ESKOM HOLDING SOC Ltd APPLICATION FOR POSTPONEMENT OF THE MINIMUM EMISSION STANDARDS (MES) FOR TUTUKA COAL-FIRED POWER STATION, STANDERTON, MPUMALANGA PROVINCE

1st ROUND OF PUBLIC ENGAGEMENT – THUTHUKANI PUBLIC MEETING

Draft Minutes of the Thuthukani Public Meeting

MEETING DATE	30 January 2018
VENUE	AFM Lefikeng Church, Thuthukani
TIME	05:30HRS – 06:30HRS

Meeting Facilitator: Naledzi Environmental Consultants CC - Sean O'Beirne (SO)
Zulu Translator: Naledzi Environmental Consultants CC - Sithabisiwe Ncube – Gari (SN)

Attendees:

Name & Surname	Position	Abbreviation
Eskom Holdings SOC Ltd (Eskom)		
Tobile Bokwe	Environmental Impact Management Unit	TB
Bianca Wernecke	Air Quality Centre of Excellence	BW
Naledzi Environmental Consultants CC (NEC)		
Sean O'Beirne	**EAP and Meeting facilitator**	**SOB**
Desmond Musetsho	EAP and Project Manager	DM
Marissa Botha	EAP & Public Participation Programme	MB
Sithabisiwe Ncube-Gari	**EAP and Zulu Translator**	**SN**
Tsundzukani Ritshuri	Public Participation Programme	TR
Tutuka Power Station (TPS)		
Ilse Coop	Environmental Manager	IC
Lehlohonolo Mogwase	Senior Environmental Advisor	LM
Oupesh Motlhabane	Project Programme Manager (Acting)	OM
Claude Naicker	Research & Development Manager	CN
Reginald Ngomana	SHE Manager	RN
Solly Sibiya	Environmental Officer	SS
L Mjingwana	Project Manager	LMJ
Lesiba Mike Molepo	Senior Engineer	LMM
Interested and Affected Parties (I&APs)		
THE NAMES OF ATTENDEES AT THE MEETING ARE ATTACHED UNDER ANNEXURE A.		

DISCUSSIONS:

1. WELCOME AND INTRODUCTION

1.1 SOB welcomed everyone and thanked them for their attendance. The project team from NEC, Eskom and Tutuka Power Station introduced themselves and stated their role in the project.

1.2 SOB presented the draft Agenda, rules and purpose of the meeting. It was highlighted that the key aim of the meeting is to communicate and explain the application to I&APs and specify the type of work that needs to be undertaken to support the application.

1.3 SOB established whether the attendees approve of the Agenda. Attendees confirmed it was approved.

1.4 SOB highlighted that a Background Information Document (BID) was available for review in Afrikaans, English and Zulu. Attendees would be informed on how to access the document if attendees had not seen the document yet.

1.5 SOB highlighted that all presentations would be queued and opportunity for discussions would be provided afterwards. Attendees would be provided an opportunity to ask questions if a particular concept is not clear.

1.6 SOB indicated that the meeting facilitation would be conducted in English but NEC has Zulu capabilities if attendees would like to ask questions in Zulu. Zulu Translator from Naledzi was present for these purposes. The attendees agreed to the manner. SOB pointed out that most of the presentation would be presented in Zulu except for the Atmospheric Impact Assessment detail.

1.7 SOB established if attendees were comfortable with the recording of the meeting proceedings. He highlighted it would merely be recorded to ensure accurate notes for recording of issues and responses.

1.8 SOB explained that TB from Eskom would present the Background and Motivation for the proposed application. The presentation would explain what the meeting was about and what Eskom intended to do as part of the application.

1.9 TB explained that SN would present the Background and Motivation presentation in Zulu on behalf of Eskom to ensure that attendees adequately understood the content. SOB indicated the Atmospheric Impact Assessment details would be presented in English and SN would thereafter present the public participation process details in Zulu.

1.10 SN confirmed with attendees if they would be comfortable if NEC took a photograph of the meeting proceedings as proof of the meeting. Attendees agreed to be photographed.

2. PRESENTATIONS

2.1 SN presented the background and motivation in Zulu for the Tutuka Coal-Fired Power Station Minimum Emission Standard (MES) Postponement Application on behalf of TB from Eskom. The presentation followed.

2.1.1 The location of the TPS was confirmed followed by an illustration of the process of coal input and output at the power station, output being combustion products referred to as emissions. It was stated that the MES Postponement Application focused on the emissions of the power station.

2.1.2 The relevant legislation guiding the application was described. The difference between the MES and National Ambient Air Quality Standards was clarified. It was pointed out that Tutuka Power Station needs to comply with specific MES by a certain timeframe, yet the MES allow industry to apply for postponement. Eskom submitted a postponement application from the MES in 2014, after which postponement from the MES was granted for 5 years.

2.1.3 It was pointed out that the current application is not new. It is a rolling application that Eskom would continue to apply for until they are able to retrofit the power station to comply with the MES, which is what had been presented in the first application in 2014.

2.1.4 The MES limits for 2015 and 2020 were provided. It was indicated that Eskom applied for postponement from the 2015 "existing plant limits" in 2014 as Tutuka was 30 years old and not designed to comply with the minimum emission standards limits. Tutuka requested to comply with a PM limit of 350 mg/Nm^3 and a NOx limit of 1200 mg/Nm^3 until relevant technology could be completely installed to bring the station into compliance with the 2020 standards.

2.1.5 It was pointed out Eskom had an emission reduction plan in which technology would be installed in a phased manner in each of the six units of Tutuka to meet the new plant standard levels for PM and NOx emissions. Eskom was also committed to a timeline for the installation. The retrofitting would bring the station into full compliance with new plant standards from 2024 for PM and 2025 for NOx.

2.1.6 The health of people when exposed to emissions were discussed and compared to various other sources contributing to ambient air quality in the area. It was stated that there was a north westerly wind during the day and an easterly wind at night over Tutuka. Eskom stated it monitored the ambient air quality for the area at Grootdraai Dam and Majuba Power Station, Grootdraai being more representative of Tutuka's ambient air quality. But based on Majuba's monitoring station results it is expected that Tutuka would be in compliance with all parameters except for PM on occasion.

2.1.7 Eskom's offset programme to minimise emissions in communities around Tutuka was explained. It was highlighted to be a different programme/process to the MES Postponement Application which would result in an improvement of ambient air quality.

2.1.8 SN highlighted an opportunity to ask questions would be provided once the presentations had been completed. The next presentation would explain the detail on

the Atmospheric Impact Assessment required in support of the application, it would be presented by SOB.

2.2 SOB specified the presentation on the Atmospheric Impact Assessment would be presented in English. It would explain the assessment that would be done in support of the MES Postponement application. If there were any need for translation of any part of the presentation in Zulu, a translator would on hand to do so. The presentation followed.

2.2.1 The basic power generation principle was illustrated through a schematic presentation. It was explained that coal is delivered to the power station, crushed and fed into the boiler and burnt. Ash falls to the bottom, the boiler heats water to make steam, which in turn drives the turbine. The burning of coal produces particulate matter or fly ash which is ultimately emitted to the atmosphere. Tutuka implements removal of fly ash from the air through electrostatic precipitators (ESP) before being emitted to the atmosphere. The ESP removes or reduces the ash in the combustion stream which is emitted to the atmosphere.

2.2.2 A photograph of Tutuka was shown to the attendees.

2.2.3 The legislative overview and significant difference between ambient and emission standards were revisited; ambient air quality being the air people breath at ground level and emissions standards referring to the emissions at point of release at the stack. Ambient standards are measured in low concentrations at μ/Nm^3 and emission standards at greater concentrations in m/Nm^3.

2.2.4 The primary pollutants emitted by Eskom and its control were revisited; indicating that the PM was removed by ESP and fabric filters and the SOx had no direct control. It was highlighted that the existing ESP at Tutuka was not sufficient to meet the MES. Eskom would therefore change the manner in which coal is burnt in the boilers by use of low NOx burners. Small fires would be used to burn the coal which will lower the NOx emissions. In additional the ESP which removes the fly ash from the combustion stream would be augmented by fabric filters which would allow Tutuka to meet the MES.

2.2.5 It was pointed out the installation of abatement technology was a challenge. The technology would need to be installed in a phased manner to each of the 6 generating units. The installation involved shutting down a unit, retrofitting the unit and subsequently brining the unit into operation again. This would be done in a phased manner for each of the 6 units. This method required a considerable amount of time to implement.

2.2.6 The MES for existing plants and new plants were revisited in which was indicated that “new plant standards” for 2020 were half the concentrations permitted for "existing plants by April 2015. Eskom intended to start retrofitting the units of Tutuka at the start of the 2019 financial year as it would not be able to meet the $200mg/Nm^3$ from January 2019 nor the $100mg/Nm^3$ from January 2020.

2.2.7 It was highlighted that the Department of Environmental Affairs, as the decision making authority, would mainly want to determine through the application, the impact on the ambient air quality, the people and environment if the MES cannot be met.

2.2.8 It was specified that the motivation for postponement of the MES was as a function of technical and cost difficulties. The Atmospheric Impact Report would determine the impact of Tutuka's emissions on the ambient air quality should Eskom continue to emit. It would include a Dispersion Model of the ambient concentrations and the existing ambient measurements. The assessment would focus only on the ambient standards.

2.2.9 The Dispersion Model and its function was illustrated and explained by means of a cubicle model.

2.2.10 It was explained that the model would be informed by data from ambient air quality monitoring stations situated throughout the Mpumalanga Highveld. The stations monitored the quality of air people breathe at ground level. The Atmospheric Impact Assessment would model the emissions and predict emission concentrations around the Tutuka Power Station to establish whether people's health would be negatively affected by the application. The findings would be presented to the public through another round of public meetings.

2.2.11 The Dispersion model would also compare the model values against the actual values measured at the monitoring stations to determine if the model was accurate or not. It was explained that the model scenarios would include determining the actual emissions, worst case scenario and MES. SOB illustrated the scenarios in the form of a graph which indicated the emission standards, the standards to which Tutuka need to comply and then the actual emissions emitted.

2.2.12 SOB pointed out that attendees were welcome to ask for points of clarity on concepts illustrated.

2.3 SN presented the Public Participation Process conducted for the MES Postponement Application in Zulu.

2.3.1 The application - and public participation process tasks for Tutuka was explained. It was clarified that two rounds of public engagement would be undertaken; the first round (this round) served to announce the application, gain inputs from the public on the approach taken to assess the potential impact of the postponement through written notifications and public meetings. The first round of engagement commenced on 12 January 2018 and would be concluded by 14 February 2018. The second round would allow the public to review the draft Motivation and Atmospheric Impact Report for the application and would include two public meetings to facilitate comments.

2.3.2 The timeframes at which the public could expect consultation were provided.

2.3.3 The tasks completed as part of the first round of public engagement were stipulated including the future tasks to be undertaken as part of the second round of engagement.

2.3.4 The way forward for the public participation process was discussed. The minutes of the public meetings would be prepared and distributed to attendees for a comment period of 7 days. Attendees should state in this time frame whether all comments and

issues have been recorded correctly and submit such comments to NEC, subsequently the minutes would be finalised. An Issues and Response Report would be prepared including the draft Motivation and AIR. The second round of engagement would commence on 26 February up to 9 April 2018. NEC would send out a notification letter, notices and newspaper advertisements to notify the public of the commencement of the second engagement phase. Two public meetings would be scheduled for the second round as per the first round of engagement in Standerton and Thuthukani. It is anticipated that the meetings would take place during the week of 12 – 16 March 2018.

Presentations are attached under Annexure B of the minutes.

3. DISCUSSIONS

3.1 SOB opened the floor for discussions. Refer to 3.2 in table format, overleaf, for comments raised at the public meeting and associated responses by the project team.

3.2 Comments and Responses recorded at the Thuthukani Public Meeting of 30 January 2018			
NO	**Comment**	**Commenter**	**Response**
3.2.1	The wind blows ash towards Thuthukani. This is not acceptable. There are long queues at the local clinic for Tuberculosis. Are these cases related to the Tutuka emissions? Our children are born into this air pollution. Also as per the presentation there is no control of the sulphur dioxide emissions. The monitoring stations are too far from Tutuka power station. Grootdraai monitoring station is 11km away. Thuthukani is next to the power station. How accurate is the monitoring data then? The 1st application for MES postponement was not communicated to the community. We are not happy about this. I did not sign the attendance register because we do not understand this process. NEC must bring the decision making authority to the meeting so that they can explain the impacts to the community. It was said that power stations could not be demolished, this is not true. Other power stations have been demolished in the past. The people of Thuthukani are sick as a result as a result of the emissions.	Sipho Ngwenya Community Member Thuthukani	SN from NEC responded in Zulu, she indicated that as explained before Tuberculosis is not only caused by the impacts from Tutuka, however statistics indicate that smoking is one of the major contributors to human diseases such as Tuberculosis and respiratory diseases. TB, from Eskom, responded in Zulu the application for postponement of the MES for Tutuka power station is not a new application it is a rolling application since 2014. Eskom is further trying to improve it communications. SOB from NEC responded it is very expensive to operate ambient air quality monitoring stations and labour intensive to monitor many stations. TB, from Eskom, added in Zulu that Desulphurisation plants which control sulphur dioxide involves a difficult process, is expensive to implement and requires a lot of water. If such control plants are fitted to most power stations it may result in electricity price increases. Eskom is also working on an offset programme to improve air quality in low income communities surrounding the Tutuka Power Station. Please note the offset programme is separate from the MES Postponement Application.

3.2.2	Next time NEC conducts a public meeting, the District Air Quality Officer and Department of Environmental Affairs should be present to explain the process and impacts. The Department of Health must also be involved. We are suffering here in Thuthukani. Also NEC is being paid to conduct the work. Why would they tell the truth?	Sipho Ngwenya Community Member Thuthukani	TB, from Eskom, responded in Zulu that Naledzi Environmental Consultants CC is an independent environmental consulting company. Hence although paid for the work, they present an independent result / findings of the public participation process and Atmospheric Impact Assessment. Naledzi is a separate party. Eskom is the developer and by law is obligated to provide Naledzi with all the information they require to complete the assessment. The 3rd party is the decision making authority to which the findings are submitted. It would be premature to involve the Department of Environmental Affairs in the application process public meetings. They are the decision making authority all the public participation process results, issues recorded at public meetings would be submitted to DEA for decision making. DEA is also consulted as part of the Application Process. TB highlighted that NEC has no role to decide whether the application should be approved or not. They only submit and present the findings of the application process and assessment to DEA for decision making. It is the role of DEA to make the decision whether to approve the application or dismiss it.
3.2.3	Eskom should not respond to questions. Let NEC answer the questions, so that we can get the meeting going.	Sipho Ngwenya Community Member Thuthukani	SN from NEC responded that NEC would report all the issues and comments recorded at public meetings and during the public participation process and submit it to DEA for review and decision making.
3.2.4	The distance of Eskom's monitoring stations is too far from the power station. How is Eskom dealing with the health impacts?	Sipho Ngwenya Community Member Thuthukani	SOB from NEC responded that it is impossible for Eskom to measure the ambient air quality everywhere. There is in the order of 20 monitoring stations within the Mpumalanga Highveld region. These monitoring stations are expensive to install everywhere and are difficult to operate further requires

			frequent checks by people to ensure that readings from stations are accurate. There cannot be monitoring stations everywhere where Eskom's emissions reach the ground level. NEC will therefore use a mathematical dispersion model to determine the concentration of emissions at ambient level. It will predict the concentrations at Grootdraai and Majuba and will test it against the actual monitored levels at Grootdraai and Majuba. The model will be able to determine the air quality in the area as a result of emissions from Tutuka. All the questions recorded at the public meetings would be captured and submitted to the decision making authority.
3.2.5	Is the community of Thuthukani outside the buffer?	Oupa Molho Community Member Thuthukani	SOB from NEC responded there is no buffer zone representing an area of risk around the power station. TB, from Eskom, responded the bufferzone SN was referring to was with respect to the zone at which the plume from the stack will come to the ground.
3.2.6	When the meeting started, there were a lot of attendees. Now towards the end of the public meeting many attendees have left. The community members do not understand this scientific information. The presentations are too scientific. But we need job opportunities. Will there be any jobs when Eskom installs the abatement technology at Tutuka?	Thokozani Ngobeni Community Member Thuthukani	SOB from NEC responded that NEC is trying its best to bring to people's attention that there will be no new development at the Tutuka power station; Eskom will only install specialist technology. Please know that there is no expectation of jobs. The meeting will now be drawn to a close, if there are no other issues from the attendees.
3.2.7	Thank you Sean O'Beirne for all the explanations of the application and of the process. It means that Eskom received	Sipho Ngwenya Community Member	SOB from NEC noted the remark.

	all their licenses legally and not through underhanded tactics. I would like to thank Eskom for bringing this information to us. I will now complete the Attendance Register because I better understand the process and purposes of the consultation.	Thuthukani	
3.2.8	This AFM Lefikeng Church is a very suitable venue for meetings as aspose to the New Denmark Hall. It is much closer to the community.	Sipho Ngwenya Community Member Thuthukani	SOB from NEC responded the next public meeting would then also be held at the AFM Lefikeng Church.

4. CLOSURE

4.1 SOB brought the meeting to a close. It was indicated that each attendee would be provided with a copy of the minutes of meeting. NEC would prepare an Issues and Response Report (IRR) in which all the issues and responses for the project will be recorded.

4.2 SOB pointed out that everyone needed to fill in the attendance register. It was explained that the filling in of the register did not constitute support towards the application but simply provided NEC with contact information of attendees for further engagement and information distribution.

4.3 SOB stated that NEC would schedule another public meeting as part of the 2nd Round of public engagement once the draft Atmospheric Impact Report and Motivation Report is available.

4.4 SOB closed the meeting at 7:00pm.

4.5 **Post meeting note:** MB from NEC communicated with Councillor Poppy Dlamini for Ward 12. It was agreed that Naledzi would send the minutes to each attendee with an email address, yet the minutes would be emailed to Councillor Poppy Dlaminin to copy, provide and discuss with the community.

5. THUTHUKANI PUBLIC MEETING PHOTOS

Figure 1: Sithabisiwe Ncube-Gari from Naledzi presenting the Background and Motivation for the application in Zulu on behalf of Eskom

Figure 2: Public Meeting held at AFM Lefikeng Church in Thuthukani

ANNEXURE A

ATTENDANCE REGISTER

ANNEXURE B

MEETING PRESENTATIONS