

**INTEGRATED ENVIRONMENTAL AUTHORISATION****(ENVIRONMENTAL AUTHORISATION, WASTE MANAGEMENT LICENSE APPLICATION and WATER USE LICENSE APPLICATION)**

for the

**Proposed Retrofitting Flue Gas Desulphurisation (FGD) at Medupi Power Station in Lephalele, Limpopo Province**

DEA REF: 14/12/16/3/3/110

**Comments and Responses Report**

Version 2: Final Scoping Report

This Comments and Responses Report (CRR) captures the comments and issues raised by stakeholders during the announcement and Scoping Phase of the Integrated Environmental Authorisation (Environmental Authorisation, Waste Management License Application and Water Use License Application) process for the proposed Retrofitting Flue Gas Desulphurisation (FGD) at Medupi Power Station in Lephalele, Limpopo Province.

For easy reference and review, comments / concerns / issues / recommendations have been categorised according to proposed impacts and captured alphabetically according to surname under each category.

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**TABLE OF CONTENTS**


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<b>1.</b>	<b>DRAFT SCOPING REPORT COMMENTS .....</b>	<b>1</b>
1.1	<b>AUTHORITIES .....</b>	<b>1</b>
1.1.1	<b>SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE .....</b>	<b>1</b>
1.2	<b>INTERESTED AND AFFECTED PARTIES .....</b>	<b>3</b>
1.2.1	<b>SPECIALIST STUDIES .....</b>	<b>3</b>
1.2.2	<b>WATER RELATED COMMENTS .....</b>	<b>4</b>
1.2.3	<b>LIMESTONE SOURCING AS WELL AS MARKET ANALYSIS FOR GYPSUM BY-PRODUCT. ....</b>	<b>11</b>
1.2.4	<b>BY-PRODUCT RELATED COMMENTS .....</b>	<b>15</b>
1.2.5	<b>SOCIAL AND SOCIO-ECONOMIC -PRODUCT RELATED COMMENTS.....</b>	<b>18</b>
1.2.6	<b>TECHNICAL RELATED COMMENTS .....</b>	<b>19</b>
1.2.7	<b>PROJECT TIMEFRAMES .....</b>	<b>22</b>
1.2.8	<b>AIR QUALITY RELATED COMMENTS .....</b>	<b>25</b>
1.2.8	<b>WASTE CLASSIFICATION RELATED COMMENTS .....</b>	<b>29</b>
1.2.9	<b>CONSULTATION/COMMUNICATION RELATED COMMENTS .....</b>	<b>29</b>
1.2.10	<b>GENERAL COMMENTS.....</b>	<b>48</b>
<b>2.</b>	<b>COMMENTS RAISED DURING SCOPING PHASE .....</b>	<b>49</b>
2.1	<b>AUTHORITIES .....</b>	<b>49</b>
2.1.1	<b>LEPHALALE MUNICIPALITY .....</b>	<b>49</b>
2.1.2	<b>DEPARTMENT OF ROADS &amp; TRANSPORT .....</b>	<b>49</b>
2.2	<b>INTERESTED AND AFFECTED PARTIES.....</b>	<b>50</b>
2.2.1	<b>AIR EMISSION COMPLIANCE / IMPACTS RELATED COMMENTS.....</b>	<b>50</b>
2.2.2	<b>FGD TECHNOLOGY ALTERNATIVES RELATED COMMENTS .....</b>	<b>55</b>
2.2.3	<b>GYPSUM DISPOSAL ALTERNATIVES RELATED COMMENTS .....</b>	<b>57</b>
2.2.4	<b>WATER RELATED COMMENTS .....</b>	<b>59</b>

2.2.5	WASTE RELATED COMMENTS .....	61
2.2.6	ENVIRONMENTAL PROCESS COMMENTS .....	64
2.2.7	PROJECT RELATED COMMENTS .....	65
2.2.8	LEGAL COMPLIANCE RELATED COMMENTS .....	65
2.2.9	CONSULTATION RELATED COMMENTS .....	67

**Abbreviations:**

ADF	Ash Disposal Facility	AEL	Atmospheric Emission License
AQA	Air Quality Act	AQMP	Air Quality Management Plan (AQMP)
BID	Background Information Document	CER NPC	Centre for Environmental Rights- Non-profit Company
DAFF	Department of Agriculture, Forestry & Fisheries	DEA	Department of Environmental Affairs
DEIR	Draft Environmental Impact Assessment Report	DWS	Department of Water and Sanitation
EIA	Environmental Impact Assessment	ELA	Earthlife Africa
EPA	Environmental Protection Agency	FGD	Flue Gas Desulphurisation
I&APs	Interested and/or Affected Parties	IWULA	Integrated Water Use Licence Application
KSW	Key Stakeholder Workshop	LEDET	Limpopo Department of Economic Development; Environment and Tourism
Medupi	Medupi Power Station	MES	Minimum Emission Standards
OEMPr	Operational Environmental Management Programme	PAIA	Promotion of Access to Information Act
PED	Primary Energy Division	PM	Public Meeting
RAL	Roads Agency Limpopo	WML	Waste Management License
WUL	Water-use License	ZED	Zero Effluent Discharge

No	COMMENT / CONCERN / RECOMMENDATION	RAISED BY & WHEN	RESPONSE
<b>1. DRAFT SCOPING REPORT COMMENTS</b>			
<b>1.1 AUTHORITIES</b>			
<b>1.1.1 SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE</b>			
1	SANBI is a public entity mandated to act in an advisory or consultative capacity on matters relating to biodiversity to the Department of Environmental Affairs (i.e. the “competent authority”). The Department and its provincial counterparts are welcome to engage SANBI for advice and/or comment on specific matters related to biodiversity information relevant to this application, if such input is required. Such advice or comment is not equivalent, however, to the comment required as per the NEMA regulations from commenting authorities. SANBI restricts its comment to the accuracy and relevance of the biodiversity information that should inform the Environmental Assessment.	MANUEL, J Deputy Biodiversity and Policy Advice SANBI Letter: 05 November 2014  Director: Planning	Note is taken that SANBI will not participate as an I&AP for this proposed project. However, SANBI will remain on the project database to ensure that they receive project related information as and when available. <b>Nicolene Venter, Public Participation Practitioner</b>  The biodiversity specialist will reference the information obtained from SANBI's website in the Biodiversity Report appended to the DEIR. <b>Sharon Meyer-Douglas, EAP</b>
2	SANBI thus also declines to participate as a commenting authority in this application. For comment on the biodiversity impacts of the development, please consult the relevant provincial conservation agency.		We can confirm that the provincial conservation agency, DETEA, who is also a commenting authority for this proposed project, are part of the consultation process. <b>Nicolene Venter, Public Participation Practitioner</b>
3	I also encourage you to visit our web portal <a href="http://biodiversityadvisor.sanbi.org">http://biodiversityadvisor.sanbi.org</a> for free access to special biodiversity information relevant for the land use planning and decision making processes.		The biodiversity specialist will reference the information obtained from SANBI's website in the Biodiversity Report appended to the DEIR. <b>Sharon Meyer-Douglas, EAP</b>
4	Referencing the special biodiversity resources found on the Biodiversity Advisor in the early stages of project development can support informed planning and decision making while helping to timeously “iron out” obstacles that might otherwise result in delays and additional		

	<p>costs to the project proponent. Such a proactive approach can:</p>	
4.1	<ul style="list-style-type: none"> <li>▪ Show the decision-making authority that potential conflict between biodiversity priorities and other land uses has been identified and resolved by well-informed project planning;</li> </ul>	
4.2	<ul style="list-style-type: none"> <li>• Allow the proponent to take an informed decision about the biodiversity (and administrative and, by implication, financial) risks of proceeding with a particular project; and</li> </ul>	
4.3	<ul style="list-style-type: none"> <li>• Identify the scope, type and intensity of environmental assessment that is likely to be required if an application were to proceed.</li> </ul>	
5	<p>This approach also supports best practice in environmental assessment and planning by:</p>	
5.1	<ul style="list-style-type: none"> <li>• Ensuring that a project is consistent with the “Duty of Care” principle (i.e. that the project proponent has taken reasonable measures to prevent significant degradation of the environment);</li> </ul>	
5.2	<ul style="list-style-type: none"> <li>• Emphasizing the fundamental role of alternatives in selecting the best practicable environmental option;</li> </ul>	
5.3	<ul style="list-style-type: none"> <li>• Giving effect to the mitigation hierarchy, i.e. the sequential avoidance, minimizing, mitigating and remedying of impacts that may result in loss of biodiversity or disturbance to ecosystems; and</li> </ul>	
5.4	<ul style="list-style-type: none"> <li>• Supporting the principle that environmental management must pay specific attention to planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.</li> </ul>	

1.2 INTERESTED AND AFFECTED PARTIES		
1.2.1 SPECIALIST STUDIES		
1	A FGD Commissioning Schedule Study, to investigate the feasibility and potential benefits of co-commissioning the last few units with FGD, be included as a specialist study.	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)
2	FGD Construction and Commissioning Schedule Study to investigate the feasibility and potential benefits of co-commissioning the last few units with FGD;	
2.1	Water minimisation study to identify and assess all possible water minimisation design improvements;	
2.2	Gypsum market investigation to identify markets for 100% of the gypsum produced, taking into account its wide range of uses; and	
2.3	Ash market investigation to identify markets for the ash produced (including fly and bottom ash), taking into account their wide range of uses.	
3	Will ash be produced and will it be re-used?	HLAPA, Joshua Lephatale Local Municipality KSW: 05 November 2014

Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD.  
**Theuns Blom, Eskom**

As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process.  
**Carel van Heerden, Eskom**

A market research for the use of gypsum produced by Eskom's power stations has been done.  
**Kubentheran Nair, Eskom**

The Report is also included in the FSR under Appendix J.  
**Sharon Meyer-Douglas, EAP**

Ash is not a waste product from the FGD operation and therefore this study would not have any bearing on the current environmental assessment process.  
**Sharon Meyer-Douglas, EAP**

Ash is not a by-product of the FGD technology, only the gypsum, salts and sludge.  
**Carel van Heerden, Eskom**

1.2.2 WATER RELATED COMMENTS			
1	<p>MCWAP Phase 2 will possibly only be starting up in 2020 or later, is it therefore correct that before MCWAP 2 there can be no retrofitting of the FGDs because there is not sufficient water for it?</p> <p>It was commented that a lot of mines in the area are waiting for MCWAP 2 and once it is available there will be a rush to the area which in turn will trigger a lot of pollution activities. SO<sub>2</sub> levels for instance are going to increase. The Municipality is aware that Medupi Power Station is a Key Point Infrastructure, but everything is going to happen at the same time and that is a concern. The brunt of the pollution is going to be for the community and the community is not being made aware of the impacts (dangers) of retrofitting of the FGD. Is there a possibility of fitting three of the six units at the start-up of the Power Station and the rest when MCWAP 2 is on line?</p>	<p>BASSON, Cllr Astrid Lephalale Local Municipality PM: 05 November 2014</p>	<p>The DWS is currently developing MCWAP 2, and the project consists of a number of phases. DWS is currently busy with Phase 1 which entails an increase in the capacity from the Mokolo Dam to Lephalale. Eskom has already secured 10.9 cubic litres of water from Phase 1 of the Project through a pipeline infrastructure, which will provide water for the full Energy Production at Medupi Power Station as well as for three of the FGD units. Phase 2 will bring water from the Crocodile River and return flows from the waste water treatment plants from Johannesburg and Tshwane for the purpose of supplying the Power Station with additional water to cater to all six (6) FGD units.</p> <p>The current water use license for the 10.9 cubic litres is sufficient until 2020/23, before Phase 2 is needed. Another 15.4 cubic litres will be needed for the Energy Production and FGD facilities combined, which will become available from Phase 2 of the MCWAP Project. Eskom is currently in discussions with DWS and TCTA, and water users have submitted their requirements. The matter is currently in the hands of National Treasury to provide the guarantees for the pipeline which will hopefully be finalised by the end of November 2014. Contracts have been negotiated and it is therefore not a question of whether the pipeline is going to be built, but merely the size of the pipeline.</p> <p><b>Ian Midgley, Eskom</b></p>
2	<p>A water minimisation study, to identify and assess all possible water minimisation design improvements, be included as a specialist study.</p>	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p>	<p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process.</p> <p><b>Carel van Heerden, Eskom</b></p>
3	<p>The large water requirements of wet FGD are a major concern as the project is located in a highly water-stressed area that relies on the import of water from outside sources. This water consumption not only threatens the availability of water for other regional end-users, but also increases the risk that the FGD will be bypassed during periods of water shortages. Our clients therefore strongly support the inclusion of design</p>		<p>Zitholele Consulting, on behalf of the applicant, would like substantiation and reference provided by CER regarding the comment that: "The cooler, which will reduce the plant's water consumption by around 30%, <u>does not affect the project's costs or pose any technical challenges.</u>"</p> <p>This information is required from the CER prior to Zitholele Consulting or the applicant responding to this comment.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>



	<p>considerations that reduce the water consumption of the FGD project, such as the flue gas cooler. The cooler, which will reduce the plant's water consumption by around 30%, does not affect the project's costs or pose any technical challenges. However, it has not been incorporated into the base case FGD design and has instead been proposed as a design alternative to be investigated during this Integrated Environmental Authorisation process. Our clients find this unacceptable, and assert that it should be incorporated into the base case FGD plant design.</p>		
4	<p>In addition to the flue gas cooler, there may be further opportunities for improvements to reduce water consumption. Technologies, such as condensing heat exchangers, membranes and liquid desiccant systems are under development to capture and reuse water in the flue gas.</p> <p>Even if these technologies are not yet suitable for implementation, modifications that facilitate their future installation can be built into the FGD design.</p>		<p>As part of basic design process Eskom considered all of the water minimisation options as a component of the life cycle assessment. This assessment is inherent in the design process.</p> <p><b>Carel van Heerden, Eskom</b></p>
5	<p>Although water usage has been identified as a potential significant impact of the project, a water minimisation study has not been included in the list of specialist studies that will inform the authorisation process. Owing to the importance of reducing the plant's water consumption, our clients assert that a water minimisation study should be included to ensure all possible design improvements (including those mentioned above) are explored.</p>		<p>Eskom operates under a Zero Effluent Discharge Philosophy on all of its operational power stations, and this will apply to Medupi Power Station as well. A proper definition of this can be obtained from the DWS, more water reports can be accessed from Appendix I in the FSR.</p> <p><b>Kubentheran Nair and Felicia Sono, Eskom</b></p> <p>As part of basic design process Eskom considered all of the water minimisation options as a component of the life cycle assessment. This assessment is inherent in the design process.</p>
6	<p>According to the DSR:</p> <p><i>"The MCWAP scheme has been initiated in order to provide adequate water to supply the current and planned water users with allocations of water from the Mokolo Dam. Medupi Power</i></p>		<p>At the time that the first CRR version was submitted for public comment, the plan was that Eskom would handle the WULA for water allocation from MCWAP Phase 2 at a strategic level. Subsequently, it has been decided that the application for water allocation from MCWAP Phase 2 for the Medupi Power Station would be included in the WULA</p>

	<p>Station already has an allocation for water from the MCWAP phase 1 scheme. There is currently a Water Use License (sic) Application in process for additional water allocation to Medupi from the MCWAP phase 2 scheme in order to supply for the planned FGD technology operation. This Water Use License (sic) is been (sic) applied for at a strategic level by Eskom.</p>		<p>that will be carried out in conjunction with the EIA and Waste Management License Application for the proposed Medupi Power Station FGD retrofit project. <b>Sharon Meyer-Douglas, EAP</b></p>																								
<p>7</p>	<p>The DSR should make clear how much water is required for the operation of Medupi with FGD; how much water is currently available and from where; and when, where and how the additional water requirements will be met.</p>		<p>The Wet FGD technology requires a significant amount of water for operation. The input volume the table below, shows a summary of the water balance done at 90% load factor, a full indication of the overall FGD water mass balance can be obtained from. Appendix I 1 in the FSR</p> <table border="1" data-bbox="660 271 1002 976"> <thead> <tr> <th>Water Usage</th> <th>90% Estimation (m<sup>3</sup>/hr)</th> <th>load</th> <th>Mm<sup>3</sup>/a</th> </tr> </thead> <tbody> <tr> <td>Process Water</td> <td>1005.1</td> <td></td> <td>8.80</td> </tr> <tr> <td>Sealing Water</td> <td>14.4</td> <td></td> <td>0.13</td> </tr> <tr> <td>Closed cycle cooling make-up water</td> <td>26.2</td> <td></td> <td>0.23</td> </tr> <tr> <td>Backwash for pre-filters</td> <td>15.9</td> <td></td> <td>0.14</td> </tr> <tr> <td><b>Total</b></td> <td><b>1061.6</b></td> <td></td> <td><b>9.3</b></td> </tr> </tbody> </table> <p><b>Carel van Heerden and Abigail Melanie, Eskom</b></p> <p>The DWS is currently developing MCWAP 2, and the project consists of a number of phases. DWS is currently busy with Phase 1 which entails an increase in the capacity from the Mokolo Dam to Lephalele. Eskom has already secured 10.9 cubic litres of water from Phase 1 of the Project through a pipeline infrastructure, which will provide water for the full Energy Production at Medupi Power Station as well as for three of the FGD units. Phase 2 will bring water from the Crocodile River and return flows from the waste water treatment plants from Johannesburg and Tshwane for the purpose of supplying the Power Station with additional water</p>	Water Usage	90% Estimation (m <sup>3</sup> /hr)	load	Mm <sup>3</sup> /a	Process Water	1005.1		8.80	Sealing Water	14.4		0.13	Closed cycle cooling make-up water	26.2		0.23	Backwash for pre-filters	15.9		0.14	<b>Total</b>	<b>1061.6</b>		<b>9.3</b>
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			<p>to cater to all six (6) FGD units. The current water use license for the 10.9 cubic litres is sufficient until 2020/23, before Phase 2 is needed. Another 15.4 cubic litres will be needed for the Energy Production and FGD facilities combined, which will become available from Phase 2 of the MCWAP Project. Eskom is currently in discussions with DWS and TCTA, and water users have submitted their requirements. The matter is currently in the hands of National Treasury to provide the guarantees for the pipeline which will hopefully be finalised by the end of November 2014. Contracts have been negotiated and it is therefore not a question of whether the pipeline is going to be built, but merely the size of the pipeline. <b>Ian Midgley, Eskom</b></p>
<p>8</p>	<p>The DSR refers to a comparative analysis that will “compare alternatives against environmental, engineering and financial considerations in order to eliminate fatally flawed alternatives”. It appears that this will be undertaken prior to the Impact Assessment comparison outlined in Section 9.3. Our clients question the validity of this process and are concerned that environmentally preferable disposal options may be rejected based on capital cost estimates. We accept that there may be good reason to eliminate options, but any decision to do so must be completely transparent and subject to public participation. A failure to do so will be contrary not only to the National Environmental Management Act, 1998 (NEMA) EIA Regulations, 2010, but to the Promotion of Administrative Justice Act, 2000 (PAJA).</p>		<p>Agreed. The alternatives for waste disposal will be assessed within the EIA Phase of this process. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>9</p>	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that a water minimisation study, to identify and assess all possible water minimisation design improvements, be included as a specialist study;</p>	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)</p>	<p>Eskom operates under its Water Management Policy on all of its operational power stations, and this will apply to Medupi Power Station as well. A proper definition of this can be obtained from the DWS. Eskom is continuously involved in water minimisation programmes through the implementation of the Zero Effluent Discharge Philosophy. The use of dry-cooled power station is part of this programme. The water management policy document can be obtained from Appendix 1 in the FSR.</p>

			<p><b>Kubentheran Nair, Eskom</b></p> <p>During the basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process.</p> <p><b>Carel van Heerden, Eskom</b></p> <p>It needs to be noted that the catchment availability is determined by the DWS and allocations are based on the availability of water.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p> <p>DWS has conducted feasibility studies looking at water availability of the Waterberg area. The requirement of Eskom has been included in the study and it is Eskom's understanding that the DWS studies will form part of the WULA supporting documents. The DWS Reports are attached as Appendix I in the FSR.</p> <p><b>Felicia Sono, Eskom</b></p> <p>The DWS has established the Crocodile Strategy Steering Committee for the Crocodile West Water Supply System in July 2010 to implement and update the Reconciliation Strategy for the catchment. This is an on-going planning process that will ensure there is sufficient water available in future to meet the water demands of the Crocodile West Catchment and the Lephale area (via Phase 2 of the Mokolo and Crocodile Water Augmentation Project). The DWS has appointed specialist consultants to carry out the necessary studies and to report back to this steering committee. <u>To say that no specialist studies focussing on water availability and water demands is incorrect, especially in the Waterberg, Crocodile and Vaal catchments.</u> Below is the latest report on the DWS web although further work has been done on this in the interim. <a href="https://www.dwa.gov.za/Projects/crocodilemaintenance">https://www.dwa.gov.za/Projects/crocodilemaintenance</a></p> <p>The EIA for MCWAP Phase 2 is expected to be reinstated in the near future. For more details the following officials at the DWS can be contacted:</p> <ul style="list-style-type: none"> <li>• Planning: Mr Tendani Ndtiwani <a href="mailto:nditiwaniI@dwa.gov.za">nditiwaniI@dwa.gov.za</a></li> </ul>
10	<p>The proposed specialist studies for the EIA focus on pollution impacts on water resources of the proposed FGD but no specialist studies focusing on water availability and impacts on water supply and water utilisation in the area have been listed. This is a major shortcoming in the proposed EIA and a broader study of the impacts on water availability and supply must be included.</p>		

			<ul style="list-style-type: none"> <li>Options Analysis: Mr Ockie van den Berg <a href="mailto:VanDenBergO@dwa.gov.za">VanDenBergO@dwa.gov.za</a> <b>Ian Midgley, Eskom</b></li> </ul> <p>The two processes are not considered in isolation. The WULA will run in tandem with the EIA Phase. The WULA and EIA will be reviewed by the same commenting authorities, stakeholders and interested and affected parties. However, the WULA requires a separate set of documentation to the EIA, and will therefore be submitted as a separate document. <b>Sharon Meyer-Douglas, EAP</b></p> <p>While the EIA leads the process, neither are considered in isolation. The competent authorities in this case use the outcomes of the EIA to inform the IWUL process. <b>Kubentheran Nair, Eskom, Medupi Power Station</b></p> <p>Due to the fact that the WULA is submitted to a different competent authority (DWS) while the EIA and WMLA are submitted to the DEA, there are different requirements for the processes. While the documents will be submitted independently, the processes will largely be carried out simultaneously and will not be in isolation. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Alternatives are part of the EIA process, and all environmental impacts of the alternatives, like the cooler, have to be assessed and presented to the Competent Authority, the Department of Environmental Affairs (DEA), and the Department of Water and Sanitation (DWS) as a commenting authority/ies.</p> <p>The DWS must make a decision on the water use license for Eskom's water allocation from MCWAP Phase 2. DWS may revert by saying that they will only grant a license with conditions stipulating, for example, that a gas cooler has to be retrofitted to reduce water consumption. Zitholele Consulting cannot make the decisions, but is mandated to provide detailed information to the DWS who will make the decision, and could perhaps make the license conditional on certain terms like retrofitting a cooler, which will reduce water consumption. <b>Sharon Douglas-Meyer, EAP</b></p>
11	The fact that the WULA process is separate from the EIA process is highly problematic.		
12	It is hugely problematic that these two processes are considered in isolation. The water use is a fundamental part of the approval process for use of this technology, and it is critical that the water use issue is discussed and assessed in more detail during the EIA.		
13	SANCO's key concern is whether either of the FGD alternatives, wet and or dry FGD will reduce the water for other water users, or have a level of impact on the water usage. Lephalale Local Municipality's water source is very scarce, and if wet FGD will be used it will impact on the water usage in the area and will have a cost impact for Eskom.	MAAKE, Nakedi SANCO KSW: 05 November 2014	

			<p>It needs to be kept in mind that the process is in the Scoping Phase during which the environmental team needs to look at alternatives. No detailed information has been obtained yet, and the question raised relates to the next phase which is the EIA and the results will be included in the DEIR will be available. All present were urged to read the Draft Scoping Report (DSR) and submit written comments on the DSR to Zitholele Consulting by Friday 5<sup>th</sup> December 2014 to ensure timeously submission to the DEA. According to the Regulations, the DEA is tasked to approach the Commenting Authorities for comments, but are now asking the Environmental Assessment Practitioners (EAPs) to source the comments from these Authorities to fast-track their decision making process.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p> <p><b>Post-meeting note:</b> The DSR review period has been extended to Friday 09 January 2015.</p>
<p>14</p>	<p>Is Eskom going to operate according to their existing water allocation or are they proposing to get additional water allocation for the Retrofitting? Does Eskom intend to re-use the waste water?</p>	<p>NETHENGWE, Mulalo DWS KSW: 05 November 2014</p>	<p>DWS is developing the Mokolo-Crocodile Water Augmentation Project Phase 2. Eskom has an allocation of 10.9 MI from Phase 1 of MCWAP, and this is sufficient for the operation of the Power Station as well as the operation of 3 FGD units. However, due to the fact that Medupi Power Station will need additional water for the remaining 3 FGD units, as well as for the operation of FGD associated infrastructure, a further 15.4 MI will be supplied from MCWAP Phase 2.</p> <p><b>Ian Midgeley, Eskom</b></p> <p>A zero liquid discharge treatment plant will be utilised, therefore there will be no liquids i.e. waste water discharged. The treated water will be re-used within the power station.</p> <p><b>Carel van Heerden, Eskom</b></p>

1.2.3 LIMESTONE SOURCING AS WELL AS MARKET ANALYSIS FOR GYPSUM BY-PRODUCT.		
1	<p>Gypsum disposal should be viewed as a last resort and waste disposal alternatives involving the co-disposal of gypsum, salts, sludge and ash should not be considered, nor should disposal alternatives that involve trucking the FGD by-products off-site.</p>	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p> <p>Disposal alternatives will be presented to, and discussed rigorously with, the competent authorities in order to identify the most feasible option. <b>Sharon Meyer-Douglas, Zitholele Consulting, EAP.</b></p> <p>The Environmental Impact study will inform the process and the necessary requirements for waste disposal. <b>Kubentheran Nair, Eskom</b></p> <p>The investigation of the disposal alternatives will happen in the EIA phase thus the lack of documentation at present. <b>Denise Govender, Eskom</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. Please review Appendix J in the FSR for the PED market study report. <b>Carel van Heerden, Eskom</b></p>
2	<p>As discussed previously, the gypsum should be sold to an appropriate market. Disposal should be viewed as a last resort as it is the least desirable alternative. When disposal is necessary, the gypsum should be deposited in its own facility to minimise contamination and to allow for its recovery at a later date. The Department of Mineral Resources considers the co-disposal of gypsum to be a “wasteful practice” and that it should be kept separate in order to retain its value as a resource.</p>	<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
3	<p>Similarly, co-disposal of the salts and sludge with the ash should be avoided, as it will remove the possibility for future ash recovery. The various ash types (e.g. bottoms and fly) can be used in many applications, including concrete production and road building. A market investigation should therefore be undertaken as</p>	<p>The issue of co-disposal is being addressed with the DEA. Due to the fact that the salts and sludge are a Type 1 waste and the gypsum is a Type 3 waste, co-disposal of these wastes is not permitted in terms of the DEA Norms and Standards for disposal of waste to land. <b>Sharon Meyer-Douglas, EAP</b></p>

	<p>part of this EIA process to identify potential markets for the ash.</p>		<p>The disposal of ash has been addressed in the EIA process undertaken for the Medupi Power Station. <b>Kubentheran Nair, Eskom</b></p>
<p>4</p>	<p>Some FGD sludges can also be utilised, e.g. as an additive in the power plant's combustion process to improve the ash melting behavior, or as setting retarder by the cement industry. Further investigation should therefore be undertaken during this authorisation process to determine if the Medupi FGD sludge is useable.</p>		<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
<p>5</p>	<p>Although the DSR provides a number of disposal alternatives, it clearly indicates that the preference is for Option 2.1: co-disposal of the gypsum, salts and sludges in the ash disposal facility (ADF). Our clients do not agree that this is the best approach for the reasons given above. Option 5.2 (separate disposal facilities for each waste) should be the preferred option. Although this may appear to be a more costly option in the short-term than that of co-disposal in the ADF, there are potential economic benefits to keeping the various by-products separate and viable for recovery. Both the cost and the space required by a new gypsum disposal facility will be significantly reduced if the bulk of the gypsum is sold.</p>		<p>Co-disposal is being discussed with the DEA Waste Directorate to establish whether all or some of the wastes could be disposed of together, according to the waste types. The outcome of this discussion will inform the feasibility of the alternatives as provided within the DSR. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The current recommendation based on the theoretical waste classification is:</p> <ul style="list-style-type: none"> <li>a) Co-disposal of ash and gypsum at the ash dump – both type 3</li> <li>b) Co-disposal of salts and sludge – both type 1.</li> </ul> <p>In order to design and plan for worst case scenario, the EIA, WML and WULA processes must include the contingency for disposal of 100% of the gypsum.</p> <p>There is a separate storage facility for gypsum after the gypsum dewatering building and adjacent to the rail siding where load out for saleability occurs and where gypsum that is rejected is conveyed from via the overland ash conveyor to the ash dump for disposal.</p> <p>Further, as mentioned the ash dump was sized considering co-disposal of ash and gypsum.</p> <p>If a new facility is considered it would most likely be outside of the Medupi Power Station due to lack of space. Purchasing of land is not a preferred option as this can be lengthy process.</p>



			<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
6	<p>The disposal alternatives that include trucking the FGD by-products off-site to Holfontein Landfill Facility are considered to be unrealistic due to the distances, costs, environmental impacts and safety issues involved. Therefore Options 1 and 4 should not be considered in this Integrated Environmental Authorisation Process.</p>		<p>If the option for sale of gypsum becomes feasible, this will definitely be investigated further. <b>Denise Govender, Eskom</b></p> <p>The alternatives for waste disposal will be assessed within the EIA Phase of this process. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The site alternative investigation that will be conducted during the impact assessment phase will determine the feasibility of all identified alternatives, against socio-economic, environmental, technical and financial impacts. It may be more cost effective for Eskom to truck waste to an existing facility, than to manage their own facility. But this must be assessed against the potential socio-economic and environmental impacts of this options, as well as the technical constraints. <b>Denise Govender, Eskom</b></p>
7			<p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process. <b>Carel van Heerden, Eskom</b></p>
8	<p>Instead only the following disposal options should be considered:</p> <p>Option A: Separate on-site facilities for each waste (preferred option).</p>		
9	<p>Option B: Disposal of ash, gypsum, salts and sludge in the ADF, each in its own compartment, subject to waste classification and a layout that will enable the future recovery of each waste stream.</p>		
10	<p>Option C: Disposal of ash, gypsum, salts and sludge in the ADF, ash and gypsum each in their own compartment; salts and sludge combined into the third compartment, subject to waste classification and a layout that will enable the future recovery of each waste stream.</p>		

<p>11</p>	<p>Option D: Separate on-site facilities for salts and sludge; disposal of the ash and gypsum in the ADF, in separate compartments, subject to waste classification and a layout that will enable the future recovery of each waste stream.</p>		
<p>12</p>	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submits that gypsum disposal should be viewed as a last resort and waste disposal alternatives involving the co-disposal of gypsum, salts, sludge and ash should not be considered, nor should disposal alternatives that involve trucking the FGD by-products ff-site.</p>		<p>The PED market study report (included as Appendix J in the FSR) indicates that the gypsum market will be flooded by Kusile Power Station's FGD by-product. Therefore no market for the gypsum produced by the Medupi FGD is expected. In order to plan and design for the worst case scenario, the environmental processes must account for disposal of 100% of the Medupi gypsum.</p> <p>Further, the ADF at Medupi Power Station was sized for co-disposal based on initial estimates of gypsum production from the FGD process. <b>Denise Govender, Eskom</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>

1.2.4 BY-PRODUCT RELATED COMMENTS	
1	<p>A gypsum market investigation, to identify markets for 100% of the gypsum produced, taking into account its wide range of uses, be included as a specialist study;</p> <p>Additional features (as described in paragraph 22) should be incorporated into the base case design to maximise the amount of gypsum sold;</p>
2	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p>
3	<p>Gypsum is one of the by-products of the FGD process and is a commercial product, used predominantly in the construction industry. The Medupi FGD design incorporates processes to enable the sale of gypsum, which will bring about significant environmental and economic benefits compared to its disposal. These include the minimisation of emissions and energy consumption associated with its landfill, the avoidance of the impacts associated with the mining of natural gypsum, increased revenue streams and reduced capital and operating costs of disposal.</p> <p>However, the DSR indicates that around 80% of the gypsum is either unlikely to find a market or will not be of commercial-grade and will therefore be disposed of.</p> <p>Our clients question whether adequate research has been undertaken to identify potential markets to avoid the disposal of this gypsum. In the EU-15 countries, only around 10% of FGD gypsum is disposed of. In South Africa, the major markets for gypsum are plasterboards and cement manufacture, followed by the agricultural sector where it is used for soil treatment, but</p>
4	<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p> <p>A market research for the use of gypsum produced by Eskom's power stations has been done and a copy of the Report on the findings is available. Refer to Appendix J. <b>Kubentheran Nair, Eskom</b></p> <p>In agreement. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p> <p>The European Union has been operating FGDs since 1980 and has an established market. Kusile Power Station will be the first FGD to be installed in the Eskom fleet of Power Stations, therefore Power Station Gypsum market has yet to be developed. <b>Carel van Heerden, Eskom</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum.</p>

	<p>there are other uses for gypsum, including filling material in the paper industry.</p> <p>Each market has its own commercial grade, with wallboard gypsum demanding the highest quality and agricultural the lowest. To minimise the amount of gypsum that does not meet the buyer's specifications - and hence avoid the need for disposal or for finding an alternative buyer - the following features should be incorporated into the design:</p>		<p><b>Carel van Heerden, Eskom</b></p> <p>A market research for the use of gypsum produced by Eskom's power stations has been done and a copy of the Report on the findings is available. Refer to Appendix J.</p> <p><b>Kubentheran Nair, Eskom</b></p>
5	<p>As off-site transportation disruptions are likely to occur (e.g. for weather or labour-related reasons), the design should incorporate a contingency plan for temporary gypsum stockpiling during such events (which may plausibly last 30 days). The plan should include the designation and permitting of an on-site stockpile, as well as procedures for preventing its contamination.</p>		<p>There is a gypsum storage building which is part of this EIA Application. The plot plan drawing (Appendix G2) shows the removal of gypsum from the gypsum dewatering building and storage in the gypsum storage building, where saleable gypsum is conveyed to a rail off-loading point and rejected gypsum conveyed to the overland ash conveyor for disposal at the ash dump.</p> <p><b>Denise Govender, Eskom</b></p> <p>A Gypsum storage building exists (See Appendix E2.3 in the FSR). Operating Philosophies will be developed as part of the Execution phase.</p> <p><b>Carel van Heerden, Eskom</b></p> <p>A rail gypsum off-loading point has been allowed for, as well as the trucking of gypsum off-site (See Appendix E2.1 and Appendix E2.2 in the FSR).</p> <p><b>Denise Govender, Eskom</b></p> <p>Comment noted and this point is addressed in the Basic Design (See Appendix C in the FSR).</p> <p><b>Carel van Heerden, Eskom</b></p> <p>Eskom take note of the comment.</p> <p><b>Kubentheran Nair, Eskom</b></p> <p>The statement made by the CER is correct. Operating Philosophies will be developed as part of the execution phase. Sampling is a normal operating procedure and is conducted on a regular basis (Forms part of the normal operation).</p> <p><b>Carel van Heerden, Eskom</b></p> <p>Eskom take note of the comment.</p>
6	<p>As contracts with the gypsum buyers are unlikely to last the duration of the plant's lifetime, the design of the gypsum handling and storage systems should take into account possible changes in shipment mode or frequency.</p>		
7	<p>FGD plant operating problems may impact on the quality of the gypsum product. Therefore any such problems should be detected and addressed promptly. An on-site analytical program that includes daily sampling should be in place. The DSR refers to a gypsum online monitoring system, which may address this issue.</p>		
8	<p>The quality of the limestone reagent used in the</p>		

	<p>FGD process has a significant impact on the quality of the gypsum product. In general, limestone that contains less than 94% reactive CaCO is unlikely to produce a gypsum product of wallboard commercial grade. Therefore quality control is an important factor when sourcing the limestone.</p>		<p><b>Kubentheran Nair, Eskom</b></p> <p>Limestone does affect the quality of the Gypsum that can be produced. High quality Limestone is however only available in certain areas and therefore transport plays a vital role in Limestone sourcing as well as the development of “Junior miners”.</p> <p><b>Carel van Heerden, Eskom</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum.</p> <p><b>Carel van Heerden, Eskom</b></p>
9	<p>Due to the gypsum washing and dewatering systems, a high quality product will likely be possible at Medupi (provided suitable quality limestone is utilised). But even with the above measures in place, some degree of off-specification gypsum will be unavoidable. However, instead of disposing of this off-spec gypsum, there may be alternative markets, such as the cement or fertiliser industries that can tolerate a lower quality product.</p>		<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum.</p> <p><b>Carel van Heerden, Eskom</b></p>
10	<p>Given the importance of finding suitable markets to avoid the disposal of 80% of the gypsum produced, a market investigation should be included as a specialist study in this Integrated Environmental Authorisation process. It has been found that utilisation rates of FGD gypsum have improved as a result of research initiatives, practical experience and marketing efforts.</p>		<p>Eskom is producing commercially resalable gypsum but the market will be flooded due to the volumes which will be produced at Kusile Power Station. However Eskom has made certain design considerations in order to possibly facilitate the offtake of 20% of the produced Gypsum.</p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum.</p> <p><b>Carel van Heerden, Eskom</b></p>
11	<p>Will the gypsum be sold to commercial users?</p>	<p>VERCA, David GP Strategies PM: 05 November 2014</p>	<p>Eskom is producing commercially resalable gypsum but the market will be flooded due to the volumes which will be produced at Kusile Power Station. However Eskom has made certain design considerations in order to possibly facilitate the offtake of 20% of the produced Gypsum.</p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum (please find from Appendix J in the FSR the PED marketability study report).</p> <p><b>Carel van Heerden, Eskom</b></p>

1.2.5 SOCIAL AND SOCIO-ECONOMIC -PRODUCT RELATED COMMENTS	
1	<p>An ash market investigation be conducted in order to identify markets for the ash produced (including fly and bottom ash), taking into account their wide range of uses;</p> <p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that a gypsum market investigation, to identify markets for 100% of the gypsum produced, taking into account its wide range of uses, be included as a specialist study;</p>
2	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p> <p>The disposal and/or sale of ash is not part of the scope of work for the FGD project, due to FGD not producing ash as a waste. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p> <p>A market research for the use of gypsum produced by Eskom's power stations has been done and a copy of the Report on the findings is available. Refer to Appendix J. <b>Kubentheran Nair, Eskom</b></p>
3	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that an ash market investigation be conducted in order to identify markets for the ash produced (including fly and bottom ash), taking into account their wide range of uses.</p>
4	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)</p> <p>At present, Medupi Power Station has been authorised and will come on line within the next few years. The current application deals with the FGD retrofit, which will reduce emission impacts to air quality and therefore reduce health risks to local communities. The focus of this process is to address comment on the FGD retrofit. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p>

1.2.6 TECHNICAL RELATED COMMENTS	
1	<p>Why was a dry FGD system not considered in such a water-poor area? Why was the decision made to go for a wet system if it is going to require a considerable amount of water, which the area does not have?</p>
2	<p>The Municipality was told that the FGD units could not be built from the beginning because of a lack of water. Eskom just responded that there is enough water for three FGD units from the MCWAP Phase 1. What is the reason then for it only being installed six years after the Power Station starts operating? Why can the units not be installed right from the beginning if there is water available for it? Is there actually another reason for it not being installed from the beginning?</p>
<p>The reason why the wet FGD was selected is because there are only two options which are viable for the removal of emissions to the degree required for Medupi Power Station. Eskom needs to comply with the minimum emission standards as well as the requirements stipulated by the World Bank. The two commercially viable technologies are Wet FGD and semi-dry specifically Circulating Fluidised Bed (CFB). Both technologies were assessed and a techno-economical study was done, (see Appendix D in the FSR). The wet FGD was selected because of its techno-economic viability as well as the fact the semi-dry technologies requires a larger footprint and the retrofit period would be longer which is not desirable for the current Eskom's power supply conditions. With the cooler possibility, the water requirements for wet FGD can be reduced to a level which is comparable to the dry or semi-dry technologies. <b>Carel van Heerden, Eskom</b></p> <p>It comes back to the air quality standards which were set after the release of the emission standards in 2010 and the project being initiated in 2007. In that period the project was in the concept phase. The standards set at that time were very stringent. This is the first part. The second part is that Eskom sourced funding for the Project. One of the potential financiers of the Medupi Power Station development is the World Bank. Their requirements for provision of funding was the inclusion of FGD. Since the Project had progressed significantly during this period. It was decided to retrofit FGD. The opportunity to start the Project with FGD had since passed. <b>Kubentheran Nair, Eskom</b></p> <p>Eskom needed to take note of the requirements for having to construct the FGD plant. The first requirement is the new Air Quality Standards and the project's time frames around these requirements. Eskom was already planning, designing and initiating the construction of Medupi Power Station when the new Air Quality Emission Standards were promulgated 2010. Therefore, the FGD was only identified and feasibility studies carried out very late in the Power</p>	
<p>BASSON, Cllr Astrid Lephatale Local Municipality PM: 05 November 2014</p>	

			<p>Station's construction phase. Due to the processes that must be followed, initial inclusion of the FGD was not possible and ad to be retrofitted. Kusile Power Station is being designed with FGD units from the beginning because there was sufficient time to design and commission the FGDs.</p> <p><b>Prince Khumalo &amp; Patrick Seloba, Eskom</b></p> <p>The intention right at the beginning was to build the FGDs as there was always sufficient water. The MCWAP Phase 1 and 2 were planned to be done concurrently but Phase 1 was unfortunately delayed in 2008 and Phase 2 development was stopped. Eskom got what it could from the yield of Mokolo Dam.</p> <p><b>Ian Midgley, Eskom</b></p> <p>The Medupi Power Station is categorised as an existing plant due to the fact that it was in construction phase in 2010 when the minimum emissions standards were promulgated. The minimum emission standards that the existing plant needs to adhere to is 3500mg/Nm<sup>3</sup> at 10% O<sub>2</sub> and 500mg/Nm<sup>3</sup> at 10% O<sub>2</sub> by 31<sup>st</sup> March 2025 and 500mg/Nm<sup>3</sup> at 10% O<sub>2</sub> by 1st April 2025. Eskom is within its goal and is investigating mitigations to adhere to the standards in the interim period in the first six years. Another reason why it is only installed after six years is because it ties in with what is required by the NEM: AQA. Eskom will not be in transgression of the Minimum Emissions Standards during the 6 year period without FGD.</p> <p><b>Carel van Heerden, Eskom</b></p>
3	<p>The flue gas cooler should be incorporated into the base case FGD design, instead of being proposed as a design alternative.</p>	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p>	<p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process.</p> <p><b>Carel van Heerden, Eskom</b></p>
4	<p>The FGD systems should be operated and maintained as an essential part of each power generation unit and that a bypass should not be included.</p>		<p>The emergency bypass will operate within the terms stipulated within the licensing agreement. The emergency bypass is a result of the retrofit and will be utilised as an emergency system.</p>



5	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that the FGD systems should be operated and maintained as an essential part of each power generation unit and that a bypass should not be included;</p>		<p><b>Carel van Heerden, Eskom</b></p>
6	<p>The DSR indicates that a bypass will be included in the FGD system installation by retaining the existing ductwork to the stacks. Our clients find this unacceptable, as it will enable the plant to operate with unabated SO emissions. Instead, the FGD systems should be operated and maintained as an integral and essential part of each power generation unit.</p>		<p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process. <b>Carel van Heerden, Eskom</b></p>
6.1	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that the flue gas cooler should be incorporated into the base case FGD design, instead of being proposed as a design alternative;</p>		<p>The PED study (included as Appendix J in the FSR) indicates that the gypsum market will be flooded by Kusile Power Station's FGD by-product. Therefore no market for the gypsum produced by the Medupi FGD is expected. In order to plan and design for the worst case scenario, the environmental processes must account for disposal of 100% of the Medupi gypsum.</p>
6.2	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that additional features (as described in paragraph 22) should be incorporated into the base case design to maximise the amount of gypsum sold.</p>		<p>Further, the Ash Disposal Facility (ADF) at Medupi Power Station was sized for co-disposal based on initial estimates of gypsum production from the FGD process. <b>Denise Govender, Eskom</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>

7.	Has a decision been made about which of the two types of FGDs will be used?	MAAKE, Nakedi SANCO KSW: 05 November 2014	Medupi Power Station was constructed to be FGD ready and based on a techno-economical study, a wet FGD system will be utilized. It utilises limestone as a reagent and gypsum is produced as a bi-product. <b>Carel van Heerden</b>
8	The FGD technology should have been assessed as part of the initial EIA as it is an essential addition to the development in terms of human health impacts. The full impact of the development has not been taken into account in terms of water use requirements and the broader impact of the water needs for this additional technology.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	This application focuses on the FGD retrofit and the inclusions or exclusions of the original Medupi Power Station authorisation is not a component of this environmental impact assessment process. However, within the FSR information will be provided to clarify the process carried out and to motivate for the decision for FGD retrofit. <b>Sharon Meyer-Douglas, EAP</b>  As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process. <b>Carel van Heerden, Eskom</b>
9	What would be the size of the plume?	VERCA, David GP Strategies PM: 05 November 2014	The Flue Gas exiting the stack will be saturated with water and will therefore be visible. <b>Carel van Heerden, Eskom</b>
<b>1.2.7 PROJECT TIMEFRAMES</b>			
<b>FGD</b>			
1	Our clients disagree with this retrofit schedule and argue that as many units as possible should be commissioned with FGD from the start, particularly if an expedited approach is taken with respect to the supply and construction of the FGD systems, as explained below. This would considerably reduce both peak SO <sub>2</sub> emissions and total SO <sub>2</sub> emissions of the plant over its lifetime - which is of critical importance to the regional air quality.	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	The process of installing FGD to the power station has a lead time. This includes amongst others, the EIAs, Waste and Water Use Licenses and design process. Once these are concluded a commercial process must be undertaken before any installation can be done. Each of these processes typically have legislated or procedural timeframes attached to it, which informs the current schedule <b>Kubentheran Nair, Eskom</b>  FGD cannot be accelerated at Medupi because the technology cannot be bought off the shelf. The concept design has been completed for Medupi's FGD. Preliminary designs are currently underway. Once final approval from Eskom's Board and PFMA approval have been obtained,

			<p>the call for tenders need to be sent out, tenders need to be evaluated, and the contract awarded. Lead time for supply and construction once the tender has been placed is typically around 3 years. According to the current project schedule, the first unit at Medupi can only be retrofitted from the start of 2021. <b>Olga Makhalemele, Eskom</b></p>
<p>2</p>	<p>In terms of the Medupi units, the current schedule estimates that one unit will be commissioned per year from 2015 until 2020.</p> <p>Although this is Eskom's "most conservative" estimate, it is unlikely that shorter timeframes can be expected given the project's track record, which is already three to four years behind schedule. It is even plausible that this "most conservative" schedule is not realistic, as at least one source predicts that the second unit will only be commissioned in 2017.</p> <p>Therefore, it is feasible that the first FGD systems will be ready for commissioning in time for the commissioning of the last few power generation units.</p>		<p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p>
<p>3</p>	<p>The benefits of commissioning the last few units with FGD from the start are considerable. As an example, if one assumes the units are commissioned as per Eskom's "most conservative" unit commissioning schedule (i.e. one per year from 2015-2020) and that a lead time for the construction of a FGD unit is 2 years, then the last two units can plausibly be commissioned with FGD in 2019 and 2020 respectively. The remaining four units would then be retrofitted in their respective General Overhaul outages. This scenario has the</p>		<p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p>

	<p>following benefits over the current proposal to retrofit all six units with FGD:</p> <p>Reduced downtime: The General Overhaul outage downtime of these last two units would reduce from 120 days to 56 days as additional downtime would not be required for FGD retrofitting. This would reduce overall costs and increase electricity output.</p>		<p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p>
<p>4</p>	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that an FGD Construction and Commissioning Schedule Study, to investigate the feasibility and potential benefits of co-commissioning the last few units with FGD, be included as a specialist study.</p>		<p>The focus of this project is the FGD retrofit. Actions that should have been excluded or included in the original Medupi Power Station EIA are not within our scope of influence. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>5</p>	<p>FGD should have been included in the initial EIA, and a retrofit exposes people living in the area to substantial levels of pollutants for a significant period of time.</p>	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)</p>	
<p><b>Medupi Power Station</b></p> <p>1</p>	<p>Eskom have argued - in its 28 May 2014 responding statement to our clients' appeal of the Medupi Atmospheric Emission Licence (AEL) - that there is insufficient time to install FGD integrally with any of the remaining units, stating "lead time for supply and construction once the tender has been placed is typically around 3 years".</p> <p>The use of the word "typically" implies that, at that stage, Eskom had not yet obtained a firm lead time estimate, and that there is at least a possibility of a shortened lead time. International experience indicates that FGD projects may take less than three years to supply and construct, and that a lead time of less than two years may be possible.</p>	<p>HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p>	<p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p>

	<p>Therefore, if Eskom ran its tender process and made the necessary preparations for the Public Finance Management Act (PFMA) and board approval in parallel with this Integrated Environmental Authorisation process, the contractors could be appointed in the third quarter of 2016. Following a two-year supply and construction period, the first FGD systems would then be ready to be commissioned from the end of 2018.</p>		
2	<p>The DSR does not make it clear why the FGD technology was not included in the initial design and EIA for Medupi, particularly if it is such an important element to protect human welfare.</p>	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015</p>	<p>This information is included within the FSR, Chapter 2.3, page 19, which will be made available for public review. At the time that Eskom had received environmental authorisation for the Medupi Power Station in 2007, the power station design complied with the requirements stipulated by Section 21 of the National Environmental Management: Air Quality Act (Act 39 of 2004). <b>Sharon Meyer-Douglas, EAP</b></p> <p>At the time of Medupi's design and approval, there was no requirement to achieve a minimum emission standard of 500 mg/Nm<sup>3</sup>, or retrofit FGD. <b>Olga Makhalemele, Eskom</b></p>
<b>1.2.8 AIR QUALITY RELATED COMMENTS</b>			
1	<p>As the FGD units and the pollution filters will only be installed after the Power Station has been running for six years whilst the surrounding area will be subjected to pollution, what is the anticipated effect on the pollution levels, especially in Marapong which is going to be exposed mostly to the pollution?</p>	<p>BASSON, Cllr Astrid Lephalale Local Municipality PM: 05 November 2014</p>	<p>The attendees need to recognise where the project is in the Environmental Impact Assessment (EIA) process which is the Scoping Phase. In the next phase which is the EIA Phase the team will be unpacking these elements and assessing the associated impacts. Out of that process, the team would be able to answer the questions raised at the meeting. <b>Kubentheran Nair, Eskom</b></p> <p>Within the Record of Decision (ROD) only very low ambient conditions are specified for compliance. After the release of the maximum emission standards in 2010 the decision was made to retrofit Medupi Power Station with a Wet FGD. Until such time as the FGD system is designed and built the Power Station will operate without it whilst still adhering to the Minimum Emission Standard.</p>

			<p><b>Carel van Heerden, Eskom</b></p> <p>In terms of Eskom's power station's life cycle, there are various processes that need to take place i.e.:</p> <ul style="list-style-type: none"> <li>• the first process is the feasibility studies that need to be undertaken and this includes the EIA process;</li> <li>• then the conceptual design phase;</li> <li>• the detailed design phase; and</li> <li>• appointment of contractor.</li> </ul> <p>All these steps have different time frames and Eskom needs to wait for a major general overhaul of Medupi Power Station as the relevant units will need to be off line for a period of time to facilitate the retrofit. Timeframes are linked to Eskom's power stations' life cycles.</p> <p><b>Kubentheran Nair, Eskom</b></p>
2	Implications of non-compliance with ambient air quality standards in the Waterberg Bojanala Priority Area:	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	Zitholele Consulting agrees with the comment made. <b>Sharon Meyer-Douglas, EAP</b>
2.1	The Medupi Power Station (Medupi) is located in the Waterberg Bojanala Priority Area (WBPA), which was declared in accordance with s18 of AQA. AQA makes provision for the declaration of Priority Areas where ambient air quality standards (AAQS) are being, or may be, exceeded.		
2.2	Subsequent to its declaration as a priority area, the DEA has confirmed that permitted levels of PM (particulate matter with an aerodynamic diameter less than 2.5 micron metres), PM (particulate matter with an aerodynamic diameter less than 10 micron metres) and ozone have been exceeded in all monitoring stations.  Therefore, there is currently non-compliance with the AAQS. The Medupi Atmospheric Impact Report (AIR), submitted in support of Eskom's application for postponement of the MES,		Zitholele Consulting agrees with the comment made. <b>Sharon Meyer-Douglas, EAP</b>  The PM (particulate matter) is not relevant to the FGD project. Medupi Power Station will have continuous emission monitors that measure the PM and gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA. <b>Olga Makhalemele, Eskom</b>

	<p>confirms this non-compliance with respect to PM.</p> <p>2.3 In terms of SO<sub>2</sub>, Medupi is located roughly 7km from the existing Matimba Power Station, which emits approximately 302,000 tons per annum of SO<sub>2</sub>. Although the daily average SO<sub>2</sub> concentrations measured at Marapong and at Grootstryd have not exceeded the South African daily average AAQS for SO<sub>2</sub> they do exceed the World Health Organisation SO<sub>2</sub> guideline value of 20 µg/m<sup>3</sup>. Therefore air quality in the vicinity of Medupi is already compromised and will be exacerbated as and when each Medupi power generation unit (hereafter referred as “unit”) comes online, particularly with respect to ambient SO<sub>2</sub> (125 µg/m) and secondary PM.</p>		<p>Medupi emissions will be monitored and reported to DEA. This information is available to the public from the DEA. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom is currently monitoring using the National Ambient Air Quality Standard which is currently not exceeded. <b>Olga Makhalemele, Eskom</b></p> <p>The (Particulate Matter) PM is not relevant to the FGD project. Medupi Power Station will have continuous emission monitors that measure the PM and gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA. <b>Olga Makhalemele, Eskom</b></p>
<p>2.4</p>	<p>Under the scenario where both power stations are operating at maximum emission levels and Medupi is operating without FGD, ambient air quality concentrations are predicted to exceed the hourly and 24-hourly average NAAQS for SO<sub>2</sub> by up to 60%. Although Medupi is intended to operate with FGD in the long term, the proposed project involves the retrofit of FGD to each of Medupi’s six units during the General Overhaul outages, which take place around six years after the commissioning of each unit. Therefore, each unit would operate for six years with unabated SO<sub>2</sub> emissions. Medupi SO<sub>2</sub> emissions will peak at 414 000 tons per annum in the one three year period when all six units are operational, but before the first retrofitted FGD unit is commissioned.</p> <p>During this peak period, the combined SO<sub>2</sub> emissions from Medupi and Matimba will be more than double their current emissions, increasing the probability of AAQS exceedances during this time.</p>		<p>Medupi Power Station will have continuous emission monitors that measure the PM and gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA. <b>Olga Makhalemele, Eskom</b></p>
<p>2.4.1</p>	<p>A reduction in SO<sub>2</sub> emissions: SO<sub>2</sub> emissions</p>		<p>To clarify, relative SO<sub>2</sub> emissions for the entire Eskom coal-</p>

	<p>would be reduced by an estimated 30% over the next 12 years (which represents almost a quarter of the plant's lifetime). This is reflected in Annexure I hereto, a comparison of SO2 emissions. This will have a significantly positive impact on the air quality in the region.</p>		<p>fired fleet will reduce by 30% by 2030. This will occur as Kusile Power Station is commissioned with FGD, as Medupi is retrofitted with FGD, and as some of the older power stations with relatively higher SO<sub>2</sub> emissions are decommissioned. This will be a reduction in total Eskom emissions, but will not have a direct impact on the air quality in the Lephalale region. <b>Olga Makhalemele, Eskom</b></p>
<p>2.4.2</p>	<p>Earlier compliance with the Minimum Emission Standards (MES): As part of its application to postpone compliance with the MES in terms of the National Environmental Management: Air Quality Act, 2004 (AQA), Eskom seeks a seven year postponement of the new plant SO<sub>2</sub> MES, which come into effect in 2020. The commissioning of the last two units with FGD would reduce the required postponement period by around two years.</p>		<p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p> <p>Medupi Power Station will have continuous emission monitors that measure the PM, gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA. <b>Olga Makhalemele, Eskom</b></p>
<p>2.4.3</p>	<p>Avoidance of a second postponement of MES compliance: As compliance with MES would be around two years earlier, there would no longer be a need for a second postponement (each postponement is only valid for up to five years).</p>		
<p>2.5</p>	<p>As stated, the above is based on Eskom's "most conservative" unit commissioning schedule. As explained previously, it is plausible that an even more conservative schedule may be realistic. In which case, there is a potential for more than two units to be commissioned with FGD from the start, and hence further reduce Medupi's lifetime SO<sub>2</sub> emissions and downtime requirements.</p>		
<p>2.6</p>	<p>Due to the significant impact the FGD commissioning schedule will have on the plant's SO<sub>2</sub> emissions, and hence regional air quality, our clients assert that a specialist study should be included in this Integrated Environmental Authorisation process, to investigate the feasibility and potential benefits of co-commissioning the last few units with FGD.</p>		
<p>3</p>	<p>What is the percentage that emissions will be</p>	<p>MAAKE, Nakedi</p>	<p>Ambient emissions will be reduced by 30%.</p>



	reduced by if the FGDs are retrofitted?	SANCO KSW: 05 November 2014	<p><b>Olga Makhalemele, Eskom</b></p> <p><b>Post-meeting note:</b> The ambient emissions of 30% quoted in the response at the KSW represents the relative SO<sub>s</sub> emission reduction for the entire Eskom fleet, including the effect of FGD Kusile, FGD Medupi and the decommissioned units between 2015 and 2030.</p> <p>Point source emissions will be reduced by between 90% and 95% if the FGDs are retrofitted. <b>Carel van Heerden, Eskom</b></p> <p>The emission levels will be at 3500mg/Nm<sup>3</sup> @ 10% O<sub>2</sub>. With the FGD retrofitted it will be able to meet the limit of 500mg/Nm<sup>3</sup> at 10% O<sub>2</sub>, which is a decrease of 90%. <b>Prince Khumalo, Eskom</b></p>
<b>1.2.8 WASTE CLASSIFICATION RELATED COMMENTS</b>			
1	What will be used as baseline for the waste classification of the gypsum and other waste products associated with the FGD technology, and is there a similar unit functioning of which one can use the same information?	SWANEPOEL, Filomaine EXXARO PM: 05 November 2014	A chemical make-up will be used for the waste classification of the three waste streams and once Kusile Power Station is in operation the information will be verified through testing of the wastes produced by the Kusile FGD operation <b>Sharon Meyer-Douglas, EAP</b>
<b>1.2.9 CONSULTATION/COMMUNICATION RELATED COMMENTS</b>			
1	Why am I receiving the documents regarding the EIA for the FGD and the pages of the fax received have not been numbered?	GARDINER, Richard Landowner Telephonic Discussion: 29 October 2014	<p>With reference to my e-mail send at 16h45 this afternoon and our telephone discussion of yesterday afternoon and today, please find attached the following documents:</p> <ul style="list-style-type: none"> <li>Letter which serves to inform you that the Draft Scoping Report (DSR) is available for public review and comment from Monday, 27 October 2014 to Friday, 05 December 2014. The attached letter also serves to invite you to attend any one of the two Public Meetings that will be held on Wednesday 05 November 2014 and Thursday 06 November 2014 (details of time and venue in the attached letter);</li> <li>DSR Comment Form; and</li> <li>Public Meetings Registration Form.</li> </ul>

			<p>Please note that the attached letter, DSR Comment Form and Public Meetings Registration Form were the documents that were faxed to you yesterday (fax number 014 763 2165).</p> <p>The DSR can be downloaded from Zitholele's website (<a href="http://www.zitholele.co.za/eia-for-medupi-fgd">http://www.zitholele.co.za/eia-for-medupi-fgd</a>).</p> <p>You are most welcome to share this notification and invitation with your neighbours, friends, family and/or colleagues, and you are also welcome to forward the names and contact details of any interested and/or affected party that you believe who needs to be informed of the availability of the DSR and/or to be invited to the Public Meetings to us and we will send them the relevant documents.</p> <p>In response to the page numbering, it needs to be noted that different documents were faxed and each document had their own page numbering.</p> <p>Please do not hesitate to contact us should you require any additional information regarding this proposed project. <b>Nicolene Venter, Public Participation Practitioner</b></p>
2	It was requested as to when does the DSR comment period ending.	E-mail: 07 November 2014	<p>With reference to Zitholele Consulting's e-mail dated 07 November 2014, registered I&amp;APs was informed that the DSR review period will be ending soon.</p> <p>The DSR review period was extended to 9th January 2015, due to an additional document being made available for public review. This extension was communicated to all registered I&amp;APs on 21 November 2014 <b>Nicolene Venter, Public Participation Practitioner (e-mail dated 10 November 2014)</b></p> <p>Confirmed that both the Key Stakeholder Workshop and Public Meeting minutes, and attachments, are sent to the CER as requested. <b>Leoni Lubbe, PP Administrator</b></p>
3.	It was requested that the draft minutes of the public meeting that was held on 05 November 2015 be forwarded. It was further requested that all of Zitholele Consulting's correspondence is also sent to <a href="mailto:skamanja@cer.org.za">skamanja@cer.org.za</a> and <a href="mailto:rkruger@cer.org.za">rkruger@cer.org.za</a>	HUGO, Robyn Attorney CER NPC E-mail: 11 February 2015	
4.	The CER noted that it is Zitholele Consulting's intention to make the FSR available to government already in March 2015. It was	E-mail: 12 February 2015	The envisaged date for submission of the FSR to the DEA is Friday 13 March 2015. The FSR will also be made available to stakeholders such as the CER on the same day.

	<p>enquired whether this is still the case. For CER's planning purposes, it was requested that they be advised when the FSR will be made available for public comment and for how long.</p>		<p>Also, all registered I&amp;APs will be notified when the FSR has been submitted to the DEA and its availability to the public for review and comment for a comment period of 40-days. <b>Nicolene Venter, Snr Public Participation Practitioner</b></p> <p>The CER was informed that the submission of the FSR to the DEA has been postponed due to the delay in finalising the FSR and supporting documents. Zitholele Consulting will notify all I&amp;APs of the submission date as soon as it is confirmed. <b>Nicolene Venter, Snr Public Participation Practitioner (e-mail 10 March 2015)</b></p>
3	<p>Any decision not to consider waste disposal alternatives must be transparent and subject to public participation.</p>	<p>Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)</p>	<p>All alternatives will be assessed within the EIA phase of the project and will provide a clear explanation of what has been identified as a feasible alternative for disposal or alternative waste use. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
3.1	<p>The public participation process connected to the DSR has been hampered on several occasions by delays in responding to CER correspondence and missing documents. Ultimately, this caused the deadline for the period for comment to be extended by over a month. This public participation process is described below, with specific reference to correspondence to which the CER was a party.</p>		<p>Delays in a EIA and PP process are accommodated for although the EAP and EIA team try to avoid delays as far as possible.</p> <p>Zitholele Consulting acknowledged the omission of the Technical Study Report in their e-mails to the CEIR NPC and advised the Applicant that the Report must be released for comment as the PP process for this project has been transparent and will proceed to be open and transparent. <b>Nicolene Venter, Public Participation Practitioner</b></p>
3.2	<p>Zitholele Consulting ("Zitholele") is the Environmental Assessment Practitioner (EAP) in the Integrated Environmental Authorisation process for the Medupi FGD. They sent an email to stakeholders on 10 October 2014, which</p>		<p>The invitation to the key stakeholder workshop has been e-mailed on Friday, 10 October 2014 and the workshop was held on Wednesday, 05 November 2014. The notification of the DSR and invitation to the two public meetings was e-mailed on Friday, 10 October 2014.</p>

	announced a key stakeholder workshop to be held on the Medupi FGD EIA and WML processes on Wednesday, 5 October at 14:00-16:00.		<p>The invitations as mentioned above are included in Appendix F5 of the FSR.</p> <p>It is best practice to conduct focus group meetings / key stakeholder workshop, etc with groups of stakeholders with similar interest i.e. landowners. The same information regarding the proposed project is shared at all the various meetings held, but the participation from the group is similar and focused on their issues and concerns.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
3.3	<p>On 13 October, Zitholele sent notification to stakeholders by email that the DSR would be distributed for comment from Monday 27 October until Friday 5 December 2014. The notice included an invitation to public meetings in Lephalale on 5 November 2014, and in Marapong on 6 November 2014. In response to this, on the same day, CER asked Zitholele about the function of the public meetings as opposed to the key stakeholder workshop, and received the response that the meetings were targeted at different groups, with the key stakeholder meeting intended to allow technical discussion of concerns in the EIA and WML processes, and the public meetings intended to address community-level concerns.</p>		<p>Zitholele is in agreement with the process as outlined by the CER.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
3.4	<p>It came to the attention of CER that the Technology Study Selection Report (TSSR), an important document forming part of the DSR process, was not accessible to stakeholders wishing to comment on the DSR. CER requested this report from Zitholele by email on 30 October 2014, and repeated the request in a telephone conversation on 31 October 2014, in which Zitholele confirmed that they had sent a request for the TSSR to Eskom. This was confirmed by Zitholele by email to CER on the same day.</p>		<p>Zitholele Consulting confirmed that the summary provided by the CER NPC is correct and the e-mail referred to was addressed to Ms Sylvia Kamanja. Acknowledgement is also</p>
3.5	<p>On 4 November 2014, Zitholele communicated to CER that Eskom wished the CER to use the process described in the Promotion of Access to</p>		

	<p>Information Act, 2000 (PAIA) if it wished to access the TSSR. CER responded on the same day, advising Eskom that they must make the TSSR available in terms of Regulation 54(7) of the 2010 NEMA EIA Regulations which provides that:</p> <p>“... the person conducting the public participation process must ensure that—</p> <p>a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and</p> <p>b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.”</p>		<p>given to the Regulations mentioned and Zitholele Consulting adhered to these Regulations. It needs to be noted that only information that is made available to the EAP is subsequently made available to the public. <b>Nicolene Venter, Public Participation Practitioner</b></p> <p>After discussion with the client, the Technology Selection Study Report was made available to all stakeholders on Monday 01 December 2014, also available as appendix D in the FSR. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>3.6</p>	<p>In terms of regulation 28(1), the DSR also “must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping”. In addition, there is a legislated time period connected to PAIA such that the CER would not have received the document ahead of the expiry of the comment period for the DSR.</p>		<p>The CER NPC and registered I&amp;APs have been provided with an extended review period to accommodate the omission of the TSSR. The DSR review period was extended from Friday 05 December 2014 (an original 40-day comment period) to Friday 09 January 2015, an additional 14 days (excluding the no public participation period between 15 December and 02 January). <b>Nicolene Venter, Public Participation Practitioner</b></p>
<p>3.7</p>	<p>On 6 November 2014, Zitholele sent a notice to stakeholders by email, cancelling the public meeting that was to be held in Marapong on the same day. The reason given for the cancellation was that there was a “safety risk” to consultants. CER responded by email on the same day, to ask for details of the safety risk, as well as minutes of the meeting that was held in Lephalale on 5 November. To date, these minutes have not been received.</p>		<p>Zitholele Consulting confirms the information as provided by the CER NPC regarding the cancellation of the 2nd public meeting which was scheduled to take place at Marapong.</p> <p>It is important to note that human safety comes first and the information provided by the Ward Councillor and the assessment by of Eskom (Medupi Power Station) informed the decision to rather cancel the meeting than to proceed with it. The risk that the meeting would lose focus and potentially turn violent was an important factor in the cancellation.</p> <p>from the minutes of the Public and Stakeholder Meetings held in November 2014 are with the client for review and comment. As soon as this review has been finalised, the minutes will be made available to all stakeholders, and will be appended to the Final Scoping Report. <b>Nicolene Venter, Public Participation Practitioner</b></p>

<p>3.8</p>	<p>The DSR makes mention of the Eskom Air Quality Strategy, but this document was not made available to stakeholders. For this reason, the CER requested it from Eskom by email on 7 November 2014, and sent a reminder to Eskom by email on 14 November 2014. On this same day, CER received a response from Eskom in which it was stated that the Eskom Air Quality Strategy could not be made available because it was outdated as there had been changes in legislation and Eskom had made an application for postponement of the applicability of the MES to its plants. Eskom stated that its Air Quality Strategy was being updated.</p>		<p>This report is in draft format. Once the report has been finalised and made available for public consumption in the Draft Environmental Impact Report (DEIR), and it may be available from Eskom. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>3.9</p>	<p>On 7 November, the CER made a telephone call to Zitholele regarding their request mentioned above, for the TSSR. During this telephone call, Zitholele communicated that the reason that Eskom did not want to provide stakeholders with the TSSR was that it contains confidential information of a commercially sensitive manner. However, a formal decision had not yet been made and would be sent to stakeholders as soon as it had been. Zitholele further advised that the safety risk, that necessitated the cancellation of the public meeting mentioned above, was connected to outstanding issues between the community, local municipality and the councilor in Marapong. Zitholele had apparently been advised by Eskom that these issues might cause community members to make use of the public meeting for discussions not connected to the DSR, and Zitholele felt that the safety of the EAP could not be assured in such circumstances. Further, Zitholele reiterated the commitment to provide the CER with the minutes of the public meeting held on 5 November 2014 in Lephalele. The content of this telephone conversation was confirmed by the CER by email to Zitholele on 7 November 2014, and Zitholele confirmed receipt of the email on the same day, once again stating the intention to</p>		<p>Responses to these matters are responded to in points 6, 9.16.4, 9.16.4 and 9.16.6 above. <b>Nicolene Venter, Public Participation Practitioner</b></p>

	<p>send the minutes from the public meeting on 5 November 2014 in Lephatalale to the CER.</p> <p>The CER sent emails to Zitholele on 12 and 13 November 2014, asking for a formal response to their request for the TSSR, as well as the minutes from the public meeting on 5 November in Lephatalale. On 18 November 2014, Zitholele responded to this request. First, Zitholele reiterated that there were pre-existing issues between the community, Eskom and the local councillor, which they had not wished to deal with at the meeting they had cancelled on 6 November 2014, which was meant to centre around the Medupi FGD EIA and its public participation processes. Zitholele explained that they had since undertaken a situation analysis with Eskom, and had decided not to hold a public meeting about this matter in the future. Our clients dispute the outcome of this situation analysis. Public participation through stakeholder engagement is required in terms of chapter 6 of the NEMA EIA Regulations, so Eskom cannot use its discretion to decide whether or not to hold a public meeting. In situations where there is a fear of danger, it is submitted that an independent facilitator should be used to minimise friction between negotiating parties and the resulting security risk.</p>		<p>Responses to these matters are responded to in points 6, 9.16.4, 9.16.4 and 9.16.6 above.</p> <p>Zitholele Consulting would like to reiterate that the decision to cancel the public meeting was a team decision, informed by information from the ward councillor and from Eskom. The fact that the PP team did secure a venue, interpreter, and invited the public to the public meeting in Marapong, shows that the project team was intent on facilitating this meeting. It was a last minute decision to cancel, based on the risk that the meeting would lose focus, thereby not addressing the current project issues. The risk of violence was also taken cognisance of.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
3.11	<p>Then, Zitholele once again stated that they would provide the minutes for the key stakeholder and public meetings which were held on 5 November 2014 in Lephatalale. Further, Zitholele stated that a decision regarding the release of the TSSR had been reached, and Zitholele would be making it available to the CER by the end of November 2014. In order to allow stakeholders enough time to consider the document, the DSR comment period would be extended to Friday 9 January 2015.</p>		<p>Zitholele Consulting confirms the information as provided by the CER NPC regarding the availability of the draft minutes of the meetings held during the DSR review period.</p> <p>The draft minutes are included in Appendix F8 of the FSR. All attendees to the meeting, and stakeholders specifically requesting such, will be sent the minutes as soon as the review process is completed.</p> <p>The final minutes, should there be any comments/updates, will be included in the DEIR.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
3.12	<p>The extension of the DSR comment period until 9 January 2015 was communicated to all other stakeholders by email on 21 November 2014.</p>		<p>The official DSR comment period extension was communicated to all registered I&amp;APs on the project database by means of the contact details provided during</p>

			<p>the consultation period (i.e. e-mail to those with an e-mail address, fax to those without an e-mail address but with a fax number and SMS to all registered I&amp;APs with cell phone number – including the CER NPC).</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p> <p>Zitholele Consulting confirm the information as provided by the CER NPC regarding the submission of the TSSR. Zitholele Consulting could only make the TSSR available once received from the Applicant.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
<p>3.13</p>	<p>When the CER had not received the TSSR by 1 December 2014, they sent a notice to Zitholele, placing on record that the TSSR had not been released by the deadline and asking to be informed as to when it would be released. The TSSR was then sent to the CER and all other stakeholders on the same day.</p>		<p>In response to the request for information that is not directly related to the current FGD project, the Medupi project team has indicated that the stakeholders should request the information directly from Eskom through the PAIA process.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
<p>3.14</p>	<p>In its comments on the BID, our clients also requested copies of several documents in order to place them in a position to make meaningful submissions and in keeping with their PAJA rights. The majority of the requested information has not been made available. Our clients place on record that this has hampered their ability to provide comment.</p>		<p>The requirements for a public participation process in terms of the NEMA EIA Chapter 6, Regulations 54 – 57 have been met.</p> <p>Zitholele Consulting can confirm that “reasonable opportunity to comment” was provided by the public participation team. Although the EIA Regulations stipulates that I&amp;APs be provided with a minimum of 30 days to comment on Reports, it needs to be noted that the DSR was made available for public review and comment from Monday, 27 October 2014 to Friday, 05 December 2014. This review period was extended, as communicated on 20 November 2014, to Friday 09 January 2015.</p> <p>The BID in which the project was announced, was available for comment from June 2014. Due to the nature of this proposed project, Zitholele Consulting did not, as per Regulation, stipulate a registration and comment period for the BID. I&amp;APs can comment until the FEIR is submitted, which by then new and or additional information would have been communicated.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p>
<p>3.15</p>	<p>Our clients would like to place on record that the public participation process with regards to the Medupi DSR has not been managed efficiently or transparently and has impacted on their ability on their “reasonable opportunity to comment”, afforded by the EIA Regulations. Our clients have had difficulty in accessing some of the documents that were necessary for them to comment on the DSR, and have not had the opportunity to engage with Eskom as initially promised, as they would have been able to at the public meeting in Marapong that was cancelled on very short notice. Our clients submit that another public meeting should be held in Marapong to ensure that the public participation process is not compromised. In addition, Eskom must make all relevant documents available to stakeholders as soon as a comment process begins in any part of the Integrated Environmental Authorisation process in future, so as to avoid unnecessary delays.</p>		
<p>3.16</p>	<p>In the circumstances, our clients submit that the</p>		



	<p>DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that all relevant documents must be made available to stakeholders as soon as a comment process begins in any part of the Integrated Environmental Authorisation process in future, so as to avoid unnecessary delays</p>		
<p>3.17</p>	<p>The online link to Appendix E does not contain information pertaining to "Absorber Diagrams" as it should. Please correct this error.</p>		<p>It can be confirmed that the link has been corrected and please also find within Appendix G5 the Medupi FGD - Absorber Diagrams for perusal. <b>Nicolene Venter, Public Participation Practitioner</b></p>
<p>3.18</p>	<p>The minutes for a public meeting held in Marapong on 6 November 2014 have not yet been distributed. It is important that all stakeholders have access to these to ensure that the record is both accurate and accessible. Please ensure that they are made available as soon as possible.</p>		<p>The draft minutes will be made available to all those who attended the meetings and those who submitted their apologies for their review and inputs. The draft minutes will also be made available in the FSR which will be made available in the same public places as per the DSR. <b>Nicolene Venter, Public Participation Practitioner</b></p> <p>Zitholele Consulting informed the key stakeholder workshop and the public meeting attendees and those who submitted apologies that the draft minutes are still being reviewed by Eskom and will be distributed as soon as it is received from Eskom. <b>Nicolene Venter, Public Participation Practitioner (e-mail dated 22 January 2015)</b></p>
<p>3.19</p>	<p>In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that any decision not to consider waste disposal alternatives must be transparent and subject to public participation;</p>		<p>All alternatives for disposal are being investigated within the EIA Phase. The saleability of the gypsum has been investigated by Eskom and the market for gypsum will not support the volumes of gypsum produced by Kusile and Medupi Power Stations. In order to design for worst case scenario, a disposal facility must be designed and prepared for the disposal of maximum gypsum volumes. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>

3.20	In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that Eskom may not adopt an attitude to public participation which suggests that it is a discretionary process, rather than one which is legislatively mandated; and		The public participation process is conducted in terms of the NEMA EIA Chapter 6, Regulations 54 – 57. As per these regulations, all relevant documents relating to this proposed project will be made available to all registered I&APs as and when available. <b>Nicolene Venter, Public Participation Practitioner</b>
4	In your email of 18 November 2014, you commit to sending the Technology Selection Report for the Medupi FGD project to the CER by the end of November 2014. We would like to place on record that we have not yet received this report, although your deadline for sending the report to us has passed. Please could you advise as to when we will receive it  Further, we have not yet received a response to our email of 24 November below, regarding the necessity of making the Technology Selection Report available to all stakeholders, not just the CER. Please could you confirm that the report will be distributed to all stakeholders?	E-mail 01 December 2014	The Medupi FGD Technology Selection Study Report (Appendix D in the FSR) was received from the Applicant on the 25 <sup>th</sup> of November 2015 and was distributed to the CER NPC and all registered I&APs on the database on 01 December 2014. The TSSR was also uploaded on Zitholele's website and the registered I&APs were informed accordingly. <b>Nicolene Venter, Public Participation Practitioner</b>
5	The delay in responding to the request is impacting on our ability to respond to the DSR. Please could you respond on an urgent basis.	E-mail: 13 November 2014	Response to the e-mail dated 24 November 2014 was responded to on the 01 <sup>st</sup> December 2014. The response is included in Appendix F5 of the FSR. <b>Nicolene Venter, Public Participation Practitioner</b>
6	Kindly let us know when we can expect a response to our correspondence below.	E-mail: 12 November 2014	Acknowledged receipt of the CER's e-mails dated 12 and 13 November 2014.  Zitholele Consulting was informed by Ward 1 (Marapong) Councillor, Mr William Motlokwa, that there are pre-existing issues between the Marapong Community and Eskom (Medupi Power Station) that, to date, have not been resolved. He advised Zitholele Consulting that Eskom needs to be prepared to provide responses and feedback on the current outstanding issues at a meeting schedule at Marapong for the evening of 6th November.  Councillor Motlokwa intimated that should Eskom not address these pre-existing issues, that the meeting may become violent. The client subsequently informed Zitholele that Eskom will not be able to provide responses at the public meeting. There is, however, an established forum between Eskom, Community Representatives, Local Authorities, etc attending to these issues, which is the correct medium for discussion of these issues.

			<p>Due to the nature of this public meeting (presentation of EIA &amp; PP process and technical information relating to the proposed Medupi GFD project only) we were cautious not to entertain these external issues. Based on discussions with Mr Motlokwa the project team (Zitholele and Eskom) took the decision not to proceed with this public meeting as a safety precaution to the community members as well as the project team members.</p> <p>Additional to above, Medupi Power Station undertook a situation analysis and, based on the results, also advised the team not to proceed with the second public meeting in Marapong.</p> <p>It was confirmed that as soon as the draft minutes of both the Key Stakeholder Workshop and the Public Meeting is drafted, that the CER will receive a copy.</p> <p>The matter regarding the release of the Technology Selection Study Report has been submitted to Eskom again and we have been informed that the Draft Technology Study Report (474-10174 Medupi FGD Technology Study Report – as reference in the Comments and Responses Report – Appendix D8 of the Draft Scoping Report) will be forwarded to the CER by end November 2014.</p> <p>The CER NPC was informed that the DSR review period will be extended to Friday 09 January 2015 and that the extension will be communicated to all registered I&amp;APs on the project database shortly.</p> <p>Zitholele Consulting expressed their hope that the above-mentioned address their queries.  <b>Nicolene Venter, Public Participation Practitioner (email dated 18 November 2014)</b></p>
7	<p>Requested that further notifications be sent to the other owners who are in Johannesburg. E-mail address provided.</p>	<p>KRUGER, Ruth                  CER NPC                  E-mail: 10 November 2014</p>	<p>Zitholele Consulting acknowledged receipt of this information and confirmed that notification will be sent to the e-mail/s provided. Zitholele Consulting requested the names of the other property owners. Information has not yet been received.  <b>Nicolene Venter, Public Participation Practitioner (e-</b></p>

<p>8</p>	<p>I refer our telephonic conversation a few minutes ago, we look forward to your responses to the correspondence below, as well as to why the meeting in Marapong was cancelled. Kindly also provide us with a copy of the minutes of the meeting held on Wednesday 5 November 2014.</p>	<p>E-mail: 07 November 2014</p>	<p><b>mail dated 11 November 2014)</b> E-mail acknowledged and confirms that a response will be forthcoming shortly. Thanked the CER for contacting Zitholele Consulting and confirm that the team is attending to the minutes. Nicolene Venter, Public Participation Practitioner (e-mail dated 04 November 2014)</p>
<p>9</p>	<p>We are instructed to draw your attention to Regulation 54(7) of the 2010 NEMA EIA Regulations which provides that: (a) "... the person conducting the public participation process must ensure that— information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application."  In terms of regulation 28(1), the DSR "must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping".  The Technology Selection Study Report (conducted by Harris D in 2014) that we have requested, is referred to throughout the Draft Scoping Report (DSR), and is clearly one of the vital documents that was relied upon to decide the suitable FGD technology. Accordingly, it clearly forms part of "information containing all relevant facts in respect of the application" and information that is necessary for a proper understanding of the nature of the issues identified during scoping." In the circumstances, the Technology Selection Study Report should be made available to all I&amp;APs without the need for a request through the Promotion of Access to Information Act (PAIA) process. It should, in fact,</p>	<p>E-mail: 04 November 2014</p>	<p>Zitholele Consulting, and especially the public participation (PP) team, is conducting the PP process according to the regulations as mentioned by the CER NPC.  Upon the PP team's request for the release of the Report in question, we were provided with the response as per our e-mail.  Subsequently, the Report was released not only to the CER NPC but also to all registered I&amp;APs on the project database. Those with e-mail addresses received the notification of the available of the Report via e-mail, those without e-mails but with fax facility received the notification via fax and all registered I&amp;APs received a SMS. <b>Nicolene Venter, Public Participation Practitioner (e-mail dated 18 November 2014)</b></p>

	<p>have been made available when the DSR was made available. We also point out that the comment and responses report (CRR) clearly states that the Study Report would be attached as an appendix to the scoping report – see pages 5, 6 and 11 of the CRR.</p> <p>Therefore, please note that a failure to provide this Study Report to I&amp;APs is contrary to NEMA's EIA Regulations, and any decision taken without providing this vital information for comment by I&amp;APs may be subject to review in terms of the Promotion of Access to Justice Act</p> <p>We also point out that, even if there were a basis to require that the document be requested in terms of PAIA (which is denied), the legislated time period for answering such PAIA request would render such request superfluous for purposes of commenting on the DSR.</p> <p>In the circumstances, we are again instructed to request that a copy of the Technology Selection Study Report be made available to I&amp;APs on an urgent basis.</p>		
10	<p>We would like to submit comments on the DSR for the proposed retrofitting for FGD at Medupi Power Station. So as to ensure that our comments are well-informed, we would like to see the Technology Selection Study Report which is referred to in the DSR's CRR Appendix. However, we have been unable to locate this report amongst the documents that you sent out, or on your website. Please could you send us a copy of the report?</p>	<p>E-mail: 30 October 2014</p>	<p>E-mail acknowledged and CER informed that their request has been forwarded to Eskom and Zitholele Consulting will revert back as soon as possible.</p> <p>Nicolene Venter, Public Participation Practitioner (31 October 2014)</p> <p>Eskom, the Applicant for this proposed project, informed us that any request for information such as the Technology Selection Study Report (as Appendix D in the FSR) must please go through the PAIA process as the requested Report contains sensitive information which is not appropriate to public review. Should the CER want specific information, please inform us and the team will formulate an appropriate response. I hope that you find above-mentioned in order and please do not hesitate to contact us should you need any additional information.</p>

			<p>Nicolene Venter, Public Participation Practitioner (04 November 2014)</p> <p>The Technology Selection Study Report (as Appendix D in the FSR) has been made available to all registered stakeholders during the public review period of the Draft Scoping Report and will be appended to the Final Scoping Report for public review.  <b>Sharon Meyer-Douglas, EAP</b></p>
<p>11</p>	<p>I refer our telephonic conversation a few minutes ago, we look forward to your responses to the correspondence below, as well as to why the meeting in Marapong was cancelled. Kindly also provide us with a copy of the minutes of the meeting held on Wednesday 5 November 2014.</p>	<p>KAMANJA, Sylvia                  Centre For Environmental Rights                  Email: 04 November 2014</p>	<p>Zitholele Consulting was informed by Ward 1 (Marapong) Councillor, Mr William Motlokwa, that there are pre-existing issues between the Marapong Community and Eskom (Medupi Power Station) that to date have not been resolved. He advised Zitholele Consulting that Eskom needs to be prepared to provide responses and feedback on the current outstanding issues at a meeting scheduled at Marapong for evening of 6th November. The client subsequently informed Zitholele that Eskom will not be able to provide responses at the public meeting. There is however an established forum between Eskom, Community Representatives, Local Authorities, etc attending to these issues.</p>
<p>12</p>	<p>Thank you for your response below. However, we are instructed to draw your attention to Regulation 54(7) of the 2010 NEMA EIA Regulations which provides that:                  "... the person conducting the public participation process must ensure that—                  a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and                  b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application."                   In terms of regulation 28(1), the DSR "must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping".                   The Technology Selection Study Report (conducted by Harris D in 2014) that we have requested, is referred to throughout the Draft Scoping Report (DSR), and is clearly one of the vital documents that was relied upon to decide the suitable FGD technology. Accordingly, it</p>		<p>Councillor Motlokwa intimated that should Eskom not address these pre-existing issues, that the meeting may become violent.</p> <p>Due to the nature of this public meeting (presentation of EIA &amp; PP process and technical information relating to the proposed Medupi FGD project only) we were cautious not to entertain these external issues. Based on discussions with Mr Motlokwa the project team (Zitholele and Eskom) took the decision not to proceed with this public meeting as a safety precaution to the community members as well as the project team members.</p> <p>Additional to above, Medupi Power Station undertook a situation analysis and, based on the results, also advised the team not to proceed with the second public meeting in Marapong.</p> <p>I can confirm that as soon as the draft minutes of both the Key Stakeholder Workshop and the Public Meeting have</p>

	<p>clearly forms part of “information containing all relevant facts in respect of the application” and information that is necessary for a proper understanding of the nature of the issues identified during scoping.” In the circumstances, the Technology Selection Study Report should be made available to all I&amp;APs without the need for a request through the Promotion of Access to Information Act (PAIA) process. It should, in fact, have been made available when the DSR was made available. We also point out that the comment and response report (CRR) clearly states that the Study Report would be attached as an appendix to the scoping report - see pages 5,6 and 11 of the CRR.</p> <p>Therefore, please note that a failure to provide this Study Report to I&amp;APs is contrary to NEMA’s EIA Regulations, and any decision taken without providing this vital information for comment by I&amp;APs may be subject to review in terms of the Promotion of Access to Justice Act (PAJA).</p> <p>We also point out that, even if there were a basis to require that the document be requested in terms of PAIA (which is denied), the legislated time period for answering such PAIA request would render such request superfluous for purposes of commenting on the DSR.</p> <p>In the circumstances, we are again instructed to request that a copy of the Technology Selection Study Report be made available to I&amp;APs on an urgent basis.</p> <p>We look forward to your urgent response.</p>		<p>been appropriately reviewed and finalised, that the CER will receive a copy.</p> <p>Robyn, the matter regarding the release of the Technology Selection Study Report has been submitted to Eskom again and we have been informed that the Draft Technology Study Report (474-10175 Medupi FGD Technology Study Report - as reference in the Comments and Responses Report – Appendix D8 of the Draft Scoping Report) will be forwarded to the CER by end November 2014.</p> <p>Robyn, please be informed that the DSR review period will be extended to Friday 09 January 2015. This extension will be communicated to all registered I&amp;APs on the project database shortly.</p> <p>I hope the above-mentioned address your queries.  <b>Nicolene Venter, Public Participation Practitioner</b></p>
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<p>13</p>	<p>Further to the email below regarding the Technology Selection Report for the Medupi FGD project, we would like to clarify who will be receiving this report. As you state below in your email of 18 November, the CER will receive it by the end of this month (November). However, it will be important for all stakeholders to read this report so as to be able to engage with the Draft Scoping Report and provide constructive comments.</p> <p>Please could you confirm that the Technology Selection Report will be sent to all stakeholders, not just the CER.</p>	<p>KRUGER, Ruth Attorney: Centre For Environmental Rights Email: 24 November 2014</p>	<p>Eskom, the Applicant for this project, informed us that any request for information such as the Technology Selection Study Report must please go through the PAIA process as the requested report contains sensitive information which is not appropriate to public review.</p> <p>Should the CER want specific information, please inform us and the team will formulate an appropriate response. I hope that you find the above-mentioned in order and please do not hesitate to contact us should you need any additional information.</p>
<p>14</p>	<p>Please could you confirm that the Technology Selection Report will be sent to all stakeholders, not just the CER.</p> <p>We would like to submit comments on the DSR for the proposed retrofitting for the FGD at Medupi Power Station. So as to ensure that our comments are well informed, we would like to see the Technology Selection Study Report which is referred to in the DSR's CRR Appendix. However, we have been unable to locate this report amongst the documents that you send out, or on your website. Please could you send us a copy of the report?</p>		<p>Please note that the TSSR has been made available to all stakeholders in the following manner:</p> <ul style="list-style-type: none"> <li>• electronic copy to all registered I&amp;APs on the project database with e-mail addresses;</li> <li>• fax to those registered I&amp;APs without an e-mail address but with a fax number; and</li> <li>• On the Zitholele website</li> </ul> <p>The time period for public review of the DSR has been extended to the 9<sup>th</sup> January 2015, to allow stakeholders the opportunity to review this additional information.</p> <p>The TSSR will also be included in the FSR which will be made available for public comment. <b>Nicolene Venter, Public Participation Practitioner</b></p>
<p>15</p>	<p>In your email below of 18 November 2014, you commit to sending the Technology Selection Report for the Medupi FGD project to the CER by the end of November 2014. We would like to place on record that we have not yet received this report, although your deadline for sending the report to us has passed. Please could you advise as to when we will receive it.</p> <p>Further, we have not yet received a response to our email of 24 November below, regarding the necessity of making the Technology Selection Report available to all stakeholders, not just the CER. Please could you confirm that the report will be distributed to all stakeholders.</p>		
<p>16</p>	<p>From the questions being posed it is obvious that there were problems with the initial</p>	<p>LEKALAKALA, Makoma Earthlife Africa –</p>	<p>Specialist studies have not been undertaken yet. Reference made to the specialist studies is to those studies that were</p>



	<p>specialist studies or scoping for the plant itself, because the process followed was inadequate and rushed just to have the plant constructed and there are a lot of issues still not being address such as the specialist studies. We are not sure how Zitholele and Eskom are going to deal with this matter, especially when stakeholders start submitting comments on the current DSR. Going through the DSR it is realised that there is a portion missing, i.e. the Technology Selection Report as it was not attached to the DSR as an Annexure, although within the DSR it is referred to several times. This means the process is incomplete and people cannot submit comments based on information not available. It will be appreciated if stakeholders can be informed when it is available for public scrutiny so that some of the questions being asked can be answered.</p> <p>That is an acceptable request, but Eskom needs to know that there may be more stakeholders who will be submitting questions.</p>	<p>Johannesburg PM: 05 November 2014</p>	<p>conducted during the original EIA for Medupi Power Station, and which will form part of the baseline assessments for the FGD EIA. The specialist studies done in 2006 for the Medupi Power Station can be made available. The specialist studies for the FGD will be done between now and March 2015. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom would have provided a reference number for the report in the DSR. Eskom would look into it and provide the reference number in the draft minutes. <b>Rosetta Rammutla, Eskom</b></p> <p>The report referred to is an internal report and not available for public review yet as it contains intellectual properties. Specific questions can be submitted to Eskom and a response will be provided. <b>Carel van Heerden, Eskom</b></p> <p><b>Post-meeting note:</b> The Technical Selection Study Report was made available on the 1<sup>st</sup> of December 2014 to all registered I&amp;APs.</p> <p>When further scoping has been done, Eskom will be in a position to share some of the high level results of the alternatives with the public. <b>Prince Khumalo, Eskom</b></p> <p><b>Post meeting note:</b> The Technical Selection Study Report was submitted to all stakeholders on 1<sup>st</sup> December 2014 and the public review period was extended to 9<sup>th</sup> January 2015 to allow sufficient time for review and comment.</p>
<p>17</p>	<p>Can the status of the Public Meeting in Marapong tomorrow evening be confirmed?</p>	<p>NAIR, Kubentheran Eskom PM: 05 November 2014</p>	<p>Information received late this afternoon indicates that there is a strong possibility that the meeting at Marapong might not take place due to safety concerns. The team will obtain confirmation regarding this fact, and should the meeting need to be cancelled, notification thereof will be communicated accordingly. <b>Nicolene Venter, Public Participation Practitioner</b></p>

18	<p>As discussed on the 13 October 2014, please receive the list of people who are going to attend Key Stakeholder Workshop.</p> <p>Mayor Moloko Maeko: Lephthalale Municipality Mayor, <a href="mailto:patrick.mojela@lephthalale.gov.za">patrick.mojela@lephthalale.gov.za</a>, 014 762 1400</p> <p>Counsellor Alpheus Thualare: (Mining, Industries &amp; Labour), Lephthalale Municipality, (Cellphone Number Withheld for purposes of CRR)</p> <p>Joel Moloantoa, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR)</p> <p>Lesiba Monare, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR)</p> <p>Nakedi Maake, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR)</p> <p>Pastor Papo: President Lephthalale City Chamber, (Cellphone Number Withheld for purposes of CRR)</p>	<p>MAAKE, Nakedi Representative SANCO Email: 16 October 2014</p>	<p>Thank you very much for a very informative discussion on Tuesday – your call is appreciated.</p> <p>Please receive herewith confirmation that we had registered the stakeholders, as listed below, attendance at the Key Stakeholder Workshop.</p> <p>Also, we captured the stakeholders on the project database (except the Mayor, Mayor Moloko Maeko, who is already on our project database) and they will receive all future public notifications and documents for review relating to the above-mentioned proposed project.</p> <p>For reference purposes, please find attached the Background Information Document.</p> <p>We are looking forward to meet you and the other stakeholders at the Key Stakeholder Workshop. <b>Nicolene Venter, Public Participation Practitioner</b></p>
19	<p>Speaking for the affected community, SANCO wishes to place on record that they are very disappointed about the manner in which meeting notices were placed, how the public participation process was followed, the fact that it was not broadcasted on the local radio station and no site notices were put up in Marapong. It will be reflected in the attendance at the meetings. SANCO has to account for the proposed project to the Community as their leaders.</p>	<p>KSW: 05 November 2014</p>	<p>The site notices, announcing the project, according to legal requirements were put up at the affected site where the development is taking place i.e. Medupi Power Station. Zitholele Consulting went over and above that by distributing the BID to community members, and Marapong was excluded during this process. As a general guideline, EIA process notices are displayed at various public places within a 10 kilometre radius.</p> <p>Our attention was drawn to the fact that Marapong should be included in the notification process and that has been done. The PM notices were put up at seven places in Marapong alone, which include the:</p> <ul style="list-style-type: none"> <li>• Marapong Public Library;</li> <li>• Clinic;</li> </ul>

<p>20</p>	<p>Please could you register Greenpeace as an I&amp;AP (with both myself and Penny-Jane (cc'ed in this email) as contacts) in this matter.</p>	<p>STEELE, Melita Senior Climate &amp; Energy Campaign Manager Greenpeace Africa Email: 17 October 2014</p>	<ul style="list-style-type: none"> <li>• Marapong Spar;</li> <li>• Mzosti's Car Wash;</li> <li>• Nelsonskop Primary School;</li> <li>• Ditheku Primary School; and</li> <li>• Tielelo Secondary School.</li> </ul> <p>In Lephalele the meeting notice was put up at the Public Library, Municipality and Afgri. As per the telephone call with Mr Maake a few weeks ago, the matter has been flagged and Zitholele will ensuring, going forward, that Marapong community is included in this process.</p> <p><b>Nicolene Venter, Public Participation Practitioner</b></p> <p>We will add yourself and Ms Penny Jane Cooke onto the database on the aforementioned project as per your request.</p> <p>For your convenience, please find attached the following documents for your perusal and response:</p> <ul style="list-style-type: none"> <li>• The Project Background Information Document;</li> <li>• A Letter Announcing the Draft Scoping Report and an invitation to the Public Meetings (and the supporting reply sheet);</li> <li>• An invitation to the Key Stakeholder Workshop (and the supporting Registration form).</li> </ul> <p>It would be excellent for you to attend the Key Stakeholder Workshop, which is a workshop that provides Stakeholders (on strategic and technical level) an opportunity to hear each other's issues/concerns/comments.</p> <p>Stakeholders have also been invited to the two Public Meetings and are more than welcome to attend these.</p> <p>The minutes of these meetings will be included in the Final Scoping Report as well as captured in the Comments and Responses Report. Both of these documents will be available for review once completed.</p> <p>We thank you for your interest in this project and look forward to meeting with you at the project meeting/s.</p> <p>As discussed, please find attached the Background</p>
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			<p>Information Document (BID) regarding the above-mentioned proposed project.</p> <p>I will forward you the Draft Scoping Report Notification and Public Meetings Invitation Letter which you received yesterday by fax in a separate e-mail.</p> <p>Please be informed that the BID can also be downloaded from Zitholele's website (<a href="http://www.zitholele.co.za/eia-for-medupifgd">http://www.zitholele.co.za/eia-for-medupifgd</a>).</p> <p>You are most welcome to share this document with your neighbours, friends, family and/or colleagues, and you are also welcome to forward the names and contact details of any interested and/or affected party that you believe who needs to be informed regarding this proposed to us.</p> <p>Please do not hesitate to contact us should you require any additional information regarding this proposed project  <b>Nicolene Venter, Public Participation Practitioner</b>  The requested has been acknowledged and confirmed  <b>Nicolene Venter, Public Participation Practitioner</b></p>
21	Please remove me off your mailing list. Sorry but I never attended any workshop / seminar or meeting that was held. Not sure why you contacted me.	VENTER, Nicolene Position Pilot Freight Email: 15 October 2014	
<b>1.2.10 GENERAL COMMENTS</b>			
1	In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern mentioned below. In summary, our clients submit that we look forward to receiving the requested documents, and to hearing from you in relation to the next steps in the Project.	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	Zitholele Consulting thank the CER NPO and confirm that all stakeholders will be kept abreast of developments and status of the proposed project. <b>Nicolene Venter, Public Participation Practitioner</b>
2	The Municipality will also go through the DSR and submit comments on it if there are any.	HLAPA, Joshua Lephalale Local Municipality KSW: 05 November 2014	The Local Municipality's comment has been noted. <b>Nicolene Venter, Public Participation Practitioner</b>
3	The DAFF representatives will go through the DSR and submit their written comments, if any.	MATLOU, JM DAFF KSW: 05 November	The Department's comment has been noted. <b>Nicolene Venter, Public Participation Practitioner</b>

4	The DWS will also go through the DSR and submit comments on it if there are any. Other Authorities like the DEA Provincial should also be invited to these meetings.	2014 NETHENGWE, Mulalo DWS KSW: 05 November 2014	A large number of stakeholders, approximately 120, mainly Authorities, which included Provincial, and representatives from various NGOs were invited. Invitees are more than welcome to extend the invitation to their colleagues in another Department who they believe need to be present. <b>Nicolene Venter, Public Participation Practitioner</b>
<b>2. COMMENTS RAISED DURING SCOPING PHASE</b>			
<b>2.1 AUTHORITIES</b>			
<b>2.1.1 LEPHALALE MUNICIPALITY</b>			
1	We have received a letter on the proposed EIA for the proposed Medupi Power Station FGD. Please note that in order to comment on the proposed EIA, we will need the specific property description of where the proposed development is to be implemented.	RADIPABE, Oteng Town and Regional Planner Department: Development Planning Division: Spatial Planning and Land Use Management Lephalale Municipality E-mail: 24 July 2014	Property description, including farm names and portion numbers were provided, and the stakeholder was referred to Eskom for any further detailed property information. An e-mail was sent to Ms Oteng Radipabe on 27 July 2014 with the required information and a response was received from her confirming receipt of the required information. <b>Sharon Meyer-Douglas, EAP, Zitholele Consulting</b>
<b>2.1.2 DEPARTMENT OF ROADS &amp; TRANSPORT</b>			
1	No objection regarding the proposed project. They are hoping that the project will not interfere with their roads. Where such is necessary, RAL will grant authorisation with applicable conditions.	TSHIKONELO, Mr Joseph Department of Roads & Transport BID Comment Sheet: 09 June 2014	Site alternatives have not yet been identified for depositing the by-products (i.e. gypsum, salts and sludge) and it is believed that the by-products will be transported from the stack area to the waste site by conveyor. However, should the by-products be transported by truck or any other means where the surrounding road network will be utilised, Zitholele Consulting will notify the RAL thereof.  Eskom will apply to the relevant departments (RAL/SANRAL/Roads & Transport) should there be a potential for impact to roads. <b>Sharon Meyer-Douglas, EAP, Zitholele Consulting</b>

2.2 INTERESTED AND AFFECTED PARTIES	
2.2.1 AIR EMISSION COMPLIANCE / IMPACTS RELATED COMMENTS	
1	<p><b>Integration of FGD into the design, construction and commissioning of units:</b> Condition 7.1.4 of the Medupi AEL provides as follows: <i>“The License (sic) Holder shall continuously operate and maintain a flue gas desulphurization (FGD) plant for control of SO<sub>2</sub> on all six units. The Flue Gas Desulphurisation plant shall be retrofitted in each unit within Six (06) years after the first commissioning of each unit and during the General Overhaul outages.”</i></p> <p>Our clients do not accept the 6 year delayed FGD retrofit on each unit, and have appealed Medupi’s AEL, the outcome of the appeal is awaited.</p>
2	<p>HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014</p> <p>Agreed <b>Sharon Meyer-Douglas, EAP</b></p> <p>The six yearly phasing of the Medupi FGD Plant is not a delay but a requirement of the loan agreement with the World Bank and linked to the statutory major overhaul outage scheduling of each running unit. Construction of the FGD is expected to commence ahead of each major outage with tie in of the FGD plant timed to align with each unit outage. The appeal responding statements referred to were submitted to Limpopo Department of Economic Development; Environment and Tourism (LEDET) in May 2014 and the outcome is awaited. <b>Olga Makhalemele, Eskom</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p> <p>Eskom’s MES postponement application for Medupi Power Station is based on the most conservative commissioning schedule, i.e. one unit per year commissioned from 2015 to</p>
3	<p>In its application to postpone compliance with the MES in terms of the National Environmental Management: Air Quality Act, 2004 (AQA),<sup>1</sup> Eskom</p>

<sup>1</sup>GN893 in GG37054 of 22 November 2013.

	<p>seeks postponement of both the existing (3500 mg/Nm<sup>3</sup>) and new plant (500 mg/Nm<sup>3</sup>) MES. The former apply from 1 April 2015, and the latter, from 1 April 2020. In its postponement application, Eskom seeks an SO<sub>2</sub> emission standard of 4000 mg/Nm<sup>3</sup> until 1 January 2027 – on which date it will comply with the April 2020 MES<sup>2</sup>. In other words, from 1 April 2020 to 31 December 2027, Eskom seeks to emit 8 times the MES.</p>		<p>2020, and subsequent FGD retrofits of one unit per year from 2021 to 2026. The most optimistic commissioning schedule would be two units per year from 2015 to 2017, and then FGD retrofits on two units per year from 2021 to 2024. Unabated SO<sub>2</sub> emissions would thus be emitted from all six units for a maximum of one year for the conservative schedule, or up to three years for the optimistic schedule. Moreover, although Eskom applied for an SO<sub>2</sub> emission limit of 4000 mg/Nm<sup>3</sup> in the MES postponement application for Medupi, this is the upper limit of expected emissions. SO<sub>2</sub> emissions from Medupi will vary primarily as a function of the sulphur content of the coal, prior to the installation of FGD. The expected sulphur content of the coal to be supplied to Medupi is 1.3% by weight (on a dry basis). The sulphur content rejection point is 2.2%. This means that the sulphur content of the coal supplied to Medupi is expected to average 1.3%, but may be as high as 2.2%. The SO<sub>2</sub> emission limit needs to be based on the highest possible SO<sub>2</sub> emissions resulting from burning the 2.2% sulphur coal (since there is no way of reducing the SO<sub>2</sub> emissions prior to the installation of FGD). However, SO<sub>2</sub> emissions from Medupi prior to installation of FGD are expected to average around 2700 mg/Nm<sup>3</sup> (on a dry basis at 10% O<sub>2</sub>), which is below the “existing plant” SO<sub>2</sub> limit of 3500 mg/Nm<sup>3</sup>. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>4</p>	<p>Medupi's 6 units will, according to Eskom's postponement application, each be commissioned over a period of 6-12 months. Eskom states that based on December 2013 project schedule, commissioning of the first unit at Medupi will start in 2014 and be completed in early 2015. The first unit would therefore be retrofitted with FGD in 2021 – 6 years after its commissioning. Eskom states that “the installation of the FGM equipment (i.e. retrofitting the generation units with FGD) will take place during the first Major General Overhaul</p>		<p>The six yearly phasing of the Medupi FGD Plant is not a delay but a logistical requirement taking advantage of the statutory major overhaul outage scheduling of each running unit. Construction of the FGD is expected to commence ahead of each major outage with tie in of the FGD plant timed to align with each unit outage. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD.</p>

<sup>2</sup> Postponement application p.5, available at: [http://www.iliso.com/emes/1/Postponement%20Applications\\_PDFs/Medupi%20PS\\_Postponement\\_Application\\_Final\\_2014%2002%2021.pdf](http://www.iliso.com/emes/1/Postponement%20Applications_PDFs/Medupi%20PS_Postponement_Application_Final_2014%2002%2021.pdf)

	<p>(MGO) of each unit when they are “switched off” for maintenance. According to manufacturer’s specifications and prudent power plant operating procedures, the first MGO will be six years after commissioning of each generating unit”.</p>		<p><b>Theuns Blom, Eskom</b></p>
<p>5</p>	<p>If each unit is commissioned sequentially, the total commissioning period of Medupi could therefore be 3 to 6 years. If each unit takes 6 months to commission, the last FGD would be installed in 2023. Although Eskom claims that it is “committed to this schedule”, it qualifies this immediately, indicating: “however, the actual interval between the generating units’ commissioning will depend on construction progress could take place in the range of 6-12 months intervals as a result of any unpredictable delays in the construction and commissioning of the power station. Thereafter taking a 2 month interval into account, this would see the last FGD installed by end 2026”.<sup>3</sup></p>		<p>The construction process duration is dependent on a lot of factors such as unforeseen and unpredictable industrial actions. This can have an impact on the planned timelines for construction completion. It is a prudent policy to allow for these unforeseen risks in construction planning and assumption in qualifying statements are a normal project management approach. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>6</p>	<p>The total commissioning period may even be significantly longer if commissioning of any of the individual units is extended or delayed, as is not unusual in the commissioning of large complex plants. Indeed, Eskom may conceivably delay the commissioning of some of the 6 units, based on business/commercial considerations. In this regard, the Medupi plant is already well behind schedule.</p>		<p>The Medupi FGD is a separate project from the Medupi Power Station and has its own milestones and timelines. However it is noted that the Medupi project delay poses a moderate risk to the FGD plant in that its delay can affect the timing of the FGD plant per unit as an outage of each unit is required to complete the FGD plant installation. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>7</p>	<p>The impact of FGD only being installed 6 years after the commissioning of each unit is that each unit will operate with unabated SO<sub>2</sub> emissions during its commissioning period, plus an additional 6 years, if units are commissioned at 6 monthly intervals, the optimistic scenario is that all 6 units would be commissioned over 3 years, and</p>		<p>Medupi Power Station will be fitted with the emission’s monitoring system to assist in optimisation of the power generation process. The FGD plant can be seen as an enhancement and extension of this emissions monitoring and control system. The FGD plant requires its’ own funding and securing of loans for projects of this magnitude is a process that takes time. It is anticipated that by the time the first Medupi unit is ready for a major maintenance outage</p>

<sup>3</sup> Ibid.



	<p>unabated emissions would occur from all 6 units for a further 3 years, until FGD is retrofitted to the first. Unabated emissions will continue from the remaining units until each is retrofitted with FGD. Unabated emissions from at least one unit will occur over a period of 6 to 9 years, depending on the commissioning schedule, with simultaneous unabated emissions from all 6 units over a period of 1 to 3 years during this period.</p>		<p>the process would have been finalised and construction of the FGD underway. Construction must be completed by the first major outage and funding must be in place before the first contract is placed. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD. <b>Theuns Blom, Eskom</b></p> <p>Medupi Power Station will be complying with the atmospheric emission licence limits for PM<sub>10</sub> and NO<sub>x</sub> from commissioning. SO<sub>2</sub> emissions will be compliant to legislated standards after FGD retrofits have been completed. Eskom cannot influence emissions stemming from other industrial sources. <b>Sharon Meyer-Douglas, EAP</b></p>
8	<p>Once commissioned, Medupi will emit PM<sub>10</sub> and NO<sub>x</sub> additional to emissions already occurring in the area. Compliance with new plant standards does not mean zero emissions of these pollutants. Medupi is essentially adjacent to (less than 10km away from) the Matimba power station. Primary (directly emitted) PM<sub>10</sub> emissions from Matimba are 4900 tons/year,<sup>4</sup> and are 4330 tons/year from Medupi,<sup>5</sup> representing an 88% increase in emissions. Medupi No<sub>x</sub> emissions are 71200 tons/year<sup>6</sup> compared with current Matimba emissions of 67600 tons/year;<sup>7</sup> a 105% increase in these emissions in the area. This excludes the emissions from a number of other industrial and mining activities which are scheduled to commence in the Waterberg Bojanala Priority Area.</p>		
9	<p>Should Eskom's application for postponement be accepted to, Medupi annual average SO<sub>2</sub> emissions may increase from 69000 tons/year<sup>8</sup> with 1 unit online, to a total of 414000 tons/year when all 6 units are online without FGD. That is, under these</p>		<p>Eskom's application for postponement is a separate process and was submitted to the Department of Environmental Affairs in February 2014 following input from interested and affected parties. It also includes an atmospheric impact report. <b>Sharon Meyer-Douglas, EAP</b></p>

<sup>4</sup> Matimba AIR, Table 21, p34 available at: [http://www.ilsco.com/emes/1/Atmospheric%20Impact%20Reports\\_PDFs/Matimba\\_AIR\\_FINAL\\_2014%2002%2021.pdf](http://www.ilsco.com/emes/1/Atmospheric%20Impact%20Reports_PDFs/Matimba_AIR_FINAL_2014%2002%2021.pdf)

<sup>5</sup> Medupi AIR Figure 3, p15.

<sup>6</sup> Medupi AIR Figure 3, p15.

<sup>7</sup> Matimba AIR Table 21, p34.

<sup>8</sup> Medupi AIR Figure 3, p15, available at: [http://www.ilsco.com/emes/1/Atmospheric%20Impact%20Reports\\_PDFs/Medupi\\_Final\\_AIR\\_2014%2002%2024.pdf](http://www.ilsco.com/emes/1/Atmospheric%20Impact%20Reports_PDFs/Medupi_Final_AIR_2014%2002%2024.pdf). Total uncontrolled SO<sub>2</sub> emissions with all 6 units commissioned 414000 tons/year; 1/6<sup>th</sup> per unit, 69000 tons/year.

	<p>circumstances, combined Matimba and Medupi emissions would increase from 309000 tons/year (Matimba only) to 723000 tons/year (Matimba plus all 6 units of Medupi online); an increase of 134%. This increase in SO<sub>2</sub> emissions will not only result in a corresponding increase in ambient SO<sub>2</sub> concentrations, but also will result in the increased formation of secondary sulphate particles, a major component of ambient PM<sub>2.5</sub>.</p>		<p>Medupi Power Station will have continuous emission monitors that measure the PM and gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA. <b>Olga Makhalemele, Eskom</b></p>
10	<p>Our clients submit that these impacts illustrate the importance of integrating FGD into units 2-6.<sup>9</sup> The Project must address this, with full and detailed explanations if this is not possible.</p>		<p>Eskom's application for postponement includes an atmospheric impact report related to the application. As indicated above, this is a separate process and the application was submitted to the Department of Environmental Affairs in February 2014 following input from interested and affected parties. <b>Sharon Meyer-Douglas, EAP</b></p>
11	<p>It is not clear whether or not Medupi's FGD system will be constructed with a by-pass option – which would allow Eskom to continue operation without the FGD system in operation. It must be stated upfront that a by-pass option is not acceptable to our clients: Eskom must be compelled to maintain and operate the FGD system as an integral part of the plant.</p>		<p>Since this is a retrofitted plant, the bypass is incorporated into the design. By and large the power station will be operated with the FGD in service in accordance with the AEL and the provision of a bypass provides the opportunity to run the station in the event of unforeseen FGD plant unavailability such as severe drought periods, sorbent shortage and unplanned maintenance. <b>Sharon Meyer-Douglas, EAP</b></p>
12	<p><b>Implications of non-compliance with ambient air quality standards in the Waterberg Bojanala Priority Area</b> Medupi is located in the Waterberg Bojanala Priority Area (WBPA),<sup>10</sup> which was declared in accordance with s.18 of AQA. AQA makes provision for the declaration of Priority Areas where ambient air quality standards (AAQs)<sup>11</sup> are being, or may be, exceeded. The WPA is developing an Air Quality Management Plan (AQMP), as required by S.19 of</p>		<p>Eskom is aware if this and the AQMP will combine the outcomes of the baseline characterisation and threat assessment, and address these through timely interventions, with a view to preserve the areas of existing good air quality, while progressively realising better air quality in degraded areas. <b>Sharon Meyer-Douglas, EAP</b></p>

<sup>9</sup> See fn 1.

<sup>10</sup> Declaration of the Waterberg National Priority Area in GG35435 of 15 June 2012.

<sup>11</sup> GN1210 in GG32816 OF 24 December 2009 and GN486 in GG35463 of 29 June 2012.

13	<p>AQA for every Priority Area.</p> <p>At the time of the WBPA declaration, the Minister was “satisfied that the ambient air quality ... may <u>exceed</u> the national ambient air quality standards in the near future, and that a trans-boundary situation exists between the Waterberg District Municipality and the Bojanala Platinum District Municipality in the North West Province which may cause a significant negative impact on air quality in both areas”. She also commented on the possible trans-boundary air pollution impact between South Africa and its neighbours – particularly Botswana. However, it is clear from a recent presentation by the DEA at the WPA multi-stakeholder reference group meeting on 26 June 2014 that permitted levels of PM<sub>2.5</sub> (particulate matter with aerodynamic diameter less than 2.5 micron metres), PM<sub>10</sub> (particulate matter with matter with aerodynamic diameter less than 10 micron metres) and ozone have been exceeded in all monitoring stations. In other words, there is now, subsequent to its declaration as a priority area, <u>non-compliance with the AAQS</u>. This presentation is attached hereto as annexure “1”. The fact that there is currently non-compliance with AAQS emphasises the importance of ensuring FGD installation as soon as possible, my integrating FGD into the units.</p>		<p>The exceedance of PM<sub>10</sub> and Ozone has nothing to do with the SO<sub>2</sub> retrofit, Medupi will be retrofitted with Fabric filter plants on commission and we will not have any PM10 exceedances.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
<b>2.2.2 FGD TECHNOLOGY ALTERNATIVES RELATED COMMENTS</b>			
1	<p><b>Alternatives to wet-flue gas desulphurisation:</b></p> <p>The BID makes mention only of wet FGD as a means to control SO<sub>2</sub> emissions from the Medupi Power Station, describing the Project as follows:</p> <p><i>“The FGD (flue gas desulphurisation) will be operated on wet systems; very small volumes of water will be circulated from the absorber reaction tank to spray headers. The water will be abstracted from the existing raw water reservoir.”</i></p>	<p>HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014</p>	<p>474-10175 Medupi FGD Technology Study Report.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>

<p>2</p>	<p>Defining the project in this manner forecloses a discussion about whether SO<sub>2</sub> emissions from the Medupi Power Station would be better controlled through alternative technology such as dry (or semi-dry) FGD technology.</p>		<p>Studies have been undertaken on technology options for Medupi FGD (between wet and dry) and it has shown that there are no significant difference in total life-cycle costs. These two alternatives are considered equal on an overall technical and economic basis. It is further noted that since the Medupi Power Station is under construction and an adequate supply of limestone and water are available to the plant for operation, this should continue. Technology Selection Study Report appended to Scoping Report. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>3</p>	<p>Eskom has argued that using dry (or semi-dry) FGD technology for controlling SO<sub>2</sub> emissions at Medupi is not economically feasible. Further, Eskom has stated – in its responding statement to our client’s appeal for the Medupi AEL – that the comparable costs of the various technical options for controlling SO<sub>2</sub> emissions cannot be divulged because of “commercial sensitivity”. The responding statement is attached hereto as annexure “2”. Without knowledge of these costs, I&amp;APs cannot comment meaningfully on economic feasibility of various forms of FGD. As a result, these costs and the technical assessments associated with this decision have been requested.</p>		<p>Studies have been undertaken on technology options for Medupi FGD (between wet and dry) and it has shown that there are no significant difference in total life-cycle costs. These two alternatives are considered equal on an overall technical and economic basis. It is further noted that since the Medupi Power Station is under construction and an adequate supply of limestone and water are available to the plant for operation, this should continue. Technology Selection Study Report appended to Scoping Report. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>4</p>	<p>Eskom’s statement regarding the economic feasibility of dry (or semi-dry) FGD technology is in contradiction to a statement by the Environmental Protection Agency (EPA) in the United State, as follows: <i>“Dry scrubbers have significantly lower capital and annual costs than wet systems because they are simpler, demand less water and waste disposal is less complex. Dry injection systems install easily and use less space, therefore, they are good candidates retrofit applications.”</i><sup>12</sup></p>		<p>Studies have been undertaken on technology options for Medupi FGD (between wet and dry) and it has shown that there are no significant difference in total life-cycle costs. These two alternatives are considered equal on an overall technical and economic basis. It is further noted that since the Medupi Power Station is under construction and an adequate supply of limestone and water are available to the plant for operation, this should continue. Technology Selection Study Report appended to Scoping Report. <b>Sharon Meyer-Douglas, EAP</b></p>

<sup>12</sup> USEPA “Air Pollution Control Technology Fact Sheet: Flue Gas Desulfurization (FGD) – Wet, Spray Dry, and Dry Scrubbers.” <http://www.epa.gov/ttn/catc1/dir1/ffgdg.pdf>

<p>5</p>	<p>The DSR states that wet FGD is the preferred choice of technology, despite the fact that wet FGD technology requires a significant amount of water for operation, and Lephalale has significant water constraints. If the analysis (which should include an assessment of water availability) is that wet FGD is the preferred option, then it should only be considered with gas cooling, to reduce the water use.</p> <p>The DSR states that: The assessment studies favour Wet FGD technology, assuming no water constraints' (page 29). However, there are clearly significant water constraints in Lephalale, which is a water stressed area. This means that if wet FGD is still considered, it should only be with the installation of a flue gas cooler. The assessment of the preferred technology type should include an assessment of water availability in the area, and how the allocation of water to FGD will impact on water use in the area.</p>	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)</p>	<p>The selection of WET FGD as the preferred technology was completed by Eskom prior to the initiation of the EIA process, and therefore falls outside of the EIA process scope of work. The EIA will proceed with WET FGD as the preferred technology. Any comments on this technology will be included within the appropriate documentation for this process, but alternatives to WET FGD will not be investigated as part of this process.</p> <p>The Technology Selection Study Report has been provided by Eskom, and this has been made available to all stakeholders and will be appended to the FSR for further review. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom will not be making use of Lephalale's water reserves. The MCWAP imports water. <b>Carel van Heerden, Eskom</b></p>
<p><b>2.2.3 GYPSUM DISPOSAL ALTERNATIVES RELATED COMMENTS</b></p>			
<p>1</p>	<p>The role of the EIA process is partially defined in the BID as follows:  <i>"The EIA will identify, propose and assess:</i></p> <ul style="list-style-type: none"> <li>• <i>Feasible sites for disposing the by-products,</i></li> <li>• <i>Different technologies for the managing of commercial-grade saleable gypsum, ash and sludge disposal; and</i></li> <li>• <i>Various possible designs for disposal facilities."</i></li> </ul>	<p>HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014</p>	<p>Agreed. Specialist consultants will inform the EIA process. It needs to be noted that ash disposal is not part of this proposed project's Scope of Work. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
<p>2</p>	<p>Working toward the fulfillment of the role of the EIA process, the BID further states that:  <i>"The EIA team has thus far investigated all possible options for the use/disposal of gypsum, ash and sludge. It was found that the most feasible manner in which to co-dispose of all waste into the lined ADF."</i></p>		<p>Agreed. The feasibility of alternatives will be informed by technical and financial factors as well as social and environmental implications. <b>Sharon Meyer-Douglas, EAP</b></p>

<p>3</p>	<p>Our clients object to this investigation having been conducted outside of the current process. We have requested information relating to this investigation in paragraph 5.6 above.</p>		<p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
<p>4</p>	<p>The statement in the BID regarding the lack of possible alternatives to gypsum disposal in a lined AFD is in contradiction to the experience in the United States. As of 2008, more than half of gypsum produced by use of FGD systems at coal-fired power plants in the United States was reused, principally as gypsum panel products (i.e. construction drywall).<sup>13</sup> Similarly, more than 40% of bottom ash and fly ash from coal-fired power plants was reused, principally for the manufacture of concrete, concrete products and grout. This is not to say that our clients are necessarily in agreement with all of these alternative uses – but merely to illustrate that some alternatives are available.</p>		<p>Agreed. The limitation in SA is that the Kusile gypsum sales can fulfill the current market and there is very little additional demand for the product at this stage. However, the client is hoping to investigate new markets and sell the gypsum rather than dispose of it in the long term. The reuse of waste products will be re-investigated at a later stage. <b>Sharon Meyer-Douglas, EAP</b></p> <p>The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p> <p>A market research for the use of gypsum produced by Eskom's power stations has been done and a copy of the Report on the findings is available. Refer to Appendix J. <b>Kubentheran Nair, Eskom</b></p>
<p>5</p>	<p>The proposed co-disposal of the gypsum waste with the ash may sterilise both waste streams so that they cannot be reused. The BID should include a comprehensive examination of opportunities to minimise waste disposal by maximising the reuse of FGD gypsum, of bottom ash and fly ash from Medupi.</p>		<p>The BID offers only a brief overview of the project and does not go into any detail in terms of the intricacies of waste reuse or disposal. The Scoping Report will offer some additional detail in this regard. A Waste Classification Study is also being commissioned in order to understand the constituents of the wastes and how they would react with one another should these be co-disposed. <b>Sharon Meyer-Douglas, EAP</b></p>

<sup>13</sup> American Coal Ash Association "2008 Coal combustion Product (CCP) Production & Use Survey: Report [http://acaa-affiniscap.com/associations/8003/files/2008\\_ACAA\\_CCP\\_Survey\\_Report\\_FINAL\\_100509.pdf](http://acaa-affiniscap.com/associations/8003/files/2008_ACAA_CCP_Survey_Report_FINAL_100509.pdf)

			<p>A market research for the use of gypsum produced by Eskom's power stations has been done and a copy of the Report on the findings is available. Refer to Appendix J. <b>Kubentheran Nair, Eskom</b></p>
<b>2.2.4 WATER RELATED COMMENTS</b>			
1	<p>Eskom will apparently depend on the Mokolo-Crocodile River augmentation scheme for the operation of Medupi Power Station, as well as the Project. This means that, in the case of a prolonged drought in the primary catchment, the Project will either stop operating or need to obtain water from another source.</p>	<p>HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014</p>	<p>Eskom has worked closely with the Department of Water and Sanitation which has identified the two sources of water for running the Medupi Power plant, including FGD. The MCWAP is being developed in two Phases to supply Medupi Power Station. MCWAP Phase 1 currently under construction will supply water from the Mokolo Dam to Medupi and Matimba power stations. Phase 2 will augment the Phase 1 water supply with surplus return flows from water treatment works in the Crocodile River (West) Catchment. Capacity requirements are being finalised by DWS and it is expected to be implemented by the end of 2020.</p> <p>Eskom has water licence for MCWAP-1 for Matimba and Medupi power stations and will apply for a water licence for the MCWPA-2 to make up the shortfall from Phase-1 which is required in 2022. <b>Sharon Meyer-Douglas, EAP</b></p> <p>DWS is the custodian and implementer of the MCWAP project. The EIA for Phase 1 was done and DWS will undertake an EIA for Phase 2 in due course. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Medupi has been constructed to be FGD-ready for wet FGD. This includes allocating space behind the stack for the absorber and common facilities, lining the stacks, and sizing the Induced Draught (ID) fans to include the additional system resistance due to the FGD. Should an alternative technology like semi-dry CFB technology be selected at this stage, substantial modifications to the existing design would need to be made to Medupi, which would significantly delay the commissioning of the units, and add significant costs to</p>
2	<p>The BID should consider alternative water sources for the Project, which will affect both the scoping and EIA phases of the Project.</p>		
3	<p>Since the water consumption rates for semi-dry FGD may be as much as 60% lower than for wet FGD,<sup>14</sup> the selection of wet FGD for Medupi clearly significantly increases the overall demand for water for SO<sub>2</sub> abatement. This is another reason why the Project must include a detailed consideration of alternatives to wet FGD.</p>		

<sup>14</sup> IEA Clean Coal Centre: Low Water FGD Technologies. No 12/15 December 2012. <http://www.iea-coal.org.uk/.At.1>.

			<p>the project. The modifications to accommodate the change to semi-dry CFB technology include relocation of the existing fabric filter plant or construction of a new fabric filter plant; relocation of the ID fans; an increase in the size, height and location of the flue gas duct work after the CFB; and the addition of a recirculation duct for low load operation.  <b>Sharon Meyer-Douglas, EAP</b></p> <p>The Scoping Phase is looking more closely at alternatives.</p> <p>Same response as above.  <b>Sharon Meyer-Douglas, EAP</b></p>
4	<p>It is submitted that the selection of semi-dry FGD over the currently selected wet FGD would have avoided the delay in the installation of FGD – apparently due to insufficiency of available water, since it appears that there is sufficient water for only 3 (of 6) units equipped with wet FGD<sup>15</sup> – but this would be sufficient for 6 units equipped with semi-dry FGD.</p> <p>The BID should address all of these issues.</p>		<p>The BID offers only a brief overview of the project and does not go into any detail in terms of specific issues. The purpose of the BID is to notify stakeholders of the project in order to stimulate comments and queries for address during the Scoping and EIA phases of the project.  <b>Sharon Meyer-Douglas, EAP</b></p>
5			<p>Eskom has been in long term discussion with DWS on the issue of water allocation. DWS has indicated that there is provision for water to Medupi Power Station from MCWAP Phase 1 and Phase 2. DWS is the custodian of water resources within South Africa and any allocation of water is investigated through this department.</p> <p>Please refer to the relevant documentation available for the original Medupi Power Station environmental authorisation regarding the pollution abatement issue.  <b>Sharon Meyer-Douglas, EAP</b></p>
6	<p>Greenpeace believes that the situation cannot exist where there is enough water for mega new coal-fired power stations (namely Medupi and Kusile), but there is not enough water for pollution abatement technology, which is required by law to protect people's health and give effect to section 24 of the Constitution.</p>	<p>STEELE, Melita  Greenpeace  Environmental  Organization NPC  Letter: Undated  (Attached to e-mail dated 09 January 2015)</p>	
7	<p>The full impact of the development has not been taken into account in terms of water use</p>		<p>MCWAP Phase 1 has already licensed water allocation to Medupi Power Station. An application for additional</p>

<sup>15</sup> Eskom's Water Resources Assessment (Postponement Applications). Available at: [http://www.iliso.com/emes1/Annexure%20F\\_Water%20Resources%20Report/Water%20Resources%20Assessment\\_FINAL\\_2013.12.13.pdf](http://www.iliso.com/emes1/Annexure%20F_Water%20Resources%20Report/Water%20Resources%20Assessment_FINAL_2013.12.13.pdf)



	<p>requirements and the broader impact of the water needs for FGD.</p>		<p>allocation from Phase 2 will be addressed within the Water Use License Application that will be carried out simultaneously to the EIA Phase of this process. Eskom has been in long term discussions with DWS in terms of water allocation for the Medupi Power Station, including the FGD. DWS, as custodians of the national water resources, has the authority to approve or deny water allocation applications, depending on the security of water available. <b>Sharon Meyer-Douglas, EAP</b></p> <p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process. <b>Carel van Heerden, Eskom</b></p>
<p>8</p>	<p>The fact that the DSR states that 'it is anticipated that the approval of the wet FGD retrofit to Medupi Power Station will have a significant impact on water utilization in the area' further highlights the poor decision making that took place to select the site for Medupi in the first place.</p>	<p>STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)</p>	<p>This application focuses on the FGD retrofit and the site selection for the Medupi Power Station is not a component of this environmental impact assessment process. <b>Sharon Meyer-Douglas, EAP</b></p> <p>As part of basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. This assessment is inherent in the design process. <b>Carel van Heerden, Eskom</b></p> <p>Eskom has been in long term discussion with DWS on the issue of water allocation. DWS has indicated that there is provision for water to Medupi Power Station from MCWAP Phase 1 and Phase 2. DWS is the custodian of water resources within South Africa and any allocation of water is investigated through this department. <b>Sharon Meyer-Douglas, EAP</b></p>
<p><b>2.2.5 WASTE RELATED COMMENTS</b></p>			
<p>1</p>	<p>On June 10, 2010, the United States EPA proposed a new regulation containing environmental</p>	<p>HUGO, Robyn Attorney: Centre For</p>	<p>This is not relevant to the project at hand and does not</p>

	<p>safeguards for the disposal of coal combustion residuals.<sup>16</sup></p>	<p>Environmental Rights Letter: 07 July 2014</p>	<p>include any measures at this stage related to the possible impacts and mitigations associated with FGD-related waste. The document will however need to be revised to include all additional aspects and impact mitigations related to FGD through the current FGD EIA process which will also form part of the documents for review. The current version is already a public document and can be found on Eskom's website, Appendix K in the FSR.  <a href="http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Operation_EMP.aspx">http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Operation_EMP.aspx</a> )</p> <p>The disposal of coal combustion wastes was already covered in the initial EIA conducted for Medupi Power Station (DEA ref no.: 12/12/20/695) and also included a study into alternative ash disposal options. This application resulted in a positive decision for an Integrated Environmental Authorisation and Waste Management License. The relevant documents can be found on Eskom's website, below is the link.  <a href="http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station_Ash_Disposal_Options.aspx">http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station_Ash_Disposal_Options.aspx</a>  <a href="http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station.aspx">http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station.aspx</a></p> <p>It is important to note that the disposal of coal combustion waste is managed through technical procedures and not through the OEMPr (Appendix K in the FSR). The OEMPr only covers possible impacts associated with the management, transport and handling of hazardous substances and wastes, dust emissions, water protection, etc. upon which the specific procedures/management plans are based upon. This is managed through a certified ISO 14001 Environmental Management System.</p>
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<sup>16</sup> U.S. EAP (2010) "Hazardous and Solid Waste Management System: Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities." <http://www.regulations.gov/#/documentDetail;D=EPA-HQ-RCRA-2009-0640-0352>

<p>2</p>	<p>One key aspect of EPA's proposed rule is strongly to discourage the disposal of coal ash in wet impoundments, encouraging, instead, the disposal of coals ash in dry form:  <i>"Under the Subtitle C proposal, EPA is adopting measures intended to phase out the wet handling of CRRs and existing surface impoundments; under the Subtitle D proposal, existing impoundments would require liners, which will create strong incentives to close these impoundments and transition to safer landfills which store coal ash in dry form."</i><sup>17</sup></p>		<p><b>Emile Marell, Eskom</b>                  Noted. The ash disposal facility (a dry ashing facility as Medupi is a dry-cooled power station) has already been authorised and licensed by the relevant process carried out in 2008. Only changes to the Ash Disposal Facility (additional wastes) will require that we look at significant changes to design. Your comment will be taken cognisance of in this instance.                   The South African legislation requires an EIA to be conducted for the storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage. Moreover, the ash disposal facility (a dry ashing facility as the power station is dry-cooled) has been authorised and has a waste management license. The first 2 years of the dump have been lined with a Class C liner, to cater for the disposal of ash.</p>
<p>3</p>	<p>Therefore, the BID should specifically require consideration of the elimination of wet impoundments for the disposal of coal ash and FGD gypsum and, to the extent that these wastes cannot be beneficially reused, disposing them in dry form consistent with internationally-accepted best practice.</p>		<p><b>Sharon Meyer-Douglas, EAP,</b>                  The BID is a background information document providing only an introduction to and an overview of the proposed project in order to notify stakeholders of the process and encourage engagement. Specific project detail is generally not included in a BID, but will be included within the Scoping and EIA phases of the project.  <b>Sharon Meyer-Douglas, EAP,</b></p>
<p>4</p>	<p>For me, the ideal situation would be to find a way to utilize the gypsum product, thereby minimizing the need to dump the product.                  We have been discussing the matter internally, and find that the best way would be to process the waste gypsum into plasterboard/drywall.                  We are currently looking into feasibility of setting up a plasterboard production plant,                  For a small scale operation, the production plant would require 120ton of gypsum per day.                  Will this be enough to alleviate forecasted waste disposal issue?                  If possible please provide me with estimated</p>	<p>ABROSE, Rowan                  Supply Chain Manager                  For Bit Group Complete                  Email: 16 October 2014</p>	<p>We will be forwarding your e-mail to Eskom to provide us with responses regarding the questions raised in your e-mail and will revert back to you as soon as possible.                   Please also be informed that we had registered you as an interested and/or affected party on this proposed project's database and you will receive all further public notices and documents.                   Attached for your attention is the notification letter informing you of the availability of the Draft Scoping Report and also inviting you to any one of the two Public Meetings (or both should you wish to attend).</p>

<sup>17</sup> U.S. EPA "Frequent Questions: Coal Combustion Residues (CCR) – Proposed Rule." <http://www.epa.gov/solidwaste/nonhaz/industrial/special/fossil/ccr-rule/ccrfaq.htm>

	<p>volume/tonnage of waste gypsum which Medupi plant will produce per day. So that we can in turn calculate optimum capacity of plasterboard plant. In order for this operation to work effectively, we would need to be allowed to setup production plant in close proximity to disposal landfill, Thereby minimizing additional transport cost and CO2 emissions. Ideally the best way would be if we could setup a conveyor system to transport product from landfill to production site. Other factors to consider, Plant is said to utilize in excess of 5000kwh per day, This can be offset if we utilize LP GAS for drying purposes. We will also look into retrofitting plant with Solar panels, to make site as "Green" as possible. Plant will also require in excess of 45000 l of clean water per day. Please let me know if this would be workable solution, and something that Eskom would consider to partner with us in. Note- entire exercise is dependent on quality of gypsum, in needs to be free from radioactive impurities in order to be acceptable for production of plasterboard for home/construction industry.</p>		<p><b>Nicolene Venter, Public Participation Practitioner,</b>  The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum. <b>Carel van Heerden, Eskom</b></p>
<b>2.2.6 ENVIRONMENTAL PROCESS COMMENTS</b>			
1	<p><b>Overview:</b> The CER act for groundwork and ELA Johannesburg. Their clients are I&amp;APs in Eskom's EIA, WML and WUL (to be "initiated later within the EIA process") Applications for the proposed Medupi Power Station FGD project ("the Project"). Kindly ensure that our clients are also registered as I&amp;APs in relation to the WUL, and any other processes relevant to the project.</p>	<p>HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014</p>	<p>Noted and the mentioned entities will be registered on the database as IAPs and will be kept informed of the status of the EIA. <b>Sharon Meyer-Douglas, EAP</b></p>
2	<p>The EIA process would be the proper avenue for scrutiny of Eskom's claims that controlling SO<sub>2</sub></p>		<p>Technology alternatives do not form part of the scope of work for this EIA, however, the impacts of the preferred</p>

	emissions by use of dry (or semi-dry) FGD technology are not feasible because of cost concerns. Therefore, examination of this issue should not be excluded by how the project is defined in the BID. Rather, proof of an examination of all alternatives to wet FGD should be included in the BID.		technology will be assessed. The Eskom Technology Selection Study Report will be an appendix to the Scoping report. <b>Sharon Meyer-Douglas, EAP</b>
<b>2.2.7 PROJECT RELATED COMMENTS</b>			
1	The first major FGD unit was installed in 1931 at Battersea Power Station in the United Kingdom. <sup>18</sup> Internationally, it is not a new technology, but it is relatively new in South Africa where there is currently no coal-fired power station running the technology. <sup>19</sup> Additional employees and training will be needed to run the Project, and the processes surrounding the EIA and WML should make provision for these, to ensure that the Project is not delayed.	HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014	No provision for training has been compiled as the project is still in the early conceptual phase. <b>Ishana HARRIPERSAD, Eskom</b>
2	In the event that the Project is delayed, there would be serious economic and environmental implications. For this reason, we submit that the project timeline should be included in the BID. Our client submits that there should be penalties for non-compliance with this timeline.		The BID is a background information document providing only an introduction to and an overview of the proposed project in order to notify stakeholders of the process and encourage engagement. Specific project detail is generally not included in a BID, but included within the Scoping and EIA phases of the project. <b>Sharon Meyer-Douglas, EAP</b>
<b>2.2.8 LEGAL COMPLIANCE RELATED COMMENTS</b>			
1	<b>Background to the Project:</b> Medupi is a coal-fired power plant project currently under construction west of Lephalale in the Limpopo Province, south Africa. It will be made up of six units with a gross nominal capacity of 800MW each, so that Medupi will have a total capacity of 4 800MW. Construction activities commenced in May 2007, with the first of six units of the power	HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014	Agreed. <b>Sharon Meyer-Douglas, EAP</b>

<sup>18</sup> Biondo, SJ and Marten, JC. (1977). A History of Flue Gas Desulphurisation Systems since 1850. *Journal of the Air Pollution Control Association*, 27(10), 948-961.

<sup>19</sup> Although these boilers are much smaller than a typical Eskom power station, it is worth mentioning that Mondi paper mill installed FGD on its coal fired/ missed fuel boilers in 2005. <http://www.angloamerican.com/media/releases/2005pr/2005-12-05.aspx>

2	<p>plant planned to operate by the end of 2014.</p> <p>The funding for Medupi came in part from a World Bank loan, for which the loan agreement is dated 16 April 2010. The agreement sets out the terms of the loan, and includes a section on Environmental and Social Safeguards. This section requires the installation of FGD at Medupi as follows:</p>		<p>Funding for the construction of Medupi Power Station and funding for the FGD Plant are separate. Medupi FGD is a separate project to the Power Station. <b>Sharon Meyer-Douglas, EAP</b></p>
3	<p>"2. The Borrower shall:</p> <p>(a) not later than June 30, 2013, develop, adopt and thereafter implement a program, satisfactory to the Bank, to install FGD equipment in each of the six power generation units of the Medupi Power Plant, taking into account technical, environmental and financial criteria in accordance with terms of reference to be discussed with the Bank, such program to be designed such that the installation of the FGD equipment for the first power generation unit shall commence in the later of (i) the sixth anniversary of the Commissioning Date or (ii) March 31, 2018 or such later date as the Bank may establish following consultations with the Borrower, and, thereafter, continue the installation of the FGD equipment sequentially, in each case thereafter at the time each of the remaining five power generation units is taken out of service for the first major planned outage, it being understood and agreed that all the FGD equipment for the six power generation units shall be installed and fully operational not later than December 31, 2021, or such later date as the Bank may establish following the said consultations with the Borrower; and</p> <p>(b) afford the Bank a reasonable opportunity to exchange views with the Borrower on such FGD installation program at each of its preparation and implementation phases."</p>		<p>Noted.</p> <p>Annual reporting and every six month engagements with the World Bank take place to share information on the developmental efforts of the FGD project. <b>Sharon Meyer-Douglas, EAP</b></p>
4	<p>Therefore, although the BID refers to compliance with the minimum emission standards (discussed</p>		<p>Both are requirements by Eskom. In addition, the Minimum Emissions Standards of the NEM: Air Quality Act hold</p>

	below), Eskom is contractually obliged to install FGD technology at Medupi also to comply with its loan agreement with the World Bank.		reference. <b>Sharon Meyer-Douglas, EAP,</b>
<b>2.2.9 SERVITUDE RELATED COMMENTS</b>			
<b>1</b>	Your Background Information Document with reference DEA 14/12/16/3/3/110 dated March 2015 has reference. Transnet Pipelines (ex Petronet), a division of Transnet SOC Limited, is not affected by the proposal as indicated on your Limpopo Cadastral Map. Your awareness of the existence of Transnet's pipeline servitudes and concern for their integrity is appreciated.	HADEBE, Thami Servitude Management Transnet Pipeline Letter: 18 May 2015	
<b>2.2.10 CONSULTATION RELATED COMMENTS</b>			
<b>1</b>	<b>Overview:</b> Uprfront, we are instructed to state that it is essential that the Project be brought to the attention of all the stakeholders in the Waterberg Bojanala Priority Area – so that all I&APs can register, and that the implications of the Project can be discussed in meetings relating to the Priority Area.	HUGO, Robyn Attorney: Centre For Environmental Rights Letter: 07 July 2014	Zitholele Consulting thank the CEIR NPO for this information and it can be confirmed that the Waterberg Bojanala Priority Area stakeholders have been registered on the project database. We had also consulted the DEA for contact details of these stakeholders. <b>Nicolene Venter, Public Participation Practitioner</b>
<b>2</b>	In these submissions, we make representations for the expansion of the EIA and WML to include the areas of concern mentioned below.		The BID is a background information document providing only an introduction to and an overview of the proposed project in order to notify stakeholders of the process and encourage engagement. Specific project detail is generally not included in a BID, but will be included within the Scoping and EIA phases of the project. <b>Sharon Meyer-Douglas, EAP,</b>
<b>3</b>	In summary, our clients submit that Eskom's BID for the EIA and WML is incomplete and should also consider the following:		Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID. <b>Sharon Meyer-Douglas, EAP</b>
<b>3.1</b>	Integration of FGD into the design, construction and commissioning of units 2-6, with unit one retrofitted as soon as possible, and not later than 6 years after it is commissioned;		
<b>3.2</b>	The implications of the fact that there is non-compliance with ambient air quality standards in the Waterberg Bojanala Priority Area;		Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to

			<p>register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
3.3	<p>Alternatives to wet FGD in the scoping stage; including, but not limited to semi-dry and dry FGD;</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
3.4	<p>Alternatives in the scoping stage to disposal of gypsum in lined ADFs; specifically the reuse of gypsum;</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
3.5	<p>Alternative water sources for the Project;</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p><b>Sharon Meyer-Douglas, EAP</b></p>
3.6	<p>An independent examination of international best practices for the disposal for coal combustion residuals/waste as a basis for a decision on the practice to be adopted in the Project;</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p>It must be understood that the FGD project does not include any coal combustion wastes, nor the management of these wastes, including ash. This has been addressed within the original Medupi Power Station environmental authorisation.</p>



			<p><b>Sharon Meyer-Douglas, EAP</b></p>
<p>3.7</p>	<p>Provision for additional employees and their training prior to commencement of the Project; and</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID.</p> <p>This information will be dependent on the contractual arrangements with the supplier. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>3.8</p>	<p>A project timeline, together with penalties for non-compliance with this timeline.</p>		<p>Please note that the function of the BID is to give the public a basic understanding of the proposed project. This information will allow the stakeholder to decide whether to register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>4</p>	<p>In order for our clients to participate meaningfully and make submissions in the process, to interrogate the bases for the applications, and in keeping with their rights in terms of the Promotion of Administrative Justice Act, 2000, we have, at this stage, been instructed to request copies of the following documents:</p>		<p>Please see below the responses received from Eskom regarding the availability of information. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>4.1</p>	<p>copies of all contract Eskom has with coal mines that will supply Medupi;</p>		<p>4.1 This is not relevant to the Medupi FGD project <b>Theuns Blom, Eskom</b></p>
<p>4.2</p>	<p>the construction schedule for the whole Medupi plant;</p>		
<p>4.3</p>	<p>the construction and commissioning schedule, including the preliminary design, construction and</p>		<p>4.2 The Stakeholder is requested to please follow due process in terms of PAIA and to request the information from Eskom through the appropriate channels. <b>Sharon Meyer-Douglas, EAP</b></p>

	<p>commissioning schedules, for the retrofitting of the FGD units;</p>		<p>4.3 The Stakeholder is requested to please follow due process in terms of PAIA and to request the information from Eskom through the appropriate channels. <b>Sharon Meyer-Douglas, EAP</b></p>
<p>4.4</p>	<p>the costing, technical assessments, and water use requirements for FGD, including the comparative assessment of wet, dry and semi-dry FGD systems;</p>		<p>4.4 The Medupi FGD Technology Selection Report (Appendix D in the FSR) provides detailed information on the comparative analysis of wet, dry and semi-dry. Theuns Blom, Eskom</p>
<p>4.5</p>	<p>detailed information regarding Medupi's water demand projections, including: the time when water from each water source will become available for Medupi; the amount of water that will be available at the relevant times; and copies of all contracts relating to Medupi's water use;</p>		<p>4.5 The DWS is currently developing MCWAP 2, and the project consists of a number of phases. DWS is currently busy with Phase 1 which entails an increase in the capacity from the Mokolo Dam to Lephatala. Eskom has already secured 10.9 cubic litres of water from Phase 1 of the Project through a pipeline infrastructure, which will provide water for the full Energy Production at Medupi Power Station as well as for three of the FGD units. Phase 2 will bring water from the Crocodile River and return flows from the waste water treatment plants from Johannesburg and Tshwane for the purpose of supplying the Power Station with additional water to cater to all six (6) FGD units. The current water use license for the 10.9 cubic litres is sufficient until 2020/23, before Phase 2 is needed. Another 15.4 cubic litres will be needed for the Energy Production and FGD facilities combined, which will become available from Phase 2 of the MCWAP Project. Eskom is currently in discussions with DWS and TCTA, and water users have submitted their requirements. The matter is currently in the hands of National Treasury to provide the guarantees for the pipeline which will hopefully be finalised by the end of November 2014. Contracts have been negotiated and it is therefore not a question of whether the pipeline is going to be built, but merely the size of the pipeline. <b>Ian Midgley, Eskom</b></p> <p>To supplement above please find Appendix I in the FSR. <b>Felicia Sono</b></p>

	<p>4.6 all documentation relating to the investigation of "all possible options for the use/disposal of the gypsum, ash and sludge"; including the terms of reference and proof of public participation in this process; and the most recent Environmental Management Plan for the disposal of coal combustion residuals/wastes.</p> <p>4.7</p>		<p>4.6 The PED marketability study, (Appendix J in the FSR) gives an insight on the possible use and or disposal of the waste from the FGD process. Further investigations on the disposal options analysis will be undertaken during the EIA phase. <b>Theuns Blom, Eskom</b></p> <p>4.7 The disposal of coal combustion wastes was already covered in the initial EIA conducted for Medupi Power Station (DEA ref no.: 12/12/20/695) and also included a study into alternative ash disposal options. This application resulted in a positive decision for an Integrated Environmental Authorisation and Waste Management License. The relevant documents can be found on Eskom's website, below is the link. <a href="http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station_Ash_Disposal_Options.aspx">http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Power_Station_Ash_Disposal_Options.aspx</a></p>
<p>5</p>	<p>In the circumstances, it is submitted that the BID should be revised in order to include the following:</p>		<p><b>Emile Marell, Eskom</b></p> <p>The BID is a background information document providing only an introduction to and an overview of the proposed project in order to notify stakeholders of the process and encourage engagement. Specific project detail is generally not included in a BID, but will be included within the Scoping and EIA phases of the project. <b>Sharon Meyer-Douglas, EAP,</b></p>
<p>5.1</p>	<p>Integration of FGD into the design, construction and commissioning of units 2-6, <sup>20</sup> with unit one retrofitted as soon as possible, and not later than 6 years after it is commissioned;</p>		<p>Information on the reasons for the retrofit will be provided within the FSR for public review. <b>Sharon Meyer-Douglas, EAP</b></p> <p>Eskom investigated the feasibility of co-commissioning the remaining units at Medupi Power Station with FGD and it was found not to be feasible to commission any of the remaining units with FGD.</p>

<sup>20</sup> See fn 1.

<p>5.2</p>	<p>the implications of the fact that there is non-compliance with ambient air quality standards in the WBPA;</p>		<p><b>Theuns Blom, Eskom</b>                  Medupi Power Station will comply with “old plant” emissions standards initially. Once the FGD retrofit has been completed, then the power station will comply with the “new plant” emissions standards. Eskom is in discussion with the relevant authorities in this regard.  <b>Sharon Meyer-Douglas, EAP</b>                   Medupi Power Station will have continuous emission monitors that measure the PM and gaseous emissions and the results are reported to the DEA, as required by the Legislation. The CER and members of the public can request a copy of these reports from the DEA.                   It is important to note that there are other contributors to the air quality in the Marapong / Lephalale area and that Eskom is not the only contributor.  <b>Olga Makhalamele, Eskom</b></p>
<p>5.3</p>	<p>alternatives to wet FGD in the scoping stage; including, but not limited to semi-dry and dry FGD;</p>		<p>The Technology Selection Study Report (appendix D on the FSR) provides the information supporting the Eskom decision to proceed with WET FGD as the preferred technology. The EIA process is being undertaken with WET FGD as the technology choice, and no technology alternatives will be investigated within the process. The technology selection was carried out independently by Eskom without environmental impact assessment.  <b>Sharon Meyer-Douglas, EAP</b></p>
<p>5.4</p>	<p>alternatives in the scoping stage to disposal of gypsum in lined ash disposal ADFs; specifically the reuse of gypsum;</p>		<p>Eskom has carried out market research regarding the reuse or saleability of gypsum produced at Kusile and Medupi Power Stations. There currently is not sufficient market for gypsum to cater to Kusile alone. Therefore, as a worst case scenario, the disposal of gypsum from Medupi Power station must be designed for and included as a component of the environmental authorisation application.  <b>Sharon Meyer-Douglas, EAP</b>                   The quality of the limestone to be used in the Medupi FGD process is unknown, and therefore the gypsum quality has not yet been determined. Limestone sourcing as well as the gypsum market offtake is being investigated by Eskom in parallel and the outcome of this investigation will determine the opportunity for the sale of gypsum.</p>

			<b>Carel van Heerden, Eskom</b>
5.5	alternative water sources for the Project;		Eskom has been in discussions with DWS in terms of water allocation for the Medupi FGD. An application for water allocation from MCWAP Phase 2 will be included within the project Water Use License Application. DWS is the custodian of all national water resources and is authorised to allocate available resources to applications as appropriate. <b>Sharon Meyer-Douglas, EAP</b>
5.6	an independent examination of international best practices for the disposal of coal combustion residuals/wastes as a basis for a decision on the practice to be adopted in the Project;		Coal combustion is not a component of the FGD project and any studies relating to coal or ash are irrelevant for the FGD EIA Process. <b>Sharon Meyer-Douglas, EAP</b>
5.7	provision for additional employees and their training prior to commencement of the Project; and		The requested information is not known at this stage of the project. This information is dependent on the supplier contract which will only be in place after the tender and appointment process, should an Environmental Authorisation be granted for the proposed FGD project. <b>Andrea Williams, Eskom</b>
5.8	a project timeline, together with penalties for non-compliance with this timeline.		Eskom is not in a position to comment on this point hence no contracts has been placed. Penalties and clauses will be subject to contract placement and may include these aspects. <b>Theuns Blom, Eskom</b>