groundWork

Environmental justice action

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Monday, 11th March 2019

Dear Ms. Govender

SUBMISSIONS ON ARCELORMITTAL VANDERBIJLPARK WORKS' APPLICATION FOR A POSTPONEMENT AND ALTERNATIVE PLANT STANDARDS OF THE LISTED ACTIVITIES AND ASSOCIATED MINIMUM EMISSION STANDARDS

1. The Vaal Environmental Justice Alliance (VEJA)[1], and groundWork (gW)[2] make the following submissions in relation to ArcelorMittal South Africa's (AMSA) application for

[1] VEJA is a democratic alliance of empowered civil society organisations in the Vaal Triangle, who have the knowledge, expertise and mandate to represent the determination of the communities in the area to control and eliminate emissions to air and water that are harmful to these communities and to the environment. VEJA is an active role-player in various environmental (including air quality) campaigns within the Vaal Triangle Airshed Priority Area (VTAPA).

[2] groundWork is a non-profit environmental justice campaigning organisation working primarily in South Africa, in the areas of Climate & Energy Justice, Coal, Environmental Health, Waste, Environmental Justice Education and Environmental Justice Information.

suspension, alternative limits and/or postponement of compliance with the minimum emission standards (MES) dated 8 February 2019.

2. Our submissions are based on the Background Information Document (BID), entitled "*Notice Of Applications For The Postponement Of Compliance Timeframes To Achieve The Minimum Emission Standards, And Alterative Plant Standards For Certain Plants At The Vanderbijlparkworks, Emfuleni Local Municipality, Gauteng*", dated 8 February 2019, and the accompanying Atmospheric Impact Report (AIR) for Authority Review, dated 19 February 2019. AMSA's consultant Royal HaskoningDHV shared the AIR with interested and affected parties on 20 February 2019, however, on 22 February 2019, Royal HaskoningDHV was notified that many parts of the AIR was illegible or missing. Subsequently, on 26 February 2019, Royal HaskoningDHV distributed a revised and updated version of the AIR.

I. Introduction and Background

3. AMSA is seeking postponement and/or alternative new plant standards for three pollutants from its Vanderbijlpark Works operations.

   3.1. First, although vaguely outlined in AMSA's BID and AIR, it is seeking a **postponement application for "the special arrangement of sulphur recovery"** from its operations as required for sub-category 3.1: Combustion Installations under the "List Of Activities Which Result In Atmospheric Emissions Which Have Or May Have A Significant Detrimental Effect On The Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions Or Cultural Heritage" ("List of Activities regulation", "Minimum Emissions Standards" or "MES") in terms of Section 21 of the Air Quality Act (AQA)(last amended 31 October 2018). The List of Activities regulation requires: "Sulphur-containing compounds to be recovered from gases to be used for combustion with a recovery efficiency of not less than 90% or remaining content of inorganic sulphur-containing compounds to be less than 1000 mg/Nm3 measured as hydrogen sulphide, whichever is strictest."

   3.2. Second, it is seeking an **alternative new plant emissions standard of 150 mg/Nm^3 for Hydrogen Sulfide (H_2S)** stack emissions for its coke oven from what is required under sub-category 3.2. for Coke Production. This proposed alternative standard is approximately 15 times greater than the standard for existing plants (10mg/Nm^3) and 20 times greater than the standard for new plants (7mg/Nm^3), as required under the MES.

3.3. Third, it is seeking an **alternative new plant emissions standard of 1700 mg/Nm³ for Sulphur Dioxide (SO_2)** for its Direct Reduction kilns from what is required under sub-category 4.12, which is in effect the standard for existing plants that the MES requires to have been met by 1 April 2015.

3.4. Fourth, it is seeking **postponement of Hydrochloric Acid emissions** at the Lurgi Plant from the standard for new plants of 30 mg/Nm³ that the MES requires to be met by 1 April 2020 under sub-category 7.2 for the production of acids. It should be noted that the List of Activities regulations under this category regulates hydrogen chloride, not hydrochloric acid. This discrepancy between what AMSA is requesting and what the regulation requires must be reconciled.

4. A summary of the key information (outlined above) in relation to AMSA's application is reflected in the table below:

Category and description of the Listed Activity	**Criteria Pollutant**	**Existing Standard**	**New Standard**	**AMSA's Proposed Standard**
Category 3: Carbonization and Coal Gasification Sub category 3.1: Combustion Installations	Hydrogen Sulphide (H_2S)	N/A	N/A	Special arrangement for sulphur-recovery from gases with a recovery efficiency of not less than 90% or remaining content of sulphur to be less than 1000 mg/Nm3 measured as H2S, whichever is strictest.
Category 3: Carbonization and Coal Gasification Sub-category 3.2 Coke Production	Hydrogen Sulphide (H_2S)	10 mg/Nm³	7 mg/Nm³	150 mg/Nm³
Category 4: Pre-Reduction and Direct Reduction Sub-category 4.1.2 Metallurgical Industry	Sulphur Dioxide (SO_2)	1700 mg/Nm³	500 mg/Nm³	1700 mg/Nm³

Category 7: Production of Acids Sub-category 7.2 Inorganic Chemicals Industry	Hydrogen Chloride (HCl)	100 mg/Nm^3	30 mg/Nm^3	100 mg/Nm^3

5. As discussed in greater detail below, AMSA's requests are unlawful under the MES, AQA and other laws, and their BID and AIR fail to meet minimum requirements for such applications. To begin with, AMSA's applications should be denied because ambient air quality in the Vaal Triangle area, the location of AMSA's Vanderbijlpark Works, is not compliant with the applicable National Ambient Air Quality Standards. In addition, AMSA has vastly misinterpreted the requirements of the MES and AQA to conveniently allow it to submit an alternative new plant standard for extremely toxic Hydrogen Sulfide that is 20 times less protective that the standard required by the MES for new plants and 15 times less protective the standard for existing plants, as well as an alternative standard for sulphur dioxide that is over three times less protective than the required standard. These requests contradict the objects and purports of the MES, AQA, Constitution and other laws and regulations. With respect to all of its requests, AMSA has not provided detailed justification and reasons, its AIR is grossly deficient, and its BID and AIR are missing vital information necessary for the public to adequately assess the application. For these and other reasons specified below, AMSA's request should be categorically denied.

6. We reserve our rights to supplement these objections upon receipt of any new information that we may receive at a later stage

II. Summary of the legislative requirements for MES postponement applications

Constitution and National Environmental Management Principles

7. Section 24 of the Constitution guarantees everyone the right to an environment not harmful to health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that: prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. All law, including environmental and air

quality legislation, must be consistent with and give effect to the right to an environment.

8. The overarching environmental legislation which gives effect to section 24 of the Constitution is the National Environmental Management Act, 1998 (NEMA),[3] and the National Environmental Management (NEM) Principles in NEMA's section 2, which must be adhered to by any organ of state in all decision-making and when exercising its functions. Some of these binding directive principles are as follows:

   8.1. the environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage ("public trust doctrine");[4]

   8.2. a risk-averse and cautious approach must applied, which takes into account the limits of current knowledge about the consequences of decisions and actions[5] ("precautionary principle");

   8.3. negative impacts on the environment and on people's environmental rights must be anticipated and prevented, and where they cannot be altogether prevented, must be minimised and remedied ("preventive principle");[6]

   8.4. pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied ("preventive principle");

   8.5. environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons;[7]

   8.6. responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its lifecycle;[8]

[3] Section 2(1)of NEMA.
[4] Section 2(4)(n) of NEMA.
[5] Section 2(4)(a)(vii) of NEMA.
[6] Section 2(4)(a)(viii) of NEMA.
[7] Section 2(4)(c) of NEMA.
[8] Section 2(4)(e) of NEMA.

8.7. sensitive, vulnerable, highly dynamic or stressed ecosystems…require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure;[9]

8.8. the cost of remedying the pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment ("polluter pays' principle"); [10]

8.9. use and exploitation of non-renewable natural resources must be responsible and equitable, and take into account the consequences of the depletion of the resource;[11] and

8.10. the participation of all interested and affected parties in environmental governance must be promoted.[12]

Air Quality Act

9. In the context of giving effect to section 24 of the Constitution and embodying the NEM Principles, the Air Quality Act was promulgated and came into effect in 2005. The AQA aims to ensure that air pollution is not harmful to human health or well-being, and to enhance the quality of air in South Africa.[13] The AQA provides that its interpretation and application must be guided by the NEM Principles and accordingly, the National Air Quality Officer (NAQO), licensing authorities must adhere to the NEM Principles and legal provisions of the AQA in its decision-making and exercise of their functions – including in considering AMSA's current applications.

[9] Section2(4)(r) of NEMA.
[10] Section2(4)(p) of NEMA.
[11] Section2(4)(a)(v) of NEMA.
[12] Section 2(4)(f) of NEMA.
[13] Section 2 of the AQA.

2017 National Framework

10. The AQA makes provision for a National Framework to achieve the objects of the AQA. The 2017 Framework, the third and most updated version was published in October 2018.[14]The 2017 Framework – which was first established in 2007, and has been amended twice since – aims to achieve the objectives of the AQA and provides various norms and standards to control emissions, manage and monitor air quality, and provide mechanisms, systems, and procedures to attain compliance with the NAAQS.[15] The 2017 Framework forms part of the definition of "this Act" in the AQA,[16] and "*binds all organs of state in all spheres of government*".[17] The AQA requires that an organ of state "*give effect to the National Framework when exercising a power or performing a duty in terms of [the AQA] or any other legislation regulating air quality management*".[18]

11. Paragraph 5.4.3.4 of the 2017 Framework provides that: "*given the potential economic implications of emission standards, and mindful that emission standard setting in South Africa was not based on comprehensive sector-based CBA (at least not for the initial group of Listed Activities), provision is made for specific industries to apply for possible extensions to compliance time frames for new plant standards. A proponent of a Listed Activity will be allowed to apply for a postponement or suspension of the compliance date and such an application will be considered based on the following conditions being met:*

    11.1. *an application is accompanied by a completed Atmospheric Impact Report (as contemplated in Section 30 of the AQA); and* ***demonstration that the industry's air emissions are not causing direct adverse impacts on the surrounding environment****;*

    11.2. *the application is accompanied by a concluded public participation process undertaken as specified in the NEMA Environmental Impact Assessment Regulations;*

    11.3. *the application is submitted to the National Department on or before 31 March 2019****;***

[14] Document available here: https://cer.org.za/wp-content/uploads/2018/10/National-Environmental-Managerment-Air-Quality-Act-39-2004-the-2017-National-20181026-GGN-41996-01144.pdf
[15] Section 7(1) of the AQA.
[16] Section 1(1) of the AQA.
[17] Section 7(3)(a) of the AQA.
[18] Section 7(4) of the AQA.

11.4. ***ambient air quality in the area is in compliance with the applicable National Ambient Air Quality Standards****; and*

11.5. *other requirements as may be specified by the National Air Quality Officer*" (our emphasis). [19]

12. Paragraph 5.4.3.4 of the 2017 Framework thus stipulates that compliance with MES may be postponed or suspended, provided, among other things, that the NAAQS in the area are in compliance and the air emissions are not causing direct adverse impacts on the surrounding environment.

13. Paragraph 5.4.3.4 of the 2017 Framework also notes that: *"that the year 2020 marks 10 years since the publication of the 2010 AQA Section 21 notice. Therefore, sufficient time has been afforded to industry towards compliance with the initial MES by 2020. In upholding the objectives of the AQA, the Department provides certainty regarding postponement or suspension of compliance timeframes in the following order:*

13.1. *Existing facilities may apply for a* ***once-off postponement of compliance timeframes for new plant standards****. A postponement if granted will be for a period not exceeding 5 years and* ***no postponement would be valid beyond 31 March 2025****;*

13.2. *Existing facilities that will be* ***decommissioned by 2030 may apply for a once-off suspension of compliance timeframes with new plant standards for a period not beyond 2030****. An application must be accompanied by a clear decommissioning schedule and no such application shall be accepted after 31 March 2019;*

13.3. *Existing facilities that will be granted a suspension of compliance timeframes shall* ***comply with existing plant standards during the suspension period until they are decommissioned****; and*

13.4. ***No postponement of compliance timeframes or a suspension of compliance timeframes shall be granted for existing plant standards****.*

13.5. *An existing facility may submit an application regarding a new plant standard to the National Air Quality Officer for consideration, if* ***the facility is in compliance with other emission limits but cannot comply with a particular pollutant or pollutants****. An application must* ***demonstrate***

[19] Please refer generally to page 60 to 61.

previous reduction in emissions of the said pollutant or pollutants, measures and direct investments implemented towards compliance with the relevant new plant standards*. The National Air Quality Officer, after consultation with the Licensing Authority, may grant an alternative emission limit or emission load* ***provided there is compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for; or the Atmospheric Impact Report does not show increased health risk where there is no ambient air quality standard*****"**

List of Activities and Minimum Emissions Standards

14. In an effort to control atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions, or cultural heritage, the Minister published the List of Activities, as well as associated MES,[20] in terms of section 21 of the AQA.

15. The List of Activities came into force on 1 April 2010 and was most recently amended on 31 October 2018. It prescribes MES for various pollutants for several categories of polluting activities, including those for combustion installations such as AMSA's carbonisation and coal gasification infrastructure, direct reduction kilns, coke batteries and on-site boilers. The MES regulate a variety of pollutants, including for the purposes of AMSA's application, sulphur dioxide, hydrogen sulphide, and hydrochloric acid. In general, the requirements of the Listing Activities regulations are substantially similar to those set out in the 2017 Framework.

16. The regulations require existing plants to comply with more lenient standards by 1 April 2015, and stricter new plant standards by 1 April 2020.

17. The List of Activities published on 2 November 2018[21] provides as follows in relation applications for the postponement and suspension of MES compliance:[22]

    17.1. "*As contemplated in the paragraph 5.4.3.5 of the National Framework for Air Quality Management in the republic of South Africa, published in terms of Section 7*

[20] The Listed Activities and Associated Minimum Emission Standards identified in terms of Section 21 of the National Environment Management Act: Air Quality Act 39 of 2004, as amended on 31 October 2018

[21] https://cer.org.za/wp-content/uploads/2005/09/Section-21-Activities.pdf

[22] The amendments are also set out in P 13 of the Summary Motivation Document

of this Act, an application may be made to the National Air Quality Officer for the postponement of compliance timeframes …"[23]

17.2. "*An existing plant may apply to the National Air Quality Officer for a once-off postponement with the compliance timeframes for minimum emission standards for new plant as contemplated in paragraph (10). A once off postponement with the compliance timeframes for minimum emission standards for new plant may not exceed a period of five years from the date of issue. No once-off postponement with the compliance time frames will be valid beyond March 2025*"[24]

17.3. "*An existing plant to be decommissioned by 31 March 2030 may apply to the National Air Quality Officer before 31 March 2019 for a once-off suspension of compliance timeframes with minimum emission standards for new plant. Such an application must be accompanied by a detailed decommissioning schedule. No such application shall be accepted the National Air Quality Officer after 31 March 2019*"[25]

17.4. "*An existing plant that has been granted a once-off suspension of the compliance timeframes as contemplated in paragraph (11B) must comply with minimum emission standards for existing plant from the date of granting of the application and during the period of suspension until decommissioning*"[26]

17.5. "*No postponement of compliance timeframes or a suspension of compliance timeframes shall be granted for compliance with minimum emission standards for existing plant*"[27]

18. Furthermore, section 12A of the regulations, which is a provision under the general heading "Postponement or Suspension of compliance time frames" provides that:

18.1. "(a) An existing plant may submit an application regarding a new plant standard to the National Air Quality Officer for consideration if the plant is in compliance with other emission standards but cannot comply with a particular pollutant or pollutants."

[23] Paragraph 10 of the List of Activities
[24] Paragraph 11A of the List of Activities
[25] Paragraph 11B of the List of Activities
[26] Paragraph 11C of the List of Activities
[27] Paragraph 11D of the List of Activities

18.2. *"(b) An application must demonstrate a previous reduction in emissions of the said pollutant or pollutants, measures and direct investments implemented towards compliance with the relevant new plant standards."*

18.3. *"(c) The National Air Quality Officer, after consultation with the Licensing Authority, may grant an alternative emission limit or emission load if: (i) there is material compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for; or (ii) the Atmospheric Impact Report does not show a material increased health risk where there is no ambient air quality standard."*

19. As described below, AMSA's applications fail to comply with the legal requirements set out above.

III. Comments to AMSA's application

20. As detailed above, the Air Quality Act of 2004, List of Activities regulations, and the 2017 Framework bar postponement, suspension, or alternative limits unless certain statutory requirements are satisfied. Those requirements have not been met and, therefore, the law requires the rejection of AMSA's requests.

A. AMSA should not be granted its requests for postponements because its Vanderbijlpark Works facility is in an area that is non-compliant with ambient air quality standards.

21. AMSA's request postponements of its Hydrogen Chloride (HCI) emissions and special arrangement for sulphur recovery should denied as per the requirements of the 2017 Framework, because its plant is situated within the Vaal Triangle Airshed Priority Area (VTAPA).

22. AS mentioned, paragraph 5.4.3.4 of the 2017 Framework prohibits postponement or suspension applications unless "***ambient air quality in the area is in compliance with the applicable National Ambient Air Quality Standards*.**" AMSA's Vanderbijlpark Work's operation is situated within the Emfuleni Local Municipality which falls within the VTAPA.

23. The VTAPA AQMP has been in place since 2009, and its primary objective is to bring the air quality in the Vaal Triangle in line with all NAAQS. Even though the Vaal Triangle Airshed was declared a priority area almost 13 years ago – with the specific aim of reducing pollution so that it no longer exceeds the national ambient air quality standards

(NAAQS) – regular, significant exceedances of the NAAQS, due largely to industrial sources, remain common in this area.[28]

B. AMSA cannot propose an alternative new plant standard that is equal to or less protective than existing plant standards and that would allow it to avoid compliance with applicable new plant standards indefinitely.

24. The AQA aims to ensure that air pollution is not harmful to human health or well-being, and to enhance the quality of air in South Africa. The MES were promulgated in an effort to control atmospheric emissions that have or may have a significant detrimental effect on the environment and human health. These provisions are integral to guarantee the constitutional right to a healthy environment.

25. In order to meet these overarching objectives, the 2017 Framework and the List of Activities regulation allow for postponement or suspension applications under narrow circumstances. An operator may only ask for a once-off postponement for five-years or suspension until 2030 for new plant standards, and specifies clearly that no postponement or suspension shall be allowed for existing plant standards. Under very strict criteria, that AMSA does not meet, operators can also submit an application regarding an alternative new plant standard.

26. As mentioned, AMSA is requesting a new plant standard for SO_2 that is equivalent to the existing plant standard under the MES of 1700 mg/Nm^3. This standard is over three times less protective than the applicable new plant standard.[29] For its H_2S emissions, AMSA is proposing new an alternative standard that is 20 times less protective than the new plant standard and 15 times less protective than the applicable existing plant standard.

27. It is clear that AMSA does not intend to ever comply with the applicable new plant MES for SO_2, and in the case of H_2S it cannot comply even with the applicable existing plant standard. Therefore, AMSA could not have applied for a once-off five-year postponement for either pollutant. For H_2S, AMSA would also be precluded from a

[28] See, e.g., Department of Environmental Affairs, The Second Generation Vaal Triangle Airshed Priority Area Air Quality Management Plan: Draft Baseline Assessment Report (2017), https://saaqis.environment.gov.za/pagesfiles/VTAPA%20SECOND%20GENERATION%20AQMP_DRAFT%20BASELINE%20ASSESSMENT%20REPORT_PUBLIC%20COMMENT.pdf. (Model simulations indicated widespread exceedances of O3 and PM over the majority of the VTAPA.); also, Presentation by Dr Thuli N. Khumalo, National Air Quality Officer, 13th Air Quality Governance Lekgotla (01 – 03 October 2018),http://www.airqualitylekgotla.co.za/assets/2018_1.3_2018_state_of_air_report.pdf.

[29] See MES, Sub-category 4.12.

postponement application because it cannot meet existing plant standards, and a postponement from these standards are not allowed. In addition, AMSA does not plan to close its operations by 2030, and thus is not applying for a once-off suspension. Instead, AMSA has made a desperate and last minute attempt to by-pass compliance with the List of Activities regulation by requesting incredibly weak alternative standards for SO_2 and H_2S for the life of its operations.

28. Approving AMSA's proposal for these alternative limits would render the legal regime governing postponements and suspensions meaningless and defeat the purpose of the AQA because it would allow a polluter who cannot come close to ever complying with the new plant standards to simply substitute whatever new plant emissions standards they want, no matter how weak and not matter how harmful to human health and the environment. If AMSA's request is approved, it would thus indefinitely release toxic pollutants at much greater levels than the MES. This would amount to an unlawful exemption under the law, and defeat the strict protection regime laid out in the AQA, List of Activities regulations, and 2017 Framework. It would also be a clear violation of section 24 of the Constitution.

29. For this reason alone, AMSA's request must be denied.

C. AMSA's requests for alternative new plant standards for hydrogen sulphide and sulphur dioxide should be denied because they do not meet the requirements of Section 12A of the List of Activities regulation.

30. A mentioned, section 12A of the List of Activities regulation and paragraph 5.4.3.4 of the 2017 Framework provides that an existing plant may submit an application for a new plant standard if the applicant meets ALL of the following three requirements:

30.1. That the plant is in compliance with other emission standards but cannot comply with a particular pollutant or pollutants;

30.2. Previous reduction in emissions of the said pollutant or pollutants, measures and direct investments implemented towards compliance with the relevant new plant standards; and

30.3. there is material compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for or the Atmospheric Impact Report does not show a material increased health risk where there is no ambient air quality standard.

31. AMSA has not met any of these requirements for its request for alternative standards for H_2S or SO_2.

32. To begin with, AMSA Vanderbijlpark Works is non-compliant with at least three emissions standards (H_2S, SO_2 and HCl), as evidenced by its own application. The regulation specifies that an application for an alternative standard can only proceed if the "plant is in compliance with other emissions standards." In other words, the regulation does not envision multiple requests for alternative standards for the same facility or plant. Because AMSA is non-compliant, by its own admission, with at least three standards, it fails to meet the first requirement above.

33. Second, AMSA has given scant, if any, explanation to demonstrate "previous reduction in emissions of the requested pollutants, measures and direct investments implemented towards compliance with the new plants standards."

    33.1. With respect to its request for an H_2S alternative standard, AMSA's BID vaguely explains that although it will install "new, state-of-the-art equipment for the cleaning and recirculation of by-product coke oven gas …, it is not foreseen that the recovery of sulphur from the coke oven gas will yield H_2S stack emissions below the prescribed [MES]." AMSA further states that it is "unfeasible for Coke Batteries of the technology and age as those at AMSAVW" to achieve either the existing or new plant standards for H_2S. AMSA has not demonstrated a previous reduction in emissions of H_2S from the plant. AMSA's explanation fails to specify measures and direct investments taken to comply with the standards. For example, it does not discuss what best available technology options exist to reduce H_2S stack emissions, the cost for such technologies, and what steps it has taken to invest in these or other technologies. It thus fails to meet the second requirement above for H_2S.

    33.2. With respect to its request for a SO_2 alternative standard, AMSA's BID notes that it has achieved a 26.7 % reduction in total emissions since 2005, although does not specify what the baseline level is. However, AMSA further states that it is "not economically feasible to achieve [the new plant] standard … and SO_2 emissions from the kilns are dependent on the sulphur content in the coal which is utilised as the reducing agent in the kilns on site." AMSA provides no explanation or evidence as to why it is not "economically feasible" to meet the MES. It is thus impossible for the public or regulatory authority to determine whether it has taken reasonable measures or direct investments towards compliance. A general and claim of economic concern without adequate justification does not meet the requirements above. Furthermore, AMSA simply and vaguely states that it cannot

meet the standard because of the sulphur content of the coal it uses. It provides no explanation or evidence concerning whether it would be feasible to use low-sulphur content coal and what efforts it has made to secure such coal. Again, a general and unquantified concern about rejecting the use of a cleaner fuel source as a control option for reducing pollutants also does not meet the requirements above.

34. AMSA also fails to meet the third requirement for SO_2 because it has not proven that there is material compliance with the ambient air quality standard in the area for this pollutant. For H_2S AMSA does not meet this requirement because it has not assessed the health risks from the potential increase of H_2S (required because there are no ambient standards for this pollutant).

34.1. AMSA's AIR asserts that the national ambient air quality standard for SO_2 is not exceeded in the VTAPA "based on the monitoring results obtained from the various stations in the area."[30] AMSA has not disclosed what stations it assessed to support its findings and the levels of SO_2 from these stations. Thus, the public or the regulating authority cannot verify AMSA's findings. In fact, to the contrary, the latest draft baseline assessment report for the VTAPA found that for SO_2 there is significant hourly, daily, and annual non-compliance from 2007-2016 at three of the ten monitoring stations in the priority area.[31] Moreover, data from eight of the monitoring stations was unavailable for multiple years during the sampling period, suggesting that the pollution in the area could be substantially underestimated.[32]

34.2. AMSA has not assessed the health impacts for its request to emit H_2S at 20 times greater levels than allowed under the new plant standard in the MES. H_2S is an extremely toxic and dangerous pollutant. As AMSA itself acknowledges in its AIR, even low levels of H_2S in ambient air can cause significant health problems, including, bronchial constriction in asthmatic individuals, increased eye complaints, increased blood lactate concentration, decreased skeletal muscle citrate synthase activity, decreased oxygen uptake, eye irritation , and fatigue, loss of appetite, headache, irritability, poor memory, and dizziness.[33] At levels near, but below,

[30] AIR, p. 69.
[31] Department of Environmental Affairs, The Second Generation Vaal Triangle Airshed Priority Area Air Quality Management Plan: Draft Baseline Assessment Report (2017), Table 5-25.
[32] *Ibid*.
[33] World Health Organization, HYDROGEN SULFIDE: HUMAN HEALTH ASPECTS, 2003, Table 2, https://www.who.int/ipcs/publications/cicad/en/cicad53.pdf?ua=1.

AMSA's requested alternative standard, H_2S can cause olfactory paralysis. Thus, even a minor increase from the new plant standard in the MES can cause substantial health risks to the surrounding population. Here, as mentioned, AMSA is proposing a 20 times increase from the legal standard for new plants. The BID does not discuss any potential health implications from is request for a vastly higher H_2S alternative standard. Similarly, AMSA's AIR discusses general health risks from H_2S, but does not assess or model the health risks from its proposed alternative standard. This is insufficient to demonstrate that there will not be a material increased health risk from the alternative standard.

35. In summary, AMSA's application should be denied because it has failed to meet all three requirements for an alternative new plant standard for both H_2S and SO_2.

D. AMSA application for a postponement of the special arrangement for sulphur recovery should be denied because the List of Activities regulation and 2017 Framework does not allow a postponement of this requirement.

36. Nothing in the List of Activities regulation and 2017 Framework allows AMSA to request a postponement of the special arrangements listed under each sub-category of activity. The regulation and 2017 Framework clearly limit postponements and suspensions to compliance with the "time frames" required for compliance with the MES.

37. For this reason, AMSA's request for a postponement of the special arrangement for sulphur recovery should be denied.

E. AMSA applications should be denied because it has not provided a detailed justification and reasons for any of its requests

38. AMSA has not provided a detailed justification and reasons for its application, as required by section 12 of the List of Activities regulations.

    38.1. For SO2, as mentioned, AMSA provides no explanation or evidence as to why it is not "economically feasible" to meet the MES, or explanation or evidence concerning whether it would be feasible to use low-sulphur content coal and what efforts it has made to secure such coal.

    38.2. For H_2S, as mentioned, AMSA statement that it unfeasible for "Coke Batteries of the technology and age as those at AMSAVW" to achieve either the existing or new plant standards for H_2S is a vague and general statement that fails specify

measures and direct investments taken to comply with the standards, including through investments in best available technology.

38.3. For HCl, AMSA, again, generally and vaguely states that it is requesting a postponement because "planned upgrades to the scrubbing facilities at the Lurgi Plant … may not be completed or fully efficient by 1 April 2020." AMSA has not provided any information about its current emission levels for HCl. Furthermore, AMSA provides no further details or reasons as to why it cannot complete the facility and what steps it has taken to comply, despite having more than 10 years of notice regarding the compliance periods for the MES. Indeed, the 2017 Framework states: "It should be noted that the year 2020 marks 10 years since the publication of the 2010 AQA Section 21 notice (Listed activities and minimum emission standards). Therefore, sufficient time has been afforded to industry towards compliance with the initial MES by 2020." AMSA was therefore well aware of this provision at least from April 2010, and was aware from several years before that that the MES would come into force, requiring the necessary emission control measures to ensure compliance with the law.

38.4. As a reason for its postponement request concerning the special arrangement for sulphur recovery—which we again assert is not allowed under the law—the BID explains that AMSA cannot meet this requirement because "although a project has already been initiated to [recover sulphur], the [MES deadline] will not be achievable owing to the complexity of the intended upgrades… ." The BID further explains: "Despite numerous attempts to sustain operations of the current sulphur recovery facilities, the long-term operation of this failing equipment was no longer feasible. Hence the decision to invest in the installation of new, state-of-the-art equipment." Again, AMSA has not adequately explained why it has not been able to meet this requirement despite over ten years of notice. For example, AMSA does not explain why it took over ten years for it to recognize that its initial project would fail to adequately recover sulphur and why it did not invest in new state-of-the-art technology in time to comply with the MES.

39. These general and unquantified statements are insufficient to meet the requirements of section 12. AMSA provided no detail as to what other controls were considered, how much it would cost to comply with other controls, why they purportedly cannot comply when presumably other facilities around the world can, and other important details identified above. For this reason, AMSA's application should be categorically denied.

F. Problems with the Atmospheric Impact Report and Air Dispersion Modelling

40. The AIR has numerous deficiencies:

40.1. On page 57, AMSA refers to its results as showing the maximum concentration of various pollutants "at the boundary" of the site. However, measurements at the boundary of the site are unlikely an accurate reflection of potential harm because the largest effects from the pollution may be further downwind than that or further away due to the height of the stacks. AMSA should be reporting the maximum concentrations from its facility regardless of where it is, not just the maximum at the site boundary.

40.2. On page 56, AMSA acknowledges that there is uncertainty regarding AERMOD modeling results and that, therefore, monitoring should be carried out to confirm the modeling results. But then AMSA on page 57 provides monitoring results for only one monitor – Sebokeng – and one pollutant – SO_2. AMSA notes that the monitor is north of the site, presumably in or near the town of Sebokeng which is 1.8 km north of the site and 6km north of the main operations on the site. No information is provided, however, to show that such monitoring results are representative of the highest likely impacts from the facility.

40.3. The claim on page 51 that emissions during startup, shutdown, and maintenance conditions should not adversely impact public health seems questionable at best. AMSA does not appear to identify the level of emissions during such conditions. Typically, emissions are quite high during startup, shutdown, and maintenance because pollution controls are operating only partially or not at all during those conditions. Even short-term exposure to pollutants such as SO_2 can cause health problems, and the AIR implicitly acknowledges that startup, shutdown, and maintenance conditions can last for hours or even days.

40.4. Table 12 on page 63 fails to identify the 1-hour SO_2 NAAQS in the US, which is 196 ug/m3.

40.5. The modeling results reported on pages 56-57 are confusing and most likely incorrect. For example:

40.5.1. The 1-hour, 24-hour, and annual SO2 impacts are the same for Scenarios 3 and 4, which means either the numbers are wrong, or they the AIR is not comparing AMSA's proposed postponement and alternative scenario with a scenario in which the facility complies with the MES.

40.5.2. The 1-hour H2S impacts are the same for Scenario 3 and 4, even though Scenario 3 has higher H2S emissions.

40.6. There is no evidence that AMSA has checked its model against actual data on the ground to understand if its model is calibrated correctly.

40.7. It is not possible to verify the results in the AIR without having access to all of the air quality modelling files that AMSA or its consultant used. At a minimum, AMSA needs to identify what other pollution sources besides its facility are included in the modelling and/or what level of background concentrations is assumed in the modelling.

41. AMSA's application should not be considered until these problems are addressed.

G. AMSA's repeated non-compliance with its AEL should preclude it from seeking postponements or alternative standards.

42. AMSA is not a "fit and proper person" as required by AQA, and as such should not be to seek a postponement or alternative standards under the MES. This would be tantamount to providing an unlawful polluter a free pass. According to section 49 of the AQA one of the criteria for a fit and proper person includes whether or not the applicant has failed to comply with the AQA or other legislation. Given AMSA's repeated non-compliance with its AEL and other provisions of AQA, as well as the numerous significant non-compliances as set out in an 18 June 2018 letter from the Centre for Environmental Rights to the Department of Environmental Affairs, our client submits that AMSA is not a fit and proper person to hold an AEL and that it should not be granted any of its requests in its current application.[34]

IV. Conclusion

43. In the light of the significant negative impacts that AMSA's continued harmful emissions will have on the health, well-being, and environment of already vulnerable communities, we and our clients oppose, and will continue to oppose, AMSA's postponement and request for alternative standards applications. Furthermore, we will call upon the relevant decision-makers to reject such applications in order to protect constitutional

[34] Centre for Environmental Rights, Letter to Department of Environmental Affairs (18 June 2018), https://cer.org.za/wp-content/uploads/2018/11/Notification-to-DEA-in-terms-of-s2812-of-NEMA-18-June-2018-%E2%80%93-under-key-correspondenceAMSALand-Remediation.pdf.

rights and the realisation of environmental and social justice in South Africa, and consider all other legal options.

Yours faithfully

S. (Bobby) Peek
Director of groundWork