



**MINISTER  
FORESTRY, FISHERIES AND THE ENVIRONMENT  
REPUBLIC OF SOUTH AFRICA**

**Reference: LSA 233027**

**APPEAL DECISION**

**APPEAL LODGED AGAINST THE DECISION OF THE NATIONAL AIR QUALITY OFFICER TO  
GRANT A POSTPONEMENT OF LIMITS IN TERMS OF THE MINIMUM EMISSION  
STANDARDS FOR THE KUSILE POWER STATION**

GroundWork and Vukani Environmental Movement First Appellant

Fairacres Products Proprietary Limited Second Appellant

GHB Farms Proprietary Limited Third Appellant

Topigs Norsvin SA Proprietary Limited Fourth Appellant

Eskom Holdings SOC Limited Applicant

Department of Forestry, Fisheries and the Environment:  
National Air Quality Officer Competent Authority

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**Appeal:** These appeals are submitted against the decision that was taken on 05 June 2023, by the National Air Quality Officer (NAQO) within the Department of Forestry, Fisheries and the Environment (the Department) to grant a postponement of the limits in terms of the minimum emission standards (MES) for sulphur dioxide (SO<sub>2</sub>) to Eskom Holdings SOC Limited (the applicant), in respect of the Kusile Power Station, situated within the Nkangala District Municipality, in the Mpumalanga Province.

**1. BACKGROUND AND APPEAL**

- 1.1. In terms of the Listed Activities and Associated Minimum Emission Standards Identified in terms of Section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEMAQA) (published in Government Notice. 893 of 2013) (the section 21 Notice), Kusile Power Station is required to meet the minimum emission standards (MES) for the listed activities that result in atmospheric emissions that have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage, within the timeframes specified in the Section 21 Notice.
- 1.2. Kusile is the first power station in the Eskom fleet to be designed and constructed with sulphur dioxide reduction abatement through wet flue gas desulphurisation (FGD), which allows the station to operate at less than 500 mg/Nm<sup>3</sup> for SO<sub>2</sub> emissions.
- 1.3. On 23 October 2022, Kusile Power Station experienced a failure on the west stack, which limited the power station's ability to operate three commissioned generating units (units 1, 2 and 3). The failure/collapse of the west stack was caused by the build-up and excessive weight of slurry in the flue duct and stacks, owing to the FGD plant failures. Eskom's (the applicant's) preferred short-term technical solution is to return the generating units through construction of three temporary stacks that will bypass the FGD plant while repairs to the affected stack are underway. This solution will result in the bypassed units operating at SO<sub>2</sub> emission levels above the current MES limit until the west stack is repaired.

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- 1.4. The proposed design and placement of the temporary stacks exclude the use of the existing FGD plant, due to the proximity of the absorber to the permanent chimneys, and the surrounding infrastructure will be compromised should demolishing be required during remediation of the permanent stacks.
- 1.5. To operate the temporary stacks at the anticipated SO<sub>2</sub> emissions levels, the applicant was required to apply to the NAQO for a once-off postponement of the MES compliance timeframes for an existing plant in terms of paragraphs 11A and 12 of the Section 21 Notice, which state as follows:
- “(11A) An existing plant may apply to the National Air Quality Officer (NAQO) 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 5 years from the date of issue. No once-off postponement with the compliance timeframes with minimum emission standards for new plant will be valid beyond 31 March 2025.*
- (12) The application contemplated in paragraph (11A) and (11B) must include—*
- (a) An air pollution impact assessment compiled in accordance with the regulations prescribing the format of an Atmospheric Impact Report (as contemplated in Section 30 of the Act), by a person registered as a professional engineer or as a professional natural scientist in the appropriate category;*
- (b) a detailed justification and reasons for the application; and*
- (c) a concluded public participation process undertaken as specified in the National Environmental Management Act and the Environmental Impact Assessment Regulations made under section 24(5) the aforementioned Act.*
- 1.6. The applicant submitted an application in terms of section 59(1) of NEMAQA to be exempted from the provisions of paragraphs 12(a) and (c) of the Section 21 Notice.

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- 1.7. On 14 March 2023, I granted the applicant's application for exemption in terms of section 59(1) of NEMAQA, which exempted the applicant from the provisions of paragraphs 12(a) and (c) of the Section 21 Notice, subject to certain conditions. The applicant was accordingly permitted to submit a postponement application to the NAQO without having to include an air pollution impact assessment in terms of paragraph 12(a) and was authorised to follow a different public participation process to that specified in paragraph 12(c). This decision (my exemption decision) is not the subject of this appeal.
- 1.8. On 30 April 2023, the applicant applied to the NAQO and Nkangala District Authority for the postponement of compliance timeframes for the MES for SO<sub>2</sub> in terms of regulation 11A of the Section 21 Notice, in respect of the Kusile Power Station. In paragraphs 7(i) and (ii) of the application, the applicant requested the following:
- “(i) A postponement from new plant MES compliance until 31 March 2025 for SO<sub>2</sub> emissions for temporary stacks 7, 8 and 9 to enable the operation of these units while recovery of the West stack is underway.*
- “(ii) For temporary stacks 7, 8 and 9, Eskom requests an SO<sub>2</sub> limit of 3500 mg/Nm<sup>3</sup> (daily) until 31 March 2025 (expected recovery date plus float). Alternatively, a limit of 3000 mg/Nm<sup>3</sup> (monthly) to provide operational flexibility is requested.”*
- 1.9. The applicant commissioned Environmental Impact Management Services (EIMS) as an independent environmental assessment practitioner (EAP), to conduct the public participation process (PPP) for the postponement application.
- 1.10. The applicant advanced the following reasons for the postponement application:
- 1.10.1. The Kusile west stack failure on 23 October 2022 was an unexpected incident that limited the power station's ability to operate three generating units (Units 1, 2 and 3). Each Kusile unit can generate approximately 700 MW and 2100 MW combined, potentially reducing load shedding by two stages. The construction of the Kusile temporary stacks will not end load shedding but will reduce it.

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1.10.2. The failure of Kusile west stack has worsened the electricity crisis affecting the country causing:

- (i) A national economic impact, which can be seen locally and individually with businesses and individuals. The South African Reserve Bank estimates that stage 6 load shedding costs the country up to R899 million per day, with stage 3 load shedding costing R204 million per day. The Reserve Bank indicates that load shedding will reduce the country's economic growth by two percentage points.<sup>1</sup> Larger businesses divert millions of rands from possible expansion investments towards maintaining operations. Smaller businesses and entrepreneurs must similarly make plans, with many indicating they had lost business and income due to load shedding. A BrandMapp survey reported that 43% of self-employed/entrepreneurs and 24% of full-time employed surveyed said they had lost work opportunities because of load shedding.<sup>2</sup>
- (ii) Job losses, as an unfortunate outcome of economic impact. In lower-income households, job losses can force families into poverty, which itself is associated with multiple health issues, including malnutrition.
- (iii) Environmental impacts due to loadshedding. The lack of electricity limits the ability to pump or treat water or sewerage consistently. This increases local pollution and can cause hygiene and health issues in communities. To limit load shedding, many turn to petrol or diesel generators. Small generators generally increase local noise levels and contribute to local air quality issues.
- (iv) Human health impacts as a result of power outages. Studies in Ghana indicated that for every day with power outages lasting longer than two hours, hospital mortality increased by 43%. To replace electricity for cooking, households can use higher-risk alternatives such as paraffin or wood, which can result in increased accidents and increased load on healthcare facilities. Load shedding also impacts hospitals and clinics ability to diagnose and treat patients.<sup>3</sup>

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<sup>1</sup> Bloomberg, 6 February 2023. Eskom's previous studies by Nova Economics indicate the cost of an entire day of loadshedding at stage 1 being R235.5 million and stage 3 at R706.7 million per day.

<sup>2</sup> The-BrandMapp Silverstone CIS-SA Blackout Report 2023.

<sup>3</sup> A E Laher et al. "Getting out of the dark"; Implications of load shedding on health care in South Africa and strategies to enhance preparedness. S Afr Med J 2019; 109 (12).

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- (v) Other impacts of load shedding, including traffic impacts, supply chain and food shortages, increased poaching of natural resources and an increased risk of civil unrest.
- 1.11. The granting of the MES postponement and AEL variation is necessary when one considers the potential air quality impacts of the temporary stack project in the area for a limited time against the broader impacts of reduced load shedding to the citizens of the country, including those living around Kusile.
- 1.12. Paragraph 13 of the Section 21 Notice empowers the NAQO, with concurrence from the Atmospheric Emissions Licensing Authority (AELA) (the Nkangala District Municipality) to grant an application for a postponement in terms of paragraph 11A of the Section 21 Notice, with or without conditions, or to refuse the application with written reasons.
- 1.13. On 05 June 2023, after evaluating the application, the NAQO granted the applicant postponement of compliance timeframes with the MES for SO<sub>2</sub>, from 5 June 2023 to 31 March 2025, with a limit of 3500 mg/Nm<sup>3</sup> when temporary stacks 7, 8 and 9 will operate during the repairs to the west stack of units 1, 2 and 3, in respect of the Kusile Power Station, under reference number: Eskom GEM23-L175 (the postponement decision), subject to the following conditions:
- “14(a) Eskom is required to take measures to mitigate harm caused by the exposure of SO<sub>2</sub> to its employees and surrounding communities which measures, must, at minimum, include independent health screenings and referral to appropriate public health facilities for treatment where necessary, as stipulated in the Exemption.*
- (b) In terms of condition 14(a), Eskom is therefore required to submit detailed plan on the mitigation measures it intends to put in place within 21 days of receipt of this decision for approval by the NAQO and Nkangala District Municipality.*
- (c) Eskom is required to submit quarterly progress reports on the implementation of the compliance road map and commitments made towards recommencing of the FGD in support of the postponement application for Kusile Power Station.*

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- (d) *This decision must be reflected in Kusile Power Station AEL to be of any force and effect. Therefore, Eskom is required, as soon as possible, to liaise with the Nkangala District Municipality so that the required amendments, variations and additions to Kusile AEL may be affected.*
15. *In addition to the conditions stipulated in paragraph 14 above, the decision is also subject to conditions stipulated in the exemption decision and more specifically in paragraphs 11.2.3 and 11.2.4 thereof."*
- 1.14. In her postponement decision, the NAQO indicated that the application for postponement included an air pollution impact assessment and a detailed justification and reasons for the application, as specified in paragraph 12 of the Section 21 Notice, and that the applicant had complied with the curtailed public consultation process as set out in paragraphs 11.2.1 and 11.2.2 of the exemption decision.
- 1.15. The NAQO further confirmed that she had considered the applicant's application, atmospheric impacts reports and temporary stacks applications relating to the impacts on health and environment and that in balancing this against the negative impacts of electricity supply, she determined (with the concurrence of the AELA) that the application should be granted.
- 1.16. On 14 June 2023, and thereafter on 30 June 2023, registered I&APs were provided with a copy of the NAQO's postponement decision and advised of the right to appeal. Considering the provision of regulation 4(1)(a) of the 2014 Appeal Regulations, the due date for submission of appeals was 20 July 2023.
- 1.17. The Directorate: Appeals and Legal Review (Appeals Directorate) in the Department of Forestry, Fisheries and the Environment (the Department) received the following appeals in opposition to the grant of the postponement to the applicant:
- 1.17.1. On 5 July 2023, from Centre for Environmental Rights (CER) on behalf of Groundwork and Vukani Environmental Movement (*first appellant*);

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- 1.17.2. On 20 July 2023, from Bishop Fraser Attorneys on behalf of Fairacres Products Proprietary (*second appellant*);
- 1.17.3. On 20 July 2023, from Bishop Fraser Attorneys on behalf of GHB Farms Proprietary Limited (*third appellant*); and
- 1.17.4. On 20 July 2023, from Bishop Fraser Attorneys on behalf of Topigs Norsvin SA Proprietary Limited (*fourth appellant*).
- 1.18. The above appeals were lodged in terms of section 43(1) of NEMA, read together with regulation 4 of the National Appeal Regulations, 2014 (2014 Appeal Regulations).
- 1.19. On 10 July 2023, the Appeals Directorate received a request from the NAQO for extension of the timeframes for the submission of her responding statements to the appeal submitted by the first appellant. On 20 July 2023, the Acting Director of the Appeals Directorate granted the NAQO's extension request and accordingly extended the timeframe for the responding statement to 7 August 2023.
- 1.20. On 14 July 2023, the Appeals Directorate received a request for extension of timeframes from the applicant (Eskom) for the submission of their responding statement to the appeal submitted by the first appellant. On 20 July 2023, the Acting Director of the Appeals Directorate granted the applicant's request and accordingly extended the timeframe for the responding statement to 7 August 2023.
- 1.21. On 27 July 2023, the Appeals Directorate received a request from the NAQO for an extension of the time period for the submission of her responding statements to the appeals submitted by the second, third and fourth appellants. On 8 August 2023, the Acting Director of the Appeals Directorate granted the NAQO's request and accordingly extended the timeframe for the responding statement to 18 August 2023.
- 1.22. On 2 August 2023, the Appeals Directorate received a request from the applicant for an extension of the time period for the submission of its responding statements in respect of the appeals submitted by the second, third and fourth appellants. On 8 August 2023, the



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Acting Director of the Appeals Directorate granted the request and accordingly extended the timeframe for the responding statement to 18 August 2023.

- 1.23. On 7 August 2023, the applicant and the NAQO submitted their responding statements to the appeal lodged by the first appellant.
- 1.24. On 18 August 2023, the applicant submitted their responding statements to the appeals lodged by the second, third and fourth appellants.
- 1.25. On 21 August 2023, the NAQO submitted their responding statements to the appeals lodged by the second, third and fourth appellants.
- 1.26. On 24 August 2023, the NAQO submitted a request for condonation for the late filing of her responses to the appeals that were lodged by the second, third and fourth appellants.
- 1.27. On 20 September 2023, the Acting Director of the Appeals Directorate condoned the late filing of the responding statement.
- 1.28. The first appellant's appeal is premised on the following grounds:
  - 1.28.1. Inadequate PPP;
  - 1.28.2. The NAQO's decision is unlawful;
  - 1.28.3. The NAQO failed to give due consideration to the health impacts of air pollution and the ensuing constitutional right violation;
  - 1.28.4. The NAQO placed excessive consideration on the applicant's unfounded claims regarding loadshedding reduction; and
  - 1.28.5. The NAQO failed to impose adequate, explicit conditions in granting the postponement.
- 1.29. The second, third and fourth appellants' appeals are premised on the following grounds:

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- 1.29.1. Insufficient PPP;
  - 1.29.2. The NAQO's decision to grant the postponement application is unlawful;
  - 1.29.3. The NAQO failed to give due consideration to the human and animal (livestock) health impacts arising from the postponement decision;
  - 1.29.4. The decision to grant the postponement application was based on inaccurate information;
  - 1.29.5. The NAQO failed to impose adequate conditions in granting the postponement; and
  - 1.29.6. The AEL decision arising from the NAQO's decision is unlawful.
- 1.30. I will now turn to deal with the grounds of appeal submitted by each of the appellants, and where I deem it appropriate, I address those grounds of appeal that are overlapping in nature under a single topic.

**2. GROUNDS OF APPEAL, RESPONSES AND COMMENTS**

**INADEQUATE PPP**

- 2.1 The first, second, third and fourth appellants submit as follows:
  - 2.1.1 The curtailed PPP is still required to be adequate and facilitate a meaningful engagement with all interested and affected parties regardless of the reduced timeframe in line with the 2014 EIA Regulations. The NEMA principles state that the participation of all interested and affected parties (I&APs) in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills, and capacity necessary for achieving equitable and effective participation. In addition, decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.
  - 2.1.2 On 4 April 2022, before the commencement of the public participation meetings, the first appellant addressed correspondence to the applicant expressing their concerns regarding the accessibility of the venues for the public participation meetings and requesting crucial information including, details of all measures taken by the applicant to ensure that

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communities and individuals that are in proximity to Kusile are informed of the intended measures, the impacts, as well as about the public participation meetings, and any measures taken to ensure that such communities and individuals are enabled to attend and participate. On 6 April 2023, Eskom responded by stating that *"[i]t should be noted that the applicant has seriously considered holding a meeting in Phola township. However, previous meetings in this settlement have been subject to disruption and safety/security issues, and as such, it was considered inappropriate to hold a hearing in Phola."*

- 2.1.3 The first PP meeting took place on 12 April 2023, at Kendal Power Station ("Kendal"). Kendal is approximately 20 kilometres away from Phola, an affected community. It has been reported that there is no adequate or reliable public transport available for community members of Phola who had intention to attend the meeting.
- 2.1.4 The second public participation meeting was planned for 12 April 2023 at eMalahleni Civic Centre in the evening, from 17:00 to 19:00. The chosen time slot presented challenges with accessing public transport due to the time of day. This meeting did not proceed as the few community attendees that were present were disgruntled about the shortage of available documents, the insufficient time allocated for the meeting (two hours) and the meeting time. Furthermore, only two hard copies of the Application Document were available at this meeting. Additional copies of the Application Document were requested with the agreement to convene another meeting once people had had an opportunity to engage with the contents of the document. The Appellants note that additional copies of the Application Document were indeed distributed to affected communities, however, EIMS refused to convene a further meeting at the First Appellant's request citing "the restricted nature of the timeframes of this project."
- 2.1.5 It is apparent that the logistical arrangements of these meetings presented significant access challenges for affected communities and hindered attendance. In addition, the site placement of the notices leaves much to be desired as the notices should have been put up in community centres.

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- 2.1.6 The safety concerns cited by Eskom are noted; but alternative venues that are closer to Phola township should have been considered, bearing in mind that community members may have to use more financial resources to access venues that are located further away from them.
- 2.1.7 The dissemination of relevant information i.e., the Application Document was wholly insufficient. Placing copies of this document at Kendal and Kusile is impractical as there is no adequate or reliable public transport to these power stations from affected areas. In any event, even if people had access to transport to the power stations, it is unfair to expect communities to use their resources to travel to collect these documents.
- 2.1.8 Considering the above and the environmental injustice experienced by many vulnerable and disadvantaged communities, especially those surrounding many of Eskom's power stations in the Highveld Priority Area (HPA), the need to promote community attendance through selecting easily accessible venues and/or assistance with transport to meeting venues is emphasised.
- 2.1.9 The applicant provided an Atmospheric Impact Report (AIR) prepared by Airshed Planning Professionals in support of the postponement application. This AIR was provided to I&APs a mere three days before the close of the PPP.
- 2.1.10 Notwithstanding the fact that the applicant was legally exempt from providing an AIR in terms of Regulation 12(a) of the MES regulations, the fact the applicant chose to submit an AIR, which was expressly considered in the granting of the DFFE decision, makes it a material and significant piece of information that undoubtably had the potential to *"influence the decision in regard to the application"*.
- 2.1.11 The fact that the appellants were able to file further Comments and Objections in respect of this AIR does not absolve the applicant of its non-compliance with its obligations under the 2014 EIA Regulations.

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2.1.12 The AIR modelling fails to note the consistent fallout dust monitoring data, which data has been well documented, which shows elevated hazardous air pollutants at downwind monitoring locations. Simulation refers to various specific areas and residential and sensitive receptors surrounding the Kusile Power Station but fails to make any mention of the appellants or its commercial operations as receptor at all, let alone a highly sensitive one. In this regard the dispersion figures clearly show the appellants to be within the high level SO<sub>2</sub> impact area which, as detailed in the Initial Comments and Objections, poses a substantial risk to the Appellant's commercial interests. Most critically, the key findings of the AIR indicate that the emissions modelling simulation for the temporary stacks exceed the National Ambient Air Quality Standards for SO<sub>2</sub> at both 3000 and 3500 mg/Nm<sup>3</sup> for all sites; and NO<sub>2</sub> for Kendal Poultry.

**RESPONSE BY THE APPLICANT**

2.2 The applicant responds as follows:

2.2.1 While an exemption, or rather a truncated PPP was authorised by the Minister, the full process took in excess of 14 days due to requests and considerations from the I&APs. The application for the exemption was not submitted to curtail the rights of the I&APs but rather to ensure the repair work proceeded as soon as possible at Kusile.

2.2.2 It is vehemently denied that the PPP conducted by EIMS was in any way unfair or ineffective. As I&APs have a right to a fair and effective process, there is a duty on the parties to participate in good faith through cooperation and transparency to achieve the stated objectives. The process undertaken, although curtailed, was reasonable and procedurally fair. EIMS undertook the public participation and consultation processes in accordance with the requirements of the NEMA, the 2014 EIA Regulations and the Exemption issued by the Minister in terms of Section 59 of the NEMAQA.

2.2.3 This process included notification and communication through newspaper advertisements, site notices, posters, and direct notification, as well as public hearings within the potentially

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affected communities. English, isiZulu and Afrikaans notifications were also used where applicable.

- 2.2.4 Two separate physical public hearings were held with I&APs on 12 April 2023 at Kendal Power Station and eMalahleni Civic Centre. Six I&APs attended the hearing at Kendal Power Station, and nine I&APs attended the hearing at eMalahleni Civic Centre. At the Kendal hearing, two representatives from the second appellant were present, which organisation represents Vukani Environmental Movement, a community-based organisation. The community was therefore represented at the meeting. Similarly, at the eMalahleni Civic Centre, representatives of the first appellant were present, representing the community. A virtual public hearing was held on 13 April 2023. Twenty I&APs attended the virtual hearing.
- 2.2.5 In addition, 150 Copies of the application motivation report were provided to three identified volunteers from the surrounding communities, following the public hearing that has held at eMalahleni Civic Centre. As requested in the meeting, these copies were provided to accommodate community members who could not access the reports that had been made available. It was also noted in the public hearing at the eMalahleni Civic Centre that EIMS also has a data-free website for those with internet access challenges. These facilities were available upon request and communicated to I&APs.
- 2.2.6 Opportunity was provided to review and comment on the MES Application Motivation Report and associated documentation to be submitted to the decision maker. The process was initially to be completed by 14 April 2023 but was extended until 21 April 2023 after the additional hard copies were provided to the community.
- 2.2.7 access challenges for affected communities and hindered attendance as well as the farming communities around Kusile Power Station. eMalahleni Civic Centre was also chosen which is 36.1km from Kusile.

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- 2.2.8 It should be noted that the purpose of the public hearings was to provide details of the application being submitted through presentations as well as questions and answer sessions. The timeframe provided for the public hearings meetings is an indicative timeframe and meetings are only closed once matters have been addressed. In the Kendal meeting all the presentations and matters arising were addressed before closing the meeting.
- 2.2.9 At the meeting in eMalahleni Civic Centre, some of the community members in attendance refused to allow the presentations to be made in favour of having physical copies of the report. It was highlighted to the attendees that the presentations prepared, provided the details and key features of the application. It is noted that the community members then decided to use the number of physical reports available as a means to abandon the meeting and request for another meeting. The meeting did therefore provide an opportunity for the pertinent information to be provided, via in-person presentation (including translations to isiZulu if required), to the attendees. The attendees elected not to participate in this opportunity.
- 2.2.10 It should be noted that during the meeting no resolution could be reached on when a follow up meeting could be held. A suggestion was made for a meeting to be held on Wednesday the 19 of April 2023 and was rejected by the attendees.
- 2.2.11 EIMS did not refuse to convene the meeting as requested by the first appellant. As no resolution was reached during the public hearing meeting at eMalahleni Civic Centre, the public participation opportunity for the submission of comments and queries in relation to the application was extended until 21 April 2023, to allow the attendees to engage further with the application as per the hard copies requested.
- 2.2.12 A request was then made by the first appellant to have the meeting on 10 May 2023 knowing that this date was outside of the extended PPP. EIMS's response was that due to the restricted nature of the timeframes of this project, Eskom had to submit their application after the previously extended PPP.

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- 2.2.13 Site notices were placed in easily accessible areas, and contact details were provided in the MES Motivation Report availability notification for I&APs to communicate with EIMS on the application and any other concerns including access to the document. No concerns in respect of document access were received by EIMS prior to the meeting at eMalahleni Civic Centre.
- 2.2.14 The information prepared for the public hearings meetings was simplified and translators were available at the meetings. During the meeting at eMalahleni Civic Centre some of the attendants requested to use isiZulu for communication and provision was made.
- 2.2.15 As described in the application, the construction of the Kusile temporary stacks is only one of the strategies being implemented by Eskom and government in terms of a coordinated plan to address the present energy crisis. Other strategies include ensuring operational improvements at Eskom, the development of renewables and gas generation capacity, battery storage and demand management. Indeed, Eskom has recently received the required section 34 determinations from the Minister of Minerals and Energy to allow it to construct renewable projects at Lethabo (75 MW), Sere (19.5 MW) and Komati (100 MW). Eskom has also obtained agreement from National Treasury to proceed with these projects subject to certain conditions. The argument should thus not be framed in terms of repair to the Kusile stack versus renewable energy provision but is rather a way to address the energy crisis which requires operational improvements at Eskom, renewables, demand side management, and the short-term use of the Kusile temporary stacks.
- 2.2.16 The AIR and draft Health Impact Report (HIR), which were not required, were provided to I&APs and as a result, have provided details of the impacts of the temporary stacks which has enabled further engagement through this appeal.
- 2.2.17 The draft AIR, or revision 1 of the AIR, was shared during the public hearing and also provided to the relevant authorities. It was further noted during the public hearing, that the next revision 2, would be available soon. The applicant communicated openly with all I&APs and the authorities regarding the status of studies being undertaken to better equip



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all stakeholders, including the applicant, to identify, manage and mitigate the impacts of the temporary stacks on human health and the environment.

2.2.18 The applicant denies that the AIR is fatally flawed and contains incorrect or misleading data. Notwithstanding attempts to clarify the contents and purpose of the AIR the appellants insist on misrepresenting the study. The purpose of the study was to indicate the air quality impact of the operation of the Kusile temporary stacks. Kusile's operations without the temporary stacks are already authorised and reported on as legally required. Airshed modelled the ground level impacts using stack parameters, average and licence stack emissions as well as meteorological data. Airshed included the air quality monitoring station (AQMS) data from the Kendal Poultry Farm, Kendal and Phola to indicate the current ambient levels. The ambient ground level impacts were not modelled using the ambient AQMS data.

2.2.19 The air dispersion modelling is a method of predicting the ground level concentration of one or more sources of air pollutants. These can be predicted using information like land use (urban/rural), meteorological data (wind speed, temperature) and pollutant source information (mass emission rate/stack gas temperature/flow rate). The actual ambient air conditions related to the relevant emission is not necessary for the dispersion modelling. Further, the worst-case scenario is predicted (the 99 percentile values are reported on) and these are likely to be higher than the actual impacts experienced on any single day.

**COMMENTS BY THE NAQO**

2.3 The NAQO responds as follows:

2.3.1 The applicant undertook a PPP in accordance with the notice of the exemption as per Minister's exemption decision.

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- 2.3.2 Initial notification of the PPP dates of meetings and the availability of documents were sent out on 28 March 2023. Newspaper advertisements were also published on 28 and 31 March 2023. The 14-day public participation process was to run from 28 March 2023 to 14 April 2023.
- 2.3.3 Public hearings were held as follows: (i) Kendal Power Station, Kopanong Hall - from 10:00-12:00 on 12 April 2023 (ii) eMalahleni Civic Centre - from 17:00 to 19:00 on 12 April 2023 (iii) Virtual meeting (MS team) - from 14:00 to 16:00 on 13 April 2023.
- 2.3.4 The application documentation was made available online, and copies were placed at Kendal and Kusile power stations. After the community raised concerns, 150 hard copies of the report were distributed to the community on 14 and 17 April 2023.
- 2.3.5 The results of the AIR were shared at the public hearings, and revision 1 of the report was circulated to stakeholders on 18 April 2023.
- 2.3.6 Based on the distribution date of the additional hard copies the PPP was extended from 14 April 2023 to an end date of 21 April 2023.
- 2.3.7 In addition, the applicant considered having a meeting in Phola township. However, previous meetings in this settlement had been subject to disruption and safety/security issues, and as such, the applicant considered it inappropriate to have a meeting in Phola.
- 2.3.8 Based on the above, the applicant decided to hold two physical hearings on 12 April 2023, in the potential impact area of the project (one south of the station at Kendal and the other east of the station at eMalahleni). In addition to these two physical meetings, a third virtual hearing was held on the 13 April 2023, allowing broader participation in the process.
- 2.3.9 The public hearings offered I&APs an opportunity to present their comments and concerns with regard to the application. Site notices were placed at different locations around the vicinity of the project site.

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2.3.10 There is no evidence to suggest that the information provided in the AIR is incorrect or misleading. The results in the AIR show the analysis of both ambient air quality monitoring and atmospheric dispersion modelling.

**EVALUATION AND/OR REASONS FOR THE DECISION**

2.4 I first record that in my decision of 14 March 2023, wherein I exempted the applicant from the timeframes for PPP as stipulated in the 2014 EIA Regulations, I directed as follows:

*“ 11.2.1 Eskom must comply with the sections 59(3)(a)and(b) in this regard, within 5 calendar days of receipt of this correspondence, Eskom must publish in at least two newspapers circulating nationally its application for exemption which gives reasons for the application and stipulates that: (i) Eskom intends to make application to the NAQO in terms of regulation 11A of the Section 21 Notice for a once-off postponement; (ii) Eskom intends to apply to the licencing authority for a concomitant variation to its Atmospheric Emission Licence (AEL); and (iii) Eskom will undertake a public participation process in respect of these applications;*

*11.2.2 Prior to submitting an application to the NAQO in terms of regulation 11A of the Section 21 Notice and an application to the licensing authority for a variation of its Atmospheric Emission Licence, Eskom must conclude a public participation process which substantively takes the form of the process prescribed by regulation 12(c) of Section 21 Notice but subject to curtailed timeframes. A minimum of 14 calendar days must be afforded to parties to submit written comments and a minim of 8 calendar days’ notice for the public hearing must be given.”*

2.5 My exemption decision of 14 March 2023 was not taken on judicial review. In other words, none of the appellants took issue with my decision to exempt the applicant from the timeframes for PPP.

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- 2.6 I am cognisant that the purpose of the public participation provision is to, among other, afford I&APs an opportunity to express their views on matters affecting them. Public participation is one of the most important aspects of the environmental authorisation process. This is because people have a right to be informed about potential decisions that may affect them and to be afforded an opportunity to influence those decisions. Effective public participation also facilitates informed decision-making and may result in better decisions as the views of all parties are considered. It is therefore one of the foundational principles of NEMA that the participation of all I&APs must be promoted.
- 2.7 It is against this background that I considered this ground of appeal, the applicant's response thereto and the details of the PPP that the applicant followed, as indicated on pages 5-10 of the PP report. I note that the PP report records the following:
- 2.7.1. The PPP for the Application Motivation Report commenced on 28 March 2023 with an initial notification of the availability of MES Application Motivation Report.
  - 2.7.2. Notification letters in English, Afrikaans, and isiZulu were distributed to pre-identified I&APs through either faxes, and/or emails. Calls to register as I&APs were distributed through SMS's, including links to the EAP's (EIMS') website providing more information on the project, including details about the exemption.
  - 2.7.3. In addition, a notification was sent by email on 06 April 2023 to registered I&APs in relation to the virtual meeting scheduled for 13 April 2023.
  - 2.7.4. SMS reminders were sent to the ward councillors of the affected area (Victor Khanye Local Municipality Wards 9 and 7). This reminder included a link to the virtual meeting registration page.
  - 2.7.5. A notification regarding the extension of the public participation period was sent by email on the 14 April 2023. The notification specified that the timeframe for submission of comments and responses had been extended to 21 April 2023.
  - 2.7.6. A notification was sent by email to registered I&APs reminding them to submit comments and responses by the extended date, 21 April 2023.

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- 2.7.7. Advertisements describing the proposed project and associated process were placed on 31 March 2023 in two national newspapers, The Star and The Citizen, and in one local newspaper, the Witbank News.
- 2.7.8. On 28 March 2023, site notices were placed at different locations around the vicinity of the project site.
- 2.7.9. One hundred and fifty (150) copies of the application were provided to three identified volunteers of surrounding communities following the public hearing that was held at the eMalahleni Civic Centre. These copies were provided to accommodate community members who could not access the reports that had been made available, as had been requested during the meeting.
- 2.7.10. Two separate physical public hearings with I&APs were held on 12 April 2023 at Kopanong Hall, Kendal Power Station and eMalahleni Civic Centre. Followed by a virtual public meeting was held on 13 April 2023.
- 2.8 In addition to the above, notwithstanding the truncated PPP period that was authorised per my exemption decision, the applicant extended the commenting period from 14 days to 21 days, and the applicant provided additional studies (namely, the AIR and HIA) for comment. I&APs were notified of this extended timeframe and reminded to provide their comments on or before the extended deadline. This was to accommodate the requests and considerations from the I&APs.
- 2.9 Regarding the grievance that the applicant failed to hold or accommodate an in person meeting with the Phola community, I considered that the appellant was constrained by its concerns regarding safety and security in this community. I note that the applicant's concern arises from previous meetings in this community that had been subject to disruption and safety and security issues. The appellant avers that an alternate venue should have been secured. I note that the applicant states that it determined Kusile as an appropriate venue based on its locality to the affected communities

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- 2.10 In any case, an in person meeting is not a requirement for meaningful and effective PPP. I also considered that 150 copies of the application motivation report was circulated, and that a virtual public hearing was held on 13 April 2023. The EIMS also included links to the its website providing more information on the project, including details about the exemption. Importantly, EIMS has a data-free website for those with internet access challenges.
- 2.11 I am accordingly satisfied that the applicant took all reasonable measures to ensure adequate and meaningful engagement with I&APs.
- 2.12 This ground of appeal has no merit and is therefore dismissed.

**POSTPONEMENT DECISION IS UNLAWFUL, THE NAQO FAILED TO GIVE DUE CONSIDERATION TO HEALTH IMPACTS, FAILURE TO GIVE ADEQUATE REASONS AND CONDITIONS FOR THE DECISION (MES AND AEL)**

- 2.13 The issues for consideration on the grounds of appeal relating to whether postponement decision of the NAQO is unlawful, whether the NAQO failed to give due consideration to health impacts, and whether the NAQO failed to give adequate reasons and conditions for the decision (MES and AEL) are essentially similar and overlapping. I therefore deem it appropriate to consolidate my evaluation of these grounds of appeal under one topic.

**Unlawful Postponement Decision**

- 2.14 The first, second, third and fourth appellants submit as follows:
- 2.14.1 The NAQO's decision to permit the applicant to only comply with the existing plant standard is unlawful. It is common cause that the postponement application sought a postponement of compliance timeframes relating to the Kusile Power Station in terms of NEMAQA and regulation 11 and 12 of the MES Regulations, as amended.

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2.14.2 It is further common cause that Kusile Power Station is an 'existing plant' for the purposes of the MES regulations.

2.14.3 In terms of the MES regulations and Air Quality Management (AQM) Framework, existing plants, including Kusile Power Station, were obliged to comply with more lenient air emission standards by 01 April 2015, and were obliged to adhere to stricter new plant standards by 1 April 2020, subject to successful applications to postpone timeframes for compliance. The 2018 amendment to the MES regulations specifically states that –

- *“(11A) 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 [a] new plant as contemplated in paragraph (10). A once-off postponement with the compliance timeframes for minimum emission standards for [a] 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. (11D) No postponement of compliance timeframes or a suspension of compliance timeframes shall be granted for compliance with minimum emission standards for [an] existing plant.*
- (12A)
  - a) *An existing plant may submit an application regarding a new plant standard to the NAQO for consideration if the plant is in compliance with other emission standards but cannot comply with a particular pollutant or pollutants.*
  - 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.*
  - c) *The NAQO, after consultation with the Licensing Authority, may grant an alternative emission limit or emission load if:*
    - *there is material compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for [our emphasis]; or*
    - *the Atmospheric Impact Report does not show a material increased health risk where there is no ambient air quality standard [our emphasis].”*

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- d) *These regulations are reinforced by the AQM Framework, which states that – “It should be noted that the year 2020 marks 10 years since the publication of the 2010 [NAMAQA] Section 21 notice. Therefore, sufficient time has been afforded to industry towards compliance with the initial MES by 2020.”*

- 2.14.4 A plain reading of the above regulations makes it clear that the applicant is only entitled to apply for a postponement of compliance with new plant standards once it has shown material compliance with national ambient air quality standards in the area for pollutant or pollutants applied for.
- 2.14.5 The Kusile power station is located in the Highveld Priority Area (HPA), which was declared as such more than 16 years ago. This alone prohibits the NAQO from authorising postponement applications for Kusile power station, in accordance with 5.4.3.4 of the 2017 Framework. The applicant failed to demonstrate that its emissions are not causing direct adverse impacts on the surrounding environment. The excess SO<sub>2</sub> emissions that are going to be released into the air because of the NAQO's decision, will only serve to exacerbate adverse environmental and health impacts.
- 2.14.6 Given the peremptory wording of MES regulation 12A, the NAQO has no discretion in these matters and can only grant a postponement application if the above criteria have been met. In the circumstances, where the applicant has failed to show compliance with MES regulation 12A, the postponement application must be considered unlawful, and the resultant NAQO decision to grant the postponement application be found similarly unlawful and set aside.
- 2.14.7 The revised AIR submitted in support of applicant's application is problematic for a number of reasons:
- The Emissions Inventory is incomplete for particulate matter sources.



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- Only “wind erosion” and “materials handling” have been modelled. But to what extent these two categories include all of the many PM-emitting activities tied directly to Kusile – such as coal transport, storage, handling; ash storage, transport, disposal; emissions of trucks on plant roads; etc. – is not clear.
- To the extent all of these Kusile-related activities are not modelled, the results and conclusions for PM10 and PM2.5 modelling shown in the Revised AIR underestimate the impact of Kusile's operations.
- The PM emissions which have been modelled, rely on emissions estimates that are known to underpredict emissions. Only emissions from wind erosion and materials handling have been included as area or fugitive sources.
- Table 4-1 in the Revised AIR demonstrating point source parameters assumes that for the temporary scenarios, the temporary stacks, at 116 meters in height, would not even rise above the nearby buildings. With stacks that are shorter than the nearby buildings, the near-field dispersion would be highly problematic, leading to fumigating conditions, where the plume cannot disperse properly, and its behaviour cannot be properly modelled therefore under all meteorological conditions. It is unclear how the Revised AIR accounts for this in the modelling. As a result, the predicted impacts for the temporary stack emissions are highly unreliable.
- Table 4-7 in the Revised AIR portrays emissions during start-up, maintenance, upset and/or shut down. This table admits that certain startup, shutdown, upset, and maintenance conditions can result in high emissions. However, these scenarios have not been modelled.
- Data from the air quality monitoring stations in Kusile's vicinity reveal that there is non-compliance with the National Ambient Air Quality Standards (NAAQS) for PM10. Significant impacts are predicted at the Sibongindawo Primary School. Although the impacts are underestimated in the Revised AIR, it still contributes to the point that that the air quality around Kusile is poor and there is non-compliance with the NAAQS.
- As contemplated in terms of paragraph 5.4.3.4 of the 2017 Framework, the law, as amended, is clear that only in such cases where the areas in which the power stations are based is in compliance with NAAQS (which the HPA is not), can postponement,

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suspension, or alternative limit applications even be considered. In terms of section 1(a)(ii) of the Promotion of Administrative Justice Act, 2000 ("PAJA"), the powers to exercise administrative action are derived from and only extend insofar as the legislation allows. Therefore, the granting of the postponement application in respect of Kusile is ultra vires the Constitution, the AQA, the amended List of Activities, the 2017 Framework, and the provisions of NEMA.

**Health**

- 2.14.8 The appellants state that the NAQO claims that: *"I have considered Eskom's application, atmospheric impacts reports and temporary stacks applications relating to the impacts on health and environment but balancing this against the negative impacts of electricity supply, it is determined that the application should be granted."* The laws and policies which form part the NEMAQA, including the MES and the NAAQS, has been put into place to protect public health. Therefore, due consideration and weight must be placed on the detrimental effects of non-compliance with these standards on residents and the ensuing health costs and effects on the national fiscus. SO<sub>2</sub> has multiple adverse health effects. The SO<sub>2</sub> Report considers the health impacts of SO<sub>2</sub> emissions and acknowledges the adverse effects.
- 2.14.9 The SO<sub>2</sub> Report recognises that even in instances when SO<sub>2</sub> levels meet the NAAQS, there are adverse respiratory health impacts related to SO<sub>2</sub> exposure which occur, especially among children. From epidemiological studies focused on the HPA and the Vaal Triangle Airshed Priority Area ("VTAPA") specifically, there are health impacts in these regions due to exposure to air pollution and SO<sub>2</sub>. According to the SO<sub>2</sub> Report, some of the health impacts associated with SO<sub>2</sub> exposure include respiratory health impacts, chronic wheezing and a decline in lung function.
- 2.14.10 The Life After Coal campaign commissioned a report by the Centre for Research on Energy and Clean Air ("CREA Report") to project the expected health impacts, including air pollution related deaths, from unabated SO<sub>2</sub> emissions from the Kusile Units for the period

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1 December 2023, to 31 March 2025 based on the high rate of utilisation that Eskom claims that Kusile will be operating on. The CREA Report was utilised in support of the written submission submitted as part of public participation process. It has been updated for purposes of this appeal and in light of Eskom's Health Impact Assessment. The CREA Report is attached as "Annexure A7".

2.14.11 The CREA report projects the following: *"The bypass would result in an estimated 6-fold increase in SO<sub>2</sub> emissions from the plant, based on the reported emissions at Kusile, and the reported average sulphur content of the coal."*

2.14.12 The total excess SO<sub>2</sub> emissions resulting from the exemption, compared with normal operation at the same utilisation, would be a projected 280,000 tonnes, while excess mercury emissions would amount to 7,200 kg. This is because the FGD captures toxic mercury from the flue gases as a side benefit. The excess SO<sub>2</sub> emissions correspond to almost 20 years' worth of emissions from the normal operation of the plant. The health impacts would include a projected 930 air pollution related deaths, whereas operating normally with the FGD operational, the plant would be responsible for an estimated 250 deaths.

2.14.13 Other excess health impacts in the FGD bypass scenario would include a projected 3000 asthma emergency room visits, 1 400 preterm births, 720 000 days of work absence and 900 years lived with disability due to chronic obstructive pulmonary disease, diabetes and stroke.

2.14.14 The Report further projects that the societal costs associated with the health impacts would be an estimated R16.8 billion.

2.14.15 The applicant commissioned a Health Impact Report (HIR) in support of its MES postponement application. The HIR models current and additional health effect cases in the Kusile study domain in four different scenarios. The assessment finds that:

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*"The largest health burden is shown in the Temporary @3 500 SO<sub>2</sub> scenario, but the difference in the numbers of cases calculated in each of the Temporary scenarios is marginal, except in the case of asthma exacerbation. The number of additional cases of persons with exacerbated asthma symptoms is moderately higher in the Temporary @3 500 SO<sub>2</sub> scenario vs. the @3 000 SO<sub>2</sub> scenario. This finding is as expected, because asthma exacerbation is directly influenced by SO<sub>2</sub> concentrations in ambient air, which should logically be higher in the @3 000 SO<sub>2</sub> Temporary scenario with higher SO<sub>2</sub> emissions. Overall, considering the baseline numbers of health effect cases, the numbers of additional cases are in the moderate to practically insignificant range."*

2.14.16 The CREA Report finds some deficiencies which emerge from the applicant's HIR as follows:

- Eskom estimates similar SO<sub>2</sub> emissions (300,000 tonnes), but health impacts which are almost 100 times lower, only 10 human deaths and they do not consider the impacts of mercury emissions. The sensitivity of human health to SO<sub>2</sub> emissions adopted in the CREA Report is in much better agreement with multiple previous peer-reviewed studies.
- Eskom concluded that the SO<sub>2</sub> bypass at Kusile Power Station will lead to insignificant impacts on human health.

2.14.17 The air pollution and health impacts on local communities were only considered within a 50 km radius whereas the impacts of emissions from coal-fired power plants can extend up to hundreds of kilometres. The HIA failed to consider mercury, an extremely potent neurotoxin that persists in the environment for several years. Bypassing the FGD dramatically increases mercury emissions. Allowing Kusile Power Station to operate without FGD increases mercury-related deaths from 283 to 404 and increases the loss of IQ points from 1,894 to 2,706.

2.14.18 It is clear that the excess SO<sub>2</sub> emissions will have dire effects on human health and both HIR and Revised AIR significantly underestimate the impacts. The postponement granted is more than likely to sustain the state of poor air quality and National Ambient Air Quality

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Standards (NAAQS) non-compliance in the HPA and the continued breach of section 24 of the Constitution. This is a public health issue which must be considered holistically and must aim to prevent the exacerbation of health impacts and deaths, caused by poor air quality.

2.14.19 The section 24 rights infringement is not justifiable in terms of section 36 of the Constitution.

2.14.20 The applicant has failed to point to any legislation which constitutes a law of general application that permits levels of ambient air pollution in the HPA that far exceed the National Standards in a manner that poses a direct threat to the health and well-being of residents. The NEMAQA and the range of other instruments all have the stated aim of putting in place measures to improve air quality and to prevent conditions of this nature, not to sustain or increase levels of ambient air pollution at levels above the National Standard.

2.14.21 The principle of sustainable development requires that measures to promote economic development should not sacrifice the environment and human health and well-being. This argument reflects a callous disregard for human life, particularly considering the Department's finding that more than 10,000 premature deaths each year are directly attributable to air pollution in the Highveld.

2.14.22 This decision is not reasonable and justifiable in an open and democratic society based on human dignity, equality, and freedom. Load-shedding is a self-created problem that could have been avoided had there not been a delay to move to renewable energy.

2.14.23 The following fatal flaws contained in the HIR has been identified as follows:

- Omit any mention of the appellants, staff or its livestock of the Kendal poultry farm, all of which stand to suffer negative health impacts as a result of the Postponement Application.

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- The HIA fails to include the additional burden of pollution from Kusile and
- The HIR fails to include the second appellant as a receptor, sensitive or otherwise, and is based on the same incomplete and flawed data identified in the AIR.

2.14.24 As a result of the above, the real and significant health impacts posed to the operations and staff of the second appellant were not considered by the NAQO in the HIA provided by the applicant.

**Inadequate conditions**

2.14.25 The first appellant contends that the NAQO failed to utilise her legislative authority to impose adequate explicit conditions in granting the postponement. The applicant's application ought to have been denied in light of the health impacts that increased SO<sub>2</sub> emissions will have on surrounding communities and the resulting constitutional rights violation.

2.14.26 NAQO failed to impose adequate explicit conditions on the applicant in her decision to grant the postponement. The applicant's mitigation measures are wholly insufficient when due regard is had to what is at stake in this matter. As a result of the NAQO's decision, the applicant will continue to burden local and all affected communities with the destructive and deadly health and wellbeing costs of bypassing the FGD in the temporary stacks. These communities have effectively been sacrifice-zones for decades, bearing the brunt of the impacts of a dirty electricity generation system. The affected communities should at least be provided with a best effort at mitigation of the impacts, albeit that even this would prove inadequate of meaningful justice and redress.

2.14.27 The NAQO's decision requires the applicant to submit a detailed plan on the mitigation measures it plans to undertake within 21 days of receipt of the decision "for approval" by the NAQO and the Nkangala District Municipality. It is unclear at this stage what the contents of the said plan will be, furthermore, it is also unclear the factors to be considered by the NAQO whether to approve the plan or not. There is no guarantee whatsoever, or

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safeguards in place to ensure, that the final plan that will be adopted by the applicant will sufficiently mitigate the health impacts of the excessive SO<sub>2</sub> emissions.

2.14.28 Paragraph 13(a) of the List of Activities empowers the NAQO to impose conditions in granting an application for a once-off postponement with compliance timeframes with the MES for a new plant as contemplated in paragraph (11A). This provision gives the NAQO a wide discretion on the conditions she can impose in her decision. The NAQO must adhere to the NEMA principles and legal provisions of the NEMAQA in her decision-making and exercise of designated functions. Therefore, at the very least, the NAQO should have prescribed a basic set of factors as guidelines informing the content of the plan to ensure the effective mitigation of the harm caused by the rights violation resulting from the excess emissions.

2.14.29 The NAQO ought to have imposed more explicit conditions or prescribed factors and guidelines to minimise the harmful impact of the decision made, especially in light of the lengthy history of poor air quality, rolling MES postponements and non-compliance by Eskom in the HPA and the burden of the devastating health impacts of air pollution that is borne by the communities in this area.

2.14.30 The third second third and fourth appellant submits that the NAQO decision set aside as incorrect and unlawful.

2.14.31 The appellants submit that, considering the fatally flawed and insufficient information provided by the applicant for consideration, the NAQO failed to impose adequate and comprehensive conditions on the applicant when granting the postponement application.

2.14.32 Regulation 13 of the MES regulations clearly states that the NAQO is empowered to grant a postponement application "with or without conditions", granting wide discretion in her ability to impose the conditions necessary to insure the protection of the interests of all I&APs.

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2.14.33 The NAQO cannot allow the applicant to be responsible for devising the necessary mitigation measures when it is unable to identify the impacts it needs to mitigate.

2.14.34 The appellants propose that:

- An additional Air Quality Monitoring Station is to be installed at the second appellant's Woodsprings Breeder Farm.
- The current air quality monitoring stations on Kendal Poultry Farm and Phola are located to the south and east of the Kusile Power Station, whereas the Appellant's Woodsprings Breeder Farm is a direct eastern neighbour to the Kusile Power Station, with the key houses 5 km away from Kusile Unit 1, whereas the current Air Quality Monitoring Station at Kendal Poultry laying Farm is over 7km away. Given the expected and localised increase in air pollution through the use of the temporary stacks, The Appellant will require this additional monitoring station to accurately assess the impacts of such pollution on its property and business operations.
- As such, the newly installed Air Quality Monitoring Station, and the existing Air Quality Monitoring Stations, must monitor the following parameters to accurately assess the potential impacts –
  1. PM10;
  2. PM2.5;
  3. Nitrogen Dioxide;
  4. Nitrogen Oxide;
  5. Nitric Oxide;
  6. Sigma Theta;
  7. Ozone, Sulphur Dioxide;
  8. Ambient Temperature;
  9. Wind speed;
  10. Wind velocity; and
  11. wind direction.
- As per National Ambient Air Quality Standards and existing Kendal and Phola stations with (PM2.5 included).



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- Additional appropriate animal health monitoring is to be conducted at both the Appellant's properties by consultant veterinarians currently used by the Appellant.
- Due to strict biosecurity measures, specialist nature of the veterinary care required and commercial proprietary information applicable, only the Appellant can designate which consultant veterinarians to use.
- Additional dust buckets for FOD monitoring (dust, fluoride and ICP-MS as currently conducted on a monthly basis) are to be installed on the eastern and western sections of the appellant's property.
- The frequency of the current monitoring conducted be increased, notably for the current monthly surface water, groundwater, PCDs and stormwater monitoring be increased to weekly;
- The soil monitoring increase from biannual to monthly and to include monitoring points on the Appellant's property at eastern and western sections;
- All soil monitoring to include the same ICP-MS and fluoride analysis as currently conducted for the FOD monitoring;
- The aquatic biomonitoring assessment increase from biannual to monthly as per the external independent reports conducted previously by Ecotone Freshwater Consultants; and the appropriate health screening of the Appellant's staff onsite (currently 54 persons) and community members residing on the property (currently over 60 persons).

**Unlawful AEL**

2.14.35 The second, third and fourth appellants aver that the applicant did not submit the mandated mitigation plan within the prescribed 21 days of the issuance of the AEL Decision for approval by the NAQO and Nkangala District Municipality. The applicant is, therefore, already non-compliant with the terms of the varied AEL, which sets a concerning precedent for its compliance during the operation of the temporary stacks.

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2.14.36 The AEL requires ambient air quality monitoring at specified receptors. These are the same receptors contained in the AIR and HIR which are simply inadequate and ill-situated to measure the impacts of the temporary stacks in the vicinity of the appellants and its property. It remains a critical flaw that the condition does not stipulate an additional Air Quality Monitoring Station (AQM) at the third appellant's property which is located a mere 6km from the generating units for which the exemption is granted.

2.14.37 It is furthermore a critical flaw that no AQMs are required by the authorities to the north, north-west, west or south-west of the generating units at Kusile, despite the evidence of prevailing winds in this direction placing them downwind of Kusile in the monthly FOD reports before the Kusile EMC.

2.14.38 The failure to include PM2.5 is unacceptable given the well published relevance of this parameter and its noted presence at the Kusile Power Station due to ongoing failed dust suppression.

2.14.39 As a general comment to these conditions, the AEL appears to disregard the cumulative impact on the environment and surrounding communities by the ongoing multiple pollution impacts from Kusile Power Station and makes no adequate provision for addressing this issue. As a result of the above, the current formulation of the conditions to the varied AEL are, accordingly, wholly insufficient to ensure the adequate mitigation of harm to be caused by the granting of the AEL and the subsequent increase in air pollution surrounding the Kusile Power Station.

2.14.40 Therefore, and in the unlikely event that the AEL Decision is upheld on appeal, the appellant submits that further, comprehensive conditions as indicate above should be included in the AEL Decision.

**RESPONSES BY THE APPLICANT**

2.15 The applicant responds as follows:

*Unlawful postponement decision*

- 2.15.1 The NAQO has granted an MES postponement for three temporary stacks at the Kusile west stack, which allows operating units 1, 2 and 3 to be repaired. The NAQO took the decision on the postponement application, pursuant to a power that has been delegated to the NAQO by the Minister in terms of the MES. This power is contained in a notice that only the Minister is entitled to publish in terms of section 21 of NEMAQA, and only the Minister can provide for transitional mechanisms in the form of postponement applications in the notice. The allegation that the NAQO must ensure that the "emissions are not causing direct adverse impacts on the surrounding environment" and subsequent submission that the AIR is deficient, is denied. The NAQO is required to take the importance of socio-economic imperatives into account in the MES postponement decision.
- 2.15.2 Particulate matter (PM) from fugitive sources (coal stockpiles) were excluded from the dispersion modelling as the pollutant of concern was sulphur dioxide (SO<sub>2</sub>) because of the flue gas desulphurisation (FGD) being temporarily bypassed. The temporary scenario will not affect the fugitive sources. The fugitive sources were then included, and the Air Quality Specialist was advised to use the latest emissions as reported on the National Atmospheric Emissions Inventory System (NAEIS). The paragraph regarding other emissions refers to ambient sources surrounding Kusile, but not Kusile sources. The Air Quality Specialist identified the significant fugitive sources at Kusile, within the applicant's control.
- 2.15.3 The ratio of PM<sub>10</sub> to PM<sub>2.5</sub> was based on US EPA's AP-42 emission factors for coal combustion from dry bottom boilers using a baghouse. For PM emissions from the stacks, the specialist assumed all PM to be 50 % PM<sub>10</sub> and 50 % PM<sub>2.5</sub>. This is likely to overpredict PM from the point sources as it is a conservative assumption that nothing larger than PM<sub>10</sub> or PM<sub>2.5</sub> is emitted. This was a typographical error in the table, and the temporary stacks have been constructed to be 116 m tall, the same height as the highest

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building on site excluding the permanent stacks. Improvements to CALPUFF modelling system, used for the dispersion modelling, include the use of a probability density function (PDF) to describe dispersion during convective conditions. The results obtained with modelling are thus considered accurate and predictive.

- 2.15.4 There is further no requirement to report on emissions during start up and shutdown in the Kusile AEL. As stated in GNR 533 “where no appropriate emission standards are available, representative emission rates from continuous stack monitoring, manufacturer specifications, published emission factors or estimated/calculated emissions must be used. Published emission factors are recommended for national consistency e.g., US EPA’s AP-42 emission factors (US EPA 1995)”.
- 2.15.5 There are currently no published national fugitive emission factors to use. The specialist did not “simply accept” the data reported by Eskom, but in fact verified that the calculations were correct. The basis of the calculations was approved by the DFFE based on their advice to use the NAEIS emission rates for the fugitive sources.
- 2.15.6 Emissions from the temporary stacks were modelled based on a maximum concentration of 3500 mg/Nm<sup>3</sup>. As the temporary stacks are not yet operational, hourly emission rates are not available. Airshed agrees that the concentration will vary on an hourly basis. However, the modelling was done assuming the maximum concentration 24/7, so it is most likely:
- a. overestimating the annual time period,
  - b. accurate for daily time period, and
  - c. a good estimate for the hourly time period (many hours will be below 3500 mg/Nm<sup>3</sup>).
- 2.15.7 The non-compliance to PM<sub>10</sub> emissions in the region is acknowledged, however it is known that there are multiple sources for PM<sub>10</sub> non-compliance with local pollution sources such as veld fires, unpaved roads and household burning contributing up to 30% of PM<sub>10</sub> emissions. The applicant did not apply for any postponement in respect of PM for Kusile as there was no change in the PM reduction technology at the station and the

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Airshed dispersion modelling shows Kusile emissions result in PM concentrations well below the NAAQS. The purpose of the operation of the temporary stacks is to bring Kusile, which uses FGD, back online. FGD is used overseas to improve the impact of emissions from power stations. The operation of Kusile is but one facility that operates in the HPA. The very purpose of an HPA is to ensure cooperation between the various role players in order to improve the impacts associated therewith.

- 2.15.8 The so called "public health crisis" is in fact caused by multiple emission sources including industrial operations such as that of the applicant but includes biomass burning, unvegetated land, untarred roads, waste burning, abandoned mines and household fuel use.
- 2.15.9 It is denied that no postponements from the MES are available for Priority Areas. There is no such legal prohibition. Further, Eskom is one of multiple contributors in the region and the purpose of the HPA is to ensure broader cooperation between all of the role players to improve the air quality in the relevant areas.
- 2.15.10 Chemical transformation (using MESOPUFF II) was applied in the model setup to account for the transformation of emitted SO<sub>2</sub> and NO<sub>2</sub> (from Kusile under all scenarios) to secondary particulates, which were included in the PM<sub>2.5</sub> concentrations reported. The aim of the NEMAQA Act is to reform the law regulating air quality in order to, *inter alia*, secure ecologically sustainable development, while promoting justifiable economic and social development. The preamble to NEMAQA also makes reference to sustainable development. Further, in terms of section 2 of NEMAQA, the Act aims to provide measures that, *inter alia*, ensure sustainable development while promoting justifiable economic and social development. Furthermore, condition 7.2.13 "Special Minimum Emission Standards Postponement Conditions" of the amended Kusile AEL provides for additional reasonable measures which Eskom must implement in view of the MES Postponement decision. This is based on the Minister's Exemption decision and further measures are included therefore indicating that the health and well-being of the community was not disregarded. These conditions are the first of their kind in an Eskom MES postponement decision. This

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indicates the serious weighting this consideration has been given in the context of air quality by the relevant authorities and Eskom. For example, condition 7.2.13 (i) of the amended AEL requires the development and implementation of a screening programme to identify people with air pollution related diseases. A further condition, based on the screening programme, is to implement an Emergency Response Plan. Noting that air quality is affected by multiple contributors in the area, Eskom has been tasked with the main responsibility to monitor and manage health impacts due to the repair work to be undertaken at Kusile.

2.15.11 The National Framework for Air Quality Management ("National Framework"), while forming part of the definition of "the Act" i.e., NEMAQA, provides in paragraph 1.3:

*"The purpose of the National Framework is to achieve the objectives of the AQA, and as such the National Framework provides a medium - to long-term plan of the practical implementation of the AQA. The Framework provides mechanisms, systems and procedures to promote holistic and integrated air quality management through pollution prevention and minimisation at source, and through impact management with respect to the receiving environment from local scale to international issues. Hence, the National Framework provides norms and standards for all technical aspects of air quality management."*

2.15.12 The specific measures to achieve these objectives are contained in NEMAQA and its regulations.

- Regulations 11A, 11B and 12A of GN 893 contemplate and provide for the following separate types of MES postponement applications:
  - a) Existing facilities and new plant standards: (11A) 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;
  - b) Decommissioning of existing facilities: (11B) 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 31 March 2030. An

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application must be accompanied by a clear decommissioning schedule and no such application shall be accepted after 31 March 2019; and

- c) Existing plant and alternative emission limit/load: (12A) 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.

2.15.13 As per the postponement application for Kusile and the subsequent grant thereof by the NAQO, the MES postponement relates to existing facilities and new plant standards (11A of GN 893). The requirements for this type of application are contained in regulation 12 of GN 893 and require:

- a) An air pollution impact assessment as contemplated in section 30 of NEMAQA and the relevant regulations;
  - b) A detailed justification and reasons for the application; and
  - c) PPP conducted in accordance with NEMA and the applicable regulations.
- Due to the urgency with which it is required to repair the west stack at Kusile, in order to prevent further load-shedding impacts, it anticipated that the requirements in regulation 12 of GN 893 would severely delay the submission of the postponement application. An application in terms of section 59 of NEMAQA for exemption from the requirements of regulations 12(a) and 12(c) was submitted to the Minister of Forestry, Fisheries and Environment (the "Minister") and granted on 14 March 2023 (the "Exemption").
  - In accordance with the Exemption, the applicant has been exempted from having to compile an air pollution impact assessment and having to conclude a full public participation process as specified in NEMA. The Exemption allowed a 14-day PPP, which the applicant conducted (and extended by an additional 7 days as mentioned above) (regulation 12(c) of GN 893). Although exemption was granted, the applicant conducted the AIR (regulation 12(a) of GN 893). Detailed justification and reasons for the postponement application were duly provided. In addition, although not required due to the exemption, the applicant completed the AIR and undertook the Rapid Health Impact Assessment. These documents further assisted stakeholders,

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the NAQO and the District Municipality regarding the postponement application and amended AEL. They (the applicant) complied with the Exemption, duly granted by the Minister. Therefore, the NAQO's decision to grant the postponement application, and subsequently the District Municipality's decision to grant amend the AEL, are lawful.

- The obligation on the NAQO to ensure compliance with NAAQS, as noted above, applies to applications for alternative emission limit/load as referenced in regulation 12A of GN 893. This is not applicable to Eskom's postponement application.
- However, paragraphs 6.4, 6.5, 6.7, 6.9, 6.11, 6.12, 6.13 and 6.14 of the appellant's appeal conflates and confuses the requirements for a postponement application contemplated in regulation 11A of GN 893 and includes the requirements contained in 12A of GN 893. Regulation 11D of GN 893 specifically prohibits the postponement of existing plants, like Kusile, from applying for postponement with the existing plant MES. Kusile has always complied with new plant standards. The temporary stacks will comply with existing plant standards until the west stack is repaired. There is no suggestion or request for Kusile to comply with MES limits above the existing plant standards.
- It is denied that the NAQO erred in granting the postponement application since the requirements contained in regulation 12 of GN 893, read with the Exemption, provide the basis on which the postponement application was lawfully granted by the NAQO to the applicant. Further, the decision to grant the amendment to the AEL by the District Municipality, was lawful based on the arguments provided above.

2.15.14 The dispersion modelling includes both the temporary stacks as well as the current stacks. In the revised AIR, fugitive emissions have also been modelled. It should be noted that the temporary scenario should not affect the ash and coal stockpiles. Whether the stacks at Kusile are operated or the temporary stack are used, the same amount of coal will be stockpiled and the same amount of ash will be generated. Where a PM<sub>2.5</sub> impact is relevant, it is specific to the output of SO<sub>2</sub> and conversion to PM<sub>2.5</sub>. The fugitive emission sources do not have a bearing on the conversion of the SO<sub>2</sub> to PM<sub>2.5</sub> therefore it is correct to use emissions based on the stack dispersion.



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2.15.15 With regard to dust suppression of fugitive emission sources, as indicated in the Comments and Response Report, the applicant installed a revised dust suppression system in September 2021, as communicated during the EMC meeting.

**Health**

2.15.16 It is the applicant's view that the CREA report and the figures overstate the impact of the Kusile temporary stack proposal and its impact on the communities surrounding Kusile power station. Specific details are provided below. The CREA Report provides results for a "geographic domain (of) several hundred kilometres". The legal requirement for the Revised AIR and HIA is to consider a radius of 50 kilometres from the point source. The CREA Report therefore provides six times (300km vs 50km) the impact area when compared to the HIA and Revised AIR. As a result, it is not scientifically correct to compare the CREA Report and HIA like-for-like. The metrics are simply not comparable.

2.15.17 With reference to the CREA Report attached, the applicant responds as follows:

- The CREA study appears to have considered the emission impact of Kusile over a very extended area, which by default will increase any impact calculations significantly. The original CREA study (CREA 2023) calculates impact over a 300 km by 300 km domain, an area extending from the Highveld to below Richards Bay and to Bloemfontein. The applicant's study based on the dispersion modelling completed in line with regulatory requirements looks at a 50 km by 50 km grid around Kusile and at the edges of the grid no non-compliance with the ambient standards are being observed. By using the substantially larger domain, and the associated significantly larger population, mathematics dictates that the deaths and impacts the CREA study predicts will be substantially larger than the Eskom study.
- The inclusion of mercury, which is not a recognised priority pollutant in South Africa, also significantly inflates the CREA figures. Indeed, it can be argued that comparing the studies on the basis of numbers is actually inappropriate as one is not comparing apples with apples.

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2.15.18 In respect of the mass of SO<sub>2</sub> emitted by the Kusile temporary stacks the applicant indicates as follows:

- For the purpose of the air quality modelling, it was assumed that the units will be operated at 3500 mg/Nm<sup>3</sup> SO<sub>2</sub> at full load all the time (24/7/365), i.e., 337 615 tons. As a result, this is an absolute worst case and practically not possible (the CREA themselves acknowledge this in their assertions that the 3 units are not able to produce the 2100 MW)
- Considering that there is variability in the operations, the coal sulphur content etc a more probable SO<sub>2</sub> emission will be as follows (CREA page 2). Assuming that the units run at full load all the time with an average coal sulphur content of 1%, then.
- Max. Coal Burnt = 598 kg coal/MWhSO x 726 MWSO x 24 hrs/day x 365 days/year x 3 units / 1000 = 11 419 135 tons.
- If 11 419 135 tons of coal x 1% Coal Sulphur x 2, the applicant's get 228 383 tons of SO<sub>2</sub> produced from units 1 to 3. Furthermore, there is approx. a 90% S to SO<sub>2</sub> conversion that occurs on plant equipped with vertical spindle mills (as in the case with Kusile), hence the most probable SO<sub>2</sub> ambient load without an FGD plant will be approx. 205 544 tons. (CREA figure 280 000 tons).
- The average coal sulphur content at Kusile for FY2022 was 0.79% (adb) and for FY2023 was 0.83% (adb) which if maintained reduces the ambient impact further.

2.15.19 There is therefore a high likelihood that the SO<sub>2</sub> loading to the atmosphere as calculated by the CREA is over-stated by as much as 40%. The use of this higher figure will thus translate to increased estimates of health impacts.

2.15.20 In respect of mass of mercury emitted by the Kusile temporary stacks the applicant indicates as follows:

- The amount of mercury emitted from the coal-fired power stations is currently calculated using the amount of coal burnt, the mercury content in the coal from the coal composite samples, and the Emission Reduction Factors (ERFs). These factors

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are values that represent the quantity of mercury reductions attributable to the specific abatement technology installed and the air pollution control device installed at a power station. The ERFs utilised are from the United States Environmental Protection Agency's (US EPA) Integrated Planning Model<sup>1</sup>). The ERFs that are currently used consider the type of emission control technology and the type of coal burnt at a power station. Power stations burn bituminous type coal and use either fabric filter plants (FFPs) or cold-sided electrostatic precipitators (CS-ESPs) with SO<sub>3</sub> flue gas conditioning (FGC) as air pollution control technologies. If we use the period August 2021 to July 2022 as illustrative, we have the following mass of mercury calculated:

- Total mercury for Kusile with FGD = 254 kg, per annum
- Total mercury for Kusile without FGD = 279 kg per annum
- Total mercury for coal fleet = 15 979 kg. per annum.

2.15.21 The CREA mercury figures of 16 914 kg (with FGD) and 24 163 kg (without FGD) are orders of magnitude above the applicant's estimates. The CREA Kusile mercury figure of 24 166 kg being higher than the total Eskom mercury emissions of 15 979 kg. As in the case of SO<sub>2</sub> the over estimation of mercury mass will result in a significant over estimation in the health impacts of their study. The combination of the over estimation of both SO<sub>2</sub> and mercury and other factors will further result in an overestimation of the health costs which the CREA and the applicant alleges.

2.15.22 The INFOTOX estimate of excess mortality in the 50 km by 50 km domain is 10 deaths, irrespective of whether increased SO<sub>2</sub> emissions are modelled at 3 000 or 3 500 mg/Nm<sup>3</sup> (9.8 vs 10.3 deaths, both rounded to 10 deaths). It appears that the much larger numbers projected by CREA are at least partly due to the much larger study domain apparently used by CREA. In this regard, the following quote from the CREA report can be considered:

- "Comparing this reduction of the geographic domain from several hundred kilometres to only 50 x 50 km (as Eskom does) to one of our previous air quality assessments on Kusile Power Station, we can note that our estimated health impacts are reduced by 99% (Mylyvirta and Kelly, 2023)."

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- The INFOTOX RAHIA calculated deaths due to all causes of natural mortality, which would include the listed causes. In other words, the calculated number of all-cause deaths, by definition, includes deaths due to causes such as stroke, ischemic heart disease, lung cancer, chronic obstructive pulmonary disease and lower respiratory infections, specified by CREA.
- Asthma emergency room visits (3 000 projected by CREA): The RAHIA included calculations for the health effect of asthma exacerbation as asthma hospital admissions (HAs) and Emergency Room (ER) visits. The calculated excess for this health effect, related to exposure to increased SO<sub>2</sub> in the 50 x 50 km domain, is:
  - 37 visits associated with increased SO<sub>2</sub> emissions modelled at 3 000 mg/Nm<sup>3</sup>, and
  - 3 associated with increased SO<sub>2</sub> emissions modelled at 3 500 mg/Nm<sup>3</sup>.
- Preterm births, which CREA associated with PM<sub>2.5</sub> exposure: INFOTOX does not agree with the inclusion of this health effect in the study, for the following reasons:
  - The most recent United States Environmental Protection Agency (“USEPA”) 2019 Integrated Science Assessment (ISA) for Particulate Matter examined the strength of the causality relationship between PM<sub>2.5</sub> exposure and health effects associated with pregnancy and birth outcomes, including preterm births. The USEPA concluded that, overall, the evidence is suggestive of, but not sufficient to infer, a causal relationship between exposure to PM<sub>2.5</sub> and these health effects. In the absence of sufficient evidence to support a causal relationship, the inclusion of preterm birth as a health effect in the Kusile health study is not strongly supported.
  - The World Health Organization (“WHO”) released the most recent update of the WHO Global Air Quality Guidelines in 2021. The process for developing health-based guidelines included the identification of priority pollutant-outcome pairs. The health outcome prioritisation framework assigned a high level of priority to the causality assessments of the USEPA, giving priority to further assessment of pollutant-outcome pairs accepted as causally or likely causally related. The WHO also determined that the causality assessment would supersede the severity of a particular health outcome under assessment. The WHO applied

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the precautionary principle when determining which additional most-severe health outcomes should be included amongst those judged as suggestive to be causal. The WHO noted that a growing body of evidence also suggests causal relationships for type II diabetes and impacts on neonatal mortality from low birth weight and short gestation (related to preterm births) but did not include diabetes and preterm birth as priority-outcome pairs. In this context, the inclusion of preterm birth as a health effect in the Kusile health study is not strongly supported.

- In summary, estimates of preterm birth numbers must be contextualised with uncertainty regarding the causality of the association with PM<sub>2.5</sub> exposure, and should be presented with a cautionary qualifying statement to that effect.
- Days of work absence (720 000 projected by CREA): The RAHIA did not include calculations for this effect, because INFOTOX had judged the assessment of other health effects included in the RAHIA as sufficient for the overall assessment of the severity of the health impact. However, INFOTOX is able to estimate the days of work absence based on PM<sub>2.5</sub> exposure concentrations, if so required. It is noted that the number of days of work absence would be far lower in the 50x 50 km study domain, compared to the number projected by CREA, which is based on a “*geographic domain (of) several hundred kilometres*”.
- The societal cost provided is based on the broader impact area provided in the CREA Report, which is six times the area contained in the HIA. Societal costs can, in any event, only be based on a cost benefit analysis, which is not required for purposes of the postponement in terms of GN 893. The cost of load-shedding is known and has been calculated by National Treasury as a cost of R899 million per day for stage 6 and R204 million a day for stage 3.

2.15.23 Before attending to CREA’s reasons for an “unrealistically low” impact assessment, the applicant makes the following remarks:

- The assessment of risk was done in terms of the attributable fraction (AF) of risk, that is, the calculated proportion of health cases that may be attributed to exposure to Eskom emissions, under each of the assessed emission conditions.

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- The RAHIA report stated that increased risks, expressed as AFs, are:
  - In the insignificant range as associated with PM<sub>2.5</sub>.
  - In the insignificant range as associated with exposure to NO<sub>2</sub>.
  - Insignificant to low at almost all receptors, when considering SO<sub>2</sub>.
  - The SO<sub>2</sub> risk as interpreted as moderate, at most, but not of serious concern. It is vital to consider that this moderate risk is based on the modelled 99th percentile of the maximum daily SO<sub>2</sub> concentration, characterised by the air dispersion modelling specialists as “worst case” ambient air quality concentrations. These concentrations would actually be reached on less than 2 per cent of days during the one year of proposed operation of the temporary stacks. On all other days the risk is lower.
- Impact assessment was done based on the AF of risk, but also considered vulnerability of populations and the consequence of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/likelihood of the impact occurring.
- The AF is an approximation of the probability of the impact occurring (the risk), based only on the exposure concentration.
- The RAHIA assessed impacts as:
  - Mostly low negative.
  - Except in the case of asthma exacerbation associated with increased SO<sub>2</sub> emissions during the operation of the temporary stacks, which were assessed as medium negative.

2.15.24 In conclusion, the impact assessment recognises the seriousness of the assessed health impacts (rating impacts as negative), but also that the risks are mostly insignificant in terms of the proportionate increase in risk, except in the case of SO<sub>2</sub>. Exposure to SO<sub>2</sub> is associated with a moderate increase in the risk of a health effect occurring. Thus, the impact is assessed as medium negative in the case of SO<sub>2</sub>.

2.15.25 Mercury is not a pollutant listed in Kusile’s AEL and was not requested by the authorities to be included in the dispersion modelling.

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2.15.26 The applicant acknowledges that there are impacts associated with running the temporary stacks, but sustainable development must be considered in terms of the environmental, social and economic impact of load-shedding to the community around the station, the province and the country.

2.15.27 The Deadly Air case is distinguishable from this matter in that it dealt specifically with the Minister's failure to implement regulations in the Priority Areas. Whereas, the present matter relates to unexpected circumstances, namely the failure of the west stack and the inability to operate generating units 1, 2 and 3 at Kusile, which requires urgent repairs to bring Kusile back online. Once repaired, the FGD will be operational, which is a measure to reduce emissions in the area surrounding Kusile. Given the temporary nature of the impact and the consequences of further load-shedding, the limitation of section 24, under the circumstances is justifiable. NEMAQA, which enables the NAQO to grant the Postponement Application, is a law of general application. The decision is a justified limitation of the environmental right guaranteed in section 24 of the Constitution especially when having regard to the factors enumerated in section 36(1) of the Constitution, which factors are expounded upon hereunder:

- The nature of the right It can never be denied that the right to an environment that is not harmful to their health or well-being is a fundamental right of significance. However, giving effect to this right requires a balance with other constitutional rights. For example, load-shedding has a devastating impact on freedom of trade, occupation and profession enshrined in section 22 as it cannot be denied that load-shedding has resulted in the loss of jobs and compelled a number of small businesses to shut down. Many businesses are, as a result, compelled to scale their production down and in the process retrench their staff. This has a rippling effect. As a result of jobs being lost, other rights of a socioeconomic nature are infringed upon albeit, indirectly.
- It is for this reason that, the environmental right in section 24 of the Constitution makes provision for sustainable development and the use of natural resources while promoting justifiable economic and social development.

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- A balance was struck in that GN 893 ensures that the issue of load-shedding is resolved while the environment is protected by laying down requirements in regulation 12 aimed at minimising the potential adverse impact on the environment and persons.
- The importance of the purpose of the limitation as mentioned above, giving effect to the environmental right, requires the consideration and balancing of other rights such as the right to equality, life, freedom of trade, occupation and profession, health care, food and water.
- It cannot be denied that load-shedding, in effect, affects the poor and marginalised who do not have the means to access alternative forms of energy in that they depend on the applicant to provide access to energy. Access to electricity is a condition for the exercise of the right to health care, food and water. Critical medical equipment, particularly those of the public sector, depend on Eskom for electricity supply. Therefore, load-shedding has resulted in many unnecessary deaths. Load-shedding affects food safety and results in food wastage and deprives indigent persons of food thereby violating their right of access to food. Furthermore, load-shedding affects critical water infrastructure and results in an interrupted supply of water. The lack of electricity limits the ability to pump or treat water or sewerage consistently.
- Therefore, the purpose of the limitation is to protect other constitutional rights.
- The nature and extent of the limitation the extent of the limitation (i.e., the indulgence from complying with certain regulations in GN 893) is limited in time in that the exceedance of the MES in GN 893 and Kusile's AEL, in accordance with the Postponement decision, will only be for the amount of time that it will take to complete repairs to the damaged stack.
- The relation between the limitation and its purpose the limitation is capable of reducing load-shedding by multiple levels. The returned operation of the Kusile units is a key element of the South African Energy Recovery plan and the erection of the temporary stacks will alleviate the economic, environmental and health impact of extended load-shedding periods.
- Less restrictive means to achieve the purpose the measures chosen, do not significantly interfere with the environmental right as they are temporal and their



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impacts are, as such, limited in period and in proportion. Eskom and the state are implementing multiple strategies to reduce the impact of load-shedding improving Eskom's operations, installing renewables, and demand side management with the Kusile stack recovery being one of the strategies.

2.15.28 The applicant submitted a detailed plan on mitigation measures as required in terms of condition 14(a) of the AEL to the NAQO, DFFE and District Municipality on 5 July 2023. This was therefore submitted 21 working days from 6 June 2023 within the time period stipulated. The applicant has been engaging with the authorities in respect of the broad approach of the plan and will make the document available for stakeholder engagement, shortly. The appellant's allegation in item 10.7 of its appeal is denied. These conditions are the first of their kind in an Eskom MES postponement decision. This indicates the serious weighting this consideration has been given in the context of air quality by the relevant authorities and Eskom.

2.15.29 The location of the monitoring stations (AQMs) is based on the impact zones identified in the AIR and not necessarily tied to the receptors. The applicant established a monitoring station with the agreement of the appellant at the Kendal Poultry Farm, which has been operating since 2011. Based on discussions between the applicant and the authorities, there will be a total of 6 monitoring stations across the area. The applicant submits that they considered moving the Kendal Poultry Farm monitor to the Woodspring Breeder Farm, but this would interrupt the long-term monitoring trending which we have established and is now considered appropriate. Additionally, or alternatively, the inclusion of an additional monitoring station at the Woodsprings Breeder Farm will be of limited practical value as exceedances detected at the Kendal Poultry Farm will be applicable to Woodsprings Breeder Farm and vice versa.

2.15.30 The second appellant is well aware that the applicant has and is actively involved with them in terms of animal health monitoring through the Kusile station EMC.

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2.15.31 The Kusile temporary stack proposal is to allow the station to operate without FGD. This will not result in any increase in fugitive emissions which FOD monitoring would detect.

**Inadequate conditions**

2.15.32 In response to this ground of appeal by the first appellant, the applicant submits that the NAQO's decision is lawful and accords with her powers in terms of the relevant legislation.

2.15.33 The amendment to the AEL provides stricter conditions than previously provided in order to mitigate the identified impacts during the repair of the west stack, in addition to the conditions contained in the Postponement decision. It is denied that adequate and explicit conditions have not been implemented during the repair of the west stack.

2.15.34 The detailed plan is being developed by the applicant, in consultation with DFFE and the District Municipality. It will be made available for comment, as required, in due course. As is appropriate, the MES decision makes high level statements in terms of conditions with the AEL issued by the district making further conditions in section 7.2.13.

2.15.35 Further, this condition is unusual and the first of its kind in an Eskom postponement decision. This very fact indicates that the impacts on the local community are acknowledged and are being mitigated against as far as reasonably possible by the NAQO and DFFE. As identified in the HIA, the health impacts are far lower (medium negative at worst) than those contained in the appellants CREA Report.

2.15.36 The conditions imposed by the NAQO in the postponement decision are the first of its kind which acknowledges the importance of protecting the immediate community from unreasonable impacts.

2.15.37 The applicant denies that the conditions imposed by the NAQO are inadequate. In fact, condition 7.2.13 "Special Minimum Emission Standards Postponement Conditions" of the amended Kusile AEL provides for additional reasonable measures which the applicant

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must implement in view of the MES postponement decision. This is based on the Minister's exemption decision and further measures are included therefore indicating that the health and well-being of the community was not disregarded. These conditions are the first of their kind for an Eskom MES Postponement therefore showing the serious weighting this situation has been given in the context of air quality by the relevant authorities and Eskom. For example, condition 7.2.13(i) requires the development and implementation of a screening programme to identify people with air pollution related diseases. A further condition, based on the screening programme, is to implement an Emergency Response Plan.

2.15.38 The applicant submitted a detailed plan on mitigation measures as required in terms of condition 14(a) of the AEL to the NAQO, DFFE and District Municipality on 5 July 2023. This was therefore submitted 21 working days from 6 June 2023 within the time period stipulated. Eskom has been engaging with the authorities in respect of the broad approach of the plan and will make the document available for stakeholder engagement, shortly. For the purpose of the Appeal, the initial plan submitted to the authorities is attached as Annexure A5.1, as well as the other documents submitted to the authorities (Annexures 5.1 to 5.5). An updated version of this plan will be submitted to the authorities and stakeholders in mid to late-August 2023. The plan must be approved by the NAQO and the District Municipality therefore it is denied that Eskom is solely responsible for the plan.

2.15.39 The location of the monitoring stations (AQMs) is based on the impact zones identified in the AIR and not necessarily tied to the receptors.

2.15.40 The applicant established a monitoring station with the agreement of the second appellant at the Kendal Poultry Farm, which has been operating since 2011. Based on discussions between the applicant and the authorities, there will be a total of 6 monitoring stations across the area. The applicant notes that this is more than sufficient to monitor and manage the risks associated with project.

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2.15.41 The second appellant is well aware the applicant is actively involved with them in terms of animal health monitoring through the Kusile station EMC. In March 2023, the applicant agreed to provide veterinary monitoring at Sprucellwell Rearing Farm and Vaal Layer Farm. The applicant developed a comprehensive animal health (poultry) monitoring programme which the appellant requested. A service provider has been appointed and the monitoring methodology is yet to be approved by the appellant. The applicant has therefore agreed to this request from the appellant and there is no need to include such a condition in the amended AEL since this requirement is based on ongoing impacts as opposed to the limited impacts from the operation of the temporary stacks.

2.15.42 The Kusile temporary stack proposal is to allow the station to operate without FGD. This will not result in any increase in fugitive emissions which FOD monitoring would detect.

2.15.43 The monitoring mentioned and requested by the Appellant relates to impacts of a general nature and not those estimated for the temporary operation of the temporary stacks.

2.15.44 It is highly improbable that any significant change in soil or biomonitoring results would be identified on a monthly basis. The scientific practice is to monitor on a bi-annual basis.

2.15.45 In terms of health screening the applicant will, and always intended to, include screening of the Appellant's staff in the health screening programme.

**Unlawful AEL**

2.15.46 Mitigation measures as required in terms of condition 14(a) of the AEL to the NAQO, DFFE and District Municipality on 5 July 2023. This was therefore submitted 21 working days from 6 June 2023 within the time period stipulated. The applicant has been engaging with the authorities in respect of the broad approach of the plan and will make the document available for stakeholder engagement and comment, shortly. 7

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2.15.47 The AIR and HIR do indicate the impact of the stacks on the properties and identify the impacts of the temporary stack operation.

2.15.48 The location of the monitoring stations (AQMs) is based on the impact zones identified in the AIR and not necessarily tied to the receptors. For example, the Balmoral Laërskool does not wish to have a monitoring station on its property and Eskom has found a site close by instead. The monitoring sites are established to identify air quality trends and risks. The applicant has an established air quality monitoring station at Fairacres/Kendal Poultry Farm property, Paula and Kendal 2 already, this is a matter of kilometres to the southwest of the Woodsprings Breeder Farm, the inclusion of an additional monitoring station at the Fairacres Farm will be of limited practical value as exceedances detected at Fairacres will be applicable to Woodsprings Breeder Farm and vice versa.

2.15.49 PM levels across the Highveld area are already high with exceedances to the standard being recorded at the Kendal 2, Phola and Kendal Poultry Farm Air quality monitoring station between 2020 and 2022. The extent of PM<sub>10</sub> and PM<sub>2.5</sub> increase as a result of the Kusile operation has been assessed in the AIR and shown to result in no exceedances of ambient air quality standards. There are multiple sources that impact on PM, namely, mine dust, agricultural dust, household and industrial fuel use. Kusile is not responsible for these sources, and it is incorrect to assign these impacts to the temporary stacks by trying to require additional monitoring or mitigation measures from the applicant. Requiring Eskom to monitor for these parameters is unnecessary.

2.15.50 The FGD is used to address the impacts from Kusile related to SO<sub>2</sub>. These conditions will be in place for one year during the operation of the temporary stacks. It is not necessary for these specific conditions to deal with the broader and ongoing operation of Kusile. In other words, the AEL is appropriate and addresses the impacts of the Kusile temporary stack proposal as indicated in the scientific studies undertaken.

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2.15.51 These conditions are the first of their kind in an Eskom MES postponement decision. This indicates the serious weighting this consideration has been given in the context of air quality by the relevant authorities and the applicant.

2.15.52 The applicant has been and currently is actively involved with them in terms of animal health monitoring through the EMC. In March 2023, the applicant agreed to provide veterinary monitoring at Sprucellwell Rearing Farm and Vaal Layer Farm. The applicant developed a comprehensive animal health (poultry) monitoring programme. A service provider has been appointed and the monitoring methodology is yet to be approved by the appellant. The applicant already agreed to this request from the appellant and there is no need to include such a condition in the amended AEL since this requirement is based on ongoing impacts as opposed to the limited impacts from the operation of the temporary stacks.

2.15.53 It is highly improbable that any significant change in soil or biomonitoring results would be identified on a monthly basis. The scientific practice is to monitor on a bi-annual basis. In terms of health screening the applicant has included screening of the appellant's staff in the health screening programme.

2.15.54 The Revised AIR and HIR indicate that the impacts on the community are medium negative at worst. The detailed plan and measures included in the MES Postponement decision as well as the amended AEL provide further mitigation measures to manage the impact on the environment and the community. In consideration of the energy constraints facing the country, the objectives of sustainable development are important.

**COMMENTS BY THE NAQO**

2.16 The NAQO responds as follows:

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**Unlawful postponement decision**

- 2.16.1 The 2017 National Framework for Air Quality Management (paragraph 5.4.3.4) that the appellants refer to deals with applications for alternative emission limit, and it states that:  
*“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.”*
- 2.16.2 This qualifying criterion is also cited Paragraph 12(a)(c)(ii) of the AQA Section 21 Notice of 31 March 2018. The applicant's application was for a once-off postponement application, which is provided for in terms of Par (11A) of the Section 21 Notice of 31 October 2018 (GN 1207) or Par 11 of GN893 of 22 November 2013 (as amended).
- 2.16.3 The fugitive emissions sources modelled in the study are known to be significant contributors to particulate matter pollution in coal-fired power stations. These sources have a direct impact on local air quality and human health, making them critical areas of concern. While other sources are important, this study prioritised the most significant contributors. The emissions factors referred to are widely used for a variety of purposes in the air quality community around the world. In the absence of locally developed emissions factors, these are widely used as the best practice. There is no evidence to suggest that the use of these emissions factors result in the underestimations of emissions at Kusile Power Station
- 2.16.4 The start-up, maintenance, upset and/or shut down conditions are temporary. The applicant modelled a normal operating condition which is long term and appropriate for impact assessment. The modelling results presented in the Revised AIR referred to clearly indicate that the impact emissions from Kusile Power Station will not lead to non-compliance with the National Ambient Air Quality Standards for PM10 at the monitoring stations in the vicinity of Kusile Power Station.

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- 2.16.5 Paragraph 5.4.3.4 of the decision makes it mandatory compliance with the national ambient air quality standards as a criterion for application for alternative emission limit. Decision made by the Minister was not for alternative emission limit as intended for by this paragraph. The NAQO's decision was issued in line with the postponement provisions issued in terms S21 of the NEMAQA. Paragraph (11) of the Section 21 Notice, as contemplated in paragraph 5.4.3.4 of the National Framework, published in terms of section 7 of NEMAQA provides that an application may be made to the NAQO for the postponement of the compliance time frames in paragraphs (9) and (10) for an existing plant.
- 2.16.6 Paragraph 11A provides that an existing plant may apply to the NAQO for a once off postponement with the compliance timeframes for minimum emission standards for new plant as contemplated in paragraph (10). Therefore, the decision was made in terms of the legislation having considered all relevant factors. The statements made by the appellant dealt with postponement applications made in terms of paragraph 12A of the AQA. These statements have no bearing on the applicant's application because the application was not made in terms of Par 12A. The applicant Kusile's application was for a once-off postponement application, which is provided for in terms of Par (11A) of the Section 21 Notice of 31 October 2018 (GN 1207) or Par 11 of GN893 of 22 November 2013 (as amended). The NAQO made the decision based on the above principles, and in particular that everyone has the right to an environment that is not harmful to their health or well-being, while also promoting secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

**Health**

- 2.16.7 The NAQO considered all the information presented to her, including (amongst others) the negative impacts of loadshedding on the economy and on human health, as well as the proposed mitigation measures (Emergency Response Plan) and the applicability of the



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postponement provisions as provided in the NEMAQA, and was satisfied that a favourable decision on this application has to be made.

2.16.8 The NAQO maintains the stance that the failure of the Kusile stack has contributed and worsened the electricity supply crisis as evident in the rolling loadshedding that is being implemented throughout the country. It is common knowledge that electricity is one of the major input resources needed to drive the economy and its unavailability would negatively affect business/economy and other aspects of our lives, including health. In the absence of electricity supply, people may resort to alternative energy sources for cooking in their houses and thus leading to indoor air pollution which people would be directly exposed to. Such direct exposure would have negative impacts on their health.

2.16.9 The NAQO made the decision based on the principles contained in section 24 of the Constitution, and in particular that everyone has the right to an environment that is not harmful to their health or well-being, while also promoting secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

2.16.10 The CREA cannot be relied on because it does not comply with the regulatory requirements governing impact assessment studies. The report referred to by the appellant did not comply with the regulation regarding air dispersion modelling to conduct the atmospheric impact assessment. The format did not comply with the regulations prescribing the format of the atmospheric impact report.

2.16.11 According to the facility, the damaged stack is anticipated to be completed by December 2024, and it has not been operating since October 2022, thus, from the day it was damaged to completion it would take a period of about two years two months. It is for this reason that NAQO included conditions as listed in paragraph 14 of the postponement decision.

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2.16.12 It should be noted that different methodology and approach have been used in both the applicant and CREA reports and therefore the results in both reports are significantly different. The applicant's study population included local municipal wards with a 50 x 50 km radius in the receiving environment as guided by the dispersion modelling code of practice. The inclusion of communities further than this has a potential of providing higher estimated results. The applicant did not use the RIVAD scheme in their atmospheric dispersion modelling study. The scheme used in the modelling is the MESOPUFFII. In addition, considering that South Africa currently lacks National Ambient Air Quality Standards and Minimum Emission Standards for mercury, this study focused on assessing the pollutants for which regulations and guidelines exist.

2.16.13 The NAQO is aware of the negative impact of SO<sub>2</sub> and other pollutants (in excess of the ambient air quality limits) on the environment and on human health. It is upon this reason that, the applicant was required to take measures to mitigate harm caused by the exposure of SO<sub>2</sub> to its employees and surrounding communities which measures, must, at minimum, include independent health screenings and referral to appropriate public health facilities for treatment where necessary. The NAQO considered all the information presented to her, including (amongst others) the negative impacts of loadshedding on the economy and on human health, as already discussed above, as well as the proposed mitigation measures (Emergency Response Plan) and the applicability of the postponement provisions as provided in the NEMAQA, and was satisfied that a favourable decision on this application has to be made.

2.16.14 The NAQO is required to promote the protection of the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development. The NAQO took all of this into consideration in making her decision.

2.16.15 The applicant was granted an exemption by the Minister from submitting an AIR (exemption of regulation 12(a) and 12 (c) as per the Minister's letter of the 14 March 2023. The AIR was made available to the NAQO before the postponement decision was made.

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The HIR was also made available to the NAQO and the public after the postponement decision was made. Nonetheless, the NAQO office's decision and the Minister's exemption letter put emphasis that the applicants needed to manage the potential negative health impacts that might arise from operating the facility with the temporary stacks. The NAQO required of the applicant to:

- Take measures to mitigate harm caused by the exposure of SO<sub>2</sub> to its employees and surrounding communities which measures, must, at minimum, include independent health screenings and referral to appropriate public health facilities for treatment where necessary, as stipulated in the Exemption.
- To submit detailed plan on the mitigation measures it intends to put in place within 21 days of receipt of this decision for approval by the NAQO and Nkangala District Municipality.

2.16.16 The AIR and other health impact studies are predictive by nature and are designed to determine effects in target population. The results of these type of studies are extrapolation of realistic assumptions to obtain the realistic risk for the (target) population. Their outcomes are therefore based on projections and assumptions. The "first version of the AIR" provide the basic information regarding the impact of emissions from the facility. The point of departure for the impact following the exemption is the nonfunctioning FGD, the impact of which is predictable.

**Inadequate conditions**

2.16.17 In response to this ground of appeal, the CA submit that the NAQO's decision followed due processes required for the issuance of such decisions as provided for in the NEMAQA. It is the NAQO's view that the decision contains sufficient conditions that if implemented will mitigate the potential negative impact of the facility on the receiving environment, including human health. Other conditions required to operate the facility in compliance with the NEMAQA and emission limit requirements are included in the facility's Atmospheric

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Emission Licence. Therefore, the decision made by the NAQO is rational as it considered ambient air quality, and socio-economic impacts as presented by the applicant.

2.16.18 The NAQO has, as part of her decision, imposed conditions to be implemented by the facility. The criteria to be followed for postponement applications and the decisions thereof have been prescribed in the National Air Quality Framework. After having followed these criteria, the NAQO was satisfied that the decision contained adequate conditions to manage the facility to be in compliance with the decision. Furthermore, additional conditions for effective management of the facility in compliance with the NEMAQA and with the NAQO's decision are specified in the varied atmospheric emission licence, particularly condition 7.2.13 (Special Maximum Emission Standards Postponement Conditions-See attached licence-Annexure B).

2.16.19 The strategic placement of monitoring stations, including those in the vicinity of Kusile Power Station, is rooted in the findings of the Air Quality Impact Assessment. These locations are selected through careful analysis of pollutant characteristics and dispersion patterns. The coordinated use of existing and additional monitoring stations will ensure an extensive coverage of areas affected by the power station's emissions, thus facilitating a comprehensive and robust assessment of the impact on air quality.

2.16.20 The requirements for dust management (measurements/monitoring, mitigation and reporting requirement) are specified in the varied atmospheric emission licence and it may not be necessary to deal with such in the postponement decision since the postponement decisions was made in response to SO<sub>2</sub> postponement application.

2.16.21 The statement regarding the request for frequency of the current monitoring conducted to be increased, may need to be brought to the attention of the Licensing Authority by the appellant. Nonetheless, some of the parameters mentioned in the request such as soil and ground water seem to fall outside of the scope of the NEMAQA.

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**Unlawful AEL**

- 2.16.22 The applicant makes unsubstantiated claims. The locations of the AQM stations are selected through careful analysis of pollutant characteristics and dispersion patterns. The coordinated use of existing and additional monitoring stations will ensure an extensive coverage of areas affected by the power station's emissions, thus facilitating a comprehensive and robust assessment of the impact on air quality. The strategic placement of monitoring stations, including those in the vicinity of Kusile Power Station, is rooted in the findings of the Air Quality Impact Assessment. These locations are selected through careful analysis of pollutant characteristics and dispersion patterns. The coordinated use of existing and additional monitoring stations will ensure an extensive coverage of areas affected by the power station's emissions, thus facilitating a comprehensive and robust assessment of the impact on air quality.
- 2.16.23 The statement regarding the request for frequency of the current monitoring conducted to be increased, may need to be brought to the attention of the Licensing Authority by the appellant. Nonetheless, some of the parameters mentioned in the request such as soil and ground water seem to fall outside of the scope of the NEMAQA.

**EVALUATION AND/OR REASONS FOR THE DECISION**

- 2.17 In evaluating this ground of appeal, I took note that the applicant's MES application was for the postponement of compliance with minimum emission standards for new plant SO<sub>2</sub>, until 31 March 2025. It is not in dispute that the postponement will temporarily result in exceedances of the SO<sub>2</sub> standards as prescribed. However, the applicant is required to comply with all other MES standards such as Nitrogen Oxides (NO<sub>x</sub>), and PM thus remains in place as per the NAQO's decision. I also take cognisance that the purpose of the application is to bring Kusile (using FGD) back online and the postpone for a short duration and temporary.

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- 2.18 In as far as the appellant contends that the applicant was not liberty to apply for postponement to comply with compliance timeframes of MES in terms of regulations 11A, and 12A of the Section 21 Notice, especially considering the location of the facility within the HPA, the appellant is conflating the above provisions. In this regard, the regulation 12A applies to applications for alternative emission limit or load as referenced in GN 893. This is not applicable to the applicant's current postponement application, which relates to existing facilities and new plant standards per regulation 11A of the Section 21 Notice. I therefore conclude that regulation 11A was applicable in this instance, and that the NAQO's decision was lawfully taken in terms of this provision.
- 2.19 The appellant also takes issue with the NAQO's decision to grant the applicant's postponement application for Kusile on the basis that Kusile falls within the HPA. I am familiar with the 2017 Framework and nothing in the Framework precluded the NAQO from authorising postponements in a priority area.
- 2.20 The appellant also relies on the recent judgment in the case of *Trustees for the time being of Groundwork Trust and Another v Minister of Environmental Affairs and Others (39724/2019) [2022] ZAGPPHC 208 (18 March 2022) (Deadly Air Case)* for its argument on this issue. I am in agreement with the applicant that the postponement application is distinguishable from the above court judgment in that the judgement deals with the Department's failure to implement regulations in the HPA, which has no bearing on the matter at hand.
- 2.21 I also note that the simulated hourly, daily and annual SO<sub>2</sub> concentrations are below the NAAQ within the study area for the future baseline. I further note and I am satisfied that there was indeed a typographical error and that the temporary stack heights are 116 meter in height and therefore the same height as the highest building on site.
- 2.22 In as far as the second, third and fourth appellants' request additional monitoring stations and veterinary monitoring at their properties, I note that the applicant already has existing monitoring stations near the appellants' properties and has proposed additional monitoring

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stations based on the impact zones identified in the AIR. In addition, the applicant has already agreed to the second appellant's request regarding veterinary monitoring and has developed a comprehensive animal health (poultry) monitoring programme for the second appellant. I am therefore satisfied that the combination of the various monitoring stations will be sufficient to monitor the impacts of the increased SO<sub>2</sub> emissions. I have noted the concerns relating to animal health impacts at the appellants properties and included an additional condition to address animal health monitoring in paragraph 3.4 below.

2.23 In my assessment of the health impacts, I found that the CREA report does not comply with the NEMAQA requirements and regulations regarding air dispersion modelling to conduct the atmospheric impact assessment. I nevertheless considered the information in the CREA report and I found that the CREA report overstates the health impacts. The legal requirement for the Revised AIR and HIA is to consider a radius of 50 kilometres from the point source. The CREA Report provides six times the geographical area (300km vs 50km), which in my view resulted in inflated number of fatalities and health impacts.

2.24 I note that condition 14A of the NAQO's postponement decision required the applicant to provide a detailed health mitigation plan to the NAQO for approval. I have been provided with copies of the following documents that the applicant submitted to the NAQO on 15 September 2023, for approval:

- Final Health Mitigation Plan for Temporary Stack Emissions at the Kusile Power Station (Report No 072-2023 Rev 1.1);
- Kusile Power Station Emergency Management Contingency Plan (Report No 240-164249300 Rev 3);
- Kusile Power Station Emergency Preparedness Plan (Report No 336-509621 Rev 2);
- Kusile Power Station Temporary Stack Monitoring Framework (Report No. KUSI20230706 Rev 03);
- Mutual Assistance Agreement between Eskom and Emalahleni Local Municipality;

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- Final Health Mitigation Plan for Temporary Stack Emissions at the Kusile Power Station (Report No 072-2023 Rev 1.1);
- FGD Temporary Stacks Health and Hygiene Monitoring Plan (Report No.366-50962); and
- Critical Facilities Contact Details Report; and 3.9 Kusile Power Station Health Screening and Monitoring Programme.

2.25 On perusal of the above listed documents, I found that the key aspects of the Kusile emergency response plan to mitigate any impacts on health to surrounding community and to its employees include:

- Ambient air quality emergencies will be triggered by either (a) on-site CEMS monitor levels exceeding agreed trigger values/limits (e.g. stack emissions SO<sub>2</sub> emissions exceeding 3500 mg/Nm<sup>3</sup> for 8 hours) or b) Off-site ambient monitor levels exceeding agreed trigger values/limits...
- Emergencies identified through CEM's levels will primarily be dealt with in terms of standard plant emission management procedures, resulting in plant de-loading to bring emissions within acceptable levels. Further emergency response will only be triggered at the site level if occupational health monitoring indicates unsafe conditions.
- Emergencies identified through ambient monitoring will trigger a number of responses based on the severity of the levels, these will include:
  - Cautionary notifications to vulnerable groups and health service providers (e.g., monitor your symptoms).
  - Warning notifications to vulnerable groups and other stakeholders (e.g., avoid strenuous activity and contact your health facility where necessary).
  - Notification and, where appropriate, support to health service providers.
- Trigger levels will be based on the United States Acute Exposure Guideline Levels for Hazardous Substances. (AEGL) as amended for South African circumstances.
- The initial indications are as follows.
  - AEGL 1 – the cautionary notification level (non-disabling level for those with asthma) - is based on the South African NAAQS limit – for SO<sub>2</sub>, this will be 500



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ug/m<sup>3</sup>, measured over a 10 min averaging period, if the exceedance condition occurs for more than 4 hours (Maximum predicted daily level is 330 ug/m<sup>3</sup>).

- AEGL 2 – the warning notification level (disabling level for those with asthma) – is aligned to US AEGL approach – for SO<sub>2</sub>, this will be 1950 ug/m<sup>3</sup> measured over a 10 min averaging period (Maximum predicted hourly level is 1100 ug/m<sup>3</sup>).
- AEGL – the lethality level – for SO<sub>2</sub>, this will be 78 000 ug/m<sup>3</sup> for exposure measured over a 10 min averaging period.
- It is noted that the maximum predicted SO<sub>2</sub> level in the AIR is 1100 ug/m<sup>3</sup> (hourly average) well below the AEGL disabling level so the likelihood of triggering AEGL 2 is seen as very low.
- The above values will be used as initial inputs in the monitoring and emergency response process. The applicant appointed INFOTOX to support the health screening exercise and with their assistance the applicant will confirm trigger levels for all relevant pollutants, as agreed with the authorities, by 31 October 2023.
- The applicant established a Mutual Assistance Agreement with the Emalahleni Emergency Services and Kendal Power Station for emergency support. Further arrangements with Nkangala District Municipality and other relevant parties will be developed.

2.26 In my consideration of the HIR, I paid heed to AFs of diseases that are calculated to arise in the community due to the modelled exposure concentrations. I am aware that the AF is the fraction of cases (morbidity or mortality) of a health effect that can be attributed to environmental exposure to a causally related exposure in a community. The causally related exposure is due to Kusile stack emissions, resulting in increased concentrations of PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub>. The RAHIA takes into account the baseline health status of exposed communities as a measure of community vulnerability to the health effects of air pollution. The HIR made the following findings:

2.26.1 Considering the different exposure scenarios, conditions of increased SO<sub>2</sub> emissions allowed in the temporary scenarios had the effect of numerically increasing the risk of

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health effects (the AFs) associated with short- and long-term exposure to PM<sub>2.5</sub>. However, even the increased risks associated with PM<sub>2.5</sub> are in the insignificant range and do not trigger alarm regarding the effect on health;

2.26.2 Conditions of increased SO<sub>2</sub> emissions allowed in the temporary scenarios did not significantly increase health risks (expressed as AFs) associated with exposure to NO<sub>2</sub>. Calculated health risks associated with exposure to NO<sub>2</sub> are in the range interpreted as insignificant;

2.26.3 As expected, allowing increased rates of SO<sub>2</sub> emissions in the temporary scenarios resulted in increased health risks (AFs) compared to the future licensed scenarios. Risks are characterised as the health effect of exacerbation of asthma symptoms. This does not imply that more people will suffer from asthma, but that people already suffering from asthma may experience more episodes of exacerbated symptoms. However, it should be emphasised that the calculated AFs reflect insignificant to low risks at almost all receptors. The only receptor at which the risk is interpreted as moderate is at the chicken farm, where an air quality monitoring station is situated. The risk is interpreted as moderate at most, but not of serious concern. It is vital to consider that this moderate risk is based on the modelled 99th percentile of the maximum daily SO<sub>2</sub> concentration, characterised by the air dispersion modelling specialists as “worst case” ambient air quality concentrations, which will actually be reached on less than 2 per cent of days during the one year of proposed operation of the temporary stacks.

2.26.4 Environmental health impact significance ratings are mostly low negative. Only in the case of asthma exacerbation associated with increased SO<sub>2</sub> emissions during the operation of the temporary stacks are the impacts assessed as medium negative. Considering all of the information presented in this report, the postponement application for the operation of the Kusile temporary stacks is supported, while repairs are carried out on the existing stack. Repairs are estimated to last for one year, after which the flue gas desulphurisation (FGD) system deployed in the “current stack” will become operational again. Interim emissions associated with the operations of the temporary stacks are projected to result in a low

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negative impact with regard to the pollutants PM<sub>2.5</sub> and NO<sub>2</sub>, and a medium negative impact on health due to increased emissions of SO<sub>2</sub>. No fatal flaws are identified.

2.27 In relation to the health screening of the staff of the second, third and fourth appellants, I note that the applicant committed to including screening of their staff as part of the health screening program and this should be given effect to.

2.28 I cannot over-emphasise that I considered the issues relating to health concerns very seriously. I am aware that environmental conditions both positively and negatively impact on human health and well-being. I am also aware that human well-being includes socio-economic consequences. I therefore considered the impacts of the MES postponement decision against the need to address the country's energy related constraints (which will in effect also create health related impact) and socio-economic impacts. I also took into account that the postponement is of temporary nature, for a short duration and the applicant has provided a Health Mitigation and Emergency Response Plans, which in my view is sufficient to mitigate the impacts of the postponement decision on health.

2.29 I have taken note of the appellants' contentions regarding the decision of the licencing authority in relation to the applicant's AEL. The competent authority over the AEL is the Nkangala District Authority. I am not the Appeal Authority over decisions taken by the licensing authority and as such I am unable to make any findings on these grounds of appeal. To do would be outside of the scope of my authority and therefore unlawful.

2.30 The grounds of appeal under this topic are dismissed for all of the above reasons.

**DECISION TO GRANT POSTPONEMENT APPLICATION WAS BASED ON INACURATE INFORMATION AND EXCESSIVE CONSIDERATION ON UNFOUNDED CLAIMS IN RELATION TO LOAD-SHEDDING REDUCTION**

2.31 The second, third and fourth appellants submit as follows:

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**Inaccurate information**

- 2.31.1 The specialist indicated that there is no substantive difference in the results of the original and Revision 3 of the AIR in terms of areas of non-compliance to ambient air quality standards and therefore concludes that inaccurate / incomplete information was provided to the NAQO.
- 2.31.2 Furthermore, the applicant submitted 'Revision 3 of the AIR' to the authorities prior to the NAQO Decision on 05 June 2023, with the result that it is unknown which version of the AIR was considered by the NAQO when deciding on the postponement application. In the event that the authorities did not consider Revision 3, it is clear that the NAQO Decision was based on inaccurate information.
- 2.31.3 Given that this revised AIR has now come to the appellants' attention, the appellants are compelled to highlight the fatal flaws of the AIR as it did not consider the appellants as sensitive receptors, nor the highly specialised and sensitive commercial operation being conducted on the properties of the appellants and the impacts on their staff. In omitting the appellants from this consideration and relying on inaccurate data, the full impact of the postponement application was not assessed.
- 2.31.4 The AIR does not consider the repetitive findings in the monthly Fallout Dust monitoring reports before the EMC.
- 2.31.5 The AIR does not consider the risks of existing elevated hazardous pollutants such as arsenic, bromide, chromium, fluoride, mercury, selenium and vanadium.

**Unfounded loadshedding reduction claims**

- 2.31.6 The applicant alleges in its application document that units 1,2 and 3 that were affected by the failure on the west stack, on 23 October 2022, can each provide 700 megawatts ("MW"), being 2100 MW in total to the national grid and "potentially reduce load-shedding

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by multiple levels”; and that it (the applicant) wishes to return these units to the national grid urgently in light of the electricity crisis and the declaration of the energy crisis as a national disaster.

- 2.31.7 The applicant cites the impacts of load-shedding as the reason for applying for the postponement of compliance. In the postponement decision, the NAQO appears to have placed undue weight on the load-shedding reduction claims made by the applicant. The applicant failed to reference any information and or material in its application to validate the veracity of these claims.
- 2.31.8 The applicant’s claims that the proposed bypass stacks will reduce load-shedding by two stages, or “multiple stages”, is highly questionable. This is due to the historical output of Kusile which at the average load factor of 39%, the plant would only produce 39% of its rated capacity or 39 % of 2160 MW = 848 MW as detailed in the sub-section below. Recent Historical output of Kusile.
- 2.31.9 The installed (design) capacity of each of the three Kusile units, units 1, 2 and 3, that discharge into the damaged stack is 799 MW (2397 MW total) but according to the applicant the available power that is dispatched to the grid is 2160 MW total or 720 MW each, a reduction of 10%. This is clear from the applicants own Integrated Report (Eskom’s MES Application Document claims that each unit can provide 700 MW, for a total of 2100 MW. That is, slightly lower figures.)
- 2.31.10 If the three units operate at a 100% load factor or performance level for a year (365 days), the expected generation output would be 2160 MW x 365 days x 24 hours/day = 18 921 600 MWh or 18 921,6 GWh per year. This level of performance is highly improbable since the plant performed very poorly and unreliably prior to the stack failure.
- 2.31.11 The plant performance during this year was quite erratic, with a lowest monthly load factor of 22% in December 2021 to a highest value of 80% in July 2022, three months before the stack collapse on 23 October 2022.

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2.31.12 The above is a clear demonstration that Kusile's performance was low even before the malfunction that occurred in October 2022.

**RESPONSE BY THE APPLICANT**

2.32 The applicant submits as follows:

**Inaccurate information**

2.32.1 It is denied that the AIR is "incorrect" or that the information submitted was "inaccurate" or "incomplete". It is usual practice for an AIR to be updated based on the review by the applicant of the relevant application related to the study and possibly based on responses from I&APs through the PPP.

2.32.2 The specific changes in the AIR relate to the following aspects:

- Initially, particulate matter (PM) from fugitive emissions (coal stockyard and ash facility) were excluded from the dispersion modelling as the pollutant of concern was SO<sub>2</sub> because of the flue gas desulfurization (FGD) being bypassed temporarily for repair of the west stack. The operation of the temporary stacks will not affect the fugitive emission sources since the capacity and footprint of the coal stockyard and ash facility will remain the same during the limited period the temporary stacks are in operation. (Revision 2)
- The fugitive emissions were then included, and Airshed was advised by the NAQO to use the latest (March 2023 submission) emissions as reported on the National Atmospheric Emissions Inventory System (NAEIS). (Revision 3)
- Reference was made to emergency conditions experienced at the plant and complaints raised.

2.32.3 It is denied that the revisions constitute significant changes which impacted on the NAQO's decision. The fugitive emission sources were included for completeness but did not

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increase the stated impacts of the temporary stacks. The applicant included information about the fugitive emission source from the NAEIS emission inventory as advised by NAQO. The use of updated emissions contained in the latest NAEIS also did not result in a significant increase in the identified impacts.

2.32.4 The information about the fugitive emissions were not included because the focus is on SO<sub>2</sub> and the fugitive emissions remain the same whether or not the temporary stacks are operated for 1 year while the west stack is repaired. The results of fugitive (dust fall monitoring) were also included in the revised AIR (see section 5.1.6). There is no significant increase in impacts or change in the conclusions of the AIR by the inclusion of the information in the revisions of the AIR therefore there was no need for an additional PP. It is denied that the revised AIR, or any version thereof, contains fatal flaws.

2.32.5 Sensitive receptors highlighted in AIRs typically include schools and hospitals in the surrounding areas. Noting these groups is a practice that has developed because they are usually found in most areas and contain sensitive individuals. A poultry farm like the appellant's farm is not as common as these aforementioned sensitive receptors. However, the isopleth plots show the impact for all surrounding areas. Even though the farm may not be in the table, the simulated impact can be seen in the isopleth plots. The appellants properties were therefore included in the AIR as a sensitive receptor.

2.32.6 When considering the results of the AIR, it should be noted that the dispersion modelling is conservative in nature assuming 24-hour operations at continuous emission rates which is an unrealistic but conservative assumption. While modelling predicts possible exceedances of the standard given the variable nature of plant operations, it is likely that the actual number of exceedances will be less than the aforementioned predications.

2.32.7 Although metal analysis was done on the dust during dust fallout measurements, the dust fallout reports state that "there are currently no established environmental limits for HAPs in South Africa, against which to compare the analytical results determined in this survey". It is unclear on what basis these are regarded as elevated by the appellant. Maximum

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percentages of metal in the dust are below 0.1% (barium) but on average well below 0.00001%.

2.32.8 As stated, the Kusile temporary stack proposal will not increase the mass of fugitive emissions created as no additional coal or sorbent is used beyond that which is already authorised and required for the usual operation of Kusile. The baseline status will not be changed by the temporary stack proposal. Further the monthly fugitive monitoring reports clearly indicate that "There are currently no established environmental limits for trace element in fall out dust, against which to compare the analytical results determined in this survey.

2.32.9 The additional ambient monitoring stations have been located at a selected number of sites to obtain further information on air quality trends in the area and based on the area of predicted impact. It is not a requirement that each impacted property have its own individual monitoring station.

**Unfounded loadshedding reduction claims**

2.32.10 Each unit has an installed capacity of 800MW with 80 MW used for auxiliary power for the unit in the power generation process, thereby leaving up to 720MW as sent out load, hence, in total the available potential capacity for 3 units is up to 2160MW. The majority (>50%) of the issues that have led to the poor performance of Kusile over the recent history are related to the performance of the FGD plant. The sub-par performance of the FGD plant has been related to high plant failure rates compared to originally envisioned and as a result inadequate spares to keep up with the failure rate. The FGD is the only plant of its kind in South Africa and as it stands the majority of the spares do not have local representation and have long lead times. The applicant is currently correcting this and has entered into a contract with the OEMs of the spares in order to improve the delivery times and to improve the high failure rate so that Units 4-6 are not as affected as 1-3 as of July 2023.



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2.32.11 The applicant is the owner and operator of the plant and makes key information on performance to the authorities in its monthly atmospheric emission reports and other forums to government. It is unclear what other information sources the appellant would want the NAQO to use to obtain opinion on the operational issues and factors it questions.

**COMMENTS BY THE NAQO**

2.33 The NAQO responds as follows:

**Inaccurate information**

2.33.1 It is expected that the operation of the temporary stacks without the FGD would lead to emissions of SO<sub>2</sub> above the new plant standards and/or exceedance of the National Ambient Air Quality Standards. As such, the applicant has been required to implement mitigation measures against exposure of surrounding communities and its employees to harm, including undertaking health screenings and referrals to health care facilities.

2.33.2 The applicant revised the AIR to include the impact of fugitive source after a discussion with the NAQO.

2.33.3 The study area was intentionally chosen to cover a larger region of 50 km by 50 km, encompassing both the explicitly designated sensitive receptors within a 10 km radius and other areas that could potentially be affected by emissions from Kusile Power Station, including the property in question. The NAQO is aware of the negative impact of SO<sub>2</sub> and other pollutants (in excess of the ambient air quality limits) on the environment and on human health. It is upon this reason that, the applicant was required to take measures to mitigate harm caused by the exposure of SO<sub>2</sub> to its employees and surrounding communities which measures, must, at minimum, include independent health screenings and referral to appropriate public health facilities for treatment where necessary.

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2.33.4 In the impact assessment, not all receptors may be considered. Receptors such as schools, hospitals, clinics, old peoples' homes are always regarded as sensitive receptors and given priority in the assessment.

**EVALUATION AND/ OR REASONS FOR THE DECISION**

2.33.5 The nub of this ground of appeal is that the NAQO considered inaccurate information in the AIR and unfounded claims regarding loadshedding reduction that tainted the NAQO's decision, and that the postponement decision should therefore be set aside.

2.33.6 I had sight of all information that was submitted to the NAQO as part of the application for postponement. I refer to the AIR and HIR reports in my assessment of the grounds of appeal referred to under the previous topics in this appeal decision. I have therefore evaluated the information in the reports. In my view all relevant considerations were taken into account in the AIR, which includes the sensitive receptors, the location of monitoring stations as well as the immediate impact on SO<sub>2</sub> on the receiving environment which includes the second third and fourth appellants properties and staff. Moreover, I note that there are measures in place to mitigate the impacts on the appellants.

2.33.7 The information before me further indicates that the NAQO had the final versions of both the AIR and HIR before her for consideration at the time of making her decision on the postponement application.

2.33.8 As previously alluded to, I reiterate that the pollutant of concern was SO<sub>2</sub> due to the bypassing of the FDG and that the temporary stacks will not affect the fugitive emission sources. The applicant is still obliged to comply with all other emission limits as per their licencing conditions.

2.34 It should further be noted that the temporary stacks will not increase the mass of fugitive emissions created as the appellant will not be permitted to utilise additional coal or sorbent

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beyond that which is already authorised and used in their normal operations. Therefore, the baseline status will not be changed.

- 2.35 I considered the appellants' allegation that the applicant's claims regarding loadshedding reductions is not supported by any evidence and that the motivation that the postponement application is required to return units 1, 2 and 3 into operation to urgently alleviate the energy crisis, is without merit. The appellants state that the NAQO placed undue weight on the applicant's claims of load-shedding reduction when there is in fact no veracity to these claims. The appellant also states that Kusile's historical output demonstrates that Kusile does not operate at 100% load factor or performance for a year and therefore the projected reduction in load shedding levels that the NAQO relies on is exaggerated by the applicant. To demonstrate their point, the appellants aver that the plant performance during this year was quite erratic, with a lowest monthly load factor of 22% in December 2021 to a highest value of 80% in July 2022.
- 2.35.1 I note that the applicant does not dispute that historically Kusile has not performed at 100% load factor. The applicant attributes this to the performance of the FGD plant, which the applicant now states it is currently correcting through various measures.
- 2.36 It cannot be gainsaid that South Africa is currently experiencing an energy crisis and that South Africans have negatively experienced the social and economic impacts thereof. While the appellants make much about the units of megawatts that will be released into the national grid, based on historical data, I also considered that this alleged aspect of poor performance is being addressed by the applicant through various mechanisms to ensure better performance going forward. I am accordingly satisfied that the applicant's claims regarding loadshedding reduction are not unfounded.
- 2.37 In any case, it is also a well-established fact that Kusile is one of the largest producers of energy to the country. NEMA requires that that I consider the environmental, economic and social factors as a whole. NEMA requires me to balance the environmental right to health and well-being with the obligation to ensure justifiable economic and social development.

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Therefore, regardless of Kusile's historic performance, any addition to the grid whether it be at full or partial capacity, will provide relief to the energy crisis. I am therefore satisfied that Kusile will assist in alleviating the strain on the country's energy needs.

2.38 In light of the aforementioned this ground of appeal is dismissed.

**3. DECISION**

3.1 In reaching my decision on this appeal, I have taken the following into consideration:

3.1.1. The appeals submitted by the four appellants between 5 July 2023 and 20 July 2023;

3.1.2. The responding statements received by the applicant on 7 August 2023 and 18 August 2023;

3.1.3. The comments submitted by the NAQO on 7 August 2023 and 21 August 2023;

3.1.4. My exemption decision; and

3.1.5. The information contained in project file Eskom GEM23-L175 including the postponement decision dated 5 June 2023.

3.2. In terms of section 43(6) of NEMA, I have the authority, after considering the appeal, to confirm, set aside or vary the decision, provision, condition or directive or to make any other appropriate decision.

3.3. Having carefully considered the information mentioned in paragraph 3.1 above, and in terms of section 43(6) of NEMA, I have decided to dismiss the appeals lodged against the decision of the NAQO dated 5 June 2023 and to uphold the NAQO's postponement decision.

3.4. Nevertheless, I deem it appropriate to vary the NAQO's postponement decision to include the following conditions:

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- The applicant is instructed to submit monthly updates to the NAQO on the progress of the repairs to the permanent stacks, for the duration of the operation of the temporary stacks. These reports must be made publicly available on the applicant's official website. This is to ensure that the postponement is of a temporary nature and the applicant is held to account;
- Kusile's Power Station's Health Screening and Temporary Stack Emissions Monitoring Reports for the increased SO<sub>2</sub> emissions and associated health impacts must be made publicly available on a monthly basis on the applicant's official website for the duration of the operation of the temporary stacks; and
- The applicant must do monitoring of the animal health (poultry and pig) at the second, third and fourth appellants properties, for the duration of the operation of the temporary stacks.

3.5. In arriving at my decision on the appeal, I have not responded to every statement set out in the appeal and/or response thereto, and where a particular statement is not directly addressed, the absence of any response thereto should not be interpreted to mean that I agree with or abide by the statement made.

3.6. Should any party be dissatisfied with any aspect of my decision; they may apply to a competent court to have this decision judicially reviewed. Judicial review proceedings 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).



**MS B D CREECY**

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

DATE: 25/9/2023.