pending her final determination of the appropriate concentration-based limits for

SO<sub>2</sub> to be applied to Sasol's Secunda Synfuels facility. This is the final point of determination on the appeal.

## 1. BACKGROUND AND APPEAL

1.1. On 04 April 2024, my predecessor, the previous Minister of Forestry, Fisheries and the Environment, Minister Creecy (the previous Minister), issued her decision on the appeal that Sasol had submitted against the decision that was taken by the NAQO, on 11 July 2023, to refuse its (Sasol's) application for an alternative load based limit for Sulphur Dioxide (SO<sub>2</sub>) for its Secunda Synfuel Operations.

1.2. In terms the previous Minister's appeal decision of 04 April 2024, she upheld the appellant's appeal and granted it (the Appellant) the requested load-based limit for SO<sub>2</sub>, subject to the following conditions:

*4.3.2 The appellant's SO<sub>2</sub> emissions must be in addition subject to a daily concentration limit which I will determine after the appellant has provided me with the relevant information to justify the limit that it (the appellant) deems appropriate.*

*4.3.3 The appellant is to furnish me with this written information...within 10 days of receipt of this appeal decision.*

*4.3.4 The Appeals Directorate must within 3 days of receipt of this information forward it (the information) to the I&AP (Just Share) and to the NAQO, for their consideration and comments. This is to afford the I&AP and the NAQO an opportunity to comment on the information provided.*

*4.3.5 The I&AP and the NAQO are to submit their written comments on the above information to the Appeal Director, at the email address provided above, within 10 days of receipt of the information.*

1.3. Additionally, the previous Minister suspended her appeal decision pending her final determination of the appropriate concentration-based limits for SO<sub>2</sub> to be applied to Sasol's Secunda Synfuels facility.

1.4. In compliance with the conditions contained in the previous Minister's appeal decision of 04 April 2024, the parties to the appeal attended to the following:

1.4.1. On 17 April 2024, Sasol submitted the information it deemed relevant to justify their request for the alternate SO<sub>2</sub> limit.

1.4.2. On 6 May 2024, Just Share submitted their comments on Sasol's information to the Director: Appeals and Legal Review as well as to the NECA Forum.

1.4.3. On 9 May 2024, the NAQO provided her inputs on SASOL's request to the Director: Appeals and Legal Review.

1.5. On 17 July 2024, I received the NECA Forums advice and recommendations on the appropriate SO<sub>2</sub> limit to be imposed on Sasol's Secunda facility, with due regard to the additional information provided by Sasol and the comments and responses thereon. I have considered the information provided and the NECA Forum's report and I accept the recommendation provided therein.

## **2. INFORMATION PROVIDED, SUBMISSIONS AND COMMENTS MADE, AND RECOMMENDATION OF THE NECA FORUM**

### **SASOL (the appellant)**

2.1. Sasol provided the Appeals Directorate with the information it considered relevant to justify its requested limit and it makes the following submissions:

2.1.1 It deems the proposed concentration limit of 2000 mg/Nm<sup>3</sup> for emissions from the steam plants (applicable to both the east and west stack) to be justified and appropriate. This concentration limit represents a maximum or ceiling value below which the steam plants at the Secunda Operations can consistently operate with due consideration to the aspects explained in paragraph 7.1 of its representations. It is also the current limit included in Sasol's atmospheric emissions license as referred to in paragraph 7.3 of its representations, which is lower than the existing plant standard of 3500 mg/Nm<sup>3</sup>.

- 2.1.2 The variability of sulphur content in the fine coal feed to the boilers at the steam plants determines the concentration of SO<sub>2</sub> emissions from the steam plants. Therefore, the concentration of the SO<sub>2</sub> emissions is not a function of plant performance and cannot be controlled through operational levers and plant optimisations interventions.
- 2.1.3 In contrast, it (Sasol) can utilise operational levers to ensure consistent operations below the granted load-based limits.
- 2.1.4 As part of its (Sasol's) Clause 12A application (and reiterated in its appeal) it has demonstrated, based on measured ambient concentration data as well as the atmospheric impact report, that emissions from the steam plants neither cause nor contribute to exceedances of the national ambient air quality standards (NAAQS) for SO<sub>2</sub> while operating in accordance with the concentration based emission limit of **2000 mg/Nm<sup>3</sup>** included in its atmospheric emission license (AEL). It therefore, deems it appropriate and justified to continue adhering to this limit while reducing the mass of emissions in accordance with the conditions of the appeal decision.

**JUST SHARE (Commenting Party/ Interested and Affected Party)**

- 2.2 Just Share made the following submissions in response to Sasol's representations:
- 2.2.1 It acquired the expert services of Mr Lauri Myllyvirta, to assess the appellant's proposed daily emission limit for the coal boilers at its Secunda plant. Mr Myllyvirta acted in his expert capacity on behalf of Just Share, during the appeal proceedings through written and oral submissions. Just Share, as well as Mr Myllyvirta, stand by their technical submissions that form part of the appeal record.
- 2.2.2 These submissions are premised on Mr Myllyvirta's findings and conclusions, based on his expert assessment of the 2019 and 2023 datasets provided by the appellant.

- 2.2.3 Sasol's proposed permit conditions for its Secunda coal boilers would bring about no improvement in environmental quality or public health, requiring no reductions in emissions whatsoever.
- 2.2.4 The proposed daily SO<sub>2</sub> emission limit would allow a substantial increase in emissions if conditions at the plant change. The proposed daily SO<sub>2</sub> emission limit is 30% and 15% above even the highest daily observed daily concentration at the East and West stacks.
- 2.2.5 The 503 t/d monthly emission limit is also 30% above the average concentrations and above the single highest observed 30-day mean emissions, allowing substantial emission increase most of the time and requiring no emission reductions at any time.
- 2.2.6 There is no reasonable justification for the Department to weaken the new plant MES Standard limits. If the Minister were to rely on historical emissions data to derive emission limits that could be attained without any measures to mitigate emissions, the concentration limits would be set at 1700 mg/Nm<sup>3</sup> for the west stack and 1400 mg/Nm<sup>3</sup> for the east stack, based on the appellant's 2019 and 2023 data.
- 2.2.7 Just Share does not concede that a daily emission limit that is weaker than the new plant MES of 1000 mg/Nm<sup>3</sup> for SO<sub>2</sub> is permissible in terms of the law. Further to this, its (Just Share's) election to commission and submit Mr Myllyvirta's expert assessment in response to this final point of determination, and not to address the presently available reasons advanced by the Minister in support of the appeal decision, should not be construed as acceptance thereof. In this regard, Just Share maintains its legal and factual positions as set out in its submissions in the appeal record.
- 2.2.8 The following additional points are extracted from Mr Myllyvirta's expert assessment:
- 2.2.8.1 "[T]he proposed combination [by Sasol] of 503 t/d monthly emission limit and 2000 mg/Nm<sup>3</sup> daily concentration limit would allow Sasol to very substantially increase emissions from the current situation, according to its own data.

2.2.8.2 The NECA forum and the Minister should derive what they deem to be rational and lawful concentration limits independently and with reference to all available evidence, including the recommendations of the SO<sub>2</sub> expert panel and the health impact evidence provided by Just Share.

2.2.8.3 There is no justifiable basis for setting the limit for the eastern stack based on concentrations at the western stack. To prevent further emissions increases at the eastern stack, separate limits should be instituted for each stack. Data provided by Sasol indicates that at the eastern stack, a limit of 1500 mg/Nm<sup>3</sup> is definitely attainable without any pollution abatement measures, and a limit of 1400 mg/Nm<sup>3</sup> could very well be attainable if the two readings above 1400 mg/Nm<sup>3</sup> (on April 19-20, 2023) took place during abnormal operating conditions. To this end, it is reiterated that there is still no justification for weakening the new plant MES limit.

**NATIONAL AIR QUALITY OFFICER (NAQO) (the competent authority)**

2.3 The NAQO provided additional data on Sasol's emissions and made the following submissions:

2.3.1 In terms of paragraph 12A of section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEMAQA), alternative limit is to be considered in terms of new plant standards of 1000 mg/Nm<sup>3</sup>.

2.3.2 The NAQO is in possession of detailed and longer-term measurements of the performance of steam plants in terms of daily SO<sub>2</sub> from July 2018 to June 2023, as presented in the Annexure provided in support of the NAQO's submissions. These long-term measurements show that the steam plants are operating below a limit of 2000 mg/Nm<sup>3</sup>. The trends from the NAQO's annexure indicate that Sasol Secunda steam plants are achieving daily limits of below 1500 mg/Nm<sup>3</sup> under normal operating conditions, albeit with episodes of exceedances.

## NECA FORUM'S ANALYSIS OF INFORMATION AND RECOMMENDATIONS

- 2.4 Dr Ramsay, an independent Air Quality specialist/ expert, provided the NECA Forum with her technical assistance and expert opinion on the most suitable concentration-based limit to be imposed on Sasol, based on her consideration and analysis of the information submitted by Sasol, Just Share's submissions in response thereto and the NAQO's comments and information provided. In this regard, Dr Ramsay advises as follows:
- 2.4.1 She noted that she was pleased to see that there are no extreme spikes in the 10-minute data. However, she observed that there are some gaps in the data provided by Sasol, and she indicated that Sasol may have removed periods of upset conditions.
- 2.4.2 She stated further *"Based on the data provided to us (2019 and 2023), to maintain status quo (based on only two years of data, and allowing for maximum 24-hour average stack concentrations measured over the period), 1800 mg/Nm<sup>3</sup> (West Stack) and 1500 mg/Nm<sup>3</sup> (East Stack) would be sufficient. However only one 24-hour average concentration at the West Stack over the two years exceeds 1700 mg/Nm<sup>3</sup> (1745 mg/Nm<sup>3</sup>), so a 1700 mg/Nm<sup>3</sup> MES is also reasonable for the West Stack. The "two standard deviations above the mean" approach using the two years of provided data would give us MES of 1700 mg/Nm<sup>3</sup> (West Stack) and 1400 mg/Nm<sup>3</sup> (East Stack). I cannot see any justification for the 2000 mg/Nm<sup>3</sup> limit, and this could allow Sasol to increase emissions."*
- 2.4.3 Contrary to the position advanced by Mr Myllyvirta, Dr Ramsay remarks that there is unnecessary complexity in differentiating by stack. According to her understanding, each stack is supplied by a different coal source. She does not believe that Sasol will work to decrease emissions at the West Stack by increasing emissions at the East Stack.
- 2.4.4 In conclusion, Dr Ramsay recommends that *"the Minister sets the limits at 1700 mg/Nm<sup>3</sup>, applicable at both stacks. Any daily average concentrations above this should be considered reportable incidents (in line with Section 30 NEMA)."*

2.4.5 Although Dr Ramsay gave consideration to the NAQO's suggestion that the appropriate limit for both stacks may be 1500 mg/Nm<sup>3</sup>, Dr Ramsay indicated that the NAQO appears to have had more data to work with than what was submitted by Sasol and Dr Ramsay is unable to interrogate the NAQO's analysis thereof without having access to the underlying data on which the NAQO relies on.

2.4.6 In its concluding paragraph to its report, the NECA Forum, having considered the information provided, the submissions and comments thereon, and Dr. Ramsays expert opinion, recommends that I impose the following concentration limits to accompany the load-based limit already granted to Sasol:

2.4.6.1 1700 mg/Nm<sup>3</sup> (West Stack); and

2.4.6.2 1400 mg/Nm<sup>3</sup> (East Stack).

2.4.7 The NECA Forum emphasises that these recommended limits align with the findings of Mr Myllyvirta on what limits would be attainable by Sasol and that, although, for practical reasons, Dr Ramsay suggests the same limit be applied to both stacks, it is the Forum's understanding that it is possible for different stacks to comply with different limits and in the circumstances, is of the view that this must apply.

### 3 EVALUATION (Reasons for decision)

3.1. I have considered the information and submissions provided by Sasol, Just Share and the NAQO, as well as the opinions expressed by the experts. I have also had regard to the recommendations of the NECA Forum, as contained in its report of 17 July 2023.

3.2. I have taken note that the parties submitted the following recommended limits:

3.2.1. **Sasol** deems the proposed concentration limit of **2000 mg/Nm<sup>3</sup>** for emissions from the steam plants (applicable to both the east and west stack) to be justified and appropriate.



- 3.2.2. **Just Share** submits that there is no reasonable justification for the Department to weaken the new plant MES Standard limits; and if I were to rely on historical emissions data to derive emission limits that could be attained without any measures to mitigate emissions, then based on the appellant's 2019 and 2023 data, the concentration limits would be set at 1700 mg/Nm<sup>3</sup> (West Stack) and 1400 mg/Nm<sup>3</sup> (East Stack).
- 3.2.3. **The NAQO** submits that the trends from the annexure she provided demonstrates that Sasol Secunda steam plants are achieving daily limits of below 1500 mg/Nm<sup>3</sup> under normal operating conditions, albeit with episodes of exceedances.
- 3.2.4. **Dr Ramsay** recommends that that I set the limits at 1700 mg/Nm<sup>3</sup>, applicable at both stacks. Any daily average concentrations above this should be considered reportable incidents (in line with Section 30 NEMA).
- 3.2.5. **The NECA Forum** recommends that I impose the concentration limits to accompany the load-based limit already granted to Sasol at 1700 mg/Nm<sup>3</sup> (West Stack); and 1400 mg/Nm<sup>3</sup> (East Stack). This proposal is aligned with the recommendation of Mr Myllyvirta on behalf of Just Share.
- 3.3. I took particular note that Dr Ramsay, the NAQO and Sasol proposed that their recommended limits (albeit that they differ from each other) be applied to both stacks. Moreover, Dr Ramsay emphasised this would be more practical. On the other hand, the Forum records that it is possible for different stacks to comply with different limits. I do not disagree with the Forum on this point.
- 3.4. It is concerning to me that Sasol has not provided me and the NECA Forum with complete information to justify its requested limit. Any decision that I make must be supported by accurate and complete information. I note that Dr Ramsay records that Sasol may have removed periods of upset conditions.
- 3.5. With this in mind I deem it appropriate to grant the concentration limits for both stacks per the NECA Forum's recommendation as follows: 1700 mg/Nm<sup>3</sup> (West Stack); and 1400 mg/Nm<sup>3</sup> (East Stack).

- 3.6. I am of opinion that the appellant will be able to adhere to the load mass limit as set out above.

#### **4. DECISION**

- 4.1. This decision provides the final point of determination on Sasol's appeal against the NAQO's decision, namely, the appropriate concentration-based limits for SO<sub>2</sub> to be applied to Sasol's Secunda Synfuels facility, and it must thus be read in conjunction with my predecessor's appeal decision of 04 April 2024. Moreover, the suspension of my predecessor's appeal decision of 04 April 2024 is hereby uplifted. Additionally, nothing herein must be construed to be a reconsideration or redetermination of any aspect of the appeal which the previous Minister has already determined in her appeal decision of 04 April 2024.

- 4.2. In my determination of the appropriate concentration-based limits for SO<sub>2</sub> to be applied to Sasol's Secunda Synfuels facility, I had regard to:

- 4.2.1. The previous Minister's appeal decision of 04 April 2024;
- 4.2.2. The appeal record;
- 4.2.3. The information provided by the appellant dated 17 April 2024;
- 4.2.4. The response received from Just Share on 6 May 2024;
- 4.2.5. The response received from NAQO on 9 May 2024; and
- 4.2.6. The NECA Forum report of 17 July 2024.

- 4.3. Having considered and evaluated the information set out above, I have determined the concentration limits to accompany the load-based limit at Sasol's Secunda Synfuels facility as follows:

- 4.3.1. 1700 mg/Nm<sup>3</sup> (West Stack);
- 4.3.2. 1400 mg/Nm<sup>3</sup> (East Stack); and
- 4.3.3. Any daily average concentrations above are reportable incidents in line with Section 30 NEMA.

- 4.4. In arriving at my decision on this issue, I have not responded to every statement set out in the information provided and submissions made, and where a particular statement is not directly addressed, this should not be interpreted to mean that I have not considered that statement, or that I agree with, or abide by the statement made.
- 4.5. I have also not listed each and every annexure, document or report considered, and the absence of any such annexure, document or report should not be interpreted to mean that I have not considered same, or that I agree with, or abide by the findings made therein.
- 4.6. In addition, should any party be dissatisfied with any aspect of my predecessor's appeal decision of 04 April 2024 and/or my decision on the concentration limits to accompany the load-based limit, they may apply to a competent court to have this decision judicially reviewed. Judicial review proceedings against either decision must be instituted within 180 days of notification hereof, in accordance with the provisions of section 7 of the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) (PAJA).



**DR DION T GEORGE, MP**

**MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT**

DATE: 25 July 2024.