Appendix F-7: Comments and Responses Report

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REPORT

Comments and Responses Report for the Medupi FGD Retrofit Project Environmental Impact Assessment

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LIST OF ACRONYMS

AEL	Air Emissions Licence
ADF	Ash Disposal Facility
CER	Centre for Environmental Rights
CRR	Comments and Responses Report
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
DEIR	Draft Environmental Impact Assessment
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
FEIR	Final Impact Assessment Report
FSR	Final Scoping Report
FGD	Flue Gas Desulphurisation
GN	Government Notice
IRP	Integrated Resource Plan
West	Mokolo and Crocodile River
NAAQS	National Ambient Air Quality Standards
PPP	Public Participation Process
RFI	Request for Information
WML	Waste Management Licence
WWTP	Waste Water Treatment Plant
WULAs	Water Use Licence Applications
WFGD	Wet Flue Gas Desulphurisation

Comments and Responses Report for the Medupi FGD Retrofit Project Environmental Impact Assessment

This Comments and Responses Report (CRR) captures the comments and issues raised by stakeholders during the announcement, Scoping and Impact Phase of the EIA process for the proposed retrofitting of Flue Gas Desulphurisation (FGD) technology at the Medupi Power Station in Lephalale, Limpopo Province.

Comments received during the review period of the Draft Environmental Impact Assessment (DEIR), is captured in the CRR that will form part of the Final Impact Assessment Report (FEIR), which will be submitted to the Department of Environmental Affairs (DEA) for consideration and decision-making after conclusion of the Public Participation Process (PPP).

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.

NO	COMMENTS / CONCERN / RECOMMENDATION	RAISED BY & WHEN	RESPONSE
1	**COMMENTS RAISED ON THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)**		
1.1	**Comments raised by Centre for Environmental Rights (CER)**		
1.1.1	**Objection to separate WML variation process and deferring of important considerations relevant to the EIA.** CER stated in Paragraph 5: "the applicant cannot defer important considerations relevant to the EIA in a piecemeal fashion, irrespective of whether other legal provisions apply. The applicant is still bound, by the provisions of NEMA, to consider all effects of activities before actions are taken. Instead, the applicant proposes, through the bridging documents, to exclude the most important aspects of FGD project from the EIA process, until a later stage." CER further states in Paragraph 8: "Throughout the process, however, the applicant has not produced the necessary documentation to address these primary concerns, and now seeks to address most of these issues through other channels at a later stage, such as through Water Use Licence Applications (WULAs), Waste Management Licence (WML) Applications, under "gaps in knowledge", through a registration process in terms of Norms and Standards for the Storage of Waste, or other means."	CER, Comments Letter dated 19 April 2018: Paragraphs 4, 5, 8, and 65	Clarification is provided that, there is an Ash Disposal Facility (ADF) which has a Waste Management Licence (WML, DEA Ref: 12/9/11/L50/5/R1), which will service the station for 20 years, but it has been determined that this ADF will not be adequate to service the ashing requirements of the power station operations for the full station life. For this reason, the station requires an additional ADF. The variation application being pursued is applicable to the existing WML, with the objective to dispose gypsum with the ash. A separate EIA application will be undertaken for the additional required ADF which will service the station beyond the 20-year horizon, as was discussed in the Bridging Documents and DEIR. The applicant can only operate within the confines of the legislation and within the provisions that are allowed to obtain authorisation, i.e. in this case an existing WML is in place for the Medupi ADF, where all impacts prior to the authorisation of the licence were assessed by an independent Environmental Assessment Practitioner (EAP) and considered by the Competent Authority. Given the fact that the ADF has an existing WML, which can accommodate both the ash and gypsum it is not deemed necessary at this point to submit an application for a new WML. There is a provision in the waste act to undertake a variation application to an existing WML. The WML Variation Application will deal with potential additional impacts associated with the disposal of ash and gypsum together on the already approved footprint for ash disposal, in terms of the existing WML, the reduction of the footprint of the ADF to avoid sensitive wetland areas to the southwest of the ADF, and to assess potential impacts of the increase in height of the disposal facility from 60m to 72m if ash and gypsum are disposed together on the same authorised ADF footprint. Since gypsum and ash have the same classification the existing ashing facility can

			accommodate the additional waste. At commencement of the EIA process (DEA Ref: 14/12/16/3/3/3/110) the project scope had included authorisation processes for the additional ADF. That said, the WML Variation Application being undertaken does not consider impacts associated with the future[1] disposal of ash, gypsum, or FGD salts and sludge on a greenfields site located outside of the Medupi Power Station footprint as had been the plan at the end of the Scoping Phase. The project aimed at authorisation of an additional waste disposal facility to, potentially, cater for the disposal of the Type 1 (FGD salts and sludge) and Type 3 (ash and gypsum) waste was removed from the scope of the current EIA to allow consideration of additional proposals to deal with disposal of Type 1 and 3 in a separate authorisation process. One such proposal is to consider a possible regional waste management[2] facility commissioned by Eskom, which could allow hazardous and general waste generated by other

[1] This facility will be required beyond the 20-year horizon, after consumption of the current authorized ADF footprint or waste disposal facilities
[2] The scope of this facility may include various options as provided for in the waste hierarchy, considering business opportunities and needs.

			industries to be managed at such a regional disposal facility or such a waste disposal facility can be for Eskom use only. It must, furthermore, be noted that the application for a Water Use Licence (WUL) cannot be dealt with by incorporating it in the EIA reports, although most of the impacts are duplicated in the application for environmental authorisation in terms of NEMA, and WULA in terms of the National Water Act. The findings of the WULA may be reported separately from the Environmental Impact report, but the processes are undertaken in an integrated fashion. ***Mathys Vosloo, EAP***
1.1.2	**Delay in implementation of the FGD and the need for co-commissioning of FGD.** CER claims that Eskom has continually resisted retrofitting FGD on any of its plants therefore suggesting that Eskom has actively and deliberately stalled retrofitting of FGD to its plants in as far "never to comply with the new plant SO_2 MES". CER and its clients furthermore state the following: • "The EA process for the FGD Retrofit Project has been substantially delayed, as evidenced by the Bridging Reports, and the current plans are for Medupi only to be fully fitted with FGD by 2026 (with each unit retrofitted 6 years after it becomes operational). It furthermore aims to comply with the 2020 MES standards only by 2030. **As we have consistently maintained, FGD should have been included in Medupi's initial design plan and at least, once construction started, integrated into as many units as possible (rather than retrofitting it 6 years after each becomes operational)**." • "It is not clear why the rest of Medupi construction should not be abandoned, given that the electricity is no longer required." • "Alternatively, it is unclear why Eskom repeatedly	CER, Comments Letter dated 19 April 2018: Paragraphs 11.2, 13.5, 63 - 64	The original RoD for the Medupi Power Station (12/12/20/695) issued on 21 September 2006 stated that "Eskom shall install, commission and operate any required SO_2 abatement measures that may be necessary to ensure compliance with any applicable emissions or ambient air quality standards published in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)." At the time no emissions or ambient air quality standards were promulgated (the National Ambient Air Quality Standards (NAAQS) were only promulgated in December 2009). As no promulgated air quality standards existed to guide the selection of SO_2 abatement technology, Eskom opted for the worst-case scenario and designed the Medupi Power Station to be Wet Flue Gas Desulphurisation (WFGD) ready. WFGD was identified as the most efficient abatement technology with the highest SO_2 removal efficiency. Eskom, however, could not stall development and construction of the Medupi Power Station at the time as it needed to be constructed as soon as possible to meet the demand for electricity at the time. It was therefore decided to investigate the retrofitting of FGD technology in parallel with the construction of the Medupi Power Station. The construction of the remaining 3 generation units at the Medupi Power Station cannot simply be "abandoned" as construction and completion of the Medupi Power Station is driven by the requirements of the Integrated Resource Plan (IRP), which is a national electricity planning process. Electricity generated at the Medupi Power Station is, amongst others, aimed at supporting growth in the economy, especially in the Limpopo region,

	refuses to consider the co-commissioning of the FGD retrofit. To date, this issue has not been adequately addressed." • CER further claim that Eskom seeks to delay and/or avoid the most pertinent issues pertaining to the FGD retrofit, which include: o Production, storage, disposal (or sale) of gypsum, ash, salt, and sludge; o Water security as water from MCWAP2 is not definite, while water saving gas cooler technology is considered unfeasible; o Management and disposal of polluted water; o Salt and sludge waste is only catered for the first 5 years; o High quality lime required for high quality gypsum production has not been not secured; o Ash disposal is only possible for the next 20 years and also situated within the 1: 100 year floodline; o A claim of "no space" is put forward for certain FGD infrastructure, but no specialist engineering attached to the DEIR; o The timeline for the FGD retrofit is vague and unenforceable; o The impacts on health from operation of the station prior to FGD implementation.		resulting in higher electricity demands. Co-commissioning of the FGD infrastructure to the remaining generation units is not possible as the commissioning of the FGD infrastructure cannot meet the construction schedules for the remaining units, as the construction processes are guided by a plan that should have been in sync. The construction of the Medupi FGD plant from start to completion of the first unit, for example, is likely to be 42 months, as benchmarked against international construction norms and experience. Several of the pertinent issues referenced by CER are discussed in detail in subsequent sections hereafter. Nonetheless, the applicant and/or EAP's responses to these issues is briefly summarised below: <u>Production, storage, disposal (or sale) of gypsum, ash, salt, and sludge:</u> The production, storage and disposal of waste streams generated by the FGD process is discussed in sections 6.4, 6.5, 6.9, 6.10 and 6.11 of the DEIR. The potential sale of gypsum is furthermore discussed in sections 6.4 and 6.9 of the DEIR. The gypsum re-use or sale of gypsum is also specifically considered in these sections. It was concluded that, in the absence of a proven market demand, the construction of special gypsum offtake conveyance and handling/storage infrastructure would be commissioned only once a market demand has been established. The above-mentioned sections clarify that the gypsum conveyance system does make provision for an under the conveyor belt abstraction of gypsum on the system conveying to the ADF. The salts and sludge will be temporarily stored on site, in an appropriately prepared facility, pending disposal at a Hazardous Waste Facility. <u>Water security as water from MCWAP2 is not definite, while water saving gas cooler technology is considered unfeasible:</u> The Mokolo and Crocodile River (West): Water Augmentation Project (MCWAP) is an extensive programme driven by the Department of Water and Sanitation (DWS) and has been under development for a number of years. There are, furthermore, several phases associated with the programme aimed at augmenting water to the Limpopo region for use by a wide spectrum of water users. If alternative water sources existed in the region that could

			support the economic growth in the region it is unlikely that investment in the MCWAP scheme would have been necessary. <u>Management and disposal of polluted water:</u> The philosophy for the management of polluted water revolve around the separation of dirty and clean water, with dirty water either being treated in the proposed Waste Water Treatment Plant (WWTP), or captured and contained in Pollution Control Dams (PCDs), i.e Zero Liquid Effluent Discharge (ZLED). The dirty water management infrastructure is discussed as part of the various infrastructure requirements associated with the FGD in Chapter 6 of the DEIR. <u>Salt and sludge waste is only catered for the first 5 years:</u> It should be noted that current planning is such that salts and sludge disposal is only catered for, for the first 5 years from time gypsum production. Therefore, it could still be a number of years before salts and sludge will be produced and need to be disposed. During the planning stage for the Medupi Power Station and FGD it was anticipated that salts and sludge would be treated and/or disposed at the proposed new waste disposal facility, in this same 5-year planning horizon. Due to the challenges faced in finding a suitable disposal site in the immediate future, Eskom proposed a different management strategy, through which these salts and sludge would be disposed of at a registered landfill site. Eskom estimated that it would be able to develop a suitable disposal site within the next 5 to 10 years. The management strategy from year 6 of production is a function of a process to be commenced with. Such a strategy could include identifying a facility only for Eskom's use or developing a regional facility that can be used for business needs in the greater region. Such a process will be executed as soon as the current submissions are made to the DEA, and all due permitting processes will be followed. <u>High quality limestone required for high quality gypsum production has not been not secured</u>: Medupi Power Station FGD was designed to operate with Limestone quality that will achieve a 90% minimum SO_2 removal efficiency (i.e. flexibility to use

			lower purity limestone to meet required removal efficiency) and is deemed an appropriate sorbent quality. The procurement of suitable limestone is subject to the finalisation of commercial contracts with a service provider. However, commercial contracts are only entered into once the FGD is ready to be commissioned. Therefore, the source of limestone would not be confirmed at this stage of the project lifecycle. The choice of the source of limestone is furthermore influenced by the market demand in the region, which might not require high quality gypsum. In the event that high quality gypsum presents a feasible business case in future, the FGD at Medupi will be able (i.e. capable by design) to operate with high purity limestone to produce high quality gypsum. It is anticipated that business opportunities may roll out from such a production, but business case would have to be made for such. <u>Ash disposal is only possible for the next 20 years and also situated within the 1:100 year floodline</u>: A separate process to assess the potential management, re-use or disposal of ash and FGD wastes, beyond the 20-year operational window, will be commissioned towards the end of 2018 to identify the best possible disposal site. As mentioned previously, the planning of the Medupi Flue Gas Desulphurisation (FGD) environmental permitting processes had included the additional ashing (waste management) footprint. <u>A claim of "no space" is put forward for certain FGD infrastructure, but no specialist engineering attached to the DEIR</u>: Space within the footprint of the Medupi Power Station is available for the gas cooler only if placed after the Fabric Filter Press (FFP). However, Eskom's initial understanding of the gas cooler technology was that it did not have extensive maintenance provisions. After the benchmarking exercise undertaken, at five (5) international power stations, it became apparent that more infrastructure is needed to deal with the maintenance requirements, something that the vendors did not allude to, but is required. From this review (2016) it is clear that additional infrastructure is required, but with the current station configuration, space is not fully available in the area. <u>The timeline for the FGD retrofit is vague and unenforceable</u>: No commercial contracts with any service providers that will be involved in the

			commissioning of the FGD infrastructure have been negotiated and signed. This is the reason milestone dates are given instead. However, Eskom is still committed to ensuring the FGD is installed as soon as possible so that it can achieve compliance. The impacts on health from operation of the station prior to FGD implementation: The aim of the air quality investigation was to quantify the possible impacts resulting from the proposed activities on the surrounding environment and human health. In order to understand the potential impact the specialist ran 2 baseline scenarios, i.e. a 2014 baseline considering only emissions from the Matimba Power Station, and a 2020 baseline considering Matimba and Medupi Power Station with all 6 units operational without FGD. The specialist found that of the closest sensitive receptor communities to the Medupi and Matimba Power stations, i.e. the settlement of Marapong, a settlement NW of Matimba Power Station and the town of Lephalale, the National Ambient Air Quality Standards (NAAQS) were infrequently exceeded at the settlement NW of the Matimba Power Station. SO_2 concentrations were also found to infrequently exceed short-term NAAQ limits at the monitoring stations located at Marapong and Lephalale, while modelled SO_2 concentrations also indicate infrequent short-term exceedances of the NAAQ limits at these sensitive receptors. It was however concluded that there is however compliance with the NAAQS. The specialist further concluded that the Matimba Power Station is likely to be the main contributing source to the ambient SO2 ground level concentrations in the study area due to the magnitude of its emissions, while other sources which may contribute significantly due to their low release level include: spontaneous combustion of coal discards associated with mining operations, clamp firing emissions during brickmaking at Hanglip and potentially household fuel burning within Marapong. It can therefore be deduced that during the period where the Medupi units will be operated without FGD, the impact from Medupi Power Station on sensitive community receptors is likely to be within acceptable limits. ***Eskom, the applicant***
1.1.3	**Waste management, minimisation of waste streams and by-products, and market availability of gypsum**	CER, Comments Letter dated 19 April 2018:	In terms of the waste management hierarchy, the first priority of waste management is avoidance, followed by reduction in the quantities of waste, re-use and recycling, treatment of waste and lastly disposal of waste to

	CER and their clients maintain that almost 9 years after the 2009 Gypsum Market report updated assessments of large-scale commercial uptake and resale of gypsum and ash constitute unacceptable and negligent behaviour. CER and their clients highlight the following: • CER and its clients maintain that gypsum should not be mixed and 'co-disposed' with the ash and has previously recommended market research feasibility for gypsum and coal ash to be undertaken. Co-disposal of gypsum should be considered as a last resort. • Potential benefits of gypsum include potential revenue/ income to Eskom; avoidance of the costs and impacts associated with gypsum disposal, avoidance of the need to mine new gypsum; and the potential for very significant expansion and stimulation of the SA market for the products that use gypsum as a raw material. • CER and its clients maintain that based on the Gypsum Market Research Study, demand for Gypsum will exceed what Kusile plant would produce by 1 million tons per annum, hence suggesting that a sufficient market exists to take off more than half of the total volume of FGD gypsum that will be produced at the Medupi Power Station. • CER and its clients further maintain that Eskom should secure limestone of the requisite quality, with purity greater than 95% if possible, to maximise the gypsum sales potential, but acknowledge that not all identified markets require high quality gypsum. The cement and agricultural sectors would accept gypsum of lower purity. • Eskom should therefore clarify what methodology it uses to conduct quality assessments, and what quality gypsum would be deemed not for sale and disposable.	Par. 7, 8, 13.3 Par. 35 – 42, Par. 44 – 50 Par. 65 - 68	landfill. For the Medupi Power Station neither ash or gypsum production can be avoided. If the station is to meet its power supply contribution to the grid, limited actions can be taken to reduce the production of ash and gypsum, while in the absence of a significant market demand for ash and gypsum, at the current planning period, the only remaining option is to dispose of ash and gypsum on an appropriately designed and licenced facility. Ash and gypsum are produced separately, however, it is proposed to dispose of ash and gypsum mixed together on the existing Ash Disposal Facility (ADF), until a market develops for either of these wastes. CER holds that the reason ash and gypsum should not be mixed together is to allow recovery of gypsum at a later stage after disposal. It is however understood that once gypsum has been exposed to external elements, especially water, its chemical structure is altered thereby rendering it not readily usable for its intended purposes. It is for this reason that the proposed temporary gypsum storage area at the rail yard will be a covered structure. Therefore, long term storage of gypsum on its own is likely to render the gypsum unrecoverable for reuse. The gypsum transportation infrastructure caters for under-the-conveyor collection of gypsum by trucks, in the current infrastructure. Therefore, in the absence of a significant market demand it remains pointless to dispose of ash and gypsum, which is both classified as type 3 wastes, separately. It should also be understood that there is a need for capacity to dispose of gypsum, when lower quality (unusable) gypsum is produced from the operational challenges at the station. Currently the demand for gypsum is not large enough to result in a significant offtake of gypsum from the FGD process. Although Eskom can facilitate the opportunities for the provision of gypsum on a commercial scale, in line with its mandate, it might not be appropriate to drive the expansion of the market to meet the offtake targets for FGD gypsum, although it would support such initiatives. Eskom is currently in the process of lodging applications with the DEA and DWS to unlock economic opportunities associated with the use of ash, which is, otherwise, hindered by the classification of ash as a waste, for example.

	• In paragraph 44 of CER's comments letter, it is stated: "*In spite of our repeated earlier representations and the positive gypsum market assessment, Eskom has not included the construction of facilities for the temporary storage of gypsum or of facilities for the rail dispatch of gypsum in the scope of the project*." • CER and its clients further maintain that the impact of transport of limestone and waste (salts and sludge) by trucks on the air quality has not been adequately addressed. • CER and its clients maintain that the statement in the DEIR that "*given demand and offtake potential from commercial off-takers, infrastructure to convey gypsum from the gypsum transfer house 1 to the gypsum storage building and rail way yard for transport of large volumes of gypsum via rail will be constructed at a future date*" serves as proof that Eskom has not included construction of facilities for the dispatch of gypsum in the Medupi FGD Retrofit Project scope. • Eskom should confirm that the gypsum facilities required for the sale of gypsum are included in the scope of the project. • Concerns highlighted by CER are that there is no provision in the design and construction for separating the gypsum from the ash so that it can be reclaimed and sold as a by-product and that all gypsum surplus to sales will be stored together with the ash, rendering it unrecoverable for future sales if and when the market for gypsum develops. • CER and its clients submit that the licensing of the gypsum disposal as an amendment to the existing licence is therefore not acceptable, as the two are interlinked. • Previous comments regarding the minimisation and		CER references a Gypsum Market Research Study, which is most likely outdated in terms of the figures it states. It is furthermore argued that expecting Eskom to undertake an updated market research study which will result in significant further delays in implementation of the FGD infrastructure is unreasonable at this stage, especially considering the fact that Eskom has included design of all infrastructure required to support commercial offtake of gypsum. In other words, Eskom is in a position to respond to whatever market demand develops, whenever it develops in future. CER's statement in paragraph 44 is therefore also refuted as Chapter 6 of the DEIR explicitly describes the infrastructure associated with gypsum management, handling and conveyance to the rail yard for commercial offtake. Eskom therefore confirms that infrastructure for the offtake of gypsum is included in the scope of this EIA. The quality (with respect to purity) of limestone that will be used may be dictated by the market demand, existing volumes of high quality gypsum already in the market and capital considerations considering the only source of high purity limestone is located in the Northern Cape, but Eskom would have to undertake a full developmental process for any expenses deemed additional to its cause. The transport of limestone will be undertaken via rail, through an existing railway line, from which a rail siding will be established. The impact of the transport of the wastes via trucking was considered by specialists in a qualitative manner. It must also be considered that the service provider appointed to collect and dispose of salts and sludge will be an established service provider, and it will follow its own health, safety and environmental requirements, not to mention compliance with regulations for the transport of hazardous substances by road. CER claims that there is no provision in the design and construction for separating the gypsum from the ash so that it can be reclaimed and sold as a by-product. Sections 6.4 and 6.9, and relevant drawings and reports in **Appendix C** of the DEIR clearly demonstrate that offtake infrastructure for the commercial and small-scale offtake of gypsum has been designed for,

	handling of waste have been disregarded and include: ○ Gypsum should be stored separately from other wastes, allowing for possible future recovery; - ○ Salt and sludge co-disposal with other waste streams should be avoided, stored separately and managed appropriately in accordance with the law ○ Disposal of FGD by-products to Holfontein Landfill Facility should be avoided due to distance costs and environmental impacts. Only three possible disposals should be considered, namely: separate onsite facilities for each waste (preferred); disposal of ash, gypsum, salts and sludge in the ADF, each with its own compartment for future respective recoveries, if appropriate and permissible; disposal of ash, gypsum salts sludge in the ADF with ash and gypsum each in their own compartment, and salt and sludge combined into a third compartment. • CER and its clients claim that previous comments relating to waste management and minimisation seem largely to have been ignored and/or inadequate or inappropriate responses have been provided.		considered and assessed in the DEIR. It should also be noted that gypsum and ash is produced independently and is only mixed together for disposal during the final step of disposal. Further, if gypsum is disposed separately it will not be considered a by-product, but a waste. It was also mentioned previously that exposure of gypsum to the elements may render it unusable for the intended purposes, therefore offtake of gypsum can only be sustainable if taken directly from the waste stream as it exists the gypsum dewatering building or conveyed to an enclosed storage building prior to rail transport. The sampling process for determining the quality of gypsum is a manual process. An operator takes a sample off one of the conveyors and it is then analysed in an onsite laboratory. For the wallboard industry high purity levels are required (95% $CaSO_4$) and moisture contents below 10%. The impact of traffic on air quality was considered and qualitatively assessed by the air quality specialist and was found to be negligible as has been concluded in the Air Quality Impact Assessment included as an Appendix to the DEIR. CER furthermore does not elaborate on the exact aspects of the impact that was not adequately addressed. The existing ADF is licenced through an existing WML. This means that the impacts associated with sterilisation of the ADF footprint and potential pollution associated with the disposal of ash at the facility were considered and assessed already within the initial application for a WML for the ADF. A variation application is specifically catered for in terms of the National Environmental Management: Waste Act (No 59 of 2008), as amended. The WML Variation application therefore considered additional impacts that may result from disposal of ash and gypsum, which are both classified as Type 3 wastes, prior to approval of the variation application that will result in amendments to the conditions of the existing WML, as well as the changes in ADF configurations with respect to a reduced footprint and a raised height.
1.1.4	**Availability of water necessary for the project: water for the full project has not yet been secured.** CER argues that water security for this project is a critical	CER, Comments Letter dated 19 April 2018: Par. 7, 8, 13.2	The Department of Water Affairs and Forestry's Report on the Crocodile West River Reconciliation Strategy (2012) is most likely outdated and current studies associated with MCWAP should be considered in terms of the water demand in the Mokolo and Crocodile West catchments.

	aspect, and as a result, their clients have continuously requested a water minimisation study, to identify how to decrease the need for water. CER maintain that the 2012 Department of Water Affairs and Forestry's Report on the Crocodile West River Reconciliation Strategy, which was submitted as an annexure to the FSR, has indicated that the demand is already exceeding supply, and there are likely to be shortages of up to 16 million m^3 of water per year by 2025. Despite this, no overall water minimisation study has been conducted to date. CER further highlights the following points: • "*it was indicated in the 2018 TSSR that, if the Medupi is equipped with WFGD with an inlet gas cooler, and is operated at 90 degrees C, there would be 36% water requirement. If this is the case, FGD will not be dependent on MCWAP 2, and such technological option should not be dismissed*." • On 11 April 2018, our clients submitted comments on the MCWAP 2 scoping report, indicating that this project is not required, as the energy demand forecast on which MCWAP was based is outdated and significantly inflated. Most recent studies indicate that no new coal is required. • MCWAP 2 had not conducted a Climate Change Impact Assessment (CCIA), and current research suggest that climate change in the Limpopo basin will result in increased evaporation rates and uncertainty with regard to water supply.- • CER maintain that it is vital that a water minimisation study be undertaken and future water needs be settled as part of the EIA process.	Par. 29 - 34	Eskom has engaged and supported DWS in the development of MCWAP since commissioning of the project and is therefore dependant on the outcomes of the MCWAP project. It should be kept in mind MCWAP has various phases to deal with water scarcity and shortages in the region in light of possible climate change impacts and has taken into account long term growth of Lephalale. One of the objectives of MCWAP 2 is also to bring lower quality water to the Limpopo region to be utilised for industrial purposes such as for power generation. Furthermore, consideration of potential water savings as a result of the implementation of gas a cooler technology must be done also considering potential challenges associated with installing and operating this technology. The 2018 TSSR, which represents an updated understanding of the use of gas cooler technology therefore supersedes the 2014 TSSR, clearly lists the technical challenges that is faced with the installation of the gas cooler technology, and although Eskom has made provision in terms of space for the gas cooler infrastructure, its use cannot be justified in light of the numerous challenges Eskom would face by installing gas cooler technology. It is premature to conclude that MCWAP is not required, as the energy demand forecast on which MCWAP was based is outdated and significantly inflated. Economic development is only possible if supported by the availability of services, which include the availability of water and electricity. Supporting a stance that the energy demand forecast is significantly inflated is counterintuitive to economic development. Recent publications, e.g. the Medium-Term System Adequacy Outlook (MTSAO) October 2017 indeed showed that the system will have excess capacity over the next 5 years. The MTSAO report did not state that the excess will persist up to 2050. Therefore, new generation capacity will be needed in the light of power plants that are going to be decommissioned in the next 15 years. Caution should be taken that publications like the MTSAO are not capacity expansion plans, and they should never be used for long term decisions. MCWAP process will identify availability and demand of water in the region which will provide an updated account of water availability.

1.1.5	**FGD technology selection and use of a flue gas cooler in the wet FGD process. A flue gas cooler should be incorporated into the base case FGD design instead of a design alternative.** CER highlighted in paragraphs 14 to 27 of the letter of comments received from CER the following aspects related to the FGD technology selection and use of a flue gas cooler in the wet FGD process: • The 2014 Medupi FGD Technology Selection Study Report (TSSR) indicated a total reduction of process water up to 29%, no significant change in size, type of equipment required, no significant difference in lifecycle costs between WFGD and WFGD with gas cooler, significant savings in water with WFGD with gas cooler option • EIA Clean Coal Centre Report concluded that the use of a cooler at the inlet to the wet scrubber is common practice in Europe and Japan • Various "process area arrangement drawings", and datasheets attached to the 2014 TSSR report not available to public and should be made available immediately for comment. • The 2014 TSSR does not report any impediments or caveats in regard to achieving the estimated operating and maintenance costs of the WFGD + cooler option • DEIR and the accompanying 2018 TSSR does not provide adequate and rational reasons for this decision that the gas cooler is not feasible • Concerns outlined in the DEIR and 2018 TSSR appear to contradict the 2014 TSSR, and/or the findings are unsubstantiated • Shortcomings in the report of oversees plants visited relating to how these plants were chosen, their respective commissioning dates, unit capacities, how	CER, Comments Letter dated 19 April 2018: Par 11.4, 13.1 Par. 14 - 27	The history on this element is important as it puts the various reports into context: <u>In 2014 Technology Selection Report</u> • Eskom conducted a desktop study on the flue gas cooling technology and included this as part of the 2014 Technology Selection Study Report (TSSR). Please refer to 3.2.2.2, 3.2.3.2 and 3.4 of the TSSR. • The intention of the report was to conduct due diligence on the appropriateness of the selection of Wet FGD technology for Medupi. The report was aimed at documenting and explaining the rationale with regards to the selection of Wet FGD for Medupi with the technology information available at the time. • As part of normal technology selections studies during feasibility and conceptual engineering, various design alternatives are considered that will be matured during basic and detail engineering phases. Some of the design considerations (as was the case with the cooler), do not go into too much detail at this stage of the design as the intent is to review feasibility and narrow the scope of focus for the subsequent engineering phases. It was on this basis that the cooler was included as a design alternative, however the details surrounding the actual requirements for the fitment of the cooler, fit-for-purpose design and auxiliary requirements for this technology was not considered (which is typical at this design stage). • Therefore, the report does not consider: o The heat sink that would need to be identified to dissipate the heat recovered from the flue gas and also the costing associated with this infrastructure. o Actual maintenance costs - an industry standard allowance for maintenance costs of 1.25% was considered as the actual costs were not known. Differentiation in maintenance costs for the options with and without the cooler. o Different cooler materials and variances in the cost of materials. o Reliability of the coolers and its impact on Unplanned Capability Loss Factor (UCLF). • Information on these items was very limited at this stage, nevertheless it was decided to incorporate provisions for a potential future installation of

	problems were resolved, and comparison of the inlet cooler gas technologies in comparison to the Medupi proposed technology, amongst other. In this regard CER request a copy of the full site visit reports and outcomes for the China-based plants, for consideration. • The argument by Eskom of a lack of space to retrofit WFGD and gas cooler technology appears to be somewhat speculative. CER request a detailed engineering study of the design and layout of the inlet gas cooler to be done to establish whether or not a layout with adequate maintenance provisions is possible. • Eskom's claims as to increased cost and construction difficulties due to the material selection and weight of the cooler is speculative and CER request a detailed engineering study to confirm this. • Claims of increased downtime to the Medupi plant due to maintenance of the flue gas cooler should be seen in the context of Eskom's target planned average maintenance downtime of 10% per year, i.e 36 days. • Eskom should explain what has changed in the interim between the 2014 and 2018 TSSR. If Eskom continues to insist that space/weight is an issue, they should provide detailed evaluation or studies, including feasible options for overcoming any difficulties. • Eskom's conclusion to reject flue gas cooler technology is not accepted based on the arguments presented by CER. • The 2010 EIA Regulations require the applicants to identify and investigate reasonable and feasible alternatives and the cooler is reasonable, feasible and necessary. It should furthermore be considered as integrated into the basic design.		a flue gas cooler as part of its basic design scope due to the potential water savings that may be realised. • While the desktop lifecycle cost analysis showed that the installation cost of the cooler could be offset with the reduction in operating costs due to the water savings, it is important to note that the above-mentioned items were not considered as part of the cost estimation. In other words, the cost estimate was based on a number of assumptions that needed to be verified in the basic engineering phase for the cooler. <u>2015 Basic engineering and 2016 Benchmarking for the cooler:</u> • During the basic engineering phase, Eskom considered the practicality of the inclusion of the flue gas cooler as well as the material selection and engineering philosophies (such as operating and maintenance). It became apparent that only a limited number of installations exist and the performance data of these were not publicly available. Most OEMs claim information based on performance testing, which is done very early during the life on these assets. It is therefore prudent that longer viewpoint on these elements be taken. • Further to the above, continuous discussions between Eskom and the World Bank due to loan conditions had Eskom look at semi-dry installations again as the technology was being employed on higher capacity units. • Eskom decided to conduct a dual-purpose benchmarking exercise to answer unknowns regarding both semi-dry installations and flue gas cooling. • Eskom therefore travelled to various power stations across Europe, USA and China to better understand the practical implications of this technology and the findings from the exercise form the basis of the update to the document (i.e. the 2018 TSSR). Europe and China were chosen due to their differences in technology applications for flue gas coolers. In Europe, coolers are applied after the particulate abatement technology and in China before the particulate abatement. These brought various design considerations with them which needed to be understood. • The exercise revealed significant concerns relating to the reliability, maintainability and lifecycle cost of Flue Gas Cooler's (FGC's). These coolers use expensive materials i.e. stainless steel or PFA (polymer

			material). Medupi processes coal with a high sulphur and high abrasive ash with no neutralisation (and associated low adsorption) effect for the consideration using carbon steels. There is a high risk of erosion and corrosion damage (operating under sulphur dewpoint) to the heat exchanger tubes which results in reduction in heat exchanger efficiency (and therefore also a reduction in the water savings achievable) and significant plant downtime to plug damaged tubes and manually wash clogged tubes. Furthermore, the tube materials need to be replaced every 6-10 years (at a significantly high cost). Europe has opted for more expensive PFA materials with tube surface area that exceeds the heating elements in the boiler in some installations. The issue with these materials is that the tubes are prone to damage due to fly ash contamination and still prone to acid corrosion. The power stations visited with this installation have still required lifecycle material replacements. • The power stations visited in Europe and Asia as part of the benchmarking exercise were selected based on technology installed and accessibility to visit these plants and engage with the plant personnel. All three power plants visited in Europe advised against the installation. • The technology (flue gas cooling) was originally developed solely for the purposes of achieving the exhaust flue gas temperature legislated to reduce the visible plume from the chimney (in Europe). This requirement has recently been removed from European legislation and power plants with the flue gas cooling technology are starting to decommission the heat exchangers due to the significant operational and maintenance burden. • In China, the cooling technology was introduced to improve the operational removal efficiency of the Electrostatic Precipitators with the added benefit of potential WFGD water savings. • The high risk of erosion and corrosion damage and coupled with the characteristics (i.e. high abrasive ash and sulphur) of the Medupi coal coupled with the experience of the international power plants cannot be ignored by Eskom as part of its decision making. • Water earmarked for Medupi WFGD comes from the return streams from Tshwane. This is a growing resource that is not being utilised, approximately 170 m^3/s is being discharged into the Indian ocean (total Limpopo river discharge). The Medupi WFGD water requirement is

			approximately 0.28 m^3/s for all six units. The Mokolo Crocodile West Augmentation Phase 2 is required to bring this water to the greater Lephalale area to stimulate economic growth. The business case for MCWAP 2 includes the infrastructure CAPEX built into the tariff and is dependent on the portion of off-take. The costs associated with the FGC cannot be offset with water savings due to the MCWAP 2 payment structure. • Water cost savings will therefore not be realised with a FGC installation and Eskom's participation in MCWAP 2 is part of the broader socio-economic strategy for the area. Eskom's Mokolo allocation will also be released for residential use once MCWAP 2 is completed. • Finally, it should be noted that the cost of the inclusion of the cooler was not the sole consideration for not implementing the technology. The technical considerations outweigh the cost implications as the pragmatic considerations of the technology for use in the South African context was deemed not to be viable. <u>2018 Technology Selection Study Report</u> This report was drafted taking into consideration new information which was not known during the 2014 report and therefore replaced the 2014 with an updated version. The report further shows Eskom's continuous commitment to ongoing market research in this space, and to extend this further, not only in the cooling technology but also lower water use technology for FGD (such as semi-dry systems). *Therefore, inclusion of the FGC technology was not considered to be an efficient, sustainable and broadly (i.e. technical, social, cost) responsible solution for Medupi and South Africa at this time. Eskom is committed to water conservation and employed ACC's at Medupi with an energy penalty of approx. 1.75% to reduce water consumption (Wet cooled power plant without WFGD≈ 2 l/kWh vs dry cooled power plant with WFGD ≈ 0.35 l/kWh). Eskom has also maintained the status quo with respect to provisions in design for a potential future installation of a cooler. It is believed that advancements in materials science can improve the reliability and maintainability of the FGC technology to make it more favorable in the future.*
1.1.6	**Impact of the FGD on surrounding water systems**	CER, Comments	Stormwater management was considered in terms of GN704, therefore

	CER and its clients maintain that it is not clear whether proposed mitigation measures to reduce the ADF footprint and implementation of the stormwater management plan will be sufficient measures to mitigate pollution resulting from flooding. It is also uncertain if the impact assessment was adequately conducted since the ADF footprint will be excluded from the EIA, and instead, addressed in the separate WML application for variation. It is unclear how the specialist report reached its conclusion, given that the final footprint and impact of the ADF is unknown, and is excluded from the EIA process. It is therefore important that this is fully investigated in the EIA and not separated considered in the WML process. CER raised the following points: • The Surface Water Assessment specialist report seem to contain rainfall data only from 1903-2000. Since the report was compiled in 2018, rainfall data from 2000-2018 should also be included. The raw data used to compile the report should also be made available. • The surface water specialist report stated that is anticipated that the existing Dirty Water Dam (102 000m^3 capacity) will have insufficient capacity to store new dirty water runoff volumes. Additional dirty water storage will be required, which was not sized as it was not part of the scope. • The loss of wetlands and watercourses on site at Medupi and the ADF location will remain a very high impact; however the impact could apparently be reduced through mitigation. It is not clear, however, how these residual negative impacts will be remedied.	Letter dated 19 April 2018: Par. 13.4, Par. 13.6 Par. 51 – 59 Par. 68.3	infrastructure associated with stormwater and dirty water management was designed to comply with GN704. The initial floodlines were based on survey data that was available at the time. Eskom commissioned high resolution survey data and when it became available the floodline analysis was updated using this high resolution data. The surface water specialist concluded that the floodlines were much narrower when compared to the initial floodlines generated and the specialist report was updated accordingly. The floodlines showed that only a limited area impacting a PCD would be impacted by the 1:100 year floodline, as is seen in the figure below extracted from the updated surface water report. The potential impact of the 1:100 year floodline on the PCD infrastructure can be mitigated through the design of additional measures to protect the PCD infrastructure. It should further be noted that the floodlines do not affect the actual footprint area of the disposal facility as represented in the updated design undertaken by Jones and Wagener. The footprint of the ADF is already authorised through the Medupi Power Station's existing WML for the ash disposal facility. The impacts associated with the construction of the ADF have therefore already been considered, assessed and mitigated. Impacts highlighted through the updated floodline assessment and wetland assessment are furthermore considered in the engineering design of the waste disposal facility and clearly demonstrated in the redesign of the ADF associated infrastructure to reduce the footprint in the south western corner to avoid the sensitive wetland area and floodlines as far as possible.

			 CER is reminded that the rainfall data represents almost a decade of rainfall data and since the surface water and floodline assessment is based on averaged monthly and yearly data, the dataset is more than adequate to provide an accurate representation of rainfall patterns and storm event peaks. It is also confirmed that when the surface water report was updated the statement that the existing Dirty Water Dam (102 000m^3 capacity) will have insufficient capacity to store new dirty water runoff volumes were erroneously not updated. The detailed design of the WWTP is based on a ZLED philosophy, therefore, dirty water will be returned to the WWTP for re-use or otherwise evaporated through the technology proposed for the WWTP. Eskom has, therefore, confirmed that no additional dirty water storage capacity is required, thus all required water storage facilities have been catered for in this application. The residual negative impacts referred to by CER will be remedied through extensive rehabilitation of downstream wetland areas in order to improve the functionality of these wetlands.

1.1.7	**Inadequacy of DEIR due to missing documents and/or information** CER and its clients maintain that information was previously requested to be included in the assessment but are still not available, and therefore the information available for comment and decision-making is incomplete. It is therefore CER's view that a number of studies be undertaken and made available to the public. Such studies include: 1. Co-commissioning (integrating FGD into the design of the 3 remaining units) study 2. FGD Commissioning Schedule Study; 3. Water Minimisation Study 4. Gypsum Market Investigation and Ash Market Investigation to minimise waste 5. Limestone quality, cost, availability and sourcing study 6. Study on transport impacts from waste or materials required for FGD 7. Detailed engineering study of the design and layout of the inlet gas cooler CER additionally raise the following points: • Pages 36-37 of the DEIR refers to various design reports which were reported to be considered. However, there were not attached to the DEIR. • Appendices D1-12, which refer to various designs and drawing, were not attached to the DEIR, as well as appendix F2. • The figures and drawings mentioned in the report should be provided as separate documents to enable enlargement of the figures and drawings. • With regard to air pollution, whilst the specialist report briefly considers the health impacts, this is	CER, Comments Letter dated 19 April 2018: Par. 11.3, Par. 60 - 62	The DEIR and appendices are still available on the Eskom website and Zitholele website, and at the physical venues. Besides the fact that they are available, if CER had difficulty in accessing these appendices, or additional reports, they should have requested a CD containing all the relevant information as was highlighted in numerous notification letters that was circulated to all I&APs throughout different stages of the public review period. The public review period was extended by an additional two weeks, on CER's request, therefore they had more than adequate time to request any additional information it sought. Furthermore, the EAP/PPP Office received no other queries or request relating to missing appendices or reports. Further to these facts, the DEIR already consisted out of 3 archlevel files representing copious amount of information. Adding a number of additional reports to the DEIR for public consumption and including additional figures and drawings already contained in the reports would be counterintuitive to producing a report, which is already very long and technical, to the general public for consumption. CER requests a number of studies to be undertaken. Responses in line with the proposed studies are provided here: 1. Eskom has considered the co-commissioning of the FGD with the commissioning of the remaining 3 generation units. Eskom is actively pursuing schedule acceleration to meet committed dates for retrofit of four FGD units with the potential for the remaining two units under review; but is not able to align retrofit of FGD with commercial operation of last generation units in order to co-commission the FGD infrastructure together with the last generation units. 2. Given the current milestone dates, as was presented at the public and key stakeholder meetings undertaken on 12 – 13 March 2018, Eskom will only be able to complete installation of the first FGD based on an accelerated schedule in July 2023, with the last FGD unit expected to be completed in May 2025 on an accelerated schedule. Since the schedule is in continuous flux it is not understood what value add an FGD Commissioning Schedule Study would contribute to the schedule and milestone dates Eskom is

	insufficient for the present purposes. It is recommended that a full health impact study be undertaken, which includes health impacts for operation of the plant without the FGD for 6 years after commissioning each unit.		currently driving. 3. The 2018 TSSR already highlight all the water saving measures considered during the planning and construction of the Medupi Power Station. Water minimisation has been considered at the onset of the planning phases with Medupi planned and designed as a dry-cooled power station. Other water-saving options such as the retrofitting of the gas cooler, were also considered through the 2018 TSSR, however, given careful consideration of the technical maintenance issues associated with operation of a gas cooler water rendered its use unfeasible at this stage. 4. Eskom developed an updated Gypsum Commercialisation Strategy in 2017 in order to guide the commercial strategy it should pursue for its gypsum production. One of the key challenges the commercialisation of gypsum faces is that commercialisation of gypsum is the product of many moving parts and can only take place when these parts align. Due to this, there will be a degree of uncertainty in commercialising gypsum. Eskom's strategy concluded that building and commencement of a declassification strategy for gypsum must be undertaken, as well as preparing and releasing a Request for Information (RFI) for possible off-takers. The strategy further acknowledges that due to the timing of the commissioning of Kusile and Medupi's units and the time and capital required to build the required infrastructure, there are limited actions that can be taken at present. Lastly, as mentioned in this CRR, Eskom cannot drive commercialisation (i.e. beneficiation of waste) alone and require commercial stakeholders to come onboard, but is available to support such initiatives, as appropriate. Eskom has, furthermore, scheduled a workshop with key industry stakeholders in the first half of 2018 to discuss beneficiation of its waste. 5. Eskom has investigated limestone sources during the development of the Medupi FGD project and have identified sources, i.e. Lime Acres in the Northern Cape, or Pienaarsrivier or Marble Hall in Limpopo, as highlighted in section 6.4.2 of the DEIR. The exact specification of the limestone required for the Wet Flue Gas Desulphurisation (WFGD) is not known and once the FGD technology has been confirmed/approved will sourcing of the

			limestone commence. It has also been confirmed that the potential sources identified would be able to deliver the quality of limestone required for the Medupi FGD specifications, however, no formal commercial arrangements have been made to formalise agreements with service providers. 6. Standards regulating road transport of material, including the transport of hazardous material, exist to which the service providers transporting hazardous waste conform. Through these standards and regulations hazardous material is isolated to prevent any contamination of the environment during transport. Therefore the impact of the hazardous material on the receiving environments is deemed low through implementation and adherence to the relevant standards and regulations. Impacts associated with the increased number of trucks on main and access roads were considered qualitatively by the transport specialist. 7. Following detailed investigations by Eskom, the gas cooler has been ruled out as a feasible option in its current form and structure, therefore detailed investigations will not be done. CER requests that a full health impact study be undertaken. It is however noted that the Medupi Power Station currently operates within the emissions standards currently applicable. The impacts of air pollution on human health is considered and managed by the DEA on a national scale. DEA does this by considering future economic and industrial development in a specific region, thereby setting ambient air quality standards to manage emissions into the atmosphere, and in this case also declaring a specific area an air quality priority area, i.e. the Waterberg-Bonjanala Priority Area. The impacts of SO_2 are well-known through research done by organisations such as the World Health Organisation and Environmental Protection Agency (USA).
1.1.8	**Comments relating to the WML Variation Application** The motivation provided in the Variation Application is that, on 23 August 2013, DEA promulgated the National Norms and Standards for the Assessment of Waste for Landfill Disposal and National Norms and Standards for Disposal of Waste to Landfill, by which the applicant	CER, Comments Letter dated 19 April 2018: Par. 69 - 73	In order to assess the potential impacts of gypsum generated through operation of the FGD infrastructure in South Africa, the constituents of the gypsum must be considered. Direct parallels with gypsum produced from an FGD plant elsewhere in the world alone is not generally possible. Therefore, in order to understand the pollution potential of FGD produced gypsum under South African conditions, the only option was to undertake a "conservative theoretical waste assessment" based on literature and existing information

	determined "through conservative theoretical waste assessment" that gypsum and ash would be classified as Type 3 waste. This was despite the fact that FGD waste has not yet been generated by Medupi. CER and its clients concluded the following with regard to the WML Variation application: • Eskom attempts to defer and delay the consideration of the waste impacts in relation to the FGD - which should be considered in the initial EIA - to another platform, in order to "fast track" the EIA. • Eskom, to date, appears to have dragged its feet and have not considered the minimisation of waste as a serious option, since marketability and uptake studies for gypsum and ash have not been completed for over 4 years since the initial DSR. High quality lime also has not yet been secured. Furthermore, their Gypsum Market Study of 2009 was not included in the DEIR. • As mentioned previously, in order to significantly minimise its impacts, the last 3 units of Medupi - which are no longer required - should be abandoned. • Three units already built should have FGD fitted as soon as possible, before 6 years of operation. However, our clients vehemently object to this "fast tracking process", which undermines the EIA process by approaching the EIA in a piecemeal fashion. Such processes are contrary to legislation. • Furthermore, the WML Variation Application is deficient in that it appears that the applicant unilaterally determined the classification of certain waste times through a conservative theoretical waste assessment. The accuracy of this (scientific and legal) should be investigated. • Furthermore, and more importantly, all efforts should be directed to minimise the waste instead of		regarding limestone sources, etc. The DEIR has recommended that FGD gypsum should be reclassified once produced at the Medupi FGD. Since the commencement of the FGD system in Kusile power station, the gypsum produced was classified as Type 3 waste, and this classification is compared to what the Medupi FGD may produce. The original RoD for the Medupi Power Station (12/12/20/695) issued on 21 September 2006 stated that "Eskom shall install, commission and operate any required SO_2 abatement measures that may be necessary to ensure compliance with any applicable emissions or ambient air quality standards published in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)." At the time no emissions or ambient air quality standards were promulgated (the National Ambient Air Quality Standards (NAAQS) were only promulgated in December 2009). As no promulgated air quality standards existed to guide the selection of SO_2 abatement technology, Eskom opted for the worst-case scenario and designed the Medupi Power Station to be Wet Flue Gas Desulphurisation (WFGD) ready. WFGD was the most efficient abatement technology with the highest SO_2 removal efficiency at the time. Eskom, however, could not stall development and construction of the Medupi Power Station at the time as it needed to be constructed as soon as possible to meet the demand for electricity at the time. The applicant can only operate within the confines of the legislation and within the vehicles that are provided to obtain authorisation, i.e. in this case an existing WML is in force for the Medupi ADF, where all impacts prior to the authorisation of the licence was assessed by an independent EAP and considered by the competent authority. Given the fact that the station's ADF has an existing WML exist, another application for a new WML for the same facility may be contradictory to such existing WML, hence the allowance in the waste act to undertake a variation application to the existing WML. The WML Variation Application only deals with potential additional impacts associated with the disposal of ash and gypsum together on the already approved footprint for ash, in terms of the existing WML, the reduction of the footprint of the ADF to avoid sensitive wetland areas to the southwest of the ADF, and to assess potential impacts of the increase in height of the disposal

	expanding the capacity for the current waste disposal sites.		facility from 60m to 72m if ash and gypsum are disposed together on the same authorised ADF footprint. Eskom has developed an Updated Gypsum Commercialisation Strategy (2017) that has investigated the production of gypsum by Eskom, gypsum supply and demand, ways to commercialise gypsum, market considerations for Eskom, and legislative considerations associated with the declassification of gypsum as a waste. The construction of the remaining 3 generation units at the Medupi Power Station cannot simply be "abandoned" as construction and completion of the Medupi Power Station is driven by IRP requirements, which is a national planning process. Electricity generated at the Medupi Power Station is, amongst others, aimed at supporting growth in the economy, especially in the Limpopo region, resulting in higher electricity demands. Co-commissioning of the FGD infrastructure to the remaining generation units is not possible as the commissioning of the FGD infrastructure cannot meet the construction schedules for the remaining units. The construction of the Medupi FGD plant from start to completion of the first unit, for example, is likely to be 42 months, as benchmarked against international construction norms and experience. The classification of FGD produced gypsum through a conservative theoretical waste assessment was undertaken **as no FGD produced gypsum existed in South Africa** in order to get a representative understanding of FGD gypsum in the South African context. The waste classification was furthermore undertaken by reputable and qualified waste specialists with several years of experience in waste classification. Therefore, unless CER can point out specific areas of the waste classification that is disputed with full motivation to support this dispute, there is no reason to question the study and conclusions it comes to. Additionally, since the commencement of the Kusile FGD plant operations, gypsum has been produced and classified as Type 3 waste. Measurable minimisation of FGD gypsum, and boiler produced ash, is only

			possible through commercial offtake of gypsum and ash prior to disposal. Eskom has made provision for small scale offtake of gypsum from the gypsum dewatering plant, but in the absence of a market demand, Eskom has no choice but to dispose gypsum and ash to an appropriately lined waste disposal facility, at the current demand scenarios.
1.1.9	**Conclusion** CER and its clients concluded, firstly, that there is no doubt that FGD Retrofit Project is mandatory for the operation of Medupi Power Station, so that it will comply with the 2020 MES for SO_2, and so that it does not impact on human health and wellbeing. This should be done with the minimisation of the need for water in mind, with the least impact on surrounding ground and surface water, and should minimise waste as much as possible. Secondly, for the reasons set out in their comments letter, CER and its clients maintain that the DEIR does not contain all material information required in terms of NEMA and the EIA Regulations, and that the EIA has inappropriately deferred a number of considerations as outside the scope of the EIA, when they clearly need to be considered in the EIA. Lastly, CER and their clients furthermore strongly object to the WML Variation Application being separated from the EIA process, as it is an integral part. These fundamental deficiencies should be addressed, prior to the FEIR being made available for comment.	CER, Comments Letter dated 19 April 2018: Par. 74 - 75	Eskom has considered all requirements to reduce waste production, provisions for small scale uptake of gypsum before disposal, disposal of waste to landfill, and minimisation of water demand; however the solutions to deal with these aspects should be feasible for construction and sustainable operations. Eskom has demonstrated, through the development of the Medupi FGD project and engineering designs, that it has taken cognisance of the water stressed environments in with the Medupi Power Station finds itself, as well as the challenges in finding a suitable site for the development of a waste facility that can receive the waste streams generated by the Medupi Power Station. Nonetheless, despite the challenges in understanding FGD technology and designing for the retrofit of the SO_2 abatement technology, Eskom has committed to fast-track the installation of FGD technology in a responsible manner to reduce SO_2 emissions as required by its Atmospheric Emission Licence (AEL). The applicant and EAP reject the claim that the DEIR does not contain all the relevant information to support informed and responsible decision-making by the competent authority. Documents CER claim was not available have been available in the identified public venues, Zitholele Consulting's website and Eskom's website since the start of the public review period, which was extended by 2 weeks to allow additional review time for an already lengthy DEIR document. Other documents cited were available for review and comments by all I&APs during the Scoping Phase and is still available on Zitholele Consulting's and Eskom's websites. Authorisation and licence applications can only by undertaken in terms of the licencing and permitting provisions through the relevant legislation prescribes. To this end, undertaking a variation application to an existing WML is the

			correct process to deal with proposed changes to the existing WML. Lastly, aspects associated with the construction and operation of the Medupi FGD infrastructure, rail yard, gypsum and limestone handling facilities, water management systems, WWTP and associated infrastructure were considered in an integrated fashion through running the application processes in parallel, although due to legislation these applications are packaged separately.
1.1.10	We refer to our telephone conversation yesterday, in respect of the submission of the following Environmental Impact Assessment (EIA) for comment under the 2010 EIA Regulations: 1.Medupi FGD DEIR circulated for comment on 19 February 2018 and due for comment on 5 April 2018; and 2.Medupi WML circulated for comment on 5 March and due for comment by 9 April 2018. The purpose of this communication is to record our request for a short extension of time to comment on these documents by 19 April 2018. We and our client, Earthlife Africa, have registered as interested and affected parties (I&APs), and wish to exercise our right to comment on and raise issues relevant to the applications, as we have done throughout the process. As you know, the Medupi DEIR and the WML are voluminous and technical; for instance, the DEIR is comprised of over 200 pages, with 23 appendices, most of which in themselves are lengthy technical reports. As non-profit organisations, we have limited access to resources and technical expertise, and we and our client require adequate time to peruse and consider the voluminous DEIR, WML, and the respective appended technical reports to provide proper comments. This has been made more difficult by the public holidays.	KOYAMA, Michelle, Email received 05 April 2018, 9:32am	Yes, the extension has been granted until 19 April 2018. We look forward to receive your comments on the reports. ***Mathys Vosloo, EAP***

	Although you initially agreed to an extension of the time for comment until 16 April, you indicated subsequently that you had to consult with Eskom in this regard. As the independent EAP, you are in a position to decide whether or not to grant an extension. Regulation 56(1) of the EIA Regulations, 2010, states that comments are to be submitted within the timeframe set or within "any extension of timeframe agreed to by the applicant or the EAP". Relevant authorities, however, are given 40 days to comment on the draft environmental impact assessment report, and 60 days for a waste management activities, which excludes public holidays. We make this request also with respect to the requirements for procedurally fair and rational administrative action in terms of Promotion on Administrative Justice Act, 2000, and in terms of the National Environmental Management Act, 1998, as well as the EIA Regulation, which promote fair administrative decision making and public participation which provides a reasonable and adequate opportunity for comment in the environmental impact assessment processes. In light of the above, we propose that an extension until 19 April 2018 to submit the comments is not unreasonable and await your decision as an EAP in this regard. You mentioned previously that Eskom has indicated that they will grant the extension but that a written request should be submitted. We have submitted a written request and presume that extension has been granted until the 19 April?		

1.2	**Comments raised during the Key Stakeholder Workshop**		
1.2.1	Issue raised with regards to the pollution control for the gypsum, salt and sludge. What is the plan for after the 5 years of trucking the waste to the disposal site has ended.	Mr Jim Hlabiwa Letwaka Key Stakeholder Workshop 14 March 2018	Gypsum is generated and taken to the disposal facility via the conveyor or. The normal pollution control procedure will be followed for the handling and management of the wastes. Disposal will also conform to the waste control procedure of the existing waste facility at the Medupi Power Station. The temporary storage of the salts and sludge will take place for a period of 5 years. During this time constructed of a new waste disposal facility should be commissioned. Sludge and salt will be transported together to the waste disposal facility. Control measures such as washing the wheels of the trucks will be implemented at the storage facility to avoid pollution, while the service provider's control measures will be implemented once the waste is loaded onto truck and transported to the appropriate waste disposal facility. **Mathys Vosloo, EAP** Eskom is investigating the development of a regional waste facility together with local roleplayers. Eskom has scheduled a workshop with roleplayers to discuss the potential for the development of such a regional waste disposal facility. Space constraints seem to affect the proposed disposal facility and space options for access for future recovery of the sludge are being investigate which includes the constructing a regional landfill facility locally for disposal and recycling. Benefits from such a facility include environmental and socio-economic opportunities such as recycling opportunities. **Eskom, the Applicant**
1.2.2	What will the timeframe for construction of the FGD be?		Construction timelines are benchmarked against international time frames on similar projects. Eskom has internally relooked how they can accelerate the construction program even by employing more people on the construction teams. The planning guys are looking at how to change the sequence of construction to and optimize the construction schedule to fast track and optimize the process. It will take approximately 52-months for construction of each unit, while if we put in multiple teams Eskom should be able to complete

			a unit in 36 months instead of 52 months. **Eskom, the Applicant** So, we are looking at a construction period from about 2019 to 2025 for construction of the FGD units. **Mathys Vosloo, EAP** The appeal process can also have a huge knock-on effect on timelines if the authorisation is appealed. Emile also explained the water system around the catchment areas from a SA perspective and how it links into the project through the MCWAP Phase 2A project, and how this link with the project is important for compliance reasons. **Eskom, the Applicant**

1.2.3	Eskom has not started with the FGD installment? How long will the authorization take?	Ms Lucy Make Key Stakeholder Workshop 14 March 2018	No, the commissioning of the FGD units has not commenced yet. In order to start the authorization process currently underway must be completed only then can the construction begin. This process is on a critical pathway and Eskom is already behind on its schedule for implementation. **Mathys Vosloo, EAP** In order to start the Department of Environmental Affairs need to give permission for construction to start. We are currently in that process of providing the documentation to the authorities to make a decision for the FGD project to commence. Only once the authorization has been granted can Eskom commence with construction. **Eskom, the Applicant** The decision-making process will take to about August 2018 to make a decision. Once a decision is made an appeal period must run its course, with construction likely to start a month or two after the appeal period has expired. **Mathys Vosloo, EAP**
1.2.4	Do you already know where the infrastructure will be placed?		Yes, Eskom knows exactly where they want to place the infrastructure. **Mathys Vosloo, EAP**
1.2.5	What is the difference between the existing water in the catchment and MCWAP Phase 2 water?		Phase 1 of MCWAP is now complete and unblocks bottlenecks for the supply of water to users. The water from MCWAP Phase 2 is not as pristine as the water in the Mokolo catchment, as it comes from Johannesburg to supply poor quality water for industrial uses. This will free up more water for agricultural use and human consumption. **Eskom, the Applicant**
1.2.6	How many storage areas will there be for the gypsum and limestone? Will it be stored separately?		There is only 1 limestone storage area within the railway yard. For Gypsum there is a temporary storage area near the gypsum dewatering plant. If the gypsum is suitable for offtake, gypsum will be stored at 1 storage area within the railway yard. They gypsum and limestone will be stored together, but if gypsum is disposed it will be disposed together with ash on the Ash Disposal

			Facility. **Mathys Vosloo, EAP**
1.2.7	The FGD reduces only SO_2?		Yes, the FGD infrastructure will only reduce the SO2 emissions. **Mathys Vosloo, EAP** Other already installed infrastructure, such as fabric filter press, reduce the concentrations of the other gasses and particulates. **Eskom, the Applicant**
1.2.8	What is the difference between the different technologies?		Mathys Vosloo: The FDG with the gas cooler requires more space and far more expensive as opposed to the wet FDG system which can be modified to be fitted into to the existing infrastructure. **Mathys Vosloo, EAP** Gas cooler has no long-term technical benefit at this stage to the power station and long-term viability is limited as the wear and tear on the system is a major limiting factor. **Eskom, the Applicant**
1.2.9	What will Eskom do after 20 years if the existing disposal facility is closed?		A separate process will be undertaken to find an additional facility for disposal of ash and gypsum after 20 years. Other options of minimizing disposal of ash and gypsum is also being investigated by Eskom. Disposal of ash in existing mine pits is being investigated for future use, while ash can also be used to form part of other environmental process like treating acid mine drainage. **Eskom, the Applicant**
1.2.10	I just want to advise on communication with communities in this area. The proper delivery of the message is important and proper structures and channels should be used to engage with the community more meaningfully and for the communities to become more involved. Consultations should be structured to maintain integrity	Mr Jim Hlabiwa Letwaka Key Stakeholder Workshop 14 March 2018	It is a very important point that you are raising. It is something that we are all struggling with and we are learning from it. **Eskom, the Applicant** It is something that we will focus on more specifically. We did put up posters and send out notifications and smsed. The point is taken, thank you for your comments. **Mathys Vosloo, EAP**

	and reduce the chances of appeals. It is advised that community liaison people should be appointed and the ease of language for better interpretation and communication.		
1.3	**Comments raised by Interested and Affected Parties**		
1.3.1	We don't understand why we have to waste our time to comment on this Environmental impact assessment waste management, because u have never do your presentation in marapong. We can't comment on this fgd.	Mr Seanego, Email received 29 March 2018, 4:44pm	Thank you for your comments as per your email below. We would just like to point out that a public meeting was scheduled at the Ditheku Primary School in Marapong on Monday, 12 March 2018 from 3pm – 5pm. We were at the venue ready to undertake the presentation, but only 1 stakeholder came to the public meeting. The person requested that the meeting be postponed, however due to the fact that the public meeting was widely advertised through sms and email notifications, informing the councillors in Marapong, putting up notices of the meetings at various locations in Marapong, Steenbokpan and Lephalale, the request could not be granted. We therefore confirm that the applicant and EIA team was at the venue to present the project. Your email address is captured on our database as representative of the South African National Civic Organisation, therefore we can only assume that you have received the invitation to the public meetings as well as numerous reminders to about the date, time and venue of the public meetings, but refrained from attending the meeting. The Draft Environmental Impact Report (DEIR) has been available for public review and comment at 4 public venues, including the Marapong Community Library from 19 February to 19 April 2018. ***Mathys Vosloo, EAP***
1.3.2	Kan u asseblief n afrikaanse vertaling vir ons stuur/of alternatiewelik ons op ons plaas besoek. Ons plaas gelee te KUIPERSBULTPAD, VANAF DIE MEDUPI/AFGUNSPAD. VERBY SOUTPANPAD VERBY ESKOM CONSERVATION GRONDE AAN LINKER EN REGTERKANT. LET DAN OP VIR	BARNARD, Lynette, Email received 19 April 2018, 11:09am	Ek het probeer opvolg met U na aalnyding van die epos hieronder. Kon nie deurkom op enige van die telefoon nommers nie. Ek wil net verstaan of U enige kwellinge het oor die projek. Ongelukkig kan ons nie op die stadium U besoek op die plaas nie, maar sal graag enige kwellinge oor die telefoon bespreek indien nodig. U kan vir my gerus enige kwellinge aanstuur per epos, ek sal U weer later probeer bel.

	NAAMBORD AAN REGTERKANT. STARLINGH ,PRETORIUSKLOOF,JOHAN EN LYNETTE BARNARD TEL 0810232392, LANFLYN 0147633387, 0781447747 *<u>English Translation:</u> Please send us an Afrikaans translation / or alternatively visit us on our farm. Our farm is situated atKuipersbult Road, from the Medupi/Afguns Road, past Soutpans Road, past Eskom Conservation Grounds on left and right-hand side. Please note name plate/sign on right-hand side. Starlingh, Pretoriuskloof, Johan and Lynette Barnard. Tel 0810232392, Landline 0147633387, 0781447747*		***Mathys Vosloo, EAP*** *<u>English Translation</u>: I tried to follow up with you with regards to the email below. Could not reach you on any of the phone numbers. I just want to understand if you have any concerns about the project. Unfortunately, we cannot visit you on the farm at this stage, but will be happy to discuss any concerns about the project over the phone if necessary. You can send me any concerns by e-mail, I'll call you again later.*
1.3.3	Would you kindly add my name on your register for I&AP for the above mentioned project. My contact details are in my below signature. Mr. Ezekiel Monyamane Senior Manager, Environment and Sustainability, Risk Management Department T: 011 584 0547, C: 081 048 0856 E:ezekiel.monyamane@transnet.net, www.transnet.net "Environmental Management Makes Business Sense"	MONYAMANE, Ezekiel, Email received on 06 April 2018, 3:01pm	Dear Mr. Monyamane You have been registered on the project database and will receive all future communication relating to the Medupi FGD Retrofit Project. Mathys Vosloo, EAP
1.3.4	Good Day, Can you please send the letter referred to in the email below. <u>Email referred to are</u>: **Subject:** 12949-004-Medupi FGD: EMC Notification DEIR & WML Variation Dear Medupi EMC Stakeholder **ENVIRONMENTAL IMPACT ASSESSMENT, WASTE MANAGEMENT LICENCE VARIATION AND WATER USE LICENSE APPLICATION FOR THE PROPOSED RETROFITTING OF A FLUE GAS DESULPHURISATION (FGD) SYSTEM AT MEDUPI POWER STATION, LEPHALALE, LIMPOPO PROVINCE**	VAN ROOY, Deidre, Email received 12 March 2018, 7:32am	Hi Deidre, Please find attached the letter as requested. ***Mathys Vosloo, EAP***

	• **NOTIFICATION OF AVAILABILITY OF DEIR, WML VARIATION APPLICATION AND PUBLIC MEETINGS**		
1.3.5	Transnet pipeline servitudes are not affected by the proposed work/installations.	HADEBE, Tami (Transnet), Email received 19 April 2018, 10:16am	Thank you for your response. We acknowledge your indication that Transnet pipeline servitudes are not affected by the proposed work/installations. ***Mathys Vosloo, EAP***
1.3.6	After the evaluation of the DEIR and the specialist reports submitted for the proposed development, it was noted that the site falls within the Limpopo Water Management Area (WMA) 1 and it is situated in the Mokoko River Catchment. The proposed area also falls within the Limpop Sweet Bushveld vegetation type, classified as Least Threatened. With important plant and bird species identified within the vegetation type. The Directorate: Biodiversity Conservation recommends that the following be included in the Environmental Authorisation as specific conditions (EA): • All wetlands areas must be avoided by the development activities, including a suitable buffer zone to avoid impacts on these water courses; • Harvest of hill wash material must be prohibited within 100m of the delineated edge of all identified depressions and semi-arid ephemeral wash wetlands and within 500m radial buffer of the identified bullfrog breeding site; • A pre- and post-construction alien and invasive control, monitoring and eradication programme must be implemented along with an on-going programme to ensure persistence of indigenous species; • Rehabilitation work must be done during low rainfall seasons and soil compaction should be prevented as far as possible; • Alien invasive plant species in and around the road reserve must be removed in terms of Conservation of Agricultural Resources Act (CARA), and follow-up actions for at least 5 years need to take place; and	LUTSCH, Wilma (DEA: Director: Biodiversity Conservation, and TSHITWAMULOMONI, Stanley (DEA: Control Biodiversity Officer Grade B), Letter received on 12 March 2018.	Thank you for providing comments on behalf of the DEA Directorate: Biodiversity Conservation. The comments have been included as recommendations in the FEIR, and has also been included in the EMPr in the section dealing with the management of impacts on biodiversity and wetlands (section 5.2.4). ***Mathys Vosloo, EAP***

	• All re-vegetation must be done with local indigenous plant species as specified by the Provincial Co-ordinator and/or Wetland Ecologist. The overall biodiversity objective is to minimise loss of biodiversity as far as possible. Therefore, in order to achieve this objective, the above-mentioned recommendations must be adhered to.		
1.3.7	This Department has the following comment on the abovementioned application: i. Please note that the reference for the abovementioned project has changed from 14/12/16/3/3/3/110 to 14/12/16/3/3/2/1060 since the application is no longer an Integrated application. You are therefore required to use the new allocated reference number for the abovementioned project.	MALAZA, Sabelo (DEA Chief Director: Integrated Environmental Authorisations), and SKEPE-MNGCITA, Pumeza (DEA DD: Co-ordination, Strategic Planning and Support), Letter received on 3 May 2018.	Zitholele Consulting has taken note of the change in reference number and has amended the EIA documentation to reflect the new reference number: 14/12/16/3/3/2/1060. ***Mathys Vosloo, EAP***
1.3.8	ii. The site layout map presented on appendix D1 the DEIAR is invisible, therefore a topographic site layout map that will demonstrate all the proposed activity must be incorporated into the FEIAR.		The missing site layout map is likely the result of a printing issue during compilation of the DEIR for the department. The site layout, including a number of other development footprint and sensitivity maps has been included in the FEIR for consideration by the DEA. Zitholele has further checked final printed copies of the FEIR to ensure no pages or maps are missing prior to final submission of the FEIR to the DEA. ***Mathys Vosloo, EAP***
1.3.9	iii. You are required to submit proof of the authorised waste disposal facility that is going to be used to dispose the hazardous waste.		Eskom has obtained a letter from EnviroServ Waste Management (Pty) Ltd confirming that Eskom will be able to dispose of the waste at Holfontein Waste Disposal Site. This letter is included in **Appendix I-1**. ***Mathys Vosloo, EAP***
1.3.10	iv. Description of activity 18 of GN R 544 on Appendix A of the DEIAR states that "It is likely that infilling or excavation of more than 10m3 within a watercourse may occur during construction of the rail yard and associated infrastructure". You are therefore advised to refrain from using the word "may" and use "will" instead.		Zitholele consulting has amended the wording relating to the listed activities in the EIA Application form and FEIR to avoid words such as "may" in favour of confirmatory words such as "will". ***Mathys Vosloo, EAP***
1.3.11	The Department of Public Works, Roads and Infrastructure has no objections whatsoever regarding the project.	TSHIKONELO, Nditwani (Limpopo Dept. of Public	The Limpopo Dept. of Public Works, Roads and Infrastructure's support for the project is noted. We extend our gratitude for participating in the public participation process for this Medupi FGD Retrofit Project EIA.

		Works, Roads and Infrastructure, Fax received with DEIR Comment Sheet comments.	***Mathys Vosloo, EAP***
1.3.12	RE: COMMENTS IN RESPECT OF CONSULTATION FOR THE APPROVAL OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT FOR THE PROPOSED RETROFITTING OF A FLUE GAS DESULPHURISATION SYSTEM AT MEDUPI POWER STATION WITHIN LEPHALALE LOCAL MUNICIPALITY OF WATERBERG DISTRICT 1. The above matter refers. 2. The Department acknowledges receipt of the request for comments on the Environmental Impact Assessment Report (EIAR) for the above mentioned proposed development dated 19 February 2018 and received by the Department on 22 February 2018, 3, The Department has reviewed the contents of EIAR and has no comments in that regard. 4. Please note that in terms of section 24F(1) of the NEMA and notwithstanding the provisions of any other Act; "no person may commence an activity listed in terms of section 24(2) (a) or (b) unless the competent authority has granted an EA for the activity, and no person may continue an existing activity listed in terms of section 24(2) (d) if an application for an EA is refused".	GULWAKO, NN (Limpopo Department of Economic Development, Environment and Tourism, Letter received on 12 March 2018	Zitholele Consulting thanks the Limpopo Department of Economic Development, Environment and Tourism, for their review of the DEIR, and acknowledge that the department has raised no comments with regards to the development. ***Mathys Vosloo, EAP***
1.3.13	Why is the power station only taking measures now to protect the community from health impacts of the gas emissions?	MPUTHI, Miles (Resident in Steenbokpan Community), Comments raised at Public Meeting held in Steenbokpan on 12 March 2018.	**Responses provided at the Public Meeting:** Eskom must remain compliant to legislative requirements of the authorizations and licenses issued to the power station. The Medupi Power Station is therefore implementing requirements relating to the FGD system in relation to changes in the National Ambient Air Quality (NAAQ) Minimum Emission Standards (MES). ***Eskom, the proponent***
1.3.14	How long will construction process take and when will it start?		**Responses provided at the Public Meeting:** Construction will commence in approximately 2020 and will take 3 years to

			complete. ***Eskom, the proponent***
1.3.15	Protection of the water resources, particularly the underground systems, must be ensured		**Responses provided at the Public Meeting:** Dirty water dams would be lined as required by legislation, while a water use license application must also be obtained to prevent or minimize pollution into the ground water. External Environmental Control Officers are furthermore contracted to undertake continuous assessment of the construction activities. ***Eskom, the proponent***
1.3.16	What were the learning outcomes from the other power stations, particularly Matimba so that similar mistakes aren't repeated?		**Responses provided at the Public Meeting:** All legislative process was followed and adhered to for compliance purposes. However, the question will be deferred to Matimba Power Station Environmental Manager. ***Eskom, the proponent***
1.3.17	Heritage issues still remains a problem, especially with surveying of land and keeping the respect of ancestral graves, local tradition and implications thereof.		**Responses provided at the Public Meeting:** Eskom undertook an extensive process to investigate, and rectify where needed, any impacts on graves during the construction of the Medupi Power Station. Heritage specialists were also appointed to specifically investigate issues around graves and relocation where it was needed. Eskom understands that it is an ongoing issue, and this issue will be addressed through the Medupi Power Station EMC. ***Eskom, the proponent***
1.3.18	The ward councillor said that Eskom was going to talk about jobs at this meeting.		**Responses provided at the Public Meeting:** Eskom has not made such promises to the ward councillor and the matter will be raised with the councillor. It was specifically said that this meeting was to present the outcomes of the Environmental Impact Assessment to the community and engage in discussion relating to the project with the community. ***Eskom, the proponent***
1.3.19	I think the distance between the power station and the community will not affect the community. Tests are also being conducted to ascertain the truth if those that claim grave sites that those graves belong to them.	MOGWANE, Magda (Ex Matimba employee), Comments raised at Public Meeting held in Steenbokpan on 12	**Responses provided at the Public Meeting:** Processes have been undertaken to compensate for the loss of graves for those that have a right. ***Eskom, the proponent***

		March 2018.	
1.3.20	What happens to the dirt water that is used from the WFGD system?	HILLS, Hendrie (Resident in Lephalale), Comments raised at PM in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** The system uses water for two reasons, namely for evaporative cooling and process induced water for the reaction, accordingly the evaporative water evaporates to the sky it can be seen as a plume from the chimneys, and the process water is cycled back in to the Zero Liquid Discharge (ZLD) system. ***Leon van Wyk, Eskom***
1.3.21	What happens to the effluent discharge from the WFGD system?		**Responses provided at the Public Meeting:** The effluent will be treated from a waste treatment plant within the Power Station. ***Leon van Wyk, Eskom***
1.3.22	Is the Eskom going to use clean water or grey water from the system?	MUTHUVHA, Lutendo (Env Manager at NCC), Comment raised at PM in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** There no specifics on the water requirement on the system, even processed water can be used. Currently there is a plan to get the processed water from Pretoria via the MCWAP Phase 2A scheme. ***Leon van Wyk, Eskom***
1.3.23	Was the cumulative assessment on air quality done?		**Responses provided at the Public Meeting:** Yes, cumulative impacts were assessed by the air quality specialist through the scenarios that was modelled and also since it's an air quality priority area. ***Mathys Vosloo, EAP***
1.3.24	What are the characteristics of the ash composition?	PRETORIUS, Susan (Landowner), Comment raised at PM in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** The composition will remain the same accept that there will be an addition of calcium sulphide and or calcium sulphate in the mixture. ***Leon van Wyk, Eskom*** Mr Emile Marrel (Environmental Manager at Eskom Medupi Power Station) offered to extend meeting invitations to Mrs Pretorius on their Environmental Management Committee (EMC).
1.3.25	Will there no temporary waste disposal sites in Lephalale?	BASSON, Astrid (Councillor Lephalale Municipality), Comment raised at KSW in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** The EIA deals only with the existing disposal facility. Gypsum will be disposed with ash on the existing facility, while salts and sludge will be temporarily stored on site within the Medupi Power Station footprint, before being trucked to an existing disposal facility. ***Mathys Vosloo, EAP*** Eskom is running a project to investigate future disposal facilities for Medupi,

			which include finding an extension to the existing ash disposal and a new hazardous disposal facility. The intent is to establish a regional hazardous disposal facility or for Eskom to at least be the front runner in providing this solution. This is currently in a pre-feasibility stage and will move towards a feasibility stage by the end of 2018. ***Theuns Blom, Eskom*** There is already a shortage of space on existing facilities in Lephalale. Eskom is looking at piloting the regional disposal site to cater for regional waste instead of trucking it all the way to Johannesburg. This initiative will be looking at creating employment opportunities for the broader community. ***Emile Marrel, Medupi Power Station (Eskom)*** The original planning included a proposed space for the remaining 30 years of disposal, but upon investigation this site was not suitable. Therefore, in order to support the implementation of the FGD, investigation of a new site was proposed as a separate process to streamline the FGD authorization process. ***Tobile Bokwe, Eskom***
1.3.26	Are there any plans for using the gypsum in downstream beneficiation to help locals to make use of this opportunity?	BASSON, Astrid (Councillor Lephalale Municipality), Comment raised at KSW in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** Considering the quality of coal that the power station is burning and the quality of limestone the FGD process is designed for, Eskom is anticipating that it will end up with a gypsum of a quality usable for agriculture. That said, once we have a stable production of gypsum, it will be re-classified as a resource and only at that point can we understand what the gypsum will be most suitable for. ***Theuns Blom, Eskom*** You need to wait for all the units to be running in order to get a representative sample of the gypsum to be re-classified. ***Sifiso Mazibuko, Medupi Power Station (Eskom)*** The power station has been designed to allow for future offtake of gypsum. If Eskom comes to a decision to use gypsum then the plant will be ready to implement this future offtake. ***Leon van Wyk, Eskom***
1.3.27	How labour intensive is it to construct the FGD units and	BASSON, Astrid	**Responses provided at the Public Meeting:**

	will locals have employment opportunities based on skills levels required?	(Councillor Lephalale Municipality), Comment raised at KSW in Lephalale on 13 March 2018	Eskom is in the process of establishing an execution entity, which will have a set number of Eskom employees and unskilled, semi-skilled and skilled laborers. Eskom is working with the Medupi sustainability department to see how it will manage labour requirements. Eskom is planning to mobilise more than one team during construction of the units which will mean that there will be a shorter construction time but with more labour at peak time, i.e. a group of about 4000 people, which will include un-skilled, semi-skilled and skilled labour. ***Theuns Blom, Eskom***
1.3.28	What is plan B if MCWAP Phase 2A does not deliver water in time?	BASSON, Astrid (Councillor Lephalale Municipality), Comment raised at KSW in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** Currently the station already has guaranteed water allocation for the entire Medupi Power Station and 3 of the FGD units. If you look at timelines it is more than adequate in advance to supply water until MCWAP Phase 2 is operational. Eskom is also having regular engagement with DWS and TCTA regarding the MCWAP delivery, which shows a general support from the government to move the MCWAP project forward. ***Theuns Blom, Eskom***
1.3.29	Why is Eskom not driving the water use license application concurrently with the EIA process?	HLEKANA, Love (DWS), Comment raised at KSW in Lephalale on 13 March 2018	**Responses provided at the Public Meeting:** The process has been run concurrently, but due to detailed information requirements the WULA has run behind. Late in 2017 a meeting with DWS regarding the sensitive wetland area indicated that a wetland offset would be required. This has filtered into the staggered submission of the WULA. ***Mathys Vosloo, EAP*** The DWS is now running an online submission system, but a number of activities required by the system is already been undertaken. We will be uploading the existing data in order to move through the different phases of the online submission. One the main application has been completed it will be uploaded into the system in order to meet decision making timeframes. Therefore, Eskom is not looking at the full 300 days from submission of the application as it has uploaded the previous documents as per the requirements of the online submission system. ***Felicia Sono, Eskom*** From a PPP perspective, once the WULA documentation is completed it will be made available to the public for review. The public meetings include

			aspects of the WULA well so therefore once the WULA is available another public meeting will not be undertaken as the public is made aware of the WULA at this stage to allow discussion on any aspects. ***Tobile Bokwe, Eskom***
1.3.30	Has a source of the limestone been determined yet, and if so where will it be sourced from?	GREYLING, Elana (Concerned Citizens of Lephalale), Comment raised at KSW in Lephalale on 13 March 2018.	**Responses provided at the Public Meeting:** The source of Limestone is going to be from the Northern Cape from where it will be transported via rail to the Vaal Triangle. From the Vaal Triangle it will be trucked to Medupi. Eskom is investigating how best to transport the limestone via rail to the station. Eskom is however, considering using limestone from closer sources in Limpopo, but until such time the business case has been presented and accepted by the Eskom board the primary division cannot approve new suppliers for the limestone. ***Theuns Blom, Eskom*** Limestone and lime are very different materials. Lime is a product of limestone once it has been manipulated through calcination. Limestone is available in the area and as a company we go to the worst case in terms of our planning, that is sourcing out of the Northern Cape. Eskom is perusing the option to source the limestone from local sources. It was also quite an effort to redesign the FGD to take lower quality limestone. ***Leon van Wyk, Eskom***
1.3.31	Is it a complicated process to separate the gypsum from the water, sludge and salts, heavy metals, etc? Is there a plant that does that?	GREYLING, Elana (Concerned Citizens of Lephalale), Comment raised at KSW in Lephalale on 13 March 2018.	**Responses provided at the Public Meeting:** It is actually very simple to separate the waste. Liquids are separated from the limestone slurry. The fluids go to the hydrocyclones plant which again separate liquids from the solids. The liquids are treated and re-used in the system, while the solids are sent to the disposal facility. ***Leon van Wyk, Eskom***
1.3.32	Can we have a monthly record of emissions from the Medupi Power Station? Peak exceedances were presented, so how peak is the peaks and how does that effect the communities?	GREYLING, Elana (Concerned Citizens of Lephalale), Comment raised at KSW in Lephalale on 13 March 2018.	**Responses provided at the Public Meeting:** There are two sets of emission standards that are set for emissions. Currently it is the 2015 emission standards. With the spikes a problem that the power station face is varying qualities of coal. The coal in this area has a higher Sulphur content that in the highveld. A specification for the coal is set for the Medupi Power Station and if we can keep within this spec which levels out at about 1.8% Sulphur content, then the station can confidently remain within the 2015 standards. With the life of mine plan what we find is that the Sulphur

			content of the coal steadily increases, therefore when coal is used that has a Sulphur content higher than 1.8% it generally causes these spikes in the Sulphur emissions. At this stage, due the power station being under construction we cant consistently blend the coal to achieve an average Sulphur content below 1.8% to remain within the applicable limits. That is where we have these spikes. It is usually only on hourly periods. The average power station emission is well below 3500mg/Nm3. You are more than welcome to join the EMC where details of the emission profile can be discussed on a quarterly basis. With the commissioning of the FGD the new emission standards will be consistently complied with. Therefore, at this point in time there is very little influence from SO2 emission on the Lephalale area and surrounding area. ***Emile Marrel, Medupi Power Station (Eskom)***
1.3.33	If FGD is only using 2% of what the Limpopo River dumps in the sea, why is this area called a water scarce area?	GREYLING, Elana (Concerned Citizens of Lephalale), Comment raised at KSW in Lephalale on 13 March 2018.	**Responses provided at the Public Meeting:** As the MCWAP Phase 2 comes online, more water will become available in the area. Eskom also broadly rely on the planning and implementation of programs by the DWS. The MCWAP Phase 2 conceptually shows how water from a high rainfall area is transferred to an area of low rainfall for equitable use of water by all parties. ***Emile Marrel, Medupi Power Station (Eskom)*** The MCWAP Phase 2 also caters for water to the region not only for Eskom. ***Mathys Vosloo, EAP*** MCWAP will also provide water for other industries, mines, municipalities and communities. Eskom is therefore one of the users, it is the largest users but certainly not the only user. ***Emile Marrel, Medupi Power Station (Eskom)*** A benefit of the MCWAP Phase2 program is that it will free up better quality water for human consumption due to users such as Eskom rather making use of lower quality water through MCWAP Phase2 as opposed to its current use of good quality water through the MCWAP Phase1. ***Leon van Wyk, Eskom***

2	**COMMENTS RAISED DURING IMPACT PHASE (PRIOR TO THE RELEASE OF THE DEIR)**		
2.1	**SITE ALTERNATIVES SELECTION RELATED COMMENTS (The site selection process no longer forms part of the scope of work, none of the alternative sites we considered to be feasible)**		
2.1.1	An open hunting license has been awarded to the game hunting company.	LAMPRECHT, Mr Snr Landowner: Farm Fancy 518 One-on-One Meeting: 02 September 2015	Information noted and will be relayed to the environmental specialists to avoid this proposed site alternative as it is perceived as a safety risk. ***Nicolene Venter, Snr PPP***
1.2.3.2	Paying hunters move between the various farms at unannounced times and there is no communication between the hunting group and the base station, making walking on the farm a safety risk.		
1.2.3.3	To ensure the environmental specialists' safety, the three specialists that attended the discussion with Mr Lamprecht took the decision not to undertake their field assessment and they were: a. Mr Ian Jones, Soil Specialist, Earth Science solutions (Pty) Ltd; b. Mr Morris Sutton, Heritage Specialist, NGT Projects & Heritage Consultant; Ms Zetu Damane, Social Specialist, NGT Projects & Heritage Consultant.	Ian Jones: Soil Specialist; Morris Sutton: Heritage Specialist; Zetu Damane: Social Specialist One-on-One Meeting: 02 September 2015	No response required.
1.2.3.4	Property information was requested from Exxaro so that those site alternatives that are not feasible can be eliminated the early stage of identification and assessment.	OOSTHUIZEN, Tania EAP: Zitholele Consulting Telephone Conference: 24 June 2015	No response required.
1.2.3.4(a)	The feasibility of Site Alternatives 6 and 10 (Hieromtrent 460; Vaalpensloop 313; Grootegluk 459; Leeuwdrift 312, Mc Cabesvley 311; Daarby 458 & Goedehoop 457) were queried.		It was confirmed that site alternatives 6 and 10 are on properties owned by Exxaro. Site alternative 6 is partially Grootegeluk and Vaalpensloop and these properties form part of the pit for which a MA has been issued. The pit will eventually extend to the farms Leeuendrift and Hieromtrent. The farm Vaalpensloop will accommodate the underground phase of Exxaro's

			Thabametsi Mine. Exxaro will first commence with the pit and then go underground. The MR for Exxaro's Thabamentsi Mine is in process. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.3.4(b)	The feasibility of Site Alternatives 7 and 8 (Turfvlakte 468 & Enkelbult 462) was queried.		This proposed site alternative is situated on Exxaro's existing explosive magazine and the Farm Turfvlakte is also being considered for the pit. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.3.4(c)	It was enquired whether there is a possibility to move the explosives magazine situated on site alternatives 7 and 8.		It would be technically possible but might not be feasible for Exxaro. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.3.4(e)	The feasibility of Site Alternative 9 (Nelsonskop 464, Appelvlakte 448 & Vooruit 449) was queried.		Portions of these farms are not earmarked for mining as they might need to use it in their off-set plan and is not included in their MR area. It was also mentioned that Nelsonskop is an archaeological site, there are no roads and Exxaro wants to keep this area as pristine as possible. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.3.4(f)	It was enquired whether Exxaro can share any information regarding the farms Zongezien and Ganzepan.		Exxaro's sewage plant is situated on the farm Zongezien and that they are in the process of negotiating a servitude over the farm Ganzepan. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.3.4(g)	A portion of site alternative 7 is situated on Exxaro's Manketti biosphere reserve and that Manketti biosphere reserve forms part of Exxaro's environmental trade-off procedure. Manketti is currently being managed as a conservation area. ZC was also informed that the Lodge is situated close to site alternative 8 and is a commercial commodity of Exxaro.	SWANEPOEL, Filomaine Environmental Manager, Exxaro Telephone Conference: 24 June 2015	Information acknowledged. ***Tania Oosthuizen, EAP***
1.2.8.1	The project team was informed that no geotechnical assessment (drilling of test holes) may be undertaken on his property without compensation.	LAMPRECHT, Mr Snr Landowner: Farm Fancy 518 One-on-One Meeting: 02 September 2015	The information received was forwarded to Eskom for decision-making. ***Nicolene Venter, Snr PPP***
2.2	**CONSULTATION AND COMMUNICATION RELATED COMMENTS**		
1.2.9.1	We are still waiting for our PPP at Marapong and Steenbokpan. Humbly request – got a local radio station called Lephalale FM and community at large to be	HLABIWA, Lucky I&AP E-mail: 19 July	Please receive herewith acknowledgement of your comment submitted in the e-mail below. A formal response will be forwarded in due course.

	informed of the project as some cannot read and some are disabled.	2015	***Nicolene Venter, Snr PPP*** The details of the proposed public meetings was broadcast on Lephalale FM, however the public meeting could not continue due to protest action. ***Mathys Vosloo, EAP***
1.2.9.2	It was enquired whether any arrangements about pending public participation processes that must be implemented at Marapong and Steenbokpan.	E-mail: 24 July 2015	Please note that the public participation process is an ongoing process. It is believed that you are referring to a public meeting to be held regarding the proposed Medupi Flue Gas Desulphurisation project. We will keep you informed regarding this matter. ***Nicolene Venter, Snr PPP***
	Thanked the team for their response and are happy with the updates.	E-mail: 25 July 2015	
1.2.9.3	Your previous public participation excluded Marapong and Lesedi which are the most affected communities. The reasons for cancellation of the meeting were never communicated to the community. The meeting was cancelled in a short notice and the mode of cancellation. Community of Lesedi was never invited and there was no arrangement at all for them. In this regard I would like to draw your attention to the wind direction in Lephalale and taking into account the location of Medupi versus Lesedi (Steenbokpan). In this regard I would like to request to justify why Lesedi is on part of affected and interested community. I guess you are not undermining us because of skin pigmentation. We demand our public participation meeting so that we can address our viewpoint and also to ensure that our views are taken into account when determination is made about our welfare. Failure to engage will lead us taking this matter to relevant authorities so that we can be taken serious.	MAAKE, Nakedi I&AP E-mail: 15 July 2015	Please receive herewith acknowledgement of SANCO's comments submitted in the e-mail below. A formal response will be forwarded to SANCO in due course. ***Nicolene Venter, Snr PPP*** The team met Mr Maake at Eskom's EMC public meeting on Tuesday 01 September 2015 and was informed that a public meeting for the proposed Medupi FGD will be held before the end of 2015. The date, time and venue will be communicated to all registered on the project database and any other means to ensure that the community of Marapong is informed timeously. ***Nicolene Venter, Snr PPP***
1.2.9.4	The following documents were requested from Exxaro: • Boundary of Manketti Game Reserve • Layout of their planned Thabamentsi Mine • Mining Plan	OOSTHUIZEN, Tania EAP: Zitholele Consulting Telephone	The requested information was received via e-mail on 01/07/215.
1.2.9.5	The contact details of Exxaro's Manketti Reserve		The contact details were provided during the telephone conference and

	Manager were requested to include him on the project database.	Conference: 24 June 2015	captured on the project database. ***Nicolene Venter, Snr PPP***
1.2.9.6	The stakeholder was informed that there will be a long delay before the DEIR will be available for public review due to the site selection process currently underway.		Information noted. ***Filomaine Swanepoel, Environmental Manager, Exxaro***
1.2.9.7	Requested a copy of the 10km site selection radius map showing the property ownership.	ROSSOUW, Ettiene Lessee: Farm Kromdraai One-on-One Meeting: 01 September 2015	The map was forwarded via Dropbox on 18 September 2015. ***Nicolene Venter, Snr PPP***
1.2.9.8	Other specialists that may require access to the Farm Fancy will not access the site until confirmation has been provided that no hunting will occur for the duration of their investigations on site.	VENTER, Nicolene Snr PPP: Medupi FGD Project One-on-One Meeting: 02 September 2015	No response required.
1.2.9.9	At the meeting held, it was agreed that Mr Lamprecht will provide ZC with three (3) dates per week for the following three (3) months when hunting will not be taking place. These dates will be communicated to the specialists and Zitholele Consulting will confirm their field assessments with Mr Lamprecht's attorney, Mr Ettiene Rossouw, as representative of Mr Lamprecht.		Request was confirmed per letter dated 16 September 2015 that was e-mail to Mr Rossouw. ***Nicolene Venter, Snr PPP***
1.2.9.10	A Google Earth map indicating the geotechnical testing holes that are planned to be undertaken on the Farm Fancy will be forward when required. This map, together with an outline of the activity.		Once the dates for the geotechnical survey have been confirmed with Mr Rossouw, the map and information, as requested, will be forwarded. ***Nicolene Venter, Snr PPP***
3	**COMMENTS RAISED DURING THE FINAL SCOPING REPORT (FSR)**		
3.1	**COMMENTS RAISED BY AUTHORITIES**		
3.1.1	**South African National Biodiversity Institute**		
1	SANBI is a public entity mandated to act in an advisory or	MANUEL, J	Note is taken that SANBI will not participate as an I&AP for this proposed

	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.	Deputy Director: Biodiversity Planning and Policy Advice SANBI Letter: 05 November 2014	project. However, SANBI will remain on the project database to ensure that they receive project related information as and when available. ***Nicolene Venter, Public Participation Practitioner*** The biodiversity specialist will reference the information obtained from SANBI's website in the Biodiversity Report appended to the DEIR. ***Sharon Meyer-Douglas, EAP***
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. ***Nicolene Venter, Public Participation Practitioner***
3	I also encourage you to visit our web portal http://biodiversityadvisor.sanbi.org 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. ***Sharon Meyer-Douglas, EAP***
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 costs to the project proponent. Such a proactive approach can:		
4.1	▪ 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;		
4.2	• 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		

4.3	• Identify the scope, type and intensity of environmental assessment that is likely to be required if an application were to proceed.		
5	This approach also supports best practice in environmental assessment and planning by:		
5.1	• 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);		
5.2	• Emphasizing the fundamental role of alternatives in selecting the best practicable environmental option;		
5.3	• 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		
5.4	• Supporting the principle that environmental management must pay specific attention to planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.		
3.1.2	**LIMPOPO DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM**		
3.	The Department has reviewed the final SR & PoS for the above-mentioned development end the comments are as follows:	Masungi Tashuketana Department of Economic Development, Environment and Tourism Letter dated: 30 June 2016	
	3.1 An Atmospheric Impact Assessment Study relating to NOx dispersion must be conducted and submitted to the National Department of Environmental Affairs for review		An Air Quality Impact Assessment was conducted and forms part of the EIA report (Refer to **Appendix G-**6)
	3.2 The Area within the proximity of the stacks must be bunded to prevent corrosion owing to the low PH water droplets from the slacks		Comment noted. The areas around the stakes have been declared as dirty water areas, therefore any run-off from this area will report to the Pollution Control Dams. The Maintenance and Operations Manual for these areas will form part of the Final Engineering Designs for the plant.
	3.3 The air pollution control device (abatement equipment) maintenance programme must be developed and Implemented to ensure that the air pollution control device does not result in substantial emission increase		It should be noted that the objective of the FGD is to reduce the level of air pollution generated by the station. The station will continue to utilise the existing maintenance plan to reduce the possible increase in air pollution.

	3.4 The knowledge of the prevailing wind should be taken into account when positioning the limestone stockpiles and gypsum disposal sites		Comment noted. The information on the prevailing wind in the area where taken into consideration prior to the selections of the limestone stockpiles and gypsum disposal sites.
	3.5 The limestone handling activities should be contained within a confined space and measures should be undertaken to minimise generation of fugitive dust		Comment noted. Please note that the dust suppression measures proposed in the DEMPr (**Appendix H**) will be implemented to minimise the generation of fugitive dust.
	3.6 Appropriate methods to control fugitive dust from the gypsum disposal site must be applied at all times		
	3.7 The transportation equipment must be covered in such a way that fugitive dust emissions are minimized.		The Transportation of Hazardous Substances standards will be implemented in order to minimise fugitive dust emission during.
3.1.3 INTERESTED AND AFFECTED PARTIES			
2.2.1	The FSR fails to meet the prescribed requirements for a scoping report.	KOMANJA, Sylvia Attorney: CER Letter: 13 July 2015	It was requested that the CER indicate what elements preclude the FSR from the required format, as Zitholele has worked according to the National Environmental Management Act (Act 107 of 1998 as amended) as well as to the National Environmental Management: Waste Act (Act 59 of 2008 as amended). The FSR has been accepted by the competent authority. ***Sharon Meyer-Douglas, EAP***
2.2.2	A Project Schedule Study should be included as a specialist study to investigate opportunities to expedite the FGD project schedule and the potential to co-commission the last few units with FGD.		The timeframes for the implementation of the FGD process have been discussed within the report as well as within the responses in the Comments and Response Report (versions 1 and 2). Any information regarding the Medupi Power Station should be requested from the EMC of the power station. ***Sharon Meyer-Douglas, EAP***
2.2.3	The FGD schedule, together with the risk register (which apparently outlines the various risks and mitigation measures associated with the FGD project) should also be made available to all stakeholders.		The Environment Impact Assessment sole purpose is to identify and mitigate any risks that are highlighted during this exercise. There is no requirement for a Scoping Report or any other EIA document to provide a project schedule or risk register to the stakeholders. The purpose of the EIA process is to identify environmental impacts and practicable mitigation. ***Sharon Meyer-Douglas, EAP***
2.2.4	An independent water minimisation study, to investigate interventions to reduce and reuse water, should be included as a specialist study in the impact assessment phase. Further, the impact of the project's water use on other water users within the catchment, especially non-		DWS is the custodian of water within the country and therefore it is accepted that DWS has undertaken all appropriate water investigations prior to allocation of water to any water user. The client will be applying for water allocation from MCWAP Phase 2A and DWS will be the responsible party in making a decision for allocation. The DWS has made provision for the water

	strategic users, should be evaluated and address in the Impact Phase. The study should ensure the alternative water sources are investigated as a contingency.		requirements for all relevant water users when allocating water to Eskom from the Mokolo River (Mokolo Dam) as well as future water supplies from the Crocodile River (West). Detailed water demand forecasts of all known users and water resource studies have been done by DWS. In terms of Water Minimisation, Eskom implements the Zero Liquid Effluent Discharge(ZLED) philosophy to ensure water minimisation is implemented at Medupi Power Station, which includes reduce and re-use options. ***Sharon Meyer-Douglas, EAP***
2.2.5	Eskom should conduct an additional study if there are plans to extend the ash disposal facility.		Eskom has to ensure ashing facilities for the life of plant, which will require that the current ashing facilities are extended in the future. Eskom will comply to all legislative requirements in this regard. ***Sharon Meyer-Douglas, EAP***
2.2.6	Specialist studies on transport impacts shold be included in the Plan of Study for the EIA to the extent that the previous study conducted does not address the concerns set out in these submissions.		The detailed traffic impact study, as with all specialist studies, will be carried out during the EIA Phase. The traffic impacts assessed will be related to the transportation of waste for off-site disposal. ***Sharon Meyer-Douglas, EAP***
2.2.7	Surface and ground water specialists should be appointed since these are identifies as important in the terms of reference (ToR) for specialist studies and water is a core concern in the area.		Surface and ground water specialists are part of the specialists' team as presented in the FSR. As with all specialist studies, a groundwater and a surface water study will be conducted within the EIA Phase. These studies will be related predominantly to the disposal facilities, as these are identified as having a potential risk to groundwater and surface water. ***Sharon Meyer-Douglas, EAP***
2.2.8	If Eskom will be installing wet FGD for Medupi, it would be unacceptable to proceed without including the flue gas cooler in the design.		The statement is noted. The flue gas cooler was discussed within the FSR and will be further assessed within the EIA phase. ***Sharon Meyer-Douglas, EAP*** The feasibility of the flue gas cooler was assessed in late 2017 and early 2018 by Eskom through an updated technology selection report dated 16 February 2018. This report concluded that the gas cooler technology was not feasible for the conditions at the Medupi Power Station. The report is included in the DEIR as Appendix C-1. ***Mathys Vosloo (EAP)***
2.2.9	Gypsum disposal should be considered a last resort and market opportunities for the sale of the large quantities of gypsum to be produced should be sought;		Eskom has undertaken market research to identify users of industrial gypsum. The research has highlighted that the operations at the Kusile Power Station (installed with FGD) would fulfil and exceed the identified market need even prior to the commissioning of the Medupi FGD system. Therefore, the

			authorisation process must look at the worst case scenario for the disposal volumes of gypsum. Should there be an increase appetite in the commercialisation of industrial gypsum in the future. Medupi Power Station can be modified to cater for transport of gypsum to the appropriate market. However, at this stage, sale of gypsum is not a viable option. ***Sharon Meyer-Douglas, EAP***
2.2.10	The new gypsum disposal facility proposed as a feasible disposal alternative in the DSR should be included for evaluation in the impact assessment phase and the disposal of the gypsum in its own compartment in the future as ash disposal facility (ADF) should also be evaluated.		These options will be assessed and discussed within the EIA Phase. The conceptual designs of the preferred disposal facilities for FGD waste will be made available within the EIR. However, it must be noted that the EIA is proceeding with the understanding that gypsum will be disposed of with ash at the disposal facility. ***Sharon Meyer-Douglas, EAP***
2.2.11	For the waste comparative study, the FSR should provide a clear outline of the intended methodology for the study.		What waste comparative study is being referred to here, please may further clarification be provided to aid the response to the point. Zitholele has undertaken a Waste Classification Study and the report was made available as Appendix H (Waste Classification Report) to the FSR. There are no future waste related studies pending for this process. Zitholele has undertaken site selection for waste disposal and a screening report has been made available to inform the stakeholders of the methodology and outcome of the site selection screening of the initial 12 locations identified, to focus on the three site alternatives. Site selection will form part of the EIA Phase. ***Sharon Meyer-Douglas, EAP***
2.2.12	Eskom should provide explicit ToR for all specialist studies relevant to the project, including those that only need updated; and		Zitholele can now provide feedback that the FSR was accepted by the competent authority, the Department of Environmental Affairs (DEA). Stakeholder was provided with the segment extracted from the FSR, page 74. ***Abstract as referenced above was included in the response letter which is included in Appendix F.*** ***Sharon Meyer-Douglas, EAP***
2.2.13	For the impact assessment methodology, the FSR should include a Plan of Study for EIA which must consider the extent to which an impact could lead to irreplaceable loss.		This was provided within the FSR. The FSR was accepted by the competent authority, the DEA. Stakeholder was provided with the segment extracted from the FSR, page 74. ***Abstract as referenced above was included in the response letter which is included in Appendix F.*** ***Sharon Meyer-Douglas, EAP***
2.2.14	Failure to comply with the prescribed requirements of a scoping report:		The FSR was accepted by the competent authority, the DEA. Stakeholder was provided with the segment extracted from the FSR, page 74.

2.2.14(a)	The FSR fails to meet the requirements of a scoping report in that it does not clearly communicate the scope and type of specialist studies, or the impacting activities that must be investigated. Regulation 28 (1)(n)(i) of the 2010 EIA Regulations1 provides that: "*A scoping report must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping, and must include-* *a plan of study for environmental impact assessment which sets out the proposed approach to the environmental impact assessment of the application, which must include-* *a description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken"*		All of the impacting activities were included within Section 2 of the FSR, page 4. Section 9.2, page 68, of the report provides the terms of reference of the specialist studies anticipated for the EIA Phase. ***Sharon Meyer-Douglas, EAP***
2.2.14(b)	The purpose of a scoping report is to identify key issues and concerns, alternatives that must be assessed, and to provide explicit ToR for specialist studies to evaluate potential impacts and their significance.		Agreed. The FSR, as per responses above, has been accepted by the DEA as addressing these key objectives. ***Sharon Meyer-Douglas, EAP***
2.2.14(c)	The FSR notes that: "*For instances whether the quantities and economics do not justify use of rail, trucking will be used as an alternative to transport. Trucking will also be used as a contingency for the conveyors, or where there may be unforeseeable problems with rail transport. The trucking on site will be minimal. However, depending on the disposal option taken forward, wastes may need to be trucked to the appropriate disposal facility/ies off-site. In addition, the lime and soda ash (for water treatment) will be delivered to the power station via truck. Applicable dust suppression mechanisms will be employed as required*."		Zitholele Consulting confirms that the abstract provided are as per the FSR. ***Sharon Meyer-Douglas, EAP***
2.2.14(d)	The extent to which trucking could be used, and/ or the		Comment noted. At the stage of the FSR, the conceptual designs of the

	traffic implications of that option, particularly given the poor state of roads in the area, are not clear. Should there be negative impacts on roads as a consequence, there would be implications in terms of the need to remedy such harm, in line with the 'polluter pays' principle.		disposal facilities and the preferred sites for the disposal facilities were not finalised. As soon as these have been finalised, the Traffic Impact Assessment of potential impacts on local roads can commence to address all traffic implications and recommend appropriate mitigation measures, where required. The traffic impact study will be focused on the transport of waste to off-site disposal facilities. Other traffic impacts related to the Power Station have been assessed within the original EIA. ***Sharon Meyer-Douglas, EAP***
2.2.14(e)	The FSR states that transport alternatives will be discussed and potential methods will be rationalised during the Impact Assessment Phase. The Plan of Study for the EIA refers to "traffic impact studies", stating that the original study for the Medupi Power Station will be utilised. The FSR also states that many of the original studies need updating for the FGD project, but fails to indicate which studies will be updated or how. If the Medupi traffic impact study to which the FSR refers does not adequately address the concerns our clients raise in paragraph 6 above, these should be addressed through specialist studies.		Comment noted The original EIA Traffic Impact Assessment will be utilised for the FGD related traffic impacts. However, a new TIA has been commissioned specifically for the transport of waste off-site. In particular, the Traffic Impact Assessment will be much affected by where the waste will need to be transported to for disposal. The specialist studies that will be updated from the original EIA are the air quality assessment, the ecological assessment and the socio-economic assessment. The remaining studies will be utilised from the original EIA, and cover the footprint of the power station. Additional studies have been commissioned for the off-site disposal facilities. These include: • Traffic impact assessment; • Ecological assessment; • Groundwater study; • Surface water study; • Socio-economic study; • Heritage impact assessment; • Air quality and noise study; • Visual impact assessment; • Geotechnical assessment; and • Soil and land capability studies. ***Sharon Meyer-Douglas, EAP***
2.2.14(f)	According to the FSR, materials such as limestone are to be brought in by means of rail–to-rail siding, and if saleable quantities of gypsum are produced, they would be transported by rail too. It is not clear whether this railway line is an existing one, or a new one. The FSR addresses only the rail siding. This should be clarified.		The transport of limestone and gypsum to and from the power station, respectively, is still to be confirmed, but will be by truck and/or by railway. A rail siding is included within the current EIA for authorisation. This siding will provide the Power Station with access to the existing railway line to the south west of the power station footprint. ***Sharon Meyer-Douglas, EAP***
2.2.14(g)	Our clients noted that comments made in the 12		This is not the focus of the EIA study. During design, the schedule for fitment

	December 2014 comments on the DSR were not taken into account. Our clients had stated that a specialist study should be included in the EIA process to investigate the feasibility of co-commissioning as many units as possible with FGD. It appears that Eskom dismissed the specialist study request, stating that they had already undertaken such an investigation. They went on to state that "*it was found not to be feasible to commission any of the units with FGD.*" No evidence was provided in support of this statement, which our clients find unacceptable.		of the FGD was established. ***Sharon Meyer-Douglas, EAP***
2.2.14(h)	The FSR notes that many specialist studies will need to be updated with specific reference to the FGD retrofit, and in particular with regard to the disposal of the additional waste generated by the FGD process. Neither section 5.3 - specialist studies, nor section 9.2 -- ToR for specialist studies, makes mention of either surface water or groundwater specialists being required. This is an important oversight as impacts on water resources are a core concern. It must be addressed.		For all activities within the Medupi footprint the original specialist studies will be utilised as were include in the power station EIA and informed authorisation. The following specialist studies will be updated for FGD activities within the power station footprint: • Ecology assessment of the rail siding and limestone and gypsum handling area; • Air quality; • Socio-economic. The specialist studies to be carried out off-site at the alternative disposal facility sites will include: 1. surface water; 2. groundwater; 3. soil and land capability; 4. visual impact assessment; 5. ecological assessment; 6. air quality impact assessment; 7. geotechnical investigations; 8. traffic impact assessment; 9. heritage impact assessment; 10. social impact assessment; and 11. conceptual design of the disposal facilities. The terms of reference for the specialists for this scope of work will be provided within the EIA Report. ***Sharon Meyer-Douglas, EAP***
2.2.14(i)	However, section 5.3 also states that, if alternative waste disposal sites are required outside of the existing Medupi		The terms of reference for the specialist studies will be provided within the EIA Report.

	Power Station footprint, specialist studies will need to be carried out, at the minimum, for groundwater, geotechnology, ecological assessment and surface water. Clarity is needed, and the explicit scale and scope of specialist studies in both site selection and comparative assessment must be accurately conveyed. ToR for such studies must be included in the Plan of Study for EIA.		***Sharon Meyer-Douglas, EAP***
2.2.14(j)	In considering the option of using the ADF to accommodate both type 3 wastes as well as of type 1 wastes, it is clear that this facility's footprint would need to be increased. Additional studies would be required if expansion is needed.		Subsequent to discussions held with the competent authorities, the project will proceed on the assumption that the Type 3 wastes will be disposed of at the current Medupi Ash Disposal Facility, with a licensed Class C barrier system. Type 1 wastes will be disposed of at a new site. ***Sharon Meyer-Douglas, EAP***
2.2.15	Eskom intends to retrofit the FGD plant during the first mini general overhaul (MGO) of the respective generating units, which will happen six years after the commercial operation (CO) of each respective unit. Our clients disagree with this retrofit schedule and argue that as many units as possible should be commissioned with FGD from the start, as this would considerably reduce the SO2 emissions of the plant over its lifetime - which is of critical importance to the regional air quality.		Eskom employs Project Management principles in terms of how it deploys Projects. The process of installing FGD to the power station has a lead time. This includes, amongst others, the EIAs, Water Use License and Waste Management License, and the design process. Once these are concluded a commercial process must be undertaken before installation and construction can commence. ***Sharon Meyer-Douglas, EAP***
2.2.16	Medupi Power Station is located in the Waterberg Bojanala Priority Area (WBPA), which was declared in accordance with s18 of the National Environmental Management: Air Quality Act (AQA). It is located roughly 7km from the existing Matimba Power Station, which emits approximately 302,000 tons of SO^2 per year. The daily SO^2 concentrations measured at Marapong and at Grootstryd exceed the World Health Organisation SO^2 guideline value of 20 µg/m 3. Therefore air quality in the vicinity of Medupi is already compromised and will be exacerbated as and when each Medupi power generation unit comes online. 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-		The timeframes as indicated above are correct. ***Sharon Meyer-Douglas, EAP***

	hourly average National AAQS for SO^2 by up to 60%. Although Medupi is intended to operate with FGD in the long term, under the proposed retrofit schedule each unit is planned to operate for six years with unabated SO^2 emissions, increasing the probability of AAQS exceedances during this time.		
2.2.17	Eskom intends to retrofit each FGD unit during its respective MGO. Co-commissioning the remaining units with FGD would considerably reduce both peak SO_2 emissions and total SO_2 emissions of the plant over its lifetime, thereby decreasing the probability and extent of AAQS exceedances. It would also bring forward the date of compliance with respect to the Minimum Emission Standards (MES) in terms of AQA. Although Medupi's Provisional Atmospheric Emission Licence (AEL) makes provision for five year postponement of compliance with the 2020 standards to 2025, the current retrofit schedule indicates that the FGD system will not be fully installed by this date.		The statement is correct – retro fitment will not be completed by 2025. Postponements are only allowed for a period of 5yrs so it was not possible to apply for a postponement beyond 2020. ***Theuns Blom, Eskom***
2.2.18	As set out above, Eskom appears not to have given proper consideration to our clients' request for a co-commissioning study. It dismissed the specialist study request, stating that they had already undertaken such an investigation. Without providing any evidence of this, it went on to state that "*it was found not to be feasible to commission any of the units with FGD.*"		The process of installing FGD to the power station has a lead time. This includes, amongst others, the EIAs, Water Use License and Waste Management License, and the design process. Once these are concluded a commercial process must be undertaken before installation and construction can commence. ***Sharon Meyer-Douglas, EAP***
2.2.19	Changes made to the EIA schedule suggest there is a risk that Eskom might not be ready to retrofit the first unit (Unit 6) at the time of its MGO. In response to previous stakeholder requests for the FGD project to be implemented earlier, Eskom has stated that 'according to the current project schedule, the first unit at Medupi can only be retrofitted from the start of 2021'. The project schedule presented in the most recent progress report to the World Bank indicates that the FGD retrofit of Unit 6 will be completed by December 2021, which aligns with		Comment noted. The project risk has been identified by the project team and work is being done on the development of a treatment plans to address the risk. ***Sharon Meyer-Douglas, EAP***

	the unit's six-year MGP that year. However this schedule does not take into account the changes made to the EIA timeframes in the FSR. Environmental authorisation is now expected in January 2018, two years later than was previously indicated in the DSR. Therefore the two-year extension to the EIA process presents the risk that Eskom might not be ready to retrofit the first unit (Unit 6) at the time of its MGO. Depending on its commissioning date, this risk may also apply to Unit 5.		
2.2.20	It is imperative that this risk be mitigated, as regional air quality and human health will be further compromised if Unit 6 operates with unabated emissions for more than six years.		Comment noted. The intent of the EIA is to identify and mitigate risk appropriately to the satisfaction of the relevant authority. ***Sharon Meyer-Douglas, EAP***
2.2.21	The World Bank loan agreement dated 16 April 2010 requires that Medupi install FGD and provides that: "2. The Borrower shall: *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 on 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*		No response required here.

	later date as the Bank may establish following the said consultations with the Borrower; and (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."		
2.2.22	It is also a condition in the Provisional AEL which provides that:		No response required.
	7.1.4. The License Holder shall, continuously operate, and maintain a flue gas desulphurization (FGD) plant for control of SO2 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.		
2.2.23	Therefore the following should be included in the EIA process: <u>FGD Project Schedule Specialist Study</u>: There are a number of potential opportunities to expedite the FGD project schedule, including running the Public Finance Management Act (PFMA) approval process and the tender bidding and evaluation periods in parallel to the EIA process. These opportunities must be investigated in order to minimise the risk of delays to the retrofit of Unit 6, and to increase the feasibility of the last few units being co-commissioning with FGD. As this investigation is of direct relevance to air quality and human health within the WBPA, it should be included as a specialist study within this EIA process. In addition to identifying opportunities to expedite the schedule, the study should also investigate the potential to co-commission the last few units with FGD.		This proposed study is not a requirement for the EIA. Eskom will be working in accordance to an internally agreed schedule within the prescribes and guidelines of the internal procedures and processes applicable to deliver the project. This will be done with the full cognisance of the predetermined dates as communicated as it is in the best interests of all stakeholders, including Eskom to meet the timeframes. ***Sharon Meyer-Douglas, EAP***

2.2.24	Project schedule: The current Medupi FGD project schedule should be made available to stakeholders throughout the EIA process. Despite being of material importance to the EIA, it was omitted from both the DSR and the FSR.		The inclusion of a project schedule is not a prerequisite for the Scoping Report or for an Environmental Impact Assessment Report, as per the National Environmental Management Act (Act no 107 of 1998) as amended. ***Sharon Meyer-Douglas, EAP***
2.2.25	Risk register: The risk register, which apparently outlines the various risks and mitigation measures associated with the FGD project, should be made available to stakeholders.		The inclusion of a risk register is not a prerequisite for the Scoping Report or for an Environmental Impact Assessment Report, as per the National Environmental Management Act (Act no 107 of 1998) as amended. ***Sharon Meyer-Douglas, EAP***
2.2.26	With regards to the EIA process, our clients submit that the process can be managed more efficiently to avoid unnecessary delays. The process has already been extended by two years since the DSR, largely due to delays to date, and to the extension of the specialist study period. The process, which is still in the scoping phase, is already eight months behind schedule. Unnecessary delays have been noted, such as the extension to the DSR comment period by five weeks due to the omission of a key appendix from the DSR. The FSR inaccurately stated that this extension was included due to the fact that very few comments were obtained from the public and from key stakeholders, such as the local and district municipalities, during the original commenting period.		There were two extensions to the DSR public comment period: • one was for the provision of sufficient time for the stakeholders to review and comment on the Technology Selection Report that was made available after the DSR review period commenced; and • the other was to provide additional time to the commenting authorities, as no comments had been received from the municipalities after the first extension. The consultant and the client are undertaking to manage all delays to the process. It is in Eskom's best interest to submit the applications for authorisation and licensing as soon as possible. However, Zitholele do not want to rush the process and not provide the public with opportunity to engage on the project. ***Sharon Meyer-Douglas, EAP***
2.2.27	As delays to the FGD project have direct consequences for human health within the WBPA, our clients request that Zitholele Consulting and Eskom make every effort to reduce further unnecessary delays to the EIA process.		Comment noted. It is in the best interests of all stakeholders and Eskom to submit the environmental applications as soon as possible. ***Sharon Meyer-Douglas, EAP***
2.2.28	The proposed project, which is located in the water-scarce Lephalale Municipal area, requires more water than is currently available in the catchment. The Mokolo		The Client in conjunction with the relevant water authority plans such projects. As the custodian of all water resources within the Republic of South Africa, the Department of Water and Sanitation is engaged fully. Eskom will be applying for allocation of water from MCWAP Phase 2 for the purposes of the

	and Crocodile Water Augmentation Project (MCWAP) is being developed to supply additional water to the region. Although Phase 1 is almost complete, Phase 2, which involves importing water from the Crocodile River catchment, is six years behind schedule and the EIA process has not yet commenced. Although the MCWAP scheme has taken into account the existing and projected water needs of the region, periods of water shortages are anticipated, with scenarios suggesting shortages of up to 16 million m per year spanning a period of up to 19 years. These water shortages are likely to disproportionally affect the communities and other non-strategic water users within the catchment. Therefore, water-use is one of the most significant environmental and social impacts of the proposed FGD retrofit. Although the FSR does acknowledge this, the Plan of Study and specialist studies fail to adequately address water-related impacts.		FGD. It is implicit that DWS has undertaken the required studies and will be sufficiently informed to make a decision on all water use licenses submitted for allocation of water from the MCWAP scheme. DWS is mandated to take cognisance of all communities and other water users in the catchment when assessing such water use license applications. The Socio-economic assessment for the FGD project will assess the FGD water use on local water users. ***Sharon Meyer-Douglas, EAP***
2.2.29	In the DSR comments, our clients asserted that a water minimisation study should be included as a specialist study in the Integrated Environmental Authorisation process. This request was dismissed by Eskom in the FSR, stating, as part of the basic design process Eskom considered all of the water minimisation options as part of the life cycle assessment. However, no evidence in support of this statement was provided. Moreover, our clients question Eskom's commitment to water minimisation when the flue gas cooler (a design feature that reduces the FGD water consumption by 30% - without increasing costs or posing technical challenges) has not been incorporated into the basic design. An		The installation of the gas cooler will require significant additional infrastructure and poses challenges in terms of maintenance and integration. DWS is the custodian of water within the country and therefore it is accepted that DWS has undertaken all appropriate water investigations prior to allocation of water to any water user. The client will be applying for water allocation from MCWAP Phase 2A and DWS will be the responsible party in making a decision for allocation. DWS has made provision for the water requirements for all relevant water users when allocating water to Eskom from the Mokolo River (Mokolo Dam) as well as future water supplies from the Crocodile River (West). Detailed water demand forecasts of all known users and water resource studies have been done by DWS. ***Sharon Meyer-Douglas, EAP***

	independent water minimisation study, to investigate interventions to reduce and reuse water, should therefore be included as a specialist study in the impact assessment phase. The study should also take into account new technologies, such as condensing heat exchangers, membranes and liquid desiccant systems, which are currently being developed to capture and reuse water in the flue gas.		
2.2.30	In addition, the integrated environmental authorisation process approach to water use appears to have changed materially between the DSR and the FSR. Although the DSR did not include provision for a water minimisation specialist study, it did state that: *"The Wet FGD technology water utilisation requires that the Impact Assessment Phase investigate how the FGD retrofit at Medupi Power Station will:* - *Reduce water utilisation as far as practical;* - *Reuse water in a responsible manner; ;* - *Impact on other water users within the catchment;* - *Source water for the project; and* - *Investigate alternative water sources as a contingency.".* However, the FSR now reads (changes underlined): *"<u>Eskom endevours [sic] to continually investigate the following issues with regards to Wet FGD technology water utilisation</u>:*		There are no practical water source alternatives within the area in terms of surface or groundwater. The FGD technology is not being assessed as an alternative within the EIA process, but is rather being submitted for decision making and authorisation as the selected FGD retrofit. The impact of the water use by the FGD on other water users will be investigated within the Socio-economic study. The responsibility for ensuring the wellbeing of all water users in allocation of water remains with the DWS. The responsibility for managing the provision of water to water users is also with the DWS. The applicant is behaving responsibly by adhering to legislated requirements for license application and environmental authorisation processes. ***Sharon Meyer-Douglas, EAP***

	- *Reduce water utilisation as far as practical and financially feasible;* - *Reuse water in a responsible manner;* - *Impact on other water users within the catchment;* - *Source water for the project; and* - *Investigate alternative water sources as a contingency."*		
2.2.31	The FSR is therefore now less committed (than appears from the DSR) to addressing water-related impacts and seems to take the approach that the application for the Water Use Licence (WUL) would address all water supply and allocation issues, as well as water impacts, associated with FGD. This approach is questionable: a. These issues and associated impacts are predominant throughout the FSR; for example – "*It is anticipated that water utilisation by the Medupi FGD technology retrofit will be an issue of contention and needs to be addressed more rigorously within the Impact Assessment Phase*." "*water allocation and usage will be further investigated during the EIA Phase."* "*it is anticipated that the approval of the Wet FGD retrofit to Medupi Power Station will have a significant impact on water utilisation in the area."*		Water supply is based on the Phase 1 and 2 element of the Crocodile West Augmentation Project. The impact of the water use by the FGD on other water users will be investigated within the Socio-economic study. The responsibility for ensuring the wellbeing of all water users in allocation of water remains with the DWS. The responsibility for managing the provision of water to water users is also with the DWS. The applicant is behaving responsibly by adhering to legislated requirements for license application and environmental authorisation processes. ***Sharon Meyer-Douglas, EAP***
2.2.32	There is no indication that these issues and impacts are to be 'further investigated' during the EIA phase, based on the Plan of Study for EIA and the report is weak on a critical success factor for FGD installation and functioning, namely water supply.		
2.2.33	Despite it being evident that water-use is one of the main stakeholder concerns, the above suggests that the Plan		

	of Study and specialist studies fail to adequately address water-related impacts. Our clients submit that this is unacceptable and the following should be incorporated into the Scoping Report:		
2.2.34	An independent water minimisation study, to investigate interventions to reduce and reuse water, should be included as a specialist study in the Impact Assessment Phase.		The FGD operation is managed on a zero liquid discharge philosophy. All water within the process is reused and a waste water treatment plant for this purpose is part of the FGD infrastructure. Additional water is required to replace evaporation and other water losses by the system. ***Sharon Meyer-Douglas, EAP***
2.2.35	The impact of the project's water use on other water users within the catchment, especially non-strategic users, should be evaluated and addressed in the Impact Assessment Phase. Although not explicitly stated in the FSR itself, Appendix F8 states that: "… *[t]he use of water from MCWAP Phase 1 and 2 by the Medupi Power Station for energy production and for the FGD operation will be investigated as a key issue of significance and this will be assessed through the socio-economic assessment that is being commissioned*.		A Socio-economic impact assessment is being carried out and this will investigate the issue of water use within the study area. ***Sharon Meyer-Douglas, EAP***
2.2.36	Our clients agree that this should be investigated in the socio-economic assessment and expect this to be the case.		Statement is concurred with as this is deemed part of the socio-economic assessment. ***Sharon Meyer-Douglas, EAP***
2.2.37	There is a substantial risk that Phase 2 of the MCWAP will be further delayed or put on hold. Even if it is completed on time, water shortages are anticipated for extended periods. Insufficient water poses a serious threat to the FGD system, which relies on water to operate, as well as a threat to other water users in the catchment. It is therefore important that alternative water sources are investigated as a contingency, and this should be included in the specialist study that our clients recommended above.		The availability of water for FGD is an element that will be addressed in the EIA. ***Sharon Meyer-Douglas, EAP***
2.2.38	These studies are required in terms of section 24 of NEMA, which provides, *inter alia*, that procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the		Comment noted. Please indicate what studies are specifically required I terms of Section 24 of NEMA. ***Sharon Meyer-Douglas, EAP***

	environment must include, with respect to every application for an environmental authorisation, the investigation of mitigation measures to keep adverse consequences or impacts to a minimum.		

2.2.39	**Flue gas cooler**
	
	In the DSR comments, our clients asserted that the flue gas cooler should be included in the FGD basic design instead of being presented as an alternative in the EIA process. It was argued that the cooler will significantly reduce water consumption without increasing costs or posing technical challenges, and should therefore be integrated into the design. The response to this comment was the following:
	"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%, does not affect the project's costs or pose any technical challenges." This information is required from CER prior to Zitholele Consulting or the applicant responding to this comment."
	
	This response is unacceptable because the DSR, a report written by Zitholele Consulting, clearly states:
	
	"The technology selection report (2014) recommended that the client implement wet FGD technology. The technology with or without cooling were considered equal on an overall technical and economic basis."
			The history on this element is important as it puts the various reports into context:
			
			In 2014 Technology Selection Report
			• Eskom conducted a desktop study on the flue gas cooling technology and included this as part of the 2014 Technology Selection Study Report (TSSR). Please refer to 3.2.2.2, 3.2.3.2 and 3.4 of the TSSR.
			• The intention of the report was to conduct due diligence on the appropriateness of the selection of Wet FGD technology for Medupi. The report was aimed at documenting and explaining the rationale with regards to the selection of Wet FGD for Medupi with the technology information available at the time.
			• As part of normal technology selections studies during feasibility and conceptual engineering, various design alternatives are considered that will be matured during basic and detail engineering phases. Some of the design considerations (as was the case with the cooler), do not go into too much detail at this stage of the design as the intent is to review feasibility and narrow the scope of focus for the subsequent engineering phases. It was on this basis that the cooler was included as a design alternative, however the details surrounding the actual requirements for the fitment of the cooler, fit-for-purpose design and auxiliary requirements for this technology was not considered (which is typical at this design stage).
			• Therefore, the report does not consider:
			  ○ The heat sink that would need to be identified to dissipate the heat recovered from the flue gas and also the costing associated with this infrastructure.
			  ○ Actual maintenance costs - an industry standard allowance for maintenance costs of 1.25% was considered as the actual costs were not known. Differentiation in maintenance costs for the options with and without the cooler.

2.2.40	The above statement by the EAP was not repeated in the FSR. In the Technology Selection Study Report, an appendix to the FSR (but which was not attached to the DSR), Eskom provides detailed financial and technical information in support of our DSR comment. Zitholele's response is therefore unacceptable as it fails to address		

	our DSR comment, despite stating itself in the DSR that the technology were equivalent on an overall technical and economic basis and despite it being in possession of the evidence to support this statement – from a report it relied upon itself. In addition, it appears from the FSR that the cooler has now been withdrawn altogether as an alternative for consideration in the EIA process. The DSR addressed technology alternatives (e.g. wet and semi-dry FGD technologies) separately from design alternatives (i.e. the cooler) and put forward the cooler as a design alternative for evaluation in the impact assessment phase. However, instead of discussing design alternatives separately, the FSR includes the cooler as a technology alternative and, on the basis that the technology selection was undertaken prior to the EIA, concludes that: "*technology alternatives are therefore not addressed in detail, nor assessed in the impact rating for purposes of decision-making for this application*." The FSR also now states that the cooler "may be considered for a future retrofitment [sic] based *on an acceptable cost-benefit analysis.* This implies that the cooler is no longer considered a design alternative to be investigated in the EIA process, nor has it been incorporated into the basic design. Instead, the FSR suggests that it has been left to Eskom's discretion to determine if and when the cooler should be installed. Our clients find this unacceptable for several reasons:		o Different cooler materials and variances in the cost of materials. o Reliability of the coolers and its impact on Unplanned Capability Loss Factor (UCLF). • Information on these items was very limited at this stage, nevertheless it was decided to incorporate provisions for a potential future installation of a flue gas cooler as part of its basic design scope due to the potential water savings that may be realised. • While the desktop lifecycle cost analysis showed that the installation cost of the cooler could be offset with the reduction in operating costs due to the water savings, it is important to note that the above-mentioned items were not considered as part of the cost estimation. In other words, the cost estimate was based on a number of assumptions that needed to be verified in the basic engineering phase for the cooler. <u>2015 Basic engineering and 2016 Benchmarking for the cooler:</u> • During the basic engineering phase, Eskom considered the practicality of the inclusion of the flue gas cooler as well as the material selection and engineering philosophies (such as operating and maintenance). It became apparent that only a limited number of installations exist and the performance data of these were not publicly available. Most OEMs claim information based on performance testing, which is done very early during the life on these assets. It is therefore prudent that longer viewpoint on these elements be taken. • Further to the above, continuous discussions between Eskom and the World Bank due to loan conditions had Eskom look at semi-dry installations again as the technology was being employed on higher capacity units. • Eskom decided to conduct a dual-purpose benchmarking exercise to answer unknowns regarding both semi-dry installations and flue gas cooling. • Eskom therefore travelled to various power stations across Europe, USA and China to better understand the practical implications of this technology and the findings from the exercise form the basis of the update to the document (i.e. the 2018 TSSR). Europe and China were chosen due to their differences in technology applications for flue gas
2.2.41	Water-use is one of the most significant impacts relating to the proposed project, and interventions that minimise water consumption and reliance on the MCWAP scheme		

	(such as the cooler), are therefore of material importance to this integrated environmental authorisation process.		coolers. In Europe, coolers are applied after the particulate abatement technology and in China before the particulate abatement. These brought various design considerations with them which needed to be understood.
2.2.42	Under the 2010 NEMA EIA Regulations, applicants are obliged to identify and investigate reasonable and feasible alternatives to be comparatively assessed in the EIA process. The cooler is both The cooler is both reasonable and feasible, and should therefore be included, at the very minimum, as a design alternative. However, due to its obvious environmental benefits, the cooler should ideally be integrated into the basic design.		• The exercise revealed significant concerns relating to the reliability, maintainability and lifecycle cost of Flue Gas Cooler's (FGC's). These coolers use expensive materials i.e. stainless steel or PFA (polymer material). Medupi processes coal with a high sulphur and high abrasive ash with no neutralisation (and associated low adsorption) effect for the consideration using carbon steels. There is a high risk of erosion and corrosion damage (operating under sulphur dewpoint) to the heat exchanger tubes which results in reduction in heat exchanger efficiency (and therefore also a reduction in the water savings achievable) and significant plant downtime to plug damaged tubes and manually wash clogged tubes. Furthermore, the tube materials need to be replaced every 6-10 years (at a significantly high cost). Europe has opted for more expensive PFA materials with tube surface area that exceeds the heating elements in the boiler in some installations. The issue with these materials is that the tubes are prone to damage due to fly ash contamination and still prone to acid corrosion. The power stations visited with this installation have still required lifecycle material replacements.
2.2.43	It is evident from the comments on the DSR that water is one of the most significant stakeholder concerns. Therefore the decision to withdraw the water-saving cooler as a design alternative (without incorporating it into the basic design) is in direct contradiction to stakeholders' concerns		• The power stations visited in Europe and Asia as part of the benchmarking exercise were selected based on technology installed and accessibility to visit these plants and engage with the plant personnel. All three power plants visited in Europe advised against the installation.
2.2.44	Eskom's water policy states that it "will ensure all its new water containing infrastructure are designed, maintained and operated in a manner that water will be utilized effectively and efficiently and to ensure environmental duty of care." Eskom is also a signatory of the UN CEO Water Mandate, which aims to positively address the global water crisis. Eskom's refusal to incorporate the cooler into the Basic Design (or even propose it as a design alternative) is in direct contradiction to its own policies and commitments		• The technology (flue gas cooling) was originally developed solely for the purposes of achieving the exhaust flue gas temperature legislated to reduce the visible plume from the chimney (in Europe). This requirement has recently been removed from European legislation and power plants with the flue gas cooling technology are starting to decommission the heat exchangers due to the significant operational and maintenance burden.
2.2.45	The cooler is used by Eskom to justify the pre-selection of the water-intensive wet FGD technology over semi-dry FGD technology. It would therefore be unacceptable for Eskom to proceed with wet FGD without including the cooler in the design, or as a design alternative.		• In China, the cooling technology was introduced to improve the operational removal efficiency of the Electrostatic Precipitators with the added benefit of potential WFGD water savings.
2.2.46	The cooler is not expected to add to the project's lifetime costs. . However, even if it were the case that it increased the costs, the cooler plays such a critical role in addressing water-related impacts that it should be incorporated into the Basic Design or, at the very		• The high risk of erosion and corrosion damage and coupled with the characteristics (i.e. high abrasive ash and sulphur) of the Medupi coal

	minimum, be considered as a design alternative for assessment in this environmental authorisation process.		coupled with the experience of the international power plants cannot be ignored by Eskom as part of its decision making. • Water earmarked for Medupi WFGD comes from the return streams from Tshwane. This is a growing resource that is not being utilised, approximately 170 m^3/s is being discharged into the Indian ocean (total Limpopo river discharge). The Medupi WFGD water requirement is approximately 0.28 m^3/s for all six units. The Mokolo Crocodile West Augmentation Phase 2 is required to bring this water to the greater Lephalale area to stimulate economic growth. The business case for MCWAP 2 includes the infrastructure CAPEX built into the tariff and is dependent on the portion of off-take. The costs associated with the FGC cannot be offset with water savings due to the MCWAP 2 payment structure. • Water cost savings will therefore not be realised with a FGC installation and Eskom's participation in MCWAP 2 is part of the broader socio-economic strategy for the area. Eskom's Mokolo allocation will also be released for residential use once MCWAP 2 is completed. • Finally, it should be noted that the cost of the inclusion of the cooler was not the sole consideration for not implementing the technology. The technical considerations outweigh the cost implications as the pragmatic considerations of the technology for use in the South African context was deemed not to be viable. <u>2018 Technology Selection Study Report</u> This report was drafted taking into consideration new information which was not known during the 2014 report and therefore replaced the 2014 with an updated version. The report further shows Eskom's continuous commitment to ongoing market research in this space, and to extend this further, not only in the cooling technology but also lower water use technology for FGD (such as semi-dry systems). *Therefore, inclusion of the FGC technology was not considered to be an efficient, sustainable and broadly (i.e. technical, social, cost) responsible solution for Medupi and South Africa at this time. Eskom is committed to water conservation and employed ACC's at Medupi with an energy penalty of approx. 1.75% to reduce water consumption (Wet cooled power plant without*

			WFGD≈ 2 l/kWh vs dry cooled power plant with WFGD ≈ 0.35 l/kWh). Eskom has also maintained the status quo with respect to provisions in design for a potential future installation of a cooler. It is believed that advancements in materials science can improve the reliability and maintainability of the FGC technology to make it more favorable in the future.
2.2.47	**Bypass** The FSR 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 SO2 emissions, thereby further comprising the regional air quality. Instead, the FGD systems should be operated and maintained as an integral and essential part of each power generation unit.		This is an emergency by-pass system and will utilize the existing ductwork. The emergency by-pass system will only be utilized in emergency conditions. It should also be noted that continuous emission monitoring will be applied and that environmental legislation applies to all operating conditions. Usage of the emergency by-pass system will be incorporated into the licencing agreement. ***Sharon Meyer-Douglas, EAP***
2.2.48	**Gypsum Market Assessment**		
2.2.49(a)	Gypsum is one of the by-products of the FGD process and is a commercial ercial product. The sale of gypsum will bring about significant environmental and economic benefits compared to its disposal, including the minimisation of emissions and energy consumption associated with its landfill, the avoidance of impacts associated with the mining of natural gypsum and increased revenue streams against which to offset capital and operating costs of disposal. Therefore disposal should be considered a last resort and every effort should be taken by Eskom to identify potential markets.		In terms of the waste management hierarchy, the first priority of waste management is avoidance, followed by reduction in the quantities of waste, re-use and recycling, treatment of waste and lastly disposal of waste to landfill. For the Medupi Power Station neither ash or gypsum production can be avoided. If the station is to meet its power supply contribution to the grid, limited actions can be taken to reduce the production of ash and gypsum, while in the absence of a significant market demand for ash and gypsum, at the current planning period, the only remaining option is to dispose of ash and gypsum on an appropriately designed and licenced facility.
2.2.49(b)	The FSR indicates that Medupi is expected to produce around 1.7 million tons of gypsum each year. Eskom anticipates that it will be unable to sell most of this material because Kusile's gypsum will flood the market. However, the Gypsum Market Research Study, appended to the FSR, estimates that by 2038 the total national demand for this resource will be approximately 2.1 million tons per year, which is around 1 million tons per year more than Kusile is expected to produce. Hence there is		Ash and gypsum are produced separately, however, it is proposed to dispose of ash and gypsum mixed together on the existing Ash Disposal Facility (ADF), until a market develops for either of these wastes. CER holds that the reason ash and gypsum should not be mixed together is to allow recovery of gypsum at a later stage after disposal. It is however understood that once gypsum has been exposed to external elements, especially water, its chemical structure is altered thereby rendering it not readily usable for its intended purposes. It is for this reason that the proposed temporary gypsum storage area at the rail yard will be a covered structure. Therefore, long term storage of gypsum on its own is likely to render the gypsum unrecoverable for

	a potential for Medupi to sell, rather than discard, a significant portion of its gypsum. In addition, the quantities of gypsum produced can be reduced if high quality limestone (i.e. limestone that contains more than 94% reactive CaCO) is used in the FGD process. This will also serve to ensure that the gypsum is of a sufficient quality for the plasterboard market. As the limestone supplier for Medupi has not yet been determined, Eskom should ensure that high quality limestone is sourced wherever possible.		reuse. The gypsum transportation infrastructure caters for under-the-conveyor collection of gypsum by trucks, in the current infrastructure. Therefore, in the absence of a significant market demand it remains pointless to dispose of ash and gypsum, which is both classified as type 3 wastes, separately. It should also be understood that there is a need for capacity to dispose of gypsum, when lower quality (unusable) gypsum is produced from the operational challenges at the station.
2.2.49(c)	Aside from the environmental benefits, FGD gypsum can probably sell for between R50 - R120 per ton (depending on quality and excluding delivery), which represents a sizeable source of income for the utility. Market opportunities should therefore be aggressively pursued.		Currently the demand for gypsum is not large enough to result in a significant offtake of gypsum from the FGD process. Although Eskom can facilitate the opportunities for the provision of gypsum on a commercial scale, in line with its mandate, it might not be appropriate to drive the expansion of the market to meet the offtake targets for FGD gypsum, although it would support such initiatives. Eskom is currently in the process of lodging applications with the DEA and DWS to unlock economic opportunities associated with the use of ash, which is, otherwise, hindered by the classification of ash as a waste, for example.
2.2.49(d)	The Gypsum Market Research Study, which focused on existing markets, also acknowledged that the mining market has the largest potential for growth over the next 30 years and needed to be researched further. There are several possible applications for gypsum in the mining industry, including the prevention of acid mine drainage (AMD), which has the potential to be generated in the Waterberg Coalfield. One possible application is the thermochemical conversion of FGD gypsum and pyrite (an AMD-producing mineral) from coal mining wastes into marketable products, such a lime, sulphur and direct reduced iron. While the mining market for gypsum is still being developed, Eskom should take into consideration the future opportunities in this sector, if more traditional markets prove unsuccessful. However, our clients only support such a market if clear environmental benefits can be demonstrated.		CER references a Gypsum Market Research Study, which is most likely outdated in terms of the figures it states. It is furthermore argued that expecting Eskom to undertake an updated market research study which will result in significant further delays in implementation of the FGD infrastructure is unreasonable at this stage, especially considering the fact that Eskom has included design of all infrastructure required to support commercial offtake of gypsum. In other words, Eskom is in a position to respond to whatever market demand develops, whenever it develops in future. CER's statement in paragraph 44 is therefore also refuted as Chapter 6 of the DEIR explicitly describes the infrastructure associated with gypsum management, handling and conveyance to the rail yard for commercial offtake. Eskom therefore confirms that infrastructure for the offtake of gypsum is included in the scope of this EIA.
2.2.50	*Gypsum* In the comments on the DSR, our clients asserted that (when disposal is necessary) the gypsum should be disposed of separately from the other wastes, thereby		The quality (with respect to purity) of limestone that will be used may be dictated by the market demand, existing volumes of high quality gypsum

	minimising contamination. This allows for its future recovery, which would reduce the environmental impacts associated with its disposal, as well as the impacts related to the mining of virgin gypsum. The Department of Mineral Resources describes the co-disposal of gypsum as "a wasteful practice as the gypsum may be a usable resource; if not now, then in the future."		already in the market and capital considerations considering the only source of high purity limestone is located in the Northern Cape, but Eskom would have to undertake a full developmental process for any expenses deemed additional to its cause. The transport of limestone will be undertaken via rail, through an existing railway line, from which a rail siding will be established. The impact of the transport of the wastes via trucking was considered by specialists in a qualitative manner. It must also be considered that the service provider appointed to collect and dispose of salts and sludge will be an established service provider, and it will follow its own health, safety and environmental requirements, not to mention compliance with regulations for the transport of hazardous substances by road. CER claims that there is no provision in the design and construction for separating the gypsum from the ash so that it can be reclaimed and sold as a by-product. Sections 6.4 and 6.9, and relevant drawings and reports in **Appendix C** of the DEIR clearly demonstrate that offtake infrastructure for the commercial and small-scale offtake of gypsum has been designed for, considered and assessed in the DEIR. It should also be noted that gypsum and ash is produced independently and is only mixed together for disposal during the final step of disposal. Further, if gypsum is disposed separately it will not be considered a by-product, but a waste. It was also mentioned previously that exposure of gypsum to the elements may render it unusable for the intended purposes, therefore offtake of gypsum can only be sustainable if taken directly from the waste stream as it exists the gypsum dewatering building or conveyed to an enclosed storage building prior to rail transport. The sampling process for determining the quality of gypsum is a manual process. An operator takes a sample off one of the conveyors and it is then analysed in an onsite laboratory. For the wallboard industry high purity levels are required (95% $CaSO_4$) and moisture contents below 10%. The impact of traffic on air quality was considered and qualitatively assessed
2.2.51	As most of the waste disposal alternatives presented in the DSR involve the co-disposal of gypsum, it was proposed in the DSR comments that the list of alternatives be revised, taking into account the importance of separate gypsum disposal. Eskom's response to the revised list of disposal alternatives is as follows: *"As part of 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."*		
	The response is not relevant to the comment and therefore fails to address our clients' concerns. It is submitted that this and a number of other instances where inadequate or inappropriate responses have been given, serve to undermine the public participation process, indicating that the prescribed process in the EIA Regulations was not followed and amounting to a contravention of the Promotion of Administrative Justice Act.		
	Furthermore, the option to dispose of the gypsum in its own new waste facility has been withdrawn altogether from the FSR. The DSR included this option (Option 5.2), but the FSR has removed it, stating "the gypsum will be disposed of with the ash at the future ADF [ash disposal		

	facility] "Therefore no gypsum disposal alternatives have been put forward, not even the option of disposing the gypsum in a separate compartment within the ADF. Our clients find this unacceptable as it undermines the purpose of the EIA process, where all reasonable and feasible alternatives should be assessed. The following gypsum disposal options should therefore be included as feasible alternatives for evaluation in the impact assessment phase: - *A new gypsum disposal facility:* This option was proposed as a feasible disposal alternative in the DSR, but was not included in the FSR. *Disposal of the gypsum in its own "compartment" in the future ADF*: The FSR confirms this is feasible as it proposes the same disposal method for the salts and sludge in disposal option 2.		by the air quality specialist and was found to be negligible as has been concluded in the Air Quality Impact Assessment included as an Appendix to the DEIR. CER furthermore does not elaborate on the exact aspects of the impact that was not adequately addressed. The existing ADF is licenced through an existing WML. This means that the impacts associated with sterilisation of the ADF footprint and potential pollution associated with the disposal of ash at the facility were considered and assessed already within the initial application for a WML for the ADF. A variation application is specifically catered for in terms of the National Environmental Management: Waste Act (No 59 of 2008), as amended. The WML Variation application therefore considered additional impacts that may result from disposal of ash and gypsum, which are both classified as Type 3 wastes, prior to approval of the variation application that will result in amendments to the conditions of the existing WML, as well as the changes in ADF configurations with respect to a reduced footprint and a raised height.
2.2.52	*Salts and Sludge* With respect to the salts and sludge, our clients request confirmation as to why there is no longer considered to be sufficient space within the Medupi Power Station footprint to accommodate a new salts and sludge disposal facility. The DSR proposed this as an option (Option 5.1), stating that "about 140ha will be required for the disposal of salts and sludge within lagoons to a depth of 5m." However, despite there being no changes to the volumes of waste generated, the FSR now indicates that there is insufficient space on site for such a facility. Clarity on this matter is required, and if there is sufficient space, an on-site salts and sludge disposal facility should be included as an		

	alternative in the EIA process.		
2.2.53	Waste Disposal Comparison		
2.2.53(a)	According to regulation 28 (1)(n)(i) of the 2010 NEMA EIA Regulations, the Plan of Study must include: "*a description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken*."		
	The FSR fails to meet this requirement with respect to the waste disposal options. Instead of putting forward disposal alternatives for investigation in the impact assessment phase, the FSR presents disposal options and indicates that a comparative analysis will be carried out to eliminate those alternatives which may be impractical or fatally flawed. "*Following this analysis, the remaining alternatives will be carried through to the Impact Rating to identify the preferred alternative and to provide a rating table indicating potential impacts associated with each alternative*."		
	This elimination of unreasonable and unfeasible alternatives should have been undertaken during the scoping phase so that the ToR for specialist studies could be outlined explicitly in the scoping report. However, the elimination process has been deferred to the EIA phase and the FSR indicates that the specialist studies will only be confirmed when waste disposal alternatives are confirmed		
2.2.53(b)	Moreover, no information was provided on the methodology of the comparative assessment. The lack of		This will be made available within the EIA Phase. There is also a Site Selection Report which will be circulated to the interested and affected

	transparency is not only in violation of the NEMA EIA Regulations, but also raises concerns that feasible, environmentally preferable disposal options may be improperly rejected based on capital cost estimates.		parties, pending confirmation on the process forward. ***Sharon Meyer-Douglas, EAP***
2.2.39(c)	Our clients therefore submit that the FSR should provide a clear outline of the intended methodology for the comparative study, as well as explicit ToR for all specialist studies relevant to the Project. The FSR should also clearly indicate which original specialist studies will be updated (as per Section 5.3 of the FSR) and provide ToR for these updates.		All information will be provided to the stakeholders either in additional submissions or within the EIA Report. ***Sharon Meyer-Douglas, EAP***
2.2.40(a)	According to the proposed impact assessment methodology, any impact to human health (regardless of scale or severity) is considered 'high' in terms of 'potential intensity', as is 'loss of species'. However, neither 'loss of livelihood', nor the inability to meet national conservation targets for ecosystems, appear to be considered 'high' with respect to 'potential intensity'. It is crucial that ratings relate to limits of acceptable change or thresholds, standards (including legal and health) or targets, rather than to arbitrary or vague indicators.		The descriptors for the IA methodology are examples and are not exhaustive. The ratings will be considered on a case by case basis. ***Sharon Meyer-Douglas, EAP***
2.2.40(b)	The FSR asserts that "cumulative impacts are reflected in the in the [sic] potential intensity of the rating system." Cumulative impacts are not the same as 'intensity' of impact and therefore need to be addressed separately, as required in terms of the NEMA EIA Regulations. In this case, cumulative impacts on water resources - both in terms of availability and quality - are critical and of particular concern to the FGD project. It is inadequate and incorrect to state that existing studies will still be valid		The Scoping Report and methodology for Impact Assessment have been accepted by the competent authority (see Appendix A).. Irreplaceable loss is included within the assessment of potential intensity of the impact as per section 9.3.4 of the Scoping Report. ***Sharon Meyer-Douglas, EAP***

	in terms of the cumulative impacts of the power station. The approach set out for assessing impacts in the FSR does not make explicit and focused provision for considering the extent to which an impact could lead to irreplaceable loss. The NEMA EIA regulations require that the Scoping Report include a Plan of Study for EIA and, as part of that, must specify the proposed assessment approach which should consider this factor. The EIA phase and all specialist inputs must address these specific points as part of the required scope of their work.		
4	**COMMENTS RAISED DURING THE DRAFT SCOPING REPORT (DSR)**		
4.1	**COMMENTS RAISED BY AUTHORITIES**		
4.1.1	**SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE**		
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 Director: Biodiversity Planning and Policy Advice SANBI Letter: 05 November 2014	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. ***Nicolene Venter, Public Participation Practitioner*** The biodiversity specialist will reference the information obtained from SANBI's website in the Biodiversity Report appended to the DEIR. ***Sharon Meyer-Douglas, EAP***

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. ***Nicolene Venter, Public Participation Practitioner***
3	I also encourage you to visit our web portal http://biodiversityadvisor.sanbi.org 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. ***Sharon Meyer-Douglas, EAP***
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 costs to the project proponent. Such a proactive approach can:		
4.1	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;		
4.2	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		
4.3	Identify the scope, type and intensity of environmental assessment that is likely to be required if an application were to proceed.		
5	This approach also supports best practice in environmental assessment and planning by:		
5.1	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);		
5.2	Emphasizing the fundamental role of alternatives in selecting the best practicable environmental option;		
5.3	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		
5.4	Supporting the principle that environmental management must pay specific attention to planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.		
4.2	**COMMENTS RAISED BY INTERESTED AND AFFECTED PARTIES**		
4.2.1	**COMMENTS RELATED TO 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)	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***
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;		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***
2.2	Gypsum market investigation to identify markets for 100% of the gypsum produced, taking into account its wide range of uses; and		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 on Eskom's website ***Kubentheran Nair, Eskom*** The Report is also included in the FSR under Appendix J. ***Sharon Meyer-Douglas, EAP***
2.3	Ash market investigation to identify markets for the ash		Ash is not a waste product from the FGD operation and therefore this study

	produced (including fly and bottom ash), taking into account their wide range of uses.		would not have any bearing on the current environmental assessment process. ***Sharon Meyer-Douglas, EAP***
3	Will ash be produced and will it be re-used?	HLAPA, Joshua Lephalale Local Municipality KSW: 05 November 2014	Ash is not a by-product of the FGD technology, only the gypsum, salts and sludge. ***Carel van Heerden, Eskom***
4.2.2 WATER RELATED COMMENTS			
1	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? 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_2 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?	BASSON, Cllr Astrid Lephalale Local Municipality PM: 05 November 2014	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. 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. ***Ian Midgley, Eskom***
2	A water minimisation study, to identify and assess all possible water minimisation design improvements, be included as a specialist study.	HUGO, Robyn Attorney CER NPC Letter: 12	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.

		December 2014 (Copy of Letter attached to Appendix D6)	***Carel van Heerden, Eskom***
3	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 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.		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%, does not affect the project's costs or pose any technical challenges." This information is required from the CER prior to Zitholele Consulting or the applicant responding to this comment. ***Sharon Meyer-Douglas, EAP***
4	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. Even if these technologies are not yet suitable for implementation, modifications that facilitate their future installation can be built into the FGD design.		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. ***Carel van Heerden, Eskom***
5	Although water usage has been identified as a potential		Eskom operates under a Zero Effluent Discharge Philosophy on all of its

<table>
<tr><td></td><td>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.</td><td></td><td>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.
Kubentheran Nair and Felicia Sono, Eskom

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.</td></tr>
<tr><td>6</td><td>According to the DSR:

"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 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.</td><td></td><td>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 that will be carried out in conjunction with the EIA and Waste Management License Application for the proposed Medupi Power Station FGD retrofit project.
Sharon Meyer-Douglas, EAP</td></tr>
<tr><td>7</td><td>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.</td><td></td><td>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

<table>
<tr><th>Water Usage</th><th>90% load Estimation (m^3/hr)</th><th>Mm^3/a</th></tr>
<tr><td>Process Water</td><td>1005.1</td><td>8.80</td></tr>
<tr><td>Sealing Water</td><td>14.4</td><td>0.13</td></tr>
<tr><td>Closed cycle cooling make-up water</td><td>26.2</td><td>0.23</td></tr>
<tr><td>Backwash for pre-filters</td><td>15.9</td><td>0.14</td></tr>
</table>
</td></tr>
</table>

			Total | **1061.6** | **9.3** ***Carel van Heerden and Abigail Melanie, Eskom*** 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. 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. ***Ian Midgley, Eskom***
8	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		Agreed. The alternatives for waste disposal will be assessed within the EIA Phase of this process. ***Sharon Meyer-Douglas, EAP***

	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).		
9	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;	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	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. ***Kubentheran Nair, Eskom*** 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. ***Carel van Heerden, Eskom***
10	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.		It needs to be noted that the catchment availability is determined by the DWS and allocations are based on the availability of water. ***Sharon Meyer-Douglas, EAP*** 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. ***Felicia Sono, Eskom*** 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 Lephalale 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. To say that no specialist studies

			focussing on water availability and water demands is incorrect, especially in the Waterberg, Crocodile and Vaal catchments. Below is the latest report on the DWS web although further work has been done on this in the interim. https://www.dwa.gov.za/Projects/crocodilemaintenance 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: • Planning: Mr Tendani Ndtiwani nditwaniT@dwa.gov.za • Options Analysis: Mr Ockie van den Berg VanDenBergO@dwa.gov.za ***Ian Midgley, Eskom***
11	The fact that the WULA process is separate from the EIA process is highly problematic.		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. ***Sharon Meyer-Douglas, EAP*** 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. ***Kubentheran Nair, Eskom, Medupi Power Station***
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.		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. ***Sharon Meyer-Douglas, EAP***
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	MAAKE, Nakedi SANCO KSW: 05 November 2014	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. 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

	for Eskom.		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. ***Sharon Douglas-Meyer, EAP*** 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 5th 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. ***Nicolene Venter, Public Participation Practitioner*** **Post-meeting note:** The DSR review period has been extended to Friday 09 January 2015.
14	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?	NETHENGWE, Mulalo DWS KSW: 05 November 2014	DWS is developing the Mokolo-Crocodile Water Augmentation Project Phase 2. Eskom has an allocation of 10.9 Ml 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 Ml will be supplied from MCWAP Phase 2. ***Ian Midgeley, Eskom*** 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. ***Carel van Heerden, Eskom***

4.2.3 COMMENTS RELATED TO LIMESTONE SOURCING AND MARKET ANALYSIS FOR GYPSUM BY-PRODUCT			
1	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.	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	Disposal alternatives will be presented to, and discussed rigorously with, the competent authorities in order to identify the most feasible option. ***Sharon Meyer-Douglas, Zitholele Consulting, EAP.*** The Environmental Impact study will inform the process and the necessary requirements for waste disposal. ***Kubentheran Nair, Eskom*** The investigation of the disposal alternatives will happen in the EIA phase thus the lack of documentation at present. ***Denise Govender, Eskom*** 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. ***Carel van Heerden, Eskom***
2	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.		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. ***Carel van Heerden, Eskom***
3	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 part of		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. ***Sharon Meyer-Douglas, EAP***

	this EIA process to identify potential markets for the ash.		The disposal of ash has been addressed in the EIA process undertaken for the Medupi Power Station. ***Kubentheran Nair, Eskom***
4	Some FGD sludges can also be utilised, e.g. as an additive in the power plant's combustion process to improve the ash melting behaviour, 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.		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. ***Carel van Heerden, Eskom***
5	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.		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. ***Sharon Meyer-Douglas, EAP*** The current recommendation based on the theoretical waste classification is: a) Co-disposal of ash and gypsum at the ash dump – both type 3 b) Co-disposal of salts and sludge – both type 1. 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. 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. Further, as mentioned the ash dump was sized considering co-disposal of ash and gypsum. 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.

			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. ***Carel van Heerden, Eskom*** If the option for sale of gypsum becomes feasible, this will definitely be investigated further. ***Denise Govender, Eskom***
6	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.		The alternatives for waste disposal will be assessed within the EIA Phase of this process. ***Sharon Meyer-Douglas, EAP*** 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. ***Denise Govender, Eskom***
7	Instead only the following disposal options should be considered:		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***
8	Option A: Separate on-site facilities for each waste (preferred option).		
9	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.		
10	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.		
11	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.		
12	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.		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. Further, the ADF at Medupi Power Station was sized for co-disposal based on initial estimates of gypsum production from the FGD process. ***Denise Govender, Eskom*** 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. ***Carel van Heerden, Eskom***
4.2.4 COMMENTS RELATED TO BY-PRODUCTS			
1	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;	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	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. ***Carel van Heerden, Eskom*** 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 on Eskom's website (refer to Appendix J in the FSR). ***Kubentheran Nair, Eskom***
2	Additional features (as described in paragraph 22) should be incorporated into the base case design to maximise the amount of gypsum sold;		
3	Gypsum is one of the by-products of the FGD process		In agreement.

	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.		***Sharon Meyer-Douglas, EAP*** 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. ***Carel van Heerden, Eskom***
4	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. 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 there are other uses for gypsum, including filling material in the paper industry. 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:		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. ***Carel van Heerden, Eskom*** 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. ***Carel van Heerden, Eskom*** 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 on Eskom's website (refer to Appendix J of the FSR). ***Kubentheran Nair, Eskom***
5	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		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.

	designation and permitting of an on-site stockpile, as well as procedures for preventing its contamination.		***Denise Govender, Eskom*** A Gypsum storage building exists (See Appendix E2.3 in the FSR). Operating Philosophies will be developed as part of the Execution phase. ***Carel van Heerden, Eskom***
6	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.		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). ***Denise Govender, Eskom*** Comment noted and this point is addressed in the Basic Design (See Appendix C in the FSR). ***Carel van Heerden, Eskom***
7	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.		Eskom take note of the comment. ***Kubentheran Nair, Eskom*** 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). ***Carel van Heerden, Eskom***
8	The quality of the limestone reagent used in the 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.		Eskom take note of the comment. ***Kubentheran Nair, Eskom*** 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". ***Carel van Heerden, Eskom***
9	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.		 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. ***Carel van Heerden, Eskom***

10	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.		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. ***Carel van Heerden, Eskom***
11	Will the gypsum be sold to commercial users?	VERCA, David GP Strategies PM: 05 November 2014	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. 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). ***Carel van Heerden, Eskom***
4.2.5 COMMENTS RELATED TO SOCIAL AND SOCIO-ECONOMIC ASPECTS			
1	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;	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	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. ***Sharon Meyer-Douglas, EAP***
2	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;		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. ***Carel van Heerden, Eskom*** 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 ***Kubentheran Nair, Eskom***

3	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.		It needs to be noted that this comment is not part of this EIA. ***Kubentheran Nair, Eskom*** Ash is not a waste product from the FGD operation and therefore this study has no bearing on the environmental authorisation process for the FGD retrofit. ***Sharon Meyer-Douglas, EAP***
4	The delay in fitting FGD technology exposes the people living in the area to substantial levels of pollutants for a significant period of time. This exposes flaws in the approval process. If there was not enough water to supply the FGD, or the costs were prohibitive, Medupi should never have been approved. Particularly when there are alternatives that are essentially water-free technologies (such as wind) that are readily available.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	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. ***Sharon Meyer-Douglas, EAP*** 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***
4.2.6 COMMENTS RELATED TO TECHNICAL ASPECTS			
1	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?	BASSON, Cllr Astrid Lephalale Local Municipality PM: 05 November 2014	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. ***Carel van Heerden, Eskom***

2	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?		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. ***Kubentheran Nair, Eskom*** 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 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. ***Prince Khumalo & Patrick Seloba, Eskom*** 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. ***Ian Midgley, Eskom*** 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^3 at 10% O_2 and 500mg/Nm^3

			at 10% O_2 by 31st March 2025 and 500mg/Nm3 at 10% O2 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. ***Carel van Heerden, Eskom***
3	The flue gas cooler should be incorporated into the base case FGD design, instead of being proposed as a design alternative.	HUGO, Robyn Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	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***
4	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.		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. ***Carel van Heerden, Eskom***
5	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;		
6	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.		
6.1	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 the flue gas cooler should be incorporated into the base case FGD design, instead of being proposed as a design alternative;		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***
6.2	In the circumstances, our clients submit that the DSR should be expanded to include the areas of concern		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.

	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.		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. 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. ***Denise Govender, Eskom*** 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. ***Carel van Heerden, Eskom***
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. ***Carel van Heerden***
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. ***Sharon Meyer-Douglas, EAP*** 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***
9	What would be the size of the plume?	VERCA, David GP Strategies PM: 05 November	The Flue Gas exiting the stack will be saturated with water and will therefore be visible. ***Carel van Heerden, Eskom***

		2014	
4.2.7	**COMMENTS RELATED TO PROJECT TIMEFRAMES**		
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_2 emissions and total SO_2 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 ***Kubentheran Nair, Eskom*** 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, 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. ***Olga Makhalemele, Eskom*** 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***
2	In terms of the Medupi units, the current schedule estimates that one unit will be commissioned per year from 2015 until 2020. 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.		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***

	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.		
3	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 units 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 following benefits over the current proposal to retrofit all six units with FGD:		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***
4	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.		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***
5	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;		
6	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.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	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. ***Sharon Meyer-Douglas, EAP***
1	Eskom have argued - in its 28 May 2014 responding	HUGO, Robyn	Eskom investigated the feasibility of co-commissioning the remaining units at

	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". 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. 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.	Attorney CER NPC Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	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***
2	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.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015	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). ***Sharon Meyer-Douglas, EAP*** At the time of Medupi's design and approval, there was no requirement to achieve a minimum emission standard of 500 mg/Nm^3, or retrofit FGD. ***Olga Makhalemele, Eskom***
4.2.8 COMMENTS RELATED TO AIR QUALITY			
1	As the FGD units and the pollution filters will only be	BASSON, Cllr	The attendees need to recognise where the project is in the Environmental

	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?	Astrid Lephalale Local Municipality PM: 05 November 2014	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. ***Kubentheran Nair, Eskom*** 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. ***Carel van Heerden, Eskom*** In terms of Eskom's power station's life cycle, there are various processes that needs to take place i.e.: • the first process is the feasibility studies that need to be undertaken and this includes the EIA process; • then the conceptual design phase; • the detailed design phase; and • appointment of contractor. 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. ***Kubentheran Nair, Eskom***
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	
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		Zitholele Consulting agrees with the comment made. ***Sharon Meyer-Douglas, EAP***

	ambient air quality standards (AAQS) are being, or may be, exceeded.	attached to Appendix D6)	
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, confirms this non-compliance with respect to PM.		Zitholele Consulting agrees with the comment made. ***Sharon Meyer-Douglas, EAP*** 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. ***Olga Makhalemele, Eskom***
2.3	In terms of SO_2, Medupi is located roughly 7km from the existing Matimba Power Station, which emits approximately 302,000 tons per annum of SO_2. Although the daily average SO_2 concentrations measured at Marapong and at Grootstryd have not exceeded the South African daily average AAQS for SO_2 they do exceed the World Health Organisation SO_2 guideline value of 20 µg/m3 . 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_2 (125 µg/m) and secondary PM.		Medupi emissions will be monitored and reported to DEA. This information is available to the public from the DEA. ***Sharon Meyer-Douglas, EAP*** Eskom is currently monitoring using the National Ambient Air Quality Standard which is currently not exceeded. ***Olga Makhalemele, Eskom*** 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. ***Olga Makhalemele, Eskom***
2.4	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 SO2 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,		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. ***Olga Makhalemele, Eskom***

	which take place around six years after the commissioning of each unit. Therefore, each unit would operate for six years with unabated SO_2 emissions. Medupi SO_2 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. During this peak period, the combined SO_2 emissions from Medupi and Matimba will be more than double their current emissions, increasing the probability of AAQS exceedances during this time.		
2.4.1	A reduction in SO_2 emissions: SO_2 emissions 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.		To clarify, relative SO_2 emissions for the entire Eskom coal-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_2 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. ***Olga Makhalemele, Eskom***
2.4.2	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_2 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.		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*** 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. ***Olga Makhalemele, Eskom***
2.4.3	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).		
2.5	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_2 emissions and downtime requirements.		
2.6	Due to the significant impact the FGD commissioning schedule will have on the plant's SO_2 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.		
3	What is the percentage that emissions will be reduced by if the FGDs are retrofitted?	MAAKE, Nakedi SANCO KSW: 05 November 2014	Ambient emissions will be reduced by 30%. ***Olga Makhalemele, Eskom*** **<u>Post-meeting note</u>:** The ambient emissions of 30% quoted in the response at the KSW represents the relative SO_s emission reduction for the entire Eskom fleet, including the effect of FGD Kusile, FGD Medupi and the decommissioned units between 2015 and 2030. Point source emissions will be reduced by between 90% and 95% if the FGDs are retrofitted. ***Carel van Heerden, Eskom*** The emission levels will be at 3500mg/Nm^3 @ 10% O_2. With the FGD retrofitted it will be able to meet the limit of 500mg/Nm^3 at 10% O_2, which is a decrease of 90%. ***Prince Khumalo, Eskom***
4.2.9 COMMENTS RELATED TO WASTE CLASSIFICATION			
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 ***Sharon Meyer-Douglas, EAP***

4.2.10 COMMENTS RELATED TO CONSULTATION AND COMMUNICATION			
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	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: • 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); • DSR Comment Form; and • Public Meetings Registration Form. 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). The DSR can be downloaded from Zitholele's website (http://www.zitholele.co.za/eia-for-medupi-fgd). 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. In response to the page numbering, it needs to be noted that different documents were faxed and each document had their own page numbering. Please do not hesitate to contact us should you require any additional information regarding this proposed project. ***Nicolene Venter, Public Participation Practitioner***
2	It was requested as to when does the DSR comment period ending.	E-mail: 07 November 2014	With reference to Zitholele Consulting's e-mail dated 07 November 2014, registered I&APs was informed that the DSR review period will be ending

			soon. 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&APs on 21 November 2014 ***Nicolene Venter, Public Participation Practitioner (e-mail dated 10 November 2014***
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 skamanja@cer.org.za and rkruger@cer.org.za	HUGO, Robyn Attorney CER NPC E-mail: 11 February 2015	Confirmed that both the Key Stakeholder Workshop and Public Meeting minutes, and attachments, are sent to the CER as requested. ***Leoni Lubbe, PP Administrator***
4.	The CER noted that it is Zitholele Consulting's intention to make the FSR available to government already in March 2015. It was 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.	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. Also, all registered I&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. ***Nicolene Venter, Snr Public Participation Practitioner*** 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&APs of the submission date as soon as it is confirmed. ***Nicolene Venter, Snr Public Participation Practitioner (e-mail 10 March 2015)***
3	Any decision not to consider waste disposal alternatives must be transparent and subject to public participation.	Letter: 12 December 2014 (Copy of Letter attached to Appendix D6)	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. ***Sharon Meyer-Douglas, EAP*** 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. ***Carel van Heerden, Eskom***
3.1	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.		Delays in a EIA and PP process are accommodated for although the EAP and EIA team try to avoid delays as far as possible. 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. ***Nicolene Venter, Public Participation Practitioner***
3.2	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 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.		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. The invitations as mentioned above are included in Appendix F5 of the FSR.
3.3	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.		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. ***Nicolene Venter, Public Participation Practitioner***
3.4	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		Zitholele is in agreement with the process as outlined by the CER. ***Nicolene Venter, Public Participation Practitioner***

	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.		
3.5	On 4 November 2014, Zitholele communicated to CER that Eskom wished the CER to use the process described in the Promotion of Access to 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: "… 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."		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 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. ***Nicolene Venter, Public Participation Practitioner*** 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. ***Sharon Meyer-Douglas, EAP***
3.6	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.		The CER NPC and registered I&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). ***Nicolene Venter, Public Participation Practitioner***
3.7	On 6 November 2014, Zitholele sent a notice to stakeholders by email, cancelling the public meeting that was to 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 Lephalele on 5 November. To date, these minutes have not been		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. 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

	received.		violent was an important factor in the cancellation. 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. ***Nicolene Venter, Public Participation Practitioner***
3.8	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.		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. ***Sharon Meyer-Douglas, EAP***
3.9	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		Responses to these matters are responded to in points 6, 9.16.4, 9.16.4 and 9.16.6 above. ***Nicolene Venter, Public Participation Practitioner***

	commitment to provide the CER with the minutes of the public meeting held on 5 November 2014 in Lephalale. 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 send the minutes from the public meeting on 5 November 2014 in Lephalale to the CER.		
3.10	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 Lephalale. 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 councilor, 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.		Responses to these matters are responded to in points 6, 9.16.4, 9.16.4 and 9.16.6 above. 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. ***Nicolene Venter, Public Participation Practitioner***
3.11	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 Lephalale. 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		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. 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

	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.		minutes as soon as the review process is completed. The final minutes, should there be any comments/updates, will be included in the DEIR. ***Nicolene Venter, Public Participation Practitioner***
3.12	The extension of the DSR comment period until 9 January 2015 was communicated to all other stakeholders by email on 21 November 2014.		The official DSR comment period extension was communicated to all registered I&APs on the project database by means of the contact details provided during 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&APs with cell phone number – including the CER NPC). ***Nicolene Venter, Public Participation Practitioner***
3.13	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.		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. ***Nicolene Venter, Public Participation Practitioner***
3.14	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.		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. ***Sharon Meyer-Douglas, EAP***
3.15	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		The requirements for a public participation process in terms of the NEMA EIA Chapter 6, Regulations 54 – 57 have been met. Zitholele Consulting can confirm that "reasonable opportunity to comment" was provided by the public participation team. Although the EIA Regulations stipulates that I&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. 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

	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.		did not, as per Regulation, stipulate a registration and comment period for the BID. I&APs can comment until the FEIR is submitted, which by then new and or additional information would have been communicated. ***Nicolene Venter, Public Participation Practitioner***
3.16	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 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		
3.17	The online link to Appendix E does not contain information pertaining to "Absorber Diagrams" as it should. Please correct this error.		It can be confirmed that the link has been corrected and please also find within Appendix G5 the Medupi FGD -Absorber Diagrams for perusal. ***Nicolene Venter, Public Participation Practitioner***
3.18	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.		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. ***Nicolene Venter, Public Participation Practitioner*** 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. ***Nicolene Venter, Public Participation Practitioner (e-mail dated 22 January 2015)***
3.19	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;		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. ***Sharon Meyer-Douglas, EAP***

			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. ***Carel van Heerden, Eskom***
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. ***Nicolene Venter, Public Participation Practitioner***
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 E-mail: 13 November 2014	The Medupi FGD Technology Selection Study Report (Appendix D in the FSR) was received from the Applicant on the 25th 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. ***Nicolene Venter, Public Participation Practitioner*** Response to the e-mail dated 24 November 2014 was responded to on the 01st December 2014. The response is included in Appendix F5 of the FSR. ***Nicolene Venter, Public Participation Practitioner***
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: 12 November 2014	Acknowledged receipt of the CER's e-mails dated 12 and 13 November 2014.
6	Kindly let us know when we can expect a response to our correspondence below.		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. Due to the nature of this public meeting (presentation of EIA & 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. 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. 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. 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. 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&APs on the project database shortly. Zitholele Consulting expressed their hope that the above-mentioned address their queries. ***Nicolene Venter, Public Participation Practitioner (email dated 18 November 2014)***

7	Requested that further notifications be sent to the other owners who are in Johannesburg. E-mail address provided.	KRUGER, Ruth CER NPC E-mail: 10 November 2014	Zitholele Consulting acknowledged receipt of this information and confirmed that notification will be send to the e-mail/s provided. Zitholele Consulting requested the names of the other property owners. Information has not yet been received. ***Nicolene Venter, Public Participation Practitioner (e-mail dated 11 November 2014)***
8	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.	E-mail: 07 November 2014	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)
9	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	E-mail: 04 November 2014	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&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&APs received a SMS. ***Nicolene Venter, Public Participation Practitioner (e-mail dated 18 November 2014)***

	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&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 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. Therefore, please note that a failure to provide this Study Report to I&APs is contrary to NEMA's EIA Regulations, and any decision taken without providing this vital information for comment by I&APs may be subject to review in terms of the Promotion of Access to Justice Act 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. In the circumstances, we are again instructed to request that a copy of the Technology Selection Study Report be made available to I&APs on an urgent basis.		
10	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?	E-mail: 30 October 2014	E-mail acknowledged and CER informed that their request has been forwarded to Eskom and Zitholele Consulting will revert back as soon as possible. Nicolene Venter, Public Participation Practitioner (31 October 2014) 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. Nicolene Venter, Public Participation Practitioner (04 November 2014) 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. ***Sharon Meyer-Douglas, EAP***
11	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.	KAMANJA, Sylvia Centre *For* Environmental Rights Email: 04 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 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. Councillor Motlokwa intimated that should Eskom not address these pre-existing issues, that the meeting may become violent. Due to the nature of this public meeting (presentation of EIA & 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. 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.
12	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 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&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. Therefore, please note that a failure to provide this Study Report to I&APs is contrary to NEMA's EIA Regulations, and any decision taken without providing this vital information for comment by I&APs may be subject to review in terms of the Promotion of Access to Justice Act (PAJA). 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. In the circumstances, we are again instructed to request that a copy of the Technology Selection Study Report be made available to I&APs on an urgent basis. We look forward to your urgent response.		I can confirm that as soon as the draft minutes of both the Key Stakeholder Workshop and the Public Meeting have been appropriately reviewed and finalised, that the CER will receive a copy. 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. 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&APs on the project database shortly. I hope the above-mentioned address your queries. ***Nicolene Venter, Public Participation Practitioner***
13	Further to the email below regarding the Technology Selection Report for the Medupi FGD project, we would	KRUGER, Ruth Attorney: Centre	Eskom, the Applicant for this project, informed us that any request for information such as the Technology Selection Study Report must please go

	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. Please could you confirm that the Technology Selection Report will be sent to all stakeholders, not just the CER.	For Environmental Rights Email: 24 November 2014	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 the above-mentioned in order and please do not hesitate to contact us should you need any additional information. Please note that the TSSR has been made available to all stakeholders in the following manner: • electronic copy to all registered I&APs on the project database with e-mail addresses; • fax to those registered I&APs without an e-mail address but with a fax number; and • On the Zitholele website The time period for public review of the DSR has been extended to the 9th January 2015, to allow stakeholders the opportunity to review this additional information. The TSSR will also be included in the FSR which will be made available for public comment. ***Nicolene Venter, Public Participation Practitioner***
14	**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?**		
15	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. **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.**		

16	From the questions being posed it is obvious that there were problems with the initial 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. That is an acceptable request, but eskom needs to know that there may be more stakeholders who will be submitting questions.	LEKALAKALA, Makoma Earthlife Africa – Johannesburg PM: 05 November 2014	Specialist studies have not been undertaken yet. Reference made to the specialist studies is to those studies that were 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. ***Sharon Meyer-Douglas, EAP*** 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. ***Rosetta Rammutla, Eskom*** 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. ***Carel van Heerden, Eskom*** **<u>Post-meeting note</u>:** The Technical Selection Study Report was made available on the 1st of December 2014 to all registered I&APs. 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. ***Prince Khumalo, Eskom*** **<u>Post meeting note</u>:** The Technical Selection Study Report was submitted to all stakeholders on 1st December 2014 and the public review period was extended to 9th January 2015 to allow sufficient time for review and comment.
17	Can the status of the Public Meeting in Marapong tomorrow evening be confirmed?	NAIR, Kubentheran Eskom PM: 05 November 2014	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. ***Nicolene Venter, Public Participation Practitioner***
18	As discussed on the 13 October 2014, please receive the list of people who are going to attend Key Stakeholder Workshop. Mayor Moloko Maeko: Lephalale Municipality Mayor, patrick.mojela@lephalale.gov.za, 014 762 1400 Counsellor Alpheus Thualare: (Mining, Industries & Labour),Lephalale Municipality, (Cellphone Number Withheld for purposes of CRR) Joel Moloantoa, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR) Lesiba Monare, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR) Nakedi Maake, Marapong Sanco, (Cellphone Number Withheld for purposes of CRR) Pastor Papo: President Lephalale City Chamber, (Cellphone Number Withheld for purposes of CRR)	MAAKE, Nakedi Representative SANCO Email: 16 October 2014	Thank you very much for a very informative discussion on Tuesday – your call is appreciated. Please receive herewith confirmation that we had registered the stakeholders', as listed below, attendance at the Key Stakeholder Workshop. 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. For reference purposes, please find attached the Background Information Document. We are looking forward to meet you and the other stakeholders at the Key Stakeholder Workshop. ***Nicolene Venter, Public Participation Practitioner***
19	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.	KSW: 05 November 2014	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. 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: • Marapong Public Library;

			• Clinic; • Marapong Spar; • Mzosti's Car Wash; • Nelsonskop Primary School; • Ditheku Primary School; and • Tielelo Secondary School. In Lephalale 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. ***Nicolene Venter, Public Participation Practitioner***
20	Please could you register Greenpeace as an I&AP (with both myself and Penny-Jane (cc'ed in this email) as contacts) in this matter.	STEELE, Melita Senior Climate & Energy Campaign Manager Greenpeace Africa Email: 17 October 2014	We will add yourself and Ms Penny Jane Cooke onto the database on the aforementioned project as per your request. For your convenience, please find attached the following documents for your perusal and response: • The Project Background Information Document; • A Letter Announcing the Draft Scoping Report and an invitation to the Public Meetings (and the supporting reply sheet); • An invitation to the Key Stakeholder Workshop (and the supporting Registration form). 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. Stakeholders have also been invited to the two Public Meetings and are more than welcome to attend these. 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. We thank you for your interest in this project and look forward to meeting with you at the project meeting/s.

			As discussed, please find attached the Background Information Document (BID) regarding the above-mentioned proposed project. 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. Please be informed that the BID can also be downloaded from Zitholele's website (http://www.zitholele.co.za/eia-for-medupifgd). 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. Please do not hesitate to contact us should you require any additional information regarding this proposed project ***Nicolene Venter, Public Participation Practitioner***
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	The requested has been acknowledged and confirmed ***Nicolene Venter, Public Participation Practitioner***
4.2.11 GENERAL COMMENTS			
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. ***Nicolene Venter, Public Participation Practitioner***
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	The Local Municipality's comment has been noted. ***Nicolene Venter, Public Participation Practitioner***

		November 2014	
3	The DAFF representatives will go through the DSR and submit their written comments, if any.	MATLOU, JM DAFF KSW: 05 November 2014	The Department's comment has been noted. ***Nicolene Venter, Public Participation Practitioner***
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.	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. ***Nicolene Venter, Public Participation Practitioner***
5	**COMMENTS RAISED DURING SCOPING PHASE**		
5.1	**COMMENTS RAISED BY AUTHORITIES**		
5.1.1	**LEPHALALE MUNICIPALITY**		
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. ***Sharon Meyer-Douglas, EAP, Zitholele Consulting***
5.1.2	**DEPARTMENT OF ROADS & TRANSPORT**		
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	TSHIKONELO, Mr Joseph Department of	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,

	with applicable conditions.	Roads & Transport BID Comment Sheet: 09 June 2014	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. ***Sharon Meyer-Douglas, EAP, Zitholele Consulting***
5.2	**COMMENTS RAISED BY INTERESTED AND AFFECTED PARTIES**		
5.2.1	**AIR EMISSION COMPLIANCE / IMPACTS RELATED COMMENTS**		
1	**Integration of FGD into the design, construction and commissioning of units:** Condition 7.1.4 of the Medupi AEL provides as follows: *"The License (sic) Holder shall continuously operate and maintain a flue gas desulphurization (FGD) plant for control of SO_2 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".*	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	Agreed ***Sharon Meyer-Douglas, EAP***
2	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.		The six yearly phasing of the Medupi FGD Plant is not a delay but a requirement of the loan agreement with the Word 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. ***Olga Makhalemele, Eskom*** 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***
3	In its application to postpone compliance with the MES in		Eskom's MES postponement application for Medupi Power Station is based

	terms of the National Environmental Management: Air Quality Act, 2004 (AQA),[3] Eskom seeks postponement of both the existing (3500 mg/Nm^3) and new plant (500 mg/Nm^3) MES. The former apply from 1 April 2015, and the latter, from 1 April 2020. In its postponement application, Eskom seeks an SO_2 emission standard of 4000 mg/Nm^3 until 1 January 2027 – on which date it will comply with the April 2020 MES[4]. In other words, from 1 April 2020 to 31 December 2027, Eskom seeks to emit 8 times the MES.		on the most conservative commissioning schedule, i.e. one unit per year commissioned from 2015 to 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_2 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_2 emission limit of 4000 mg/Nm^3 in the MES postponement application for Medupi, this is the upper limit of expected emissions. SO_2 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_2 emission limit needs to be based on the highest possible SO_2 emissions resulting from burning the

[3]GN893 in *GG*37054 of 22 November 2013.
[4] Postponement application p.5, available at: http://www.iliso.com/emes1/Postponement%20Applications_PDFs/Medupi%20PS_Postponement_Application_Final_2014%2002%2021.pdf

			2.2% sulphur coal (since there is no way of reducing the SO_2 emissions prior to the installation of FGD). However, SO_2 emissions from Medupi prior to installation of FGD are expected to average around 2700 mg/Nm^3 (on a dray basis at 10% O_2), which is below the "existing plant" SO_2 limit of 3500 mg/Nm^3. ***Sharon Meyer-Douglas, EAP***
4	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 (MGO) of each unit when they are "switched off" for maintenance. According to*		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. ***Sharon Meyer-Douglas, EAP*** 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***

	manufacturer's specifications and prudent power plant operating procedures, the first MGO will be six years after commissioning of each generating unit".		
5	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*		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. ***Sharon Meyer-Douglas, EAP***

	account, this would see the last FGD installed by end 2026".[5]		
6	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.		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. ***Sharon Meyer-Douglas, EAP***
7	The impact of FGD only being installed 6 years after the commissioning of each unit is that each unit will operate with unabated SO_2 emissions during its commissioning period, plus an additional 6 years, if units are commissioned at 6 monthly intervals, the optimistic		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 the

[5] Ibid.

	scenario is that all 6 units would be commissioned over 3 years, and 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.		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. ***Sharon Meyer-Douglas, EAP*** 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***
8	Once commissioned, Medupi will emit PM_{10} and No_x 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_{10} emissions from Matimba are 4900 tons/year,[6] and are 4330		Medupi Power Station will be complying with the atmospheric emission licence limits for PM_{10} and NO_x from commissioning. SO_2 emissions will be compliant to legislated standards after FGD retrofits have been completed. Eskom cannot influence emissions stemming from other industrial sources. ***Sharon Meyer-Douglas, EAP***

[6] Matimba AIR, Tabe 21, p34 available at: http://www.iliso.com/emes1/Atmospheric%20Impact%20Reports_PDFs/Matimba_AIR_FINAL_2014%2002%2021.pdf

	tons/year from Medupi,[7] representing an 88% increase in emissions. Medupi No_x emissions are 71200 tons/year[8] compared with current Matimba emissions of 67600 tons/year;[9] 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.		
9	Should Eskom's application for postponement be acceded to, Medupi annual average SO_2 emissions may increase from 69000 tons/year[10] with 1 unit online, to a total of 414000 tons/year when all 6 units are online without FGD. That is, under these circumstances, combined Matimba and Medupi emissions would increase		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. ***Sharon Meyer-Douglas, EAP*** Medupi Power Station will have continuous emission monitors that measure

[7] Medupi AIR Figure 3, p15.
[8] Medupi AIR Figure 3, p15.
[9] Matimba AIR Table 21, p34.
[10] Medupi AIR Figure 3, p15, available at: http://www.iliso.com/emes1/Atmospheric%20Impact%20Reports_PDFs/Medupi_Final_AIR_2014%2002%2024.pdf. Total uncontrolled SO_2 emissions with all 6 units commissioned 414000 tons/year; 1/6th per unit, 69000 tons/year.

	from 309000 tons/year (Matimba only) to 723000 tons/hear (Matimba plus all 6 units of Medupi online); an increase of 134%. This increase in SO_2 emissions will not only result in a corresponding increase in ambient SO_2 concentrations, but also will result in the increased formation of secondary sulphate particles, a major component of ambient $PM_{2.5}$.		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. ***Olga Makhalemele, Eskom***
10	Our clients submit that these impacts illustrate the importance of integrating FGD into units 2-6.[11] The Project must address this, with full and detailed explanations if this is not possible.		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. ***Sharon Meyer-Douglas, EAP***
11	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		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

[11] See fn 1.

	is not acceptable to our clients: Eskom must be compelled to maintain and operate the FGD system as an integral part of the plant.		unavailability such as severe drought periods, sorbent shortage and unplanned maintenance. ***Sharon Meyer-Douglas, EAP***
12	**Implications of non-compliance with ambient air quality standards in the Waterberg Bojanala Priority Area** Medupi is located in the Waterberg Bojanala Priority Area (WBPA),[12] 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)[13] are being, or may be, exceeded. The WPA is developing an Air Quality Management Plan (AQMP), as required by S.19 of AQA for every Priority Area.		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. ***Sharon Meyer-Douglas, EAP***
13	At the time of the WBPA declaration, the Minister was "satisfied that the ambient air quality … may exceed the		The exceedance of PM_{10} and Ozone has nothing to do with the SO_2 retrofit, Medupi will be retrofitted with Fabric filter plants on commission and we will

[12] Declaration of the Waterberg National Priority Area in GG35435 of 15 June 2012.
[13] GN1210 in *GG32816* OF 24 December 2009 and GN486 in *GG35463* of 29 June 2012.

	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 I 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 PM2.5 (particulate matter with aerodynamic diameter less than 2.5 micron metres), PM10 (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, non-compliance with the AAQS. 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.		not have any PM10 exceedances. ***Sharon Meyer-Douglas, EAP***
5.2.2 FGD Technology alternatives related comments			
1	**Alternatives to wet-flue gas desulphurisation:** The BID makes mention only of wet FGD as a means to control SO_2 emissions from the Medupi Power Station, describing the Project as follows: *"The FGD (flue gas desulphurisation) will be operated on wet systems; very small volumes of water will be*	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	Refer to 474-10175 Medupi FGD Technology Study Report. ***Sharon Meyer-Douglas, EAP***

	circulated from the absorber reaction tank to spray headers. The water will be abstracted from the existing raw water reservoir."		
2	Defining the project in this manner forecloses a discussion about whether SO_2 emissions from the Medupi Power Station would be better controlled through alternative technology such as dry (or semi-dry) FGD technology.		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. ***Sharon Meyer-Douglas, EAP***
3	Eskom has argued that using dry (or semi-dry) FGD technology for controlling so_2 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_2 emissions cannot be divulged because of "commercial sensitivity" the responding statement is attached hereto as annexure "2". Without knowledge of these costs, I&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.		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. ***Sharon Meyer-Douglas, EAP***
4	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: ***"****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*		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. ***Sharon Meyer-Douglas, EAP***

	applications."[14]		
5	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. 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,	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	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. 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. ***Sharon Meyer-Douglas, EAP*** Eskom will not be making use of Lephalale's water reserves. The MCWAP imports water. ***Carel van Heerden, Eskom***

[14] USEPA "Air Pollution Control Technology Fact Sheet: Flue Gas Desulfurization (FGD) – Wet, Spray Dry, and Dry Scrubbers." http://www.epa.gov/ttncatc1/dir1/ffdg.pdf

	and how the allocation of water to FGD will impact on water use in the area.		
5.2.3 GYPSUM DISPOSAL ALTERNATIVES RELATED COMMENTS			
1	The role of the EIA process is partially defined in the BID as follows: *"The EIA will identify, propose and assess:* • *Feasible sites for disposing the by-products,* • *Different technologies for the managing of commercial-grade saleable gypsum, ash and sludge disposal; and* • *Various possible designs for disposal facilities."*	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	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. ***Sharon Meyer-Douglas, EAP*** 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. ***Carel van Heerden, Eskom***
2	Working toward the fulfilment of the role of the EIA process, the BID further states that:		Agreed. The feasibility of alternatives will be informed by technical and financial factors as well as social and environmental implications.

	"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."		***Sharon Meyer-Douglas, EAP***
3	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.		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. ***Carel van Heerden, Eskom***
4	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		Agreed. The limitation in SA is that the Kusile gypsum sales can fulfil 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. ***Sharon Meyer-Douglas, EAP***

	was reused, principally as gypsum panel products (i.e. Construction drywall).[15] 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.		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. ***Carel van Heerden, Eskom*** 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. ***Kubentheran Nair, Eskom***
5	The proposed co-disposal of the gypsum waste with the ash may sterilise both waste streams so that they cannot		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

[15] American Coal Ash Association "2008 Coal combustion Product (CCP) Production & Use Survey: Report http://acaa.affiniscape.com/associations/8003/files/2008_ACAA_CCP_Survey_Report_FINAL_100509.pdf

	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.		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. ***Sharon Meyer-Douglas, EAP*** 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. ***Kubentheran Nair, Eskom***
5.2.4 WATER RELATED COMMENTS			
1	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,	HUGO, Robyn Attorney: Centre *For* Environmental Rights	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

	the project will either stop operating or need to obtain water from another source.	Letter: 07 July 2014	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. 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. ***Sharon Meyer-Douglas, EAP***
2	The BID should consider alternative water sources for the project, which will affect both the scoping and EIA phases of the project.		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. ***Sharon Meyer-Douglas, EAP***
3	Since the water consumption rates for semi-dry FGD may be as much as 60% lower than for wet FGD,[16] the selection of wet FGD for Medupi clearly significantly		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

[16] IEA Clean Coal Centre: Low Water FGD Technologies. No 12/15 December 2012. http://www.iea-coal.org.uk/.At 1.

	increases the overall demand for water for so_2 abatement. This is another reason why the project must include a detailed consideration of alternatives to wet FGD.		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 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. ***Sharon Meyer-Douglas, EAP***
4	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[17] - but this would be sufficient for 6 units equipped with semi-dry FGD.		The Scoping Phase is looking more closely at alternatives. Same response as above. ***Sharon Meyer-Douglas, EAP***

[17] 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

5	The BID should address all of these issues.		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. ***Sharon Meyer-Douglas, EAP***
6	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.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated (Attached to e-mail dated 09 January 2015)	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. Please refer to the relevant documentation available for the original Medupi Power Station environmental authorisation regarding the pollution abatement issue. ***Sharon Meyer-Douglas, EAP***
7	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 FGD.		MCWAP Phase 1 has already licensed water allocation to Medupi Power Station. An application for additional 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. ***Sharon Meyer-Douglas, EAP*** 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***
8	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.	STEELE, Melita Greenpeace Environmental Organization NPC Letter: Undated	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. ***Sharon Meyer-Douglas, EAP***

		(Attached to e-mail dated 09 January 2015)	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*** 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. ***Sharon Meyer-Douglas, EAP***

5.2.5 WASTE RELATED COMMENTS			
1	On June 10, 2010, the united states EPA proposed a new regulation containing environmental safeguards for the disposal of coal combustion residuals.[18]	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	This is not relevant to the project at hand and does not 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 documented and can be found on Eskom's website, Appendix K in the FSR. (http://www.eskom.co.za/OurCompany/SustainableDevelopment/EnvironmentalImpactAssessments/Pages/Medupi_Operation_EMP.aspx) 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

[18] 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

			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. (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.aspx) 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. ***Emile Marell, Eskom***

2	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: ***"****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."*[19]		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. ***Sharon Meyer-Douglas, EAP,***
3	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,		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

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

	disposing them in dry form consistent with internationally-accepted best practice.		of the project. ***Sharon Meyer-Douglas, EAP,***
4	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 volume/tonnage of waste gypsum which Medupi plant will product 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,	ABROSE, Rowan Supply Chain Manager *For* Bit Group Complete Email: 16 October 2014	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). ***Nicolene Venter, Public Participation Practitioner,*** 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. ***Carel van Heerden, Eskom***

	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.		
5.2.6 ENVIRONMENTAL PROCESS COMMENTS			
1	**Overview:** The CER act for groundwork and ELA Johannesburg. Their clients are I&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&APs in relation to the WUL, and any other processes relevant to the project.	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	Noted and the mentioned entities will be registered on the database as IAPs and will be kept informed of the status of the EIA. ***Sharon Meyer-Douglas, EAP***
2	The EIA process would be the proper avenue for scrutiny		Technology alternatives do not form part of the scope of work for this EIA,

	of Eskom's claims that controlling SO_2 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.		however, the impacts of the preferred technology will be assessed. The Eskom Technology Selection Study Report will be an appendix to the Scoping report. ***Sharon Meyer-Douglas, EAP***
5.2.7 PROJECT RELATED COMMENTS			
1	The first major FGD unit was installed in 1931 at Battersea Power Station in the United Kingdom.[20] 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.[21] Additional employees and training will be needed to run the Project, and the processes surrounding the EIA and	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	No provision for training has been complied as the project is still in the early conceptual phase. ***Ishana Harripersad, Eskom***

[20] 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.
[21] 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

	WML should make provision for these, to ensure that the Project is not delayed.		
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. ***Sharon Meyer-Douglas, EAP***
5.2.8 LEGAL COMPLIANCE RELATED COMMENTS			
1	**Background to the Project:** 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 plant planned to operate by the end of 2014.	HUGO, Robyn Attorney: Centre *For* Environmental Rights Letter: 07 July 2014	Agreed. ***Sharon Meyer-Douglas, EAP***
2	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:		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. ***Sharon Meyer-Douglas, EAP***
3	*"2. The Borrower shall:* *(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*		Noted. Annual reporting and every six month engagements with the World Bank take place to share information on the developmental efforts of the FGD project. ***Sharon Meyer-Douglas, EAP***

	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 *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."*		
4	Therefore, although the BID refers to compliance with the minimum emission standards (discussed below), Eskom is contractually obliged to install FGD technology at Medupi also to comply with its loan agreement with the World Bank.		Both are requirements by Eskom. In addition, the Minimum Emissions Standards of the NEM: Air Quality Act hold reference. ***Sharon Meyer-Douglas, EAP,***
5.2.9 CONSULTATION RELATED COMMENTS			
1	**Overview:** Upfront, 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. ***Nicolene Venter, Public Participation Practitioner***
2	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. ***Sharon Meyer-Douglas, EAP,***
3	In summary, our clients submit that Eskom's BID for the EIA and WML is incomplete and should also consider the following:		
3.1	Integration of FGD into the design, construction and commissioning of units 2-6[i], with unit one retrofitted as soon as possible, and not later than 6 years after it is commissioned;		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. ***Sharon Meyer-Douglas, EAP***
3.2	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 register as an interested and affected party, or not. Detailed information is provided later in the process and not within the BID. ***Sharon Meyer-Douglas, EAP***
3.3	Alternatives to wet FGD in the scoping stage; including, but not limited to semi-dry and dry FGD;		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. ***Sharon Meyer-Douglas, EAP***
3.4	Alternatives in the scoping stage to disposal of gypsum in lined ADFs; specifically the reuse of gypsum;		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. ***Sharon Meyer-Douglas, EAP***
3.5	Alternative water sources for the Project;		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.

			Sharon Meyer-Douglas, EAP
3.6	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;		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. 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. ***Sharon Meyer-Douglas, EAP***
3.7	Provision for additional employees and their training prior to commencement of the Project; and		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. This information will be dependent on the contractual arrangements with the supplier. ***Sharon Meyer-Douglas, EAP***
3.8	A project timeline, together with penalties for non-compliance with this timeline.		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. ***Sharon Meyer-Douglas, EAP***
4	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:		Please see below the responses received from Eskom regarding the availability of information. ***Sharon Meyer-Douglas, EAP***
4.1	copies of all contract Eskom has with coal mines that will		4.1 This is not relevant to the Medupi FGD project

	supply Medupi;		***Theuns Blom, Eskom***
4.2	the construction schedule for the whole Medupi plant;		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. ***Sharon Meyer-Douglas, EAP***
4.3	the construction and commissioning schedule, including the preliminary design, construction and commissioning schedules, for the retrofitting of the FGD units;		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. ***Sharon Meyer-Douglas, EAP***
4.4	the costing, technical assessments, and water use requirements for FGD, including the comparative assessment of wet, dry and semi-dry FGD systems;		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
4.5	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;		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 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. 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. ***Ian Midgley, Eskom***

			To supplement above please find Appendix I in the FSR. ***Felicia Sono***
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		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. ***Theuns Blom, Eskom***
4.7	the most recent Environmental Management Plan for the disposal of coal combustion residuals/wastes.		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. (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.aspx) ***Emile Marell, Eskom***
5	In the circumstances, it is submitted that the BID should be revised in order to include the following:		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. ***Sharon Meyer-Douglas, EAP,***
5.1	Integration of FGD into the design, construction and commissioning of units 2-6,[22] with unit one retrofitted as soon as possible, and not later than 6 years after it is commissioned;		Information on the reasons for the retrofit will be provided within the FSR for public review. ***Sharon Meyer-Douglas, EAP*** Eskom investigated the feasibility of co-commissioning the remaining units at

[22] See fn 1.

			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***
5.2	the implications of the fact that there is non-compliance with ambient air quality standards in the WBPA;		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. ***Sharon Meyer-Douglas, EAP*** 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. ***Olga Makhalemele, Eskom***
5.3	alternatives to wet FGD in the scoping stage; including, but not limited to semi-dry and dry FGD;		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. ***Sharon Meyer-Douglas, EAP***
5.4	alternatives in the scoping stage to disposal of gypsum in lined ash disposal ADFs; specifically the reuse of gypsum;		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. ***Sharon Meyer-Douglas, EAP*** 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. ***Carel van Heerden, Eskom***
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 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. ***Sharon Meyer-Douglas, EAP***
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. ***Sharon Meyer-Douglas, EAP***
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 are 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. ***Andrea Williams, Eskom***
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. ***Theuns Blom, Eskom***