

COMMISSION OF INQUIRY INTO STATE CAPTURE

HELD AT

PARKTOWN, JOHANNESBURG

10

26 FEBRUARY 2019

DAY 56

20

PROCEEDINGS HELD ON 26 FEBRUARY 2019

CHAIRPERSON: Good morning Ms Hofmeyr, good morning everybody.

ADV KATE HOFMEYR: Good morning DCJ.

CHAIRPERSON: Are you ready?

ADV KATE HOFMEYR: Yes we are indeed Chair.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Chair if I may by way of introduction set out what we propose to cover today. As introductory matters I would like to address first the approach that will be taken to the Brakfontein evidence. Secondly to deal with a few procedural matters and then to give you an overview of that evidence.

CHAIRPERSON: Yes thank you.

ADV KATE HOFMEYR: Chair in terms of the approach to the evidence in relation to Brakfontein what we propose to do is to begin with a snapshot of what the evidence in totality will show over the course of a number of days of evidence in relation to Brakfontein. Chair we propose that that will be useful way to begin the evidence well for a number of reasons. The first is that there will be three witnesses who will give oral testimony but their testimony will be broken up over a series of days because of the need and the schedule to adjust it for travel arrangements and other matters relating to witnesses. So it will not be a situation where it can run consecutively for a number of days and so we do not want to lose the threads between the evidence and so an overview initially we propose is useful. The second reason for providing the overview Chair is that it is not usually the case we submit that State Capture announces itself with headlights. It in fact reveals itself through the insidious and incremental undermining of institutions and it shows itself through the movement for private benefit of public funds and through the appropriation of power and decision making from those

who should wield it to those who stand outside of state organs. And what the Brakfontein evidence shows when it is considered across its full canvass is that those elements of State Capture were apparent and real in the context of the Brakfontein coal supply agreement with Tegeta. So Chair with your leave I will commence with an overview once I have dealt with the procedural aspects. Chair in terms of the procedural aspects.

CHAIRPERSON: Okay maybe let us deal with the procedural aspects and then we go back to the overview a bit before you go into it.

ADV KATE HOFMEYR: Certainly. Chair in terms of procedural aspects there are four
10 reports that have come to the Commission's attention that have already been done on the question of this coal supply agreement. They are reports by National Treasury in March 2017. They are a report by Fundudzi of November 2018 and then there are two PWC reports in November 2015 and November 2016. Those appear in what is called File 5 of U4 which is before you today. What – the approach that has been taken to those existing reports in the course of the investigation is the following: They were used as a basis for investigation where they revealed important aspects of the factual story. They were investigated further and where appropriate corroborated. But they were also interrogated and there are occasions where we have identified errors in them and we will advise you of that in the course of the presentation of the evidence. So
20 they form a background to the way the investigation was proceeded with. The second thing at the level process and just to orientate you Chair is that the Public Protector's report on State Capture dealt with Brakfontein in a very cursory manner. If you consider the report what really happens in it in relation to Brakfontein is that there are summaries of some of the documents which the Public Protector considered which referenced Brakfontein and then there is a recordal of Eskom's response to the

questions around Brakfontein. That response was in the following terms: Eskom is recorded in the Public Protector’s report as having said: “At the time of the conclusion of the coal supply agreement with Tegeta in relation to its Brakfontein resource all contractual documents, information and approvals had been provided.” Chair we will show you through the course of the evidence that that is false. That is not what occurred in the Brakfontein coal supply agreement. I will also at an appropriate point refer you to what was presented in evidence yesterday through Mr Mabuza which was the chairman’s response in anticipation of the Carte Blanche interview about the Brakfontein coal supply agreement with Tegeta. And we will show again that what the

10 chairman said in that media statement is false insofar as it relates to Brakfontein. Chair as I mentioned earlier the evidence will be presented through the testimony of three witnesses. One of them will appear today and the other two will appear next week Friday. By the conclusion of Friday we should have completed the Brakfontein story. There is the witness the evidence of a further witness who provided a statement to the Commission and that is the evidence of Doctor Mark Van Der Riet. Doctor Van Der Riet sadly cannot give evidence because he passed away a matter of days after providing his statement to the Commission. I therefore propose in the appropriate point in the chronology of the story to take you to his affidavit and to highlight the relevant parts of it. Chair what is relevant in relation to Doctor Van Der Riet’s statement is that out of an

20 abundance of caution the legal team determined that it would be appropriate to send out Rule 3.3 Notices in relation to Doctor Van Der Riet’s statement albeit that he was not going to be presenting and giving evidence. We did so and one of the implicated persons has responded to the Commission and I would like to take you through what is said in that response.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And to give you our approach. Chair the response is from Mr Mboweni. It is a response that was handed to me this morning albeit that it was sent through on Friday.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: If I beg leave just to hand it up.

CHAIRPERSON: Yes thank you.

ADV KATE HOFMEYR: Chair if you turn over.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: To the second page you really have the letter that was
10 received by the Commission. What the letter makes clear is that the Rule 3.3 Notice
was received by Mr Mboweni on the 15th February. You will see that in the first bullet of
the page. And it was notice that the evidence of Doctor Van Der Riet would be
presented during the course of today's hearing and so that is the date of the 26
February that you see there. What the letter goes on to say is that despite the passage
of time being eleven days Mr Mboweni has not been afforded the ordinary fourteen
days in which to make application and he seeks a request if you see over the page that
the date for the hearing be rescheduled and a fresh notice be submitted which is
received by Mr Mboweni more than fourteen clear days prior to the scheduled start for
the hearing. Chair if I may just make some submissions about the recommended
20 approach of the legal team.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: There is no opportunity for Doctor Van Der Riet to be cross-
examined.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Quite clearly.

CHAIRPERSON: Yes, yes.

ADV KATE HOFMEYR: If Mr Mboweni would like to place his version before the Commission whether by way of affidavit or oral evidence he has every opportunity to do so and we would certainly welcome him approaching the Commission in that – on that basis. We therefore see no utility.

CHAIRPERSON: Did the notice from the Commission to him – was it appropriately amended to make sure that it did not give the impression that Doctor Van Der Riet would be giving evidence?

ADV KATE HOFMEYR: Let me draw your attention to it.

10 **CHAIRPERSON**: Because most of those notices would be talking about people who will come and give evidence.

ADV KATE HOFMEYR: Yes indeed.

CHAIRPERSON: So I wonder whether it was appropriately adjusted to indicate that this is not a witness who would be called.

ADV KATE HOFMEYR: Yes. Chair let me find it for you. It is in File 5 before you.

CHAIRPERSON: Yes. I will not go to it I will just rely on you.

ADV KATE HOFMEYR: Indeed I am going to just get you the reference. Chair unfortunately it appears that the form of the notice that went to one of the other implicated persons is in the file but not the one that went to Mr Mboweni. I would like to
20 just check myself on that. Oh sorry at 1295. Thank you Chair I am indebted to my learned colleague. No that is the one for Mr Bester. No the one for – in relation to Doctor Van Der Riet has not been included. Over the break I will confirm it.

CHAIRPERSON: Okay no that is fine.

ADV KATE HOFMEYR: For you Chair but my recollection.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Is that it made it clear that it was not the case that Doctor Van Der Riet would give evidence.

CHAIRPERSON: Okay, okay.

ADV KATE HOFMEYR: But that his statement would be presented in evidence.

CHAIRPERSON: Okay, okay.

ADV KATE HOFMEYR: I would just like to make absolutely sure of about that.

CHAIRPERSON: Yes, yes okay.

ADV KATE HOFMEYR: But it was known certainly at the time.

CHAIRPERSON: Yes.

10 **ADV KATE HOFMEYR:** That Doctor Van Der Riet had passed away and would not be giving oral evidence.

CHAIRPERSON: Yes okay.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: Okay, okay.

ADV KATE HOFMEYR: And so Chair we can see no utility in delaying the presentation of Doctor Van Der Riet's statement today to fit it into the chronology of events because Mr Mboweni has every right to approach and put his version before this Commission in due course.

CHAIRPERSON: Yes, yes. But you – when do you intend introducing that statement?

20 **ADV KATE HOFMEYR:** During the course of Mr Mashigo's evidence today at the appropriate point in the chronology.

CHAIRPERSON: Yes. Yes. Well maybe what should happen is that one of your colleagues should just telephonically inform the attorneys.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: That the position is that Doctor Van Der Riet is late so it is not like he

will be called to give evidence. His affidavit will be introduced but if Mr Mboweni wishes to file an affidavit to respond to the state – to the statement he must do so in terms of the rules and if he wishes to give evidence he must just do what the rules require.

ADV KATE HOFMEYR: Indeed Chair we will do that. And just to make it clear he was given a full copy of the affidavit and all its annexures.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: As a supplement to the notice.

CHAIRPERSON: Yes, okay, okay.

ADV KATE HOFMEYR: So there will be nothing in addition to that that will be covered
10 today.

CHAIRPERSON: Yes. Okay, okay.

ADV KATE HOFMEYR: Chair the last – there are two further sources of the evidence in relation to Brakfontein. One of those sources is emails that have been recovered from the hard drive that Chair you received into evidence at the end of last year. To the best of our investigators searches these are emails that have not previously been publicly disclosed and so they will form an important part of the puzzle.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: The final source of evidence will be a number of affidavits. That will be presented at the relevant points in the evidence. They tend to be of an
20 ancillary nature Chair. They relate to computations of penalties and records of under-supply of coal. What we propose to do at the conclusion of the evidence as my learned leader Mr Maleka has already signalled to Chair is to invite you to through the powers under Rule 3.10 ask for persons implicated as a consequence of the totality of the evidence to then provide answers in writing to this Commission in relation to those aspects. And so we would ensure that any evidence that is pertinent that is placed

before this Commission on affidavit would be referenced in those Rule 3.10 notices that go to any persons implicated by them. But by and large Chair they tend to be of a statistical nature and hence not the type of evidence that implicates people. There are one or two that do have implication but I will address them when we get to it.

CHAIRPERSON: Okay. Okay.

ADV KATE HOFMEYR: Chair those are the procedural matters. It then requires me to deal with the overview of the evidence so that it can be placed in its proper context and hopefully will be more accessible as a story that will then be presented through a series of witnesses. All that it purports to do is to highlight at the outset what the investigation
10 has found and what evidence will be presented to the Chair.

CHAIRPERSON: No that is fine. I wanted to say probably Mr Mashigo might or should be qualified to tell me a little bit more about Eskom.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: You know we have Eskom being at the centre of the investigations, the hearings the next two weeks or so and I do not want to rely simply on what I know as a member of the public about Eskom. There may be things that might be relevant that I should know. For example I want to know how many divisions, what divisions does it have, what departments does Eskom have, which department does what, how do they relate to each other – to one another in relation to the core function of Eskom.

20 **ADV KATE HOFMEYR**: Indeed.

CHAIRPERSON: The process of – I mean these contracts relate to coal. You know coal I think I do not enough about those things and it might just be important to have somebody from Eskom who tells me more about those things.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: In order to enable me to appreciate certain nuances that might be

relevant to the actual investigation. So if – I suspect that he should be able to deal with all of those things.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: So it might be useful to see if we can cover those things at the beginning.

ADV KATE HOFMEYR: Indeed. Chair we in fact anticipated that need and what Mr Mashigo has kindly done for us is produced a shortened version of a power point presentation that was prepared in 2015.

CHAIRPERSON: Okay.

10 **ADV KATE HOFMEYR**: It has been placed in the bundles.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And my intention is to start with that.

CHAIRPERSON: Okay that seems good.

ADV KATE HOFMEYR: It will give you the background to Eskom.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And importantly for Brakfontein it will give you the background to coal supply.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: And the role that it plays.

20 **CHAIRPERSON**: Yes

ADV KATE HOFMEYR: In powering power plants.

CHAIRPERSON: Yes, okay. Thank you. Thank you.

ADV KATE HOFMEYR: Chair if I may then just...

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Commence with the overview.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Chair Brakfontein is the shorthand name for a coal mine in Delmas. It is a mine that was acquired at a point in time by Tegeta and it was a mine that approached Eskom as early as 2011 but continuing through to 2014 to supply it with coal. Its endeavours to supply coal were initially rejected. We will go into why in the evidence but towards the end of 2014 when it received a water use licence on the 22nd December 2014 the last ground on which the approaches could be refused was removed and so a period of engagement with Tegeta for coal supply from Brakfontein began. Chair the evidence will show that considerable pressure was placed on Eskom employees to conclude this agreement with Tegeta for coal supply from Brakfontein. 10 They were told to finalise the agreement within 48 hours and to have it signed on the 10th March 2015. That is when it was duly concluded and it was to be a contract for coal supply for ten years to the Medupi Power Plant for a total of R4.3 billion. The day after it was signed Mr Koko was suspended. You have heard evidence about that already. His suspension occurred on the 11th March 2015. Chair the evidence will show that the agreement was concluded despite a financial due diligence not having been completed. The financial due diligence was in fact completed at the end of April 2015 after the agreement was concluded and had become effected and coal supply had already commenced. That financial due diligence concluded that Tegeta was quote 20 “Not financially sound enough to be awarded a contract of this value.” Despite that two months previously it was awarded this contract for R4.3 billion. And despite that caution from finance at the end of April 2015 the contract continued to be implemented apace. It was implemented despite a critical condition precedent in the agreement not having been fulfilled. The condition precedent related to concerns that the technical arm of Eskom had about the quality of the coal that would come from the Brakfontein

mine. We will go into the details of why that quality is important through the evidence of Mr Mashigo. But what is important for present purposes is that those who were pushed to conclude this agreement under great urgency tried to put in a protection for Eskom. The protection was that there would be a full successful combustion test of the coal from Brakfontein by 4:00 pm on the 31st March 2015. It is an unusual clause I will take the Chair to it in the course of today's evidence because it is not written in the usual lawyer's language that just says it is a condition precedent and the agreement will fail if it is not performed. It goes on to say and it will be the case that this agreement never came into existence. We will emphasise it because it is a key element of the protection

10 that those who were in the know sought to place in the conclusion of the agreement. Despite that no successful combustion test was done and on the 7th April coal started to be delivered from the Brakfontein mine. The contract was also implemented for the better part of two years despite another key element of the agreement not having been fulfilled and that was the need for an auto-mechanical sampler to do the sampling of the coal. Mr Mashigo will also deal with why that mechanism to ensure objectivity and integrity of the process of sampling coal was so key in this contract and others. So despite that the contract is implemented and there is no auto-mechanical sampler. The next unusual event in the evidence that will be presented is that a matter of three months after the agreement became effective there was an approach to Eskom to

20 supply almost double the tonnage of coal that had originally been contracted for. That is the part of the evidence that is revealed in the emails that have been recovered and obtained from the hard drive and what they show akin to the evidence that was presented to the Chair yesterday is that there was a method of engagement between Tegeta and Eskom at that time June 2015 where Tegeta would dictate the terms on which it wanted Eskom to respond to its offers. There is the rewriting of the letters that

Eskom ultimately provides to Tegeta. The next thing that happens in the performance of the contract as will be revealed in the evidence is that the quality of the coal from Brakfontein starts to become an issue. It gets increasingly bad in July of 2015 and reached a fever pitch in August of 2015. At that point the existing laboratory nominated and accredited laboratory of Eskom's, an independent one called Sibonisiwe had failed 15 out of 30 samples that had been obtained from the Brakfontein mine. But there was suddenly an allegation from Brakfontein Mine that a bribe had been sought to be solicited from them by Sibonisiwe Labs. So a decision was taken to move the lab to the SABS Lab another accredited lab, independent that Eskom uses in order to do a reanalysis of that sample which Sibonisiwe had failed 15 out of the 30 of. When that happened SABS failed 29 out of the 30 of the reanalysed samples. This had become such a serious matter that Doctor Van Der Riet and a team of three others were appointed to deal with the matter. They were reporting directly to Mr Koko and involved in meetings with Ms Daniels about the issue of coal quality supply from Brakfontein. They took it seriously. They started investigating and a decision was taken that on Saturday the 29th August Doctor Van Der Riet and his team would go to Brakfontein and they would witness the sampling of a new set of coal to be sent for new analysis. Doctor Van Der Riet was called however in advance of the Saturday by Mr Koko and he was told not to attend. That the sampling would take place without any Eskom personnel present. Doctor Van Der Riet conveyed to Mr Koko that that would be irregular. It would not be in accordance with the contracted quality management processes but despite that the sampling went ahead. Chair that sample was then analysed in what can only be described as mysterious circumstances. We will go into the detail of that in the evidence but it passed. It passed resoundingly and was deemed to be within the quality specifications of the coal supply agreement. Doctor

Van Der Riet says that on its own in his statement should have been a cause for caution because until then they were failing and now all of a sudden when a sample was taken at which no Eskom personnel were present it suddenly passes. But he starts to put his full report together so that he can report the following week to Mr Koko and the rest of the team about what the analysis were showing. But unfortunately he was unable to do so because on Tuesday the 1st September he was summarily suspended together with his three colleagues who were at that stage involved in assisting him to get to the bottom of the coal quality issues in relation to the Brakfontein coal. Chair he was suspended for 32 months. So for the better part of three years

10 Eskom lost the services of Doctor Van Der Riet. He was ultimately exonerated of all charges against him and his statement goes into some detail about the efforts he made to speed up that disciplinary process but to no avail.

CHAIRPERSON: I seem to have read something either in his statement or elsewhere which gave me the impression that Eskom may have actually asked him to come back from suspension earlier but he insisted that there should be a process in terms of which he would cleared or something like that.

ADV KATE HOFMEYR: Indeed Chair what it shows is that there was eventually a disciplinary process. The Chairperson exonerated him of all charges but one. There was a further charge that was added late in the day that related to him having sent to

20 himself 27 emails related to the Brakfontein affair on the morning of his suspension from his Eskom email account to his private email account. And the Chairperson of the disciplinary enquiry found that he was guilty of that charge. Eskom however reviewed that and regarded it as having been irrationally arrived at and then invited him back and that was on the 1st May 2018. So he re-entered the employ of Eskom at the beginning of May last year after being unavailable to it for 32 months to provide his expertise.

When we get to Doctor Van Der Riet's statement what we will be making clear is the key role that coal quality plays and can potentially affect the load shedding crisis that Eskom has experienced regularly. And so the loss of those services we will submit had a serious impact on Eskom over the period. Chair we then jump in the evidence to August 2016. So just to recap it is about September 2015 when Doctor Van Der Riet and his team are suspended. And then the contract continues to be performed but by about August 2016 under-supply from the Brakfontein Mine starts in some significant proportion. But in that very same month.

CHAIRPERSON: So first there was an agreement that Brakfontein would supply an
10 agreed amount of coal.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: Then they made an approach to Eskom to say we actually want to supply you more?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: And then later on they could not supply even the agreed one?

ADV KATE HOFMEYR: Correct.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Indeed Chair and when the undersupply starts Eskom approaches National Treasury to give Tegeta another R2.9 billion. They do so because
20 earlier in 2016 there was a National Treasury instruction to all Schedule 2 Public Entities that if they sought to vary an existing contract by more than 15 percent they would have to obtain the approval of Treasury. So but for that instruction it would have been entirely within Eskom's domain to decide to increase the contract, but as luck would have it for want of a better description because of this instruction in April 2016 Eskom had to apply to Treasury for approval. So it applied to Treasury for approval to

give Tegeta R2.9 billion more for 10.8 million tons more of coal over the course of the agreement, but it did so on terms that are patently misrepresenting the facts. Chair what the evidence will show is that representations were made to Treasury about the quality of the coal that had been confirmed when in fact it had not been confirmed. Let me just go back a moment to explain what I mean by that. The coal supply agreement covered two properties which comprised the Brakfontein Mine. There is what is called the Brakfontein Colliery and then there is a second property adjacent to it, in fact separated I am told and this will come out in the evidence, by the road the R35 through Delmas. On the other side of the road is what is called the Brakfontein Colliery Extension. Tegeta had mining rights in respect of both and when the approach was made to National Treasury in 2016 it is said that the colliery extension has now come online and coal will be supplied from there and it has been confirmed as being of the right quality. Well as a matter of fact it had not been confirmed as the right quality. In fact the tests available at the time had said it was not suitable and that more holes had to be drilled to take further samples. National Treasury did not give the approval. It did not give the approval because it had got wind of the quality issues and it said until the quality of the coal matter had been resolved it was not going to approve the extension. A further attempt was made in January 2017 to get National Treasury approval, but it was never granted and so that attempt at the extension of the agreement never came to fruition. Chair Tegeta continued to supply albeit under the original agreement, but in dwindling amounts from that late 2016 period. There were some months where there was more, other months when there were less but by about November 2017 the undersupply situation had become very serious. They were notified under the contract that they had to come up with a rectification plan, because the undersupply was of a significant magnitude and if they failed to do so penalties would be applied. Well in

February 2018 Tegeta went into business rescue, could no longer supply coal. It has not done so since February 2018 and every month penalties have been levied against it to what is now the total of 500 million. So that will be the Brakfontein story Chair. That is the overview and at the relevant point in the evidence in order to be of assistance we will go back to the chronology and just locate ourselves as to where we are in the story.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Chair that is the overview. If I may then call for Mr Mashigo to come forward?

CHAIRPERSON: Yes, do so. Thank you.

10 **ADV KATE HOFMEYR:** If I may request that he be sworn in?

REGISTRAR: Please state your full names for the record?

MR DANIEL MASHIGO: Daniel Mashigo.

REGISTRAR: Do you have any objections in taking the prescribed affirmation?

MR DANIEL MASHIGO: No.

REGISTRAR: Do you solemnly affirm that the evidence you will give will be the truth, the whole truth nothing but the truth? If so please raise your right hand and say I duly affirm.

MR DANIEL MASHIGO: I duly affirm.

REGISTRAR: Thank you.

20 **MR DANIEL MASHIGO:** (duly affirm, states)

CHAIRPERSON: Thank you. Yes you may proceed Ms Hofmeyr.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo if I can just orientate you. You have a set of files on your left hand side. They are identified as files 3, four and five on the spine. Chair the files have already been identified as U4 in the sequence of the bundles of the evidence for Eskom. If I may just request that that be entered into the

record?

CHAIRPERSON: So they are part of EXHIBIT U?

ADV KATE HOFMEYR: They are part of EXHIBIT U and they are the fourth part.

CHAIRPERSON: Oh.

ADV KATE HOFMEYR: So they have been identified as U4.

CHAIRPERSON: Oh, okay and then so there is a, a file 3 of EXHIBIT U4 and file 4 of EXHIBIT U4 and file 5 of EXHIBIT U4. Is that right?

ADV KATE HOFMEYR: Indeed Chair.

CHAIRPERSON: Okay. The files have already been marked U4. They are part of
10 EXHIBIT U4. So they will be five, file 3, file 4 and file 5 all under EXHIBIT U4. Thank
you.

ADV KATE HOFMEYR: Thank you Chair.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: And those will be the only files that will be relevant for the
Brakfontein evidence.

CHAIRPERSON: Thank you.

ADV KATE HOFMEYR: Mr Mashigo if I could ask you to take out file 3 and if you go
to, just to orientate you. The files have a pagination in the top right hand corner of each
page. They are Brak, shorthand for Brakfontein and then a number. If you go to
20 Brak128.

CHAIRPERSON: I am sorry. Before you proceed this might be something that needs
to be attended to in regard to a number of, a number of lever arch files.

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: You will find that what you have in the spine if Volume U4.

ADV KATE HOFMEYR: Hm.

CHAIRPERSON: We should have EXHIBIT U4.

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: Somewhere so that anybody who is looking for EXHIBIT U4 does not see Volume U4.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: And says this is not the right one.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: *Ja*, okay.

ADV KATE HOFMEYR: Chair if we can do that over the tea break.

10 **CHAIRPERSON:** That is fine.

ADV KATE HOFMEYR: For your files.

CHAIRPERSON: That is fine, *ja*.

ADV KATE HOFMEYR: And we will make sure to do the same with ours.

CHAIRPERSON: Thank you.

ADV KATE HOFMEYR: Thank you. Mr Mashigo if you go to Brak128 you will see the first page of a statement and that statement runs to page 160 as I have it. Do you see that?

MR DANIEL MASHIGO: Yes, I do.

ADV KATE HOFMEYR: Can you confirm that that is your statement?

20 **CHAIRPERSON:** I am sorry. I missed which one you are at.

ADV KATE HOFMEYR: Sorry Chair. We are in file 3.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: And it begins at Brak128.

CHAIRPERSON: Yes, I have got it. Thank you.

ADV KATE HOFMEYR: That is the first page of the statement and it runs to page 160.

Mr Mashigo can you confirm that that is your statement?

MR DANIEL MASHIGO: It is indeed my statement.

ADV KATE HOFMEYR: And you confirm that its contents are true and correct?

MR DANIEL MASHIGO: Yes, I do.

ADV KATE HOFMEYR: Thank you. Mr Mashigo I will take you to parts of your statement in the course of your evidence, but there is also great deal of additional information that the investigators have compiled subsequent to receiving your statement and so I will also ask you to go to those aspects which are generally found in file 4 during the course of your evidence at relevant points. If I may then.

10 **CHAIRPERSON**: What page does his stage end?

ADV KATE HOFMEYR: It ends at page, the statement itself Chair.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: Ends at page 160, but then it is followed by numerous annexures that commence from page 161 and runs for the remainder

CHAIRPERSON: Oh.

ADV KATE HOFMEYR: Of file 3.

CHAIRPERSON: Okay, thank you.

ADV KATE HOFMEYR: Thank you.

CHAIRPERSON: Well I think the reason why I could not see was.

20 **ADV KATE HOFMEYR**: Yes.

CHAIRPERSON: I was looking for his signature.

ADV KATE HOFMEYR: Yes, indeed. It is not signed.

CHAIRPERSON: [Laughter].

ADV KATE HOFMEYR: Which is why I requested him to confirm its contents under oath here. Thank you Chair. Mr Mashigo if we may just start with some background

then. What is the current position that you occupy at Eskom?

MR DANIEL MASHIGO: I, I am the Acting Head of Primary Energy or Acting Senior General Manager in Primary Energy which is part of the Generation Division.

ADV KATE HOFMEYR: We will get into the sort of organogram structure of Eskom in a moment, but if I may just ask you about your qualifications. What qualifications do you have?

MR DANIEL MASHIGO: I, I am, I am a Technologist Diplomate Chemist. I am a Chemist by trade.

ADV KATE HOFMEYR: Thank you and how long have you been employed at Eskom?

10 **MR DANIEL MASHIGO:** I am 25 years in Eskom. This is my 26th year. End of June I will be 26 years in Eskom.

ADV KATE HOFMEYR: And Mr Mashigo you have told us the position you currently occupy at Eskom. Can you describe for the Chair the position you occupied in 2015 when the coal supply agreement with Brakfontein was concluded?

MR DANIEL MASHIGO: In 2015 I was the Acting General Manager for Coal Operations which is a function that basically executes the contract and the supply to various stations.

CHAIRPERSON: Just as a matter of interest you said you are on your 26th year?

MR DANIEL MASHIGO: Yes.

20 **CHAIRPERSON:** At Eskom. Was Eskom your first employer after university or [intervenes].

MR DANIEL MASHIGO: My only employer Chair.

CHAIRPERSON: Your only employer?

MR DANIEL MASHIGO: Yes Chair.

CHAIRPERSON: You do not know any other employer?

MR DANIEL MASHIGO: No, not at all.

CHAIRPERSON: Okay, alright.

ADV KATE HOFMEYR: We thought as a result he would be the right witness to give you the Eskom.

CHAIRPERSON: Yes. No.

ADV KATE HOFMEYR: Back and side track.

CHAIRPERSON: *Ja*, he definitely should be, *ja*.

ADV KATE HOFMEYR: Thank you Chair. If you can go Mr Mashigo to page, to file 3 and the first page of that file after the green file divider. You will see that that has a slightly different numbering. It begins at BrakU4A.1 and it is a printed version of a PowerPoint presentation that runs to page 26. Can you confirm that you provided the Commission with this PowerPoint presentation?

CHAIRPERSON: That starts where?

ADV KATE HOFMEYR: At BrakU4A.1 in file 3.

CHAIRPERSON: BrakU41?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: Yes Chair [intervenes].

CHAIRPERSON: It might be necessary also during the break to put, I do not know whether it would be dividers.

ADV KATE HOFMEYR: Hm.

CHAIRPERSON: But something that will know where I find his statement. So and, and other important documents that you will be referring to frequently.

ADV KATE HOFMEYR: We can do that.

CHAIRPERSON: Not necessarily every document, but those that you think you will be

referring to frequently.

ADV KATE HOFMEYR: We will do that Chair.

CHAIRPERSON: *Ja.*

ADV KATE HOFMEYR: With pleasure.

CHAIRPERSON: Oh, okay.

ADV KATE HOFMEYR: Mr Mashigo if you turn past the first page of that PowerPoint presentation to page 2 you will see there that the slide is headed “PED Mandate and Structure”. Can you please tell the Chair what PED stands for?

MR DANIEL MASHIGO: Okay. It is an acronym for Primary Energy Division.

10 **ADV KATE HOFMEYR:** And can you tell us what this structure displays on page 2 about the organogram of that division within Eskom?

MR DANIEL MASHIGO: Firstly I must just qualify that this was the structure in 2015 the time in point of interest. So at that point Primary Energy was part of Group Technology and Commercial and it had numerous functions which is fuel sourcing with, this is a team who basically identifies sources and concludes coal supply agreement and thereafter handover coal supply agreements to a function called Coal Supply Operations. The functions are segregated. I think it is good governance to segregate all. The person who concludes the contract cannot be the implementer of that contract. So that is how it was, you know, divided for coal and following that because our coal is
20 delivered through three modes it is conveyor for mines that are adjacent to the power stations followed by rail for mines that are distance from, from the power stations and the last mode of delivery is road transportation. So we have got a specific function that manages other logistics other than rail, because it is quite a significant volume that we are transporting on rail, road and rail. It is more than 40 million tons Chair.

CHAIRPERSON: The, the, the ones that are closed that are adjacent to Eskom.

MR DANIEL MASHIGO: Power stations.

CHAIRPERSON: *Ja*, how, how far, how close are they? A matter of a few kilometres or what?

MR DANIEL MASHIGO: *Ja*. Chair, Chair they vary but it is quite near. It is, it is I think the [intervenes].

CHAIRPERSON: [Intervenes].

MR DANIEL MASHIGO: Will be about seven kilometres.

CHAIRPERSON: Oh, okay.

MR DANIEL MASHIGO: Basically the power stations sits at the mouth of the mine.

10 **CHAIRPERSON:** Okay.

MR DANIEL MASHIGO: Yes.

CHAIRPERSON: Okay, okay and then those that are taken to be far enough for, far enough so that you use rail would be about how far away more or less?

MR DANIEL MASHIGO: Some of the furthest would be about two to 100 kilometres.

CHAIRPERSON: Oh.

MR DANIEL MASHIGO: However the travelling distance may be slightly. So the resultant distance may be 200 kilometres.

CHAIRPERSON: Yes.

20 **MR DANIEL MASHIGO:** The travelling distance you know like a, would, would be more. So they vary, *ja*.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: They vary.

CHAIRPERSON: Oh, okay and then the road would those be the furthest [intervenes]?

MR DANIEL MASHIGO: Similar, road will be in the range you know like anything between 10 kilometres to 200 kilometres.

CHAIRPERSON: Okay, closer.

MR DANIEL MASHIGO: Depending, depending on the matching of the qualities.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: To a particular power station Chair.

CHAIRPERSON: Okay, thank you.

ADV KATE HOFMEYR: And then that is I take it the block represented by logistics on the page. Is that correct?

MR DANIEL MASHIGO: Certainly.

ADV KATE HOFMEYR: And then.

- 10 **MR DANIEL MASHIGO:** And those, those three, those first three blocks deal with you know like coal sourcing, coal supply including the delivery of coal at the power stations. You know whereby you know like the coal is consumed. You know like by the power station. Then there are further you know like the functions in the, in the whole division. Primary Energy is also responsible for sourcing water for all the, you know, coal fired power stations. So that that is one element it is water and environment. It is separated. It is not coal. You know like a, we, we source quite a lot of water to keep the power station going. Then we have got an integrated planning function which is a function that takes the production plan from the fleet part of Generation and breaks it down into the coal demand for each power station then we match the coal demand with
- 20 what is currently contracted and whether we have a shortfall or we have an access where there is a shortfall. Then the trigger goes into the sourcing team now to fill up, you know, the shortfall. It is an iterative process that happens on a short term, medium term and long term basis but it is, it is done continuously Chair.

CHAIRPERSON: So which section does that?

MR DANIEL MASHIGO: It is Integrated Planning. Chair maybe if I.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: If I may take from a macro perspective you would have the, the resource planning the country commonly known as the Integrated Resource Plan.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: Which basically stipulates, you know, what energy you know like a demand, you know, the country should be.

CHAIRPERSON: *Ja*.

MR DANIEL MASHIGO: Able to meet.

CHAIRPERSON: *Ja*.

10 **MR DANIEL MASHIGO:** And, and allocate who is supposed to you know like produce.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: And Eskom has its own allocation with its own fleet and all of it is, it is existent.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: Bar the two you know like the last power stations that are still under construction.

CHAIRPERSON: Hm.

20 **MR DANIEL MASHIGO:** And the same IRP is the one that basically does the determination of the renewables and any other interested licensee that would like to play in the Power Generation Space.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: Once an IRP is, is completed you know like within Eskom we, we take you know like that resource plan and we break it down in terms of you know like the energy wheel diagram, *ja*. Based on that energy wheel diagram you then start filling the gaps for the, for the demand with Eskom Fleet and also you know like the

other supplies. We do get plus/minus I think 1 058 megawatts that is coming across from Mozambique Hydro, you know, Cahora Bassa and you also have your IPPs and you have Eskom. So in a, in a total nutshell the capacity that is controlled within the Eskom, you know, like a power system is about 50 000 megawatts if I include Eskom Generation, the IPPs and the hydro Cahora Bassa. Then the energy gets broken down into Eskom you know like for different modes of power generation. We have got about 26 power stations you know like in Eskom ranging from coal which is the biggest you know like a, a part of the fleet. It is about 82 percent. Then there is a certain amount of power.

10 **CHAIRPERSON:** 82?

MR DANIEL MASHIGO: It is about 82 percent Chair, *ja*.

CHAIRPERSON: Okay, alright.

MR DANIEL MASHIGO: And, and then there is, there is a coal allocation. You know like coal production you know like an allocation and based on that coal production this is basically saying a coal power station should generate a certain amount of power over a period of time and then we break it into a budget year which is one year, our corporate which is five years and then the long term range basically which is 10 and you know like beyond going to the period of the Integrated Resource Plan. We breakdown the coal you know like a power demand and allocate per individual power
20 station based on the power station's matrix on what is their planned capacity, what is their unplanned capacity, what is their schedule of interventions. That basically states how much coal will be required for the entire total coal fleet and per particular power station. We then go further to match the coal demand to, to ensure that we can produce that volume of, of energy and compare against what is currently existing and contracted and that basically say will say to us we have got adequate coal to supply in

a particular year or a period of time and if not there will be a shortfall and that shortfall will trigger the process to go and source additional coal to ensure that at any given point in time we are able to match you know like the demand and serve power and keep a certain you know like a stockholding as a buffer in a, in a power station for operational, you know, variations and so on. That is in a nutshell how we get to an individual power station and going out and saying I need X amount of coal.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: For this particular power station.

CHAIRPERSON: Yes.

10 **MR DANIEL MASHIGO:** And particular quality criteria.

CHAIRPERSON: Yes, oh.

MR DANIEL MASHIGO: So that is the function that is done by Integrated Planning.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: On an iterative and continuous basis.

CHAIRPERSON: Okay, okay.

20 **MR DANIEL MASHIGO:** *Ja*, then we go further. We, we, we have another function that does what we call assurance and in the overview statement that I was given there is a technical services function which looks purely at the assurance on the coal contract. This is basically quality assurance and also pre contracting assurance. This is a team of technical experts. We have Mining Engineers. We have got Geologists and we have got, you know, Metallurgists. We have got quality assurance people. So they will be prior contracting. They will evaluate the resource, you know, or the reserve that will be offered by a particular supplier, whether it meets the quality criteria that includes going to the sites, you know, verifying the mine does exist indeed. You know, they verify the capacity of the mine that it will be able to, to, to match the required coal

that they are putting on a bid. They also verify the, the practicality and ability of that mine to meet the quality criteria. They will look at the borehole data that the mine has done. You know like review the borehole data to match the quality, the processing of the plant up until you know like the, the date of the mine to say this is the amount of the coal that can be supplied. So that is what the team does. So they do work prior to contracting and they do work during contracting and this is a team that basically oversees the day to day quality assurance when the coal is produced by a mine. We have got various aspects of how we do quality determination for coal that is delivered by conveyor and coal that is delivered, you know like, by road and rail. The coal that is delivered by road and rail we pre-certify before it is dispatched and that is done because it is, it is a, we have more than 40 you know like coal supply agreements that are running basically on road and rail. You know, bar the nine.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: That is conveyor.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So it is, it is a quite a, a, a very you know like a complex environment, multiple suppliers, multiple modes of transportation. At any given point in time we have got more than 2 000 coal trucks that are basically moving the Eskom coal consignment. So we pre-certify each stockpile at a given point in time and what it matches the contracted quality criteria then it will be given a go ahead to be loaded onto a train or onto a truck then dispatched to a particular power station. So this is the team.

CHAIRPERSON: So.

MR DANIEL MASHIGO: That does it, *ja*.

CHAIRPERSON: So, so the pre-certification I think that is what, is that what you call

it?

MR DANIEL MASHIGO: Yes that is what I call.

CHAIRPERSON: *Ja*. So the, the certification would be done at the, at the mine or at the suppliers premises or wherever?

MR DANIEL MASHIGO: Yes Chair.

CHAIRPERSON: That is where it would be done, but it is done by the Eskom Team?

MR DANIEL MASHIGO: [Intervenues].

CHAIRPERSON: From this department?

MR DANIEL MASHIGO: *Ja*, because the mining operation is under the custodianship
10 of the mine. There is, I mean, regulations that that governs it. The mine is responsible to ensure that the sample is, is taken within the ISO standards that are stipulated in the contract and that sample is provided. Eskom nominated sample transporters will take that sample, register it accordingly and take it to a nominated lab which is contracted by Eskom.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: And, yes, and then the quality determination will be done, *ja*.

CHAIRPERSON: Oh.

MR DANIEL MASHIGO: But the quality determination is under Eskom's control.

CHAIRPERSON: Oh, okay. So.

20 **MR DANIEL MASHIGO**: So, so the labs that do those analysis are Eskom appointed Chair.

CHAIRPERSON: So, so it might not be the Eskom Team from this department, but it is people who have been approved by Eskom at that particular lab?

MR DANIEL MASHIGO: Certainly through, through a, a commercial contractual agreement Chair.

CHAIRPERSON: Yes, okay.

MR DANIEL MASHIGO: Certainly Chair.

CHAIRPERSON: Okay, okay.

MR DANIEL MASHIGO: So that.

CHAIRPERSON: And then in that event when the, when, when the coal is actually delivered to Eskom this department still goes through to check if the coal meets those standards?

MR DANIEL MASHIGO: Hm.

CHAIRPERSON: Or not, not, not really [intervenes]?

10 **MR DANIEL MASHIGO:** Not, not as a norm Chair because you do pre-certification. It is like you purchasing any other commodity.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: Where you get a green sticker that says.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: This, this commodity has met the [intervenes].

CHAIRPERSON: [Intervenes].

MR DANIEL MASHIGO: Criteria.

CHAIRPERSON: *Ja*.

MR DANIEL MASHIGO: However we do time and again.

20 **CHAIRPERSON:** Spot checks?

MR DANIEL MASHIGO: Random verifications.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Certainly.

CHAIRPERSON: *Ja*.

MR DANIEL MASHIGO: We also do have a regiment to check how the quality analysis

is done at those various labs.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Because they are ISO accredited.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: We are not accreditors. However we understand the ISO process. We send out own technical expert.

CHAIRPERSON: *Ja.*

MR DANIEL MASHIGO: To go and witness as they do the, the analysis that they are doing it you know like a, correctly including the sampling at the mine. So we have.

10 **CHAIRPERSON:** Hm.

MR DANIEL MASHIGO: Oversight

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: You know like of that as part of the control Chair, *ja.*

CHAIRPERSON: So there are a number of these labs that that do these on which Eskom relies?

MR DANIEL MASHIGO: *Ja.* I think at this point we, we have got about five.

CHAIRPERSON: Oh, okay.

MR DANIEL MASHIGO: So, *ja*, it is not.

CHAIRPERSON: Okay.

20 **MR DANIEL MASHIGO:** Like a, a multitude of the.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: They, they analyse a lot of samples.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: But there is about, I think we have got about five contracted labs.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: That basically place around Mpumalanga.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So most of these mines are in Mpumalanga.

CHAIRPERSON: But the, the, the samples that they, they analyse relate to those supplies who use rail or road to transport?

MR DANIEL MASHIGO: Definitely Chair, *ja*.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: The coal, maybe to close off.

10 **CHAIRPERSON:** *Ja*.

MR DANIEL MASHIGO: Completely, the coal that is transported by conveyor you know it goes through an automatic chemical sampler which is located on an Eskom site.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: And that particular sample gets divided between the power station lab and the mine lab [*intervenies*].

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So that is treated differently. Hence I am saying.

CHAIRPERSON: Yes.

20 **MR DANIEL MASHIGO:** The way we do for the conveyor coal and, and how we deal with the road and rail delivered it is slightly different, but.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: But the parameters are exactly the same.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: The tests are the same as well.

CHAIRPERSON: Yes. No, thank you. Thank you.

MR DANIEL MASHIGO: So Chair that wraps up basically what the technical.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: Services function you know like that and then you have got other you know like a support function Business Integration Performance Management and Operational Risk and Safety. The transportation of coal on road has introduced the dynamic in terms of the interphase with public you know like are we operating safely and hence we have you know like this particular function. That is basically the value chain on how we you know like the point of sourcing coal, delivering coal and you know
10 like doing payments and so on. It sits in basically one, one function Chair, *ja*.

CHAIRPERSON: Okay, thank you.

ADV KATE HOFMEYR: Thank you Mr Mashigo. Could I just ask a few questions in relation to the slide with reference to Brakfontein itself? You have explained to the Chair that there are some mines that are located adjacent to power stations and others that are located further away. What is Brakfontein?

MR DANIEL MASHIGO: Brakfontein is, is very remote to Majuba Power Station. It is, it is in the Delmas you know like a precinct in Mpumalanga and Majuba Power Station which is basically the host power station. It is very close to Amersfoort. You know like much closer to the Northern Natal. So it is quite, it is quite a distance. It is more than
20 100. I think it is, the travelling distance by road is probably close to 200 and by rail more or less between 180 and 200. So it is quite a distance. So it is one of those that we do the pre-certification.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: You know.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: *Ja*, quality determination.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: And then just in terms of the various power stations you also indicated to the Chair that there will be those power stations because of their locality adjacent to a mine who receives coal from that mine, but there are other power stations given their locality that will receive coal from a number of mines. Can you just clarify for the Chair what position Majuba is in?

MR DANIEL MASHIGO: *Ja*. Majuba does not have a colliery. It has, it has got a history from, from construction. It had a mine, but major geological issues. It is a very
10 difficult mine. It was closed around 1996 and since then coal has been sourced you know like a, far from Majuba from around there Ogies, Witbank Coal Field. So Majuba has, has multiple coal suppliers. It is, I mean it's burn per annum ranges between 12 and 14 but at, at nominal you know like capacity Majuba will require about 14 million tons you know like to make sure that it can provide power. At a given point in time Majuba you know like it would have on average about 10 different coal supply agreement or coal suppliers that are supplying like the power stations so it's not only one power station, and Brakfontein I think account for about 15% of the total Majuba you know like a coal consumption on a given financial year.

ADV KATE HOFMEYR: Is that apposite in 2015?

20 **MR DANIEL MASHIGO:** In 2015 it was more or less about 15 *ja*.

ADV KATE HOFMEYR: And just back to 2015 in terms of those mines that were supplying Majuba where would Brakfontein have ranged in terms of its distance from the power plant?

MR DANIEL MASHIGO: It ranged among the furthest, I think there's two other mines that are in the Delmas area that supply *ja*, but Brakfontein is among the furthest you

know like from Majuba Power Station, it's logistics is quite a sizeable part you know like of the coal supply from Brakfontein to Majuba and it is on road because Brakfontein does not have a rail siding.

ADV KATE HOFMEYR: Thank you, if we can move in your Powerpoint to the next page, which is page 3, you've dealt there already in some detail with coal supply and coal logistics, is there any aspect of that slide that you would like to draw to the Chair's attention?

MR DANIEL MASHIGO: No not really, I think we've covered basically being the amount of coal that we are moving on road and rail, road takes the bigger portion, it's
10 about 43, rail on average say 12million tons per annum.

ADV KATE HOFMEYR: And the position with Brakfontein, did they transport by road or by rail?

MR DANIEL MASHIGO: It's predominantly by road, there are sidings or rail sidings in the vicinity of where Brakfontein is, and when we have capacity we do move some of the coal from the mine to the rail siding and then we load it on rail to Majuba, so it's multi-mode, but predominantly it's on rail.

ADV KATE HOFMEYR: And which is the more expensive method of transport, road or rail?

MR DANIEL MASHIGO: It is road.

20 **ADV KATE HOFMEYR:** And who picks up those transportation costs in relation to the coal supply agreements?

MR DANIEL MASHIGO: It's Eskom, it's part of the delivered cost.

ADV KATE HOFMEYR: If you then move to slide 4 and 5, if you can just take the Chair through what those reflect?

CHAIRPERSON: I'm sorry, are you still at 3? Are you still at page 3 Ms Hofmeyr?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: Oh okay alright, yes.

ADV KATE HOFMEYR: So 3 Mr Mashigo indicated he'd already covered in his broader explanation to you of the origins of the coal supply and the logistics aspects.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And so maybe we can move to slide 4.

CHAIRPERSON: And – Mr Mashigo you deal with these things all the time and you are very experienced in them so you will forgive some of the questions that might show how little one knows about some of these things. You have on page 3 the first column,
10 under coal supply coal manages the supply of 120 is that what megatons or what is that?

MR DANIEL MASHIGO: It's million tons Chair. 120million tons.

CHAIRPERSON: Oh, million tons, oh okay, of coal per annum, that would come from one mine or where?

MR MASHIGO: This is the total portfolio Chair, so this is now the mines that are adjacent, the mines that are furthest.

CHAIRPERSON: All the suppliers?

MR MASHIGO: It is the total coal that we basically manage the supply per annum.

CHAIRPERSON: Okay, thank you.

20 **ADV KATE HOFMEYR:** Thank you Chair, and then if we move over to slide 4, that just gives you a snapshot.

MR DANIEL MASHIGO: Chair slide 4 and 5 I will deal with that in basically one breath, it's a statistical, you know like a demonstration of how much you know like coal South Africa as a continent, sorry as South Africa consume relative to the total you know like Continents, it's about 92% you know like – of all coal produced in the country is

basically consumed in South Africa you know like ...(intervention)

CHAIRPERSON: 92% consumed in the continent is consumed in the country, in this country?

MR DANIEL MASHIGO: Absolutely yes. And if you go further basically now coming closer to home the Eskom part, you know like of that 92% and if you're looking basically in the sovereign like Eskom consumes like 50% of the total coal that is currently produced in the country.

CHAIRPERSON: Yes okay.

MR DANIEL MASHIGO: So the country on average produces about 250 million tons,
10 so our portion is about 120, we've got about 75million tons that is export via Richards Bay and you have the domestic consumers like Sasol, which is about 40million tons and then you've got other domestic consumers about 28 you know like million tons, but we account for about 50% so we're the single largest user you know of coal in the country.

ADV KATE HOFMEYR: And just to be clear again these are statistics relevant in 2015.

MR DANIEL MASHIGO: Absolutely Chair.

ADV KATE HOFMEYR: Thank you. We can then skip over slide 6 because that's just an introductory slide, what follows though in the successive slides is some background as to coal geology, and if you would take the Chair through that aspect please.

20 **MR DANIEL MASHIGO:** Chair this is not trying to make you a geologist, it's just giving a snapshot that you know like coal it's a carbonaceous material, that has been formed over multiple hundreds, millions of years, that is almost 300 million years ago, from carbonaceous material that is flora and fauna and whereby you know climate you know like at that point in time have you know like an impact on the coal you know like production, the type of plant composition, you know like it will determine the higher

carbon content basically means you will end with you know like a higher, you know like a coal ...(intervention)

CHAIRPERSON: It affects the quality.

MR DANIEL MASHIGO: The quality and quantity because in there you've got you know blending with other you know like inorganic material rocks, soil, and so on Chair, and then the sedimentary environment with drains, washing, you know with other like earth movements like volcanoes and so on they do affect you know like basically the formation of the coal or they affected the formation of the coal over the 300million years and the depth at which the coal you know like is found, you know like the deeper the coal, you know like the older the coal or the peat that form the coal and the higher you know like the quality of coal so when we count the typical seam like in Mpumalanga you count from seam one up to seam five so our seam one, seam two, typically are your high you know like your quality coal that are *in situ* to a point that some of the older you know the one and two seam you did not need to wash or beneficiate you know like you could actually export as is, but the higher you go you know like in terms of height and also the ranking, you know like the lower the quality, your five seam will typically, four and five seam would typically you know like be your lower quality seams, and in between these coal seams Chair and as demonstrated in some of the slides there is what we call inter-seam you know like sediments you know like that are over-burdened as we call it, so you get your top soil, what we all see you know like but to get your first coal seam which is typically depending on where you know like the location of that resources, you typically encounter seam five, but seam five is not available throughout all the coal fields, you now typically you will find seam four then as you mine deeper, you know like you go through an inter-barren you know between seam four and seam two you know and you're lucky you may get like a one seam but some of the coal

deposit you only find four seam, some you find two seam, four seam and five seam, so they do vary, because of what happened you know like over a period of time and when the continents also like segregated and so on ja.

ADV KATE HOFMEYR: Mr Mashigo ...(intervention)

CHAIRPERSON: So the deeper you dig the greater the chances that you will get better quality?

MR DANIEL MASHIGO: Inherently Chair yes.

CHAIRPERSON: Ja, okay.

ADV KATE HOFMEYR: Mr Mashigo if I could ask you to slide ten just in the context of
10 this explanation about coal seams, because you have some diagrams there that may assist in describing the seams, if you could take the Chair through what that slide reflects.

MR DANIEL MASHIGO: Chair as I mentioned you know like it's a function of time, the coal formation is also a function of time, I've mentioned climate, you know what happened with the movement, but it's also a function of time, so moving from left to right on that slide it is where you still have you know like flora and fauna you know like existing and then you have those environmental factors that form coal up until today, w here you have you know like various segregations you know like a – of the coal seam, so the black borders that you see in there they represent the coal seam, so you can see
20 there is overburden, you know like that is surface, then you come across you know like the first seam, typically it will be five seam, then it's inter-barren then the next seam if you're going down is four seam, then you get further you know like an inter-barren then you can see closer down is two seam, then the fine small one right at the end is where you are lucky you know like it is one seam.

CHAIRPERSON: Is a seam like a layer, from that part of underground to that part it's

one seam, is that what it is?

MR DANIEL MASHIGO: Certainly Chair you – if I look at that wall ja, it may represent a seam, and then the ground we're standing on maybe inter-barren to the next seam and the roof is basically (indistinct)

CHAIRPERSON: Okay, okay.

MR DAN MASHIGO: You're spot on Chair yes.

CHAIRPERSON: Okay thank you, is there a particular size that is used to say this is one seam or how do you differentiate from one seam to another, like it should be so many kilometres down or underground or what?

10 **MR DAN MASHIGO**: No it is not a function of you know you and I determining that, it's a function of what nature has and basically how it is formed over a period of years, as I mentioned counting to the lowest you know like a seam. The heights of the seams and the inter-barren it's a function basically of nature ja, so we don't ...(intervention)

CHAIRPERSON: So it depends what you find in a particular ...(intervention)

MR DAN MASHIGO: In a particular coal mine.

CHAIRPERSON: Yes, then you know that if you find A, B, C then it must be a seam.

MR DAN MASHIGO: And where you find it also you know geologically it will tell you now you can count that four seam so it is known from geological you know like the model, it is a norm ja.

20 **CHAIRPERSON**: Okay, okay thank you.

ADV KATE HOFMEYR: And just to clarify again in relation to quality is it correct that your evidence to the Chair indicated that the lower in number the seam the higher the quality of the coal, is that accurate?

MR DANIEL MASHIGO: Inherently so Chair, you will find that two seam inherently is of a higher quality compared to four seam.

CHAIRPERSON: On a lighter note so this would be what geology 101? Or not even geology 101.

MR DANIEL MASHIGO: Chair hopefully I have done a good job in taking ...(intervention)

CHAIRPERSON: You are doing a good job Mr Mashigo.

ADV KATE HOFMEYR: Mr Mashigo before we leave the seams can you just explain to the Chair the difference between an upper and a lower seam in any particular number?

MR DANIEL MASHIGO: So Chair if you look at the last you know like representation, graphic representation in that four seam you know like you can have the quality varying
10 in one band of seam, and that particular that's basically you know like a four seam typically is at you know the lowerest in terms of that will typically be like a four seam lower, it will be higher in quality and then the upper part of that particular seam will be typically four seam upper and it tends to be much more, or a bit inferior compared you know like to the four seam lower, and I think Brakfontein is one of those mines that basically you've got this you know like a delineation of the two seams and that is important because you have to decide as a miner whether you know you mine it totally and are you going to treat it or you mine selectively to meet certain quality requirements, and Brakfontein based on the geological study that was done, the drilling the core drilling it found that the four seam upper quality were not like of the quality that
20 you can use as is, you either had to beneficiate through your washing plant and so on. The four seam lower however you know like it did meet the Majuba requirements and hence we could specify in what proportions you know like the coal should be produced to make sure that you meet the quality criteria continuously.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Sorry Chair what I would like to move to next is the activities

on the mine, how the coal is removed from underground and then how it gets to the power station and why quality of coal at the power station is such an important issue, but we are at the tea break, if you would like to take that adjournment now.

CHAIRPERSON: Okay let's take the short adjournment, we will resume at half past eleven, the Commission adjourns.

INQUIRY ADJOURNS

INQUIRY RESUMES

CHAIRPERSON: Yes you may proceed Ms Hofmeyr.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo you have taken us through
10 some of the; I think we call the geology 101 if we can now move to Slide 13. Because what I would now like to deal with is coal mining itself and this is a slide which give us some insight into that. If you would please take the Chair through what the slide depicts.

MR DANIEL MASHIGO: Thanks. Chair basically what you see in front of you is just a graphic representation of how coal is extracted you know like in South Africa. Two methods underground and open cast and decision making around whether you go underground or open cast it is a depth you know like of the coal – coal seam you are going to mine. The shallow of the coal you know like you basically use an open cast mining method. When the coal is deeper you basically would sink a shaft and go
20 directly to where the coal seam is and then you mine using...

ADV KATE HOFMEYR: Mr Mashigo sorry to interrupt I just want to ensure that the Chair is – we were at Slide 13 Chair have you got that?

CHAIRPERSON: I have got that. I got that but you know when you are at geology 101

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: When you are at first year you have got to make sure you

understand things properly. I saw Mr Mashigo when you have told us about seams at Brak U2 there seams there was spelt s-e-a-m-s. Now I see now at Brak U4.13 there is accessed it deep seams with double ee.

MR DANIEL MASHIGO: My sincere apologies it is a typo Chair.

CHAIRPERSON: Is that something different or is a spelling error?

MR DANIEL MASHIGO: It is a typo Chair. It is a typo.

CHAIRPERSON: It should be e-a?

MR DANIEL MASHIGO: E-a.

CHAIRPERSON: Oh okay. Alright.

10 **MR DANIEL MASHIGO**: Chair so we look from top down. The top part represent basically surface and on your – you can see there is a dotted line that cuts you know like the picture.

CHAIRPERSON: Yes. Yes.

MR DANIEL MASHIGO: Almost into half.

CHAIRPERSON: In the middle.

MR DANIEL MASHIGO: Ja.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: And that basically that line represents the decision making once we have identified the ore body you know how you going to mine the coal. Cost
20 of mining is quite a – it is a significant you know like decision making aspect you know like – so

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Once the geologists have identified you know like where the coal is and so on the mine planners would then come up with plans how to access the coal.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: And what is the best mining method.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: To extract that coal economically.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: And as I have mentioned if you move from surface to where the coal is; if the coal is closer to the surface that is shallower open cast mechanism is used.

CHAIRPERSON: Yes.

10 **MR DANIEL MASHIGO:** And open cast because you have to remove the entire overburden and top soil to get to the coal seam.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: And the depth of your top soil and overburden to get to your first coal seam relative you know like to the coal seam itself is what people talk about strip ratio. So the more overburden that you have to move to get to the coal you know like you would have a high ratio which says you know it is going to be costly.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Like the lower the ratio if you say you know like 3 is to 1 then you know that you basically have a very good economic model. If the coal is too deep
20 then you go into you know like your underground you know like mining.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: But underground mining you basically would sink a shaft so that white you know like a [indistinct].

CHAIRPERSON: That line?

MR DANIEL MASHIGO: Ja it symbolises you know like a shaft basically.

CHAIRPERSON: Oh okay.

MR DANIEL MASHIGO: Going to the different seams. You can see the top seam.**CHAIRPERSON:** Yes, yes.

MR DANIEL MASHIGO: Which is 4 seam and then you go further down to get to 2 seam.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: That is basically what that represents and so on.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: So you basically you do not remove any over burden top soil
10 you go straight you know like to the coal seam and then the mechanised mining
basically would continue horizontally. So you go vertically down, you get to the coal
seam and then you mine you know like horizontally and so on. So and then open cast
basically as it is represented there you can see that you know like a structure you know
like that is on top of the purple you know colouring that is what we call a drag line.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: It is a high volume mover you know like of you over burden
and top soil and once the coal seam is exposed it gets blasted and then it gets loaded
onto the trucks to go to crushers and beneficiation and to the power station. That is
basically you know like the two separate processes. So open cast is total extraction.
20 You extract the entire you know like coal seam. Underground is quite selective and you
leave some of the coal behind in a form of support structures what we call pillars.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know because you have to have you know like a stability
underground for people to be able to work you know safely. And leaving those pillars
behind basically saves your extraction rate is much lower.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: Than your 50 to 60 percent whereas open cast is – it is hundred percent you know like extractions and so on ja.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: That is what that picture basically you know Chair symbolises.

CHAIRPERSON: Yes. Okay.

MR DANIEL MASHIGO: How we get to the coal and so on. And Brakfontein the mine in question is one the right hand side. It is an open cast you know like mining operation.

10 **CHAIRPERSON**: Oh okay.

MR DANIEL MASHIGO: Ja.

CHAIRPERSON: In open cast you could be – so you do not go underground; you do go underground but only in a limited way?

CHAIRPERSON: No you do not go underground.

CHAIRPERSON: At all?

MR DANIEL MASHIGO: It is surface. You are always exposed to the weather elements.

CHAIRPERSON: Oh.

20 **MR DANIEL MASHIGO**: And they call it sunshine mining because you always see the sun.

CHAIRPERSON: Oh so you actually literally do not go underground at all?

MR DANIEL MASHIGO: No you access from the top.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: You access from the top and you exposed totally to the elements.

CHAIRPERSON: But are there many you know suppliers like that for Eskom?

MR DANIEL MASHIGO: The – I think open cast mining is a bigger portion of our coal mining. There are virtually very few underground mines.

CHAIRPERSON: Oh.

MR DANIEL MASHIGO: You know like operating ja.

CHAIRPERSON: Oh okay, okay.

MR DANIEL MASHIGO: And it is not only in coal.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: I mean if you go like to the North West you will see a lot of
10 other you know like a open – you know open cast mining.

CHAIRPERSON: Open cast.

MR DANIEL MASHIGO: For other type of you know like ore body or quarries you know in and around Gauteng.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You see quarries that is an open cast mine where you know they mine you know like aggregates for construction and other things. It is an open cast mine Chair basically.

CHAIRPERSON: Well for some of us the moment you talk about mining we thinking about going underground all the time.

20 **MR DANIEL MASHIGO**: Ja it is when the ore body is very deep down the most economical way is to sink a shaft.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know like you go down like gold mining you know platinum, your hard rock type mining you know like I mean you know people gold mines close to 4 kilometres from surface you know underground.

CHAIRPERSON: Ja okay.

MR DANIEL MASHIGO: Because it is uneconomic to can – remove 4 kilometres of over burden to get you know like the gold reef.

CHAIRPERSON: Yes. Yes no thank you.

ADV KATE HOFMEYR: Mr Mashigo if we could just stay on 13 for a moment because I just wanted to clarify the representation of the seams on that diagram. Just to clarify in relation to your evidence earlier. Those black horizontal lines reflect the seams, is that correct?

MR DANIEL MASHIGO: That is correct Ma'am.

10 **ADV KATE HOFMEYR:** And we start at the bottom with what I think is number 2 seam, is that correct?

MR DANIEL MASHIGO: That is correct.

ADV KATE HOFMEYR: And then moving up number 4 seam and then above that number 5 seam, is that correct?

MR DANIEL MASHIGO: That is correct Ma'am.

ADV KATE HOFMEYR: So in the open cast section that is represented here is there – what seam is the mining occurring at?

MR DANIEL MASHIGO: You can see the purple where the drag line stands or representation of a drag line you can see they do not have 5 seam there. The first coal
20 seam is a much thicker one which is 4 seam. So they are mining you know like 4 seam.

ADV KATE HOFMEYR: And back to the question I raised earlier with between upper and lower seams.

MR DANIEL MASHIGO: Ja.

ADV KATE HOFMEYR: Would that black line then be divided in a proportion to show

an upper and a lower seam?

MR DANIEL MASHIGO: Ja not physically you know like for you to say it will be based on the geological sample that has been taken when it gets analysed you know like they can see the different qualities on the whole on the seam band ja.

CHAIRPERSON: Can you – can you talk about seams in relation to open cast mining? In other words is open – is the concept of seams only applicable to underground mining or is it applicable to both open cast and underground?

MR DANIEL MASHIGO: It is a constant. The coal seam is there. The type of mining it is basically based on how deep that particular seam is.

10 **CHAIRPERSON**: Ja okay.

MR DANIEL MASHIGO: And as I mentioned if – and as you can relative what we are trying to demonstrate with this diagram with the dotted line that goes across.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: It shows you that you know anything beyond on average 40 meters.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: You start considering underground and not 4 seam.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So it is the depth of the seam.

20 **CHAIRPERSON**: Okay.

MR DANIEL MASHIGO: That decides whether you are going to extract using open cast or underground.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: The shallower you know like the coal can be found it is open cast.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: And then the deeper it is underground ja.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: If we then move over to Slide 14. This gives a bit more detail as to the open cast process flow. If you will take the Chair through that please.

MR DANIEL MASHIGO: Ja so you can see it starts from the first picture. You know if you go counter clockwise that is where the drilling and blasting of your over – of your you know over burden. So the top soil you know like would be removed you know like much more easier and then the over burden has to be you know like blasted. So they
10 will be drilling, they put in a charge, they blast and then they start removing the top soil. You get – and then the removal is done by if it is a mine that has got you know like it is a huge you know like a surface area you can employ a drag line because then it moves quite a lot of volume at once. That big bucket of a drag line you know like can move quite a lot of volume versus using you know like – like loaders and trucks and so on. So that is basically what a drag line does.

CHAIRPERSON: Yes okay.

MR DANIEL MASHIGO: And it removes the over burden then it exposes the coal okay which is now point number 3 where the coal also gets you know drilled, it is blasted and then it is loaded onto the coal trucks to go to a processing plant. There is a – this huge
20 coal trucks that – trucks you find you know like either in coal mine, open cast or even in your chrome you know like coal mines. It is high volume you know like trucks and so on because it is a volume business. It is how you can move the highest volume economically and lessening the number of you know like travelling times and so on. But that is basically the process of how you extract you know the coal from surface until you reach the coal seam loading it and then depending what type of coal it is you either

process through crushing and screening and which I think will come into the latter part and so on ja.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: It depends on the [indistinct] quality of that coal.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Thank you Mr Mashigo. With your leave I am going to suggest that we pass over the process flow for underground because as you have clarified Brakfontein was not an underground mine.

MR DANIEL MASHIGO: Yes.

10 **ADV KATE HOFMEYR:** And then if we move over to Slide 17. You there start addressing the question of coal quality parameters.

MR DANIEL MASHIGO: Yes.

ADV KATE HOFMEYR: There are three of those parameters which are particularly applicable in the Brakfontein context. That is CV, ash content and sulphur. If you can start off by taking the Chair through those qualities of coal.

MR DANIEL MASHIGO: Maybe for correction all coal qualities are applicable throughout. But I think of interest in Brakfontein the quality parameters that stands out from deviation perspective is indeed you know like the energy content. What we call calorific value. That is basically a measure of how much energy you know like you would get out of you know like a kilogram of coal once it is combusted and its ash. Ash is basically the inorganic material. Remember I mentioned earlier on that coal is formed from you know like a carbon bearing you know flora and fauna you know once you know like they are you know like I think no longer you know like life for lack of a better word. And they – it gets contaminated with the rest of other sediments you know like rock and so on. That is inorganic.

20

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So the inorganic material that is material that is incombustible you know like it is basically what comprises the ash component.

CHAIRPERSON: Yes okay, okay.

MR DANIEL MASHIGO: You know like of the ash so the entire ore body once you have extracted it not all of it is combustible.

CHAIRPERSON: Yes, yes.

MR DANIEL MASHIGO: You know like so that is the ash content. So the higher ...

CHAIRPERSON: And the one that you are interested in is the combustible one or not
10 really that you would be interest in?

MR DANIEL MASHIGO: All of it is important because...

CHAIRPERSON: Oh all of it is – okay.

MR DANIEL MASHIGO: You use that to decide how you design the plant.

CHAIRPERSON: Yes okay.

MR DANIEL MASHIGO: But I think the relationship between ash and CV with is ash incombustible, CV which is combustible. The higher the energy content represented by the CV value the lower the ash content. You know so there is an inverse relationship between energy content and ash. You know high ash content you know type of ore bodies typically have lower you know like an energy content.

20 **CHAIRPERSON**: Yes.

MR DANIEL MASHIGO: So that is basically that particular resource and the last one is sulphur you know like sulphur is there it is embedded you know like in the coal Different coal fields have got certain trends with regards to sulphur component it is what nature is giving us. And in around you know like Delmas you know going towards – if you go slightly east towards the likes of Eloff and you know Brakpan area those coals

seams around Delmas or coal reserves they tend to be you know like high in sulphur content and so on. So the geological model does point out you know the type of coal that you find in..

CHAIRPERSON: In that area ja.

MR DANIEL MASHIGO: Different areas and what is the probability to find you know like sulphur. So inherently that coal and Brakfontein particularly has an inherent high sulphur content.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Could you just address – sorry.

10 **MR DANIEL MASHIGO**: The sulphur because once you combust the coal in a power station and the exhaust you know like fumes or what you call flu in the technical language that goes up you now like the smoke chimneys.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: If you have a high sulphur you know like a content in your coal once you combust because you need air to support combustion.

CHAIRPERSON: Yes.

20 **MR DANIEL MASHIGO**: Which has got oxygen you get formation of sulphur oxides which are greenhouse gases. So the higher the sulphur content you know you going to have higher sulphur oxides and we are regulated to contain you know like sulphur oxides.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know like in that ja.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: That is basically why it is important for sulphur to be determined. A power station is licensed you know like with regards to emission.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know to be within certain boundaries and sulphur is one of those..

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know like a geisha submissions that we manage ja.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: So just to clarify if the sulphur content was higher than required would that effect your emissions quota so to speak at the power plant?

MR DANIEL MASHIGO: Definitely and I think our power plants are in general
10 designed between one and two percent you know like maximum you know like sulphur
content. There are other you know like consequences on the plant itself over and
above the emissions is that sulphur oxides when they get hydrated that is if they get a
certain amount of moisture they start forming you know like sulphuric acid derivatives
and in your plant at the back and what we call back and towards the exhaust part of the
plant if you start having low temperatures you can start having corrosion you know like
of that equipment. And where you got filter bags to remove the ash particles they also
get compromised because of it. So it affects the plant if it is in higher concentration
especially in winter where they you know the temperature drops and it affects also you
know like the emission license to try and prevent you know like – to try and prevent
20 sulphur oxides emissions which are greenhouse you know like gases.

ADV KATE HOFMEYR: Thank you. If you just take a little bit more time on the impact
to the power plant of coal that does not meet specification. You have told us in some
detail what the impact of a higher sulphur quantity might be but could you just spend a
little bit more time on ash. What would be the effect of high ash quantity than that
which is stipulated on the power plant?

MR DANIEL MASHIGO: Yes. So the main reason we need coal is the CV is to be able to combust it, get as much energy as possible to convert you know like that potential energy heat up the water to produce steam that drives a turbine. That is in a nutshell the most part that we are interested in is the energy. So if the energy content is below what the power plant is designed for so you would need more of that coal basically to achieve the same amount of you know like power output. So that is the first you know like comprise that you have on your plant. And the more coal you utilise to produce a single unit of power means you going to have more handling of your residual you know like ash. The plant is also designed to handle a certain amount of ash so it add on the

10 ash burden you know like percentage and also the wear patterns that you find inside your boiler you know like a combustion chamber. You design your plant to be within certain boundaries. Higher ash content not good because it is higher ash burden that you have to handle for a single unit of power and you also have to burn more coal than it is desired. So it is an economic impair. And ash in itself you know like it has got erosive you know like characteristics also you know like inside the boiler which also impact you know like the longevity of the plant or your maintenance interval. You would end up you know like having your maintenance inspections much more frequently than you would if you had the desired you know like quality of coal and hence I am using the energy and the ash interchangeably because the two go hand in hand. You know they

20 are the inverse of each other ja. That is the impact that you typically you know like you get on the power plant.

CHAIRPERSON: So is there an average that you are able to give us to say on average you know you should have so much power unit out of so much coal or is that something that is – what is expected if you have beyond so much coal but producing only so much unit power then it is economically not viable or it is not good for Eskom and so on. Is

that something that is easy to say or not really?

MR DANIEL MASHIGO: Not – it is one of the considerations you are spot on. It is basically the plant design. When you design the plant you basically set out what is the type of fuel meaning coal that needs to be you know like utilises and it is not an absolute it is a range.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know like it must be within that range.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: To be able to achieve the desired output.

10 **CHAIRPERSON**: Output ja.

MR DANIEL MASHIGO: You know with regards to energy. The moment you go outside that border which we call coal quality specification you start having you know like impact and so on. So ideally you would like to have as much higher energy content and lower ash content you know like to move higher up in the hierarchy because this less impact wear on the plant and you use lesser you know like your coal to produce you know like a single – I can the analogy of the car.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: It is better to use 95 Octane.

CHAIRPERSON: Yes.

20 **MR DANIEL MASHIGO**: On your car versus the older versions because you get you know more out of a single you know like unit of it.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So it is the plant it is designed for that.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: And with the plant design specification that is what we use

commercially to go and source the coal.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So the – you cannot change the plant. Once the plant is built it is there.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You know like you cannot change it so it is the coal quality that has to match that particular plant and once or in the event that the coal goes out of that plant design parameters you start having negative you know like consequence as I have explained you know earlier on.

10 **CHAIRPERSON:** Yes, yes.

MR DANIEL MASHIGO: It is a design consideration.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: And when we designed the plants you know historically they were designed also on typical coal fields that you find and it was an economic model that was used in South Africa to say use lower quality coal and export higher you know like quality coal.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: So our plants were designed for a certain bend you know like of quality because coal is a high cost input in producing electricity. You know like you
20 reduce the cost of coal you make electricity much more you know like affordable. So it is an economic you know like consideration over and above.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Just a technical specification.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Yes.

CHAIRPERSON: Okay thank you.

ADV KATE HOFMEYR: Chair if I may just suggest in the light of your question that we turn to File 4 because there we can actually have a look at the coal quality specifications in the Brakfontein agreement which as Mr Mashigo is describing would be specific to Majuba power plant. If we go to page 890 in File 4. Mr Mashigo you can maybe open that out and then speak to ...

CHAIRPERSON: Did you say 850?

ADV KATE HOFMEYR: Sorry 890.

CHAIRPERSON: 890.

10 **ADV KATE HOFMEYR**: Chair just to orientate you in relation to that page and it was an aspect that I intended to go through a bit later with Mr Mashigo but it seems appropriate now.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: This is a page within the coal supply agreement that was concluded with Tegeta for coal supplied from Brakfontein and to be supplied to Majuba Power Plant. And what you see on page 890 there at Table 3 is what is headed: Coal Quality Specifications and Rejection Limits. So Mr Mashigo just with reference to these quality specifications that are identified in your slide and what is set out in this table could you take the Chair through for example the calorific value that is stipulated. We
20 then have moisture stipulated. We then have ash which you have spoken a bit to us about. I would also like you if you could to deal with abrasive index and what the implication of being out of specification on abrasive index is. But if you can just explain to the Chair how this table works on page 890.

MR DANIEL MASHIGO: Thanks. Chair this table is extracted out of the design basis of the plant. Our engineers continuously look at the age of the plant. The condition of

the plant and you know like what the coal you know what the requirement is. So they take the broader design basis and look at the condition and now and again will tell us the people that source coal to say this is an ideal coal that you need to source for this power plant to ensure that it performs within you know what it is designed for. So you will see the unit measure and then it is the quality expected. The quality expected is typically within range. If we get this nominal quality we are all okay but we are know coal mining is not like a cheese factory. You know there is variability in the coal. We also hedge ourselves to say if the coal gets to a certain limit you reject the coal you cannot take it. So energy for example you know like U1 the limit is set on the lower
10 end. You do not want the energy content to drop for Majuba below 20 mega joules per kilogram. So if the energy drops below 20 mega joules per kilogram we cannot take that coal to Majuba. So that is what basically the rejection limit is. Ideally we would like to have coal on average at 21 mega joules per kilogram you know like CV and if I can go straight to ash you know because it relates to the...

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Calorific value you can see with regards to ash we expect a lower quality compared to the region. So you would want the ash to be around 27.9 but if your ash content goes up you know beyond 30 percent you know like of the total composition of the ash.

20 **CHAIRPERSON:** Yes.

MR DANIEL MASHIGO: You reject you know like that part.

CHAIRPERSON: Okay.

MR DANIEL MASHIGO: The abrasive index it is a phenomenon that says how when your ash makes contact or your coal sorry when your coal makes contact with the grinding materials you know like in the plant because we do grind the coal into a finer

you know powder less than 2 microns before we combust it in the boiler. We grind it to expose you know like the surface area so that it combusts instantly and to release as much energy. Unlike the old coal stoves where you put lumps. In this case we grind it finer and so on. So what happens is that now in the grinding plant of the power station if your coal has got a higher abrasive index it means the abrasion or the erosion phenomenon increases you know like so you wear your grinding material much quicker than they are supposed to in terms of the design line and also the transportation pipes that takes the pulverised coal into the boiler for combustion. You know like that network of pipe wear also will be compromised including the burners themselves where the coal

10 basically get combusted when it gets into the boilers. So that whole value chain in the coal handling becomes compromised if the abrasive index is expressed an element of iron loss in the material That is why it says FEFE it is a chemical formula you know like representing you know iron you know the Ferris basically ja. That is what abrasive index is. You would like to have it as low as possible ideally around 450 it goes beyond 450 milligrams of iron erosion of your components then the coal you basically reject. And similarly Chair you know like things like moisture you have moisture that is inherent in the coal it is there it is what nature has given. But there is also the moisture that comes onto the surface of coal because of weather elements and so that is easy to expunge you know like and so on. But the inherent moisture is what goes through you

20 know like into the boiler. We also do measure that and so on. But the total moisture is to manage the handle ability you know like of the coal when you move it you know like in the value chain you know like into the boiler and so on. So all these quality parameters are supposed to meet the contractual limits because the contractual limits are linked to what the plant is designed for. If we do not get the coal of the quality bend then it compromises the ability of the power plant to produce and it also compromises

the integrity of the plant hence the reliability and availability of the plant gets affected you know by coal.

ADV KATE HOFMEYR: Mr Mashigo if we can then go to Slide 20 which deals with coal beneficiation being used to obtain the varying qualities of coal. Can you just explain to us how beneficiation is used to attain the coal quality parameters in terms of an agreement with Eskom?

MR DANIEL MASHIGO: Ja I will I think beneficiation is used you know interchangeably in the industry because some people when they talk beneficiation it is converting an ore body into a value added project but with coal here when we refer to

10 beneficiation is basically enhancing the quality component of the coal and mainly the energy you know like a component so when you mine the coal and it has a lower energy content you got options to enhance that energy component by eradicating part of your inorganic material which is incombustible. So post mining let us go back to that process I mentioned earlier that the coal gets exposed, it gets blasted and once it is blasted and it is loaded on to trucks it is big lumps. You know like a boulder some of them as big as this table and so on. Then it goes to a processing plant where you crush it to size to be able to utilise in the power plant. But if the quality of the coal does not meet the requirement then you got an option you know beyond the crushing and screening to do what we call coal washing or destoning and there are different

20 mechanisms of that. But all you do is you removing a certain amount of the incombustible material in the coal to enhance the energy content. So your ash will drop, your energy content will move but you do it economically you know and get a certain yield. Because the more you wash your yield becomes low, it becomes uneconomic you know like to produce that coal. So that is basically the beneficiation. It is to enhance the quality from the *in situ*. If you get coal that is sitting at about 80 CV,

but you want to get it to 21 CV you will definitely you know like employ one of the technologists to remove stone and incombustible material before you ship the coal out of the colliery and it becomes a huge processing plant where you basically you know like wash the coal and so on, *ja*. It is called coal washing, but it is much more technically engaging, but I think washing is probably the easiest you know like a term to use to do that *ja* and the graphic shows you that in the coal washing process they use what we call dense medium. Your incombustible material will sink to the bottom and your high carbon component part of the coal will float and that is what you skim off and it is high quality. You discard you know like the part that sinks to the bottom of the high
10 medium [indistinct].

ADV KATE HOFMEYR: Thank you Mr Mashigo. What I would now like to move to is the process for sampling of coal. There is not in fact a slide that deals with that, but I do know that you have given to drawing diagrams where necessary. So we have provided you with a white board for that purpose and some pens. If you would not mind taking the Chair through precisely how sampling works at a plant, the process for sampling so that the quality of the coal can be determined and if you could just use the handheld mic for that purpose that would be great.

MR DANIEL MASHIGO: Chair I will, is it on? *Ja*. I will confirm that my graphic skills are very elementary.

20 **ADV KATE HOFMEYR:** [Laughing].

MR DANIEL MASHIGO: I do not want architects and draughters to, to, to come after me. I am going to do some line.

CHAIRPERSON: Well you, you might be needing what Graphics 101 as well.

[Laughing]

MR DANIEL MASHIGO: I probably, I probably do Chair. I probably do. So I, I am

going to do single line here representation and *ja*. So if we assume this is basically you know the, the pit you know in which the mining you know like happens. So the coal gets you know like extracted. You know like you have your, your trucks that carry coal you know like to the processing plant. That is that is for me you know like step one. Then when you get to the processing plant you know like the coal gets crushed you know like to size. As I mentioned here you get sizes as big as 100 millimetres you know like of, of coal you know like a; that is produced. You need to you know like bring it down to size. It makes it economic to transport, because like volumes occupy higher volume. You cannot move critical mass you know like in that process. The smaller the

10 particle size you can load more whether you are transporting by rail, road or conveyor. So when you get to the processing plant which is step two you crush the coal you know like to size and if that plant has got a washing facility you would wash it and so on. So all that processes takes place in the mine. The miner looks, looks after; I am just going to put here processing which is crushing, screening and then washing whether it is optional or it is part of the design based on the whole body that is mined out. So that the miner controls. You get a certain product in regard of this process. Then comes the part where we do quality determination. The miner already knows from the drilling, from the geological model what is sitting *in situ* here and hence they can design this particular process to say I am sitting with this type of coal. This is how I am going to

20 handle the coal. From the processing plant normally the conveyance of coal is mechanical via conveyor belts. So this will basically represent for me a conveyor belt. So you are coming from a plant. You have typically a siding here which is basically for search capacity in order to make the continuous running of the plant you know like a [indistinct]. So the thing will be put into a funnel which we call a coal chute and the coal gets thrown onto the conveyor. So the conveyor is going that particular direction. That

arrow just basically shows which direction the conveyor goes and somewhere here you will see you know like with a pulley because there is a drive somewhere here that basically runs the conveyor. So there is coal on top of this particular conveyor. So what happens is that on this conveyor, so this is basically now conveyance from the processing plant. Let us call it step three. So onto you know like where the coal is going to be either loaded, stockpiled and so on. So you have got options here. You are either stockpiling it in the mine or it is loaded directly onto a train or you load onto a, a, a truck and so if it is a stockpile you will have I mean this is basically how we represent a stockpile. So that will be a coal stockpile. For our purposes where we pre-certify the

10 coal we; our stockpile will weigh between three and 10 kilo tons. It is maybe to make sure that the coal you know like that is here is represented. You can sample it much easier and the sample that we take is a representative sample of what is here, because these are solid states. It is not like your would you know like a gaseous material and so on. So on this conveyor okay we, you would install what we call an auto mechanical sampler and I will, I will go to maybe just break it down further. So for processing you go onto a conveyor but before you can stockpile the coal you will have a mechanism here called an auto mechanical sampler. So I am going to draw down a bit on what the auto mechanical sampler does. So on this particular conveyor there will be an auto mechanical sampler. For ease of reference there will be what we call a belt-cutter

20 mechanism. So this auto mechanical sampler sits on top of you know like a, of the conveyor. Over a period of time it will do what we call belt.-cuts. So you know like that arm or mechanism lever will push over you know like the coal off the conveyor and the conveyor and this thing will drop through a chute onto a, a bin here, okay. So this is a splitter and then you have got your bin. So here is some, here is a conveyor continuously. This is continuous. So it is said you know like over a period of time. So

within 24 hours this auto sampler or if it is creating a three kilo ton stockpile you work out you know like a, the amount of, sorry the frequency at which this belt you know like lever is supposed to push coal over which falls onto here the chute and then you got a splitter you know like you get two samples. So it is accumulative sample over a period of time while you are building up the stockpile. No human interface you know like it is, it is systematic and, and behind you know like the time statistical model tells you how many belt-cuts, what should be the size of the sample that will represent that particular sample. So this is important. That particular sample you know one will be a contractual sample that goes to a nominated lab and the other sample you know goes
10 to the mine. So we split that particular sample. So this is a contractual sample. It goes to, to the lab. When it arrives at the lab it gets registered. They split it further you know for the sample that would be used in you know like in the lab to, to do analysis and the other one is a reference sample that we keep for 30 days in case there are disputes about whether the analysis was accurate and so. It becomes bigger. The, the mine will do its own analysis at their own lab and they usually compare against this, but the payment is made on the contractual sample which is taken to a contractual lab. That in a nutshell Chair I think what Ms Hofmeyr was trying to say is what is the purpose of this. If you do not have this what happens is now okay this is now with, with auto mechanical sampler. I am going to be grilled by my colleagues when I get back to
20 work.

ADV KATE HOFMEYR: [Laughing].

MR DANIEL MASHIGO: Okay. This coal is now illustration five. Still the same conveyor. This represents coal. This is now your stockpile. Now if you do not have an auto mechanical sampler to take and automatically to sample this coal as it, as it creates this particular stockpile. You will have to go onto the stockpile and manually

you know like take samples at different you know like an elevation to get a representation the depth in which you take the sample as well. So it is prone to errors and it is post the creation of a stockpile. So what we do in the contract especially when it is a new operation the miner is getting up we allow for about three months. You know like for a miner to set up you know processes, put in an auto mechanical sampler, calibrate it you know to ensure there is no bias. Then put it on to commercial operations. Then we move. So we, we do say there is a risk you know but you listening to about three months where you can do you know like manual sampling, but this manual sampling is also ISO. You know like it has to follow ISO protocol. So the standards are set. It is a well-established industry. We have got standards you know through the SABS. We have got ISO International Standards from Europe. You got also SB, you know the American. So it is a well-established industry on how you do sampling that will be representative of you know like it is. Your sample typically is about you know like three kilogram. So you can imagine if you take a three kilogram sample of a 3 000 kilogram you know like a consignment you know it is relatively and this three kilogram sample when you go into a lab to do those add CV moisture you basically use one gram. So you can see how you risk basically over you know like the whole process you know like changes which is why the preference and the standard is to have an auto mechanical sampler to avoid human, human errors or bias or malfeasants if you have people who [indistinct].

CHAIRPERSON: No, thank you. Thank you very much.

ADV KATE HOFMEYR: Thank you Mr Mashigo. That, if you will just give me one moment. Chair I would like to admit those four pages as an exhibit. What we propose to do is to reduce them in size by a photograph and then a reduction so that they can be placed in our files in due course.

CHAIRPERSON: Yes. No [intervenes].

ADV KATE HOFMEYR: May I propose that we label them U4B? We do not have a U4B yet.

CHAIRPERSON: We do have, we have an A?

ADV KATE HOFMEYR: We have an A, because that is the slides that.

CHAIRPERSON: Oh, okay.

ADV KATE HOFMEYR: Mr Mashigo.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Prepared for us.

10 **CHAIRPERSON**: Yes we, we, we can do that. I do not know whether as he was writing he knew that this is what would happen.

ADV KATE HOFMEYR: [Laughing].

CHAIRPERSON: And therefore I do not know whether he wrote with a handwriting that is legible, but he will be available to assist you with his.

ADV KATE HOFMEYR: [Intervenes].

CHAIRPERSON: Handwriting if he can read it.

ADV KATE HOFMEYR: Indeed. I, I think I was able to.

CHAIRPERSON: [Laughing].

ADV KATE HOFMEYR: Make out most of it.

20 **CHAIRPERSON**: *Ja*.

ADV KATE HOFMEYR: So we will be able to provide a sort of key.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: For the reader in due course.

MR DANIEL MASHIGO: Chair we have our own disabilities I think.

[Laughing]

MR DANIEL MASHIGO: And writing is one of mine.

CHAIRPERSON: Yes, thank you.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo that unless there is anything else you would like to add I would propose concludes the background setting section of your evidence. I would now like to get into some of the detail about the Brakfontein contract itself. For that purpose if I could take you in file 3 to a part of your statement which begins at page 136.

MR DANIEL MASHIGO: Just help with.

ADV KATE HOFMEYR: 136.

10 **MR DANIEL MASHIGO**: 136. Okay. I am with page 136.

ADV KATE HOFMEYR: So just to orientate you this is, this commences paragraph 5 of your statement and you will that it is headed “Tegeta Brakfontein Colliery Contract Award Evolution” and if you go down to 5.2 there you deal with the on boarding process for Tegeta and you record there that:

“Primary Energy concluded that Tegeta Brakfontein Colliery
Contract under the 2008 mandate...”

Do you see that?

MR DANIEL MASHIGO: Yes, I can see that.

20 **ADV KATE HOFMEYR**: I would now like to take you to the 2008 mandate so that we can discuss it in some detail. You will find the 2008 mandate in file 4 at page 693.

MR DANIEL MASHIGO: I am on page 693.

ADV KATE HOFMEYR: Thank you. You will see that the mandate commences at 693 and runs for three pages to 695 and then at 696 commences a checklist. I am going to deal with both of those documents with you in a moment. Can you just give us the context to what this mandate was all about in 2008 in Eskom?

MR DANIEL MASHIGO: Chair in, in two, I think running from 2007 to 2008 marked by the load shedding we had from January 2008 and it went on up to you know like May if I am, I am, I am talking under correction. The period you know we had rotational load shedding in 2008. One over and above the plant performance issues we had we also had you know like a typically one in a 50 year rain, rain you know like a storm you know like a prevalence. So we had unphenominal high rainfall you know like in 2008. We also had you know like coal shortages in, in, in 2008. So there was a coal emergency declared in Eskom to fill the gap of the coal requirement at that point in time. So and it, the, the shortage of coal does not happen at night. I think it is, it comes progressively
10 but with the, in mines production affected by rain and so on. It just worsened you know like the, the situation. So Eskom declared a coal emergency. The team in 2008 went out to source you know like coal on a very, very urgent basis to ensure you know like a continuity of supply. What the team did as well they approached the Board Tender Committee with a mandate to allow them to conclude contracts in a particular manner for the next 10 years in an attempt to avoid a repeat of what they experienced from 2007 and 2008 with regards to coal shortages. That is that is in a nutshell. The rational why the 10 year 2008 mandate, it had a particular amount of you know like volume. I think it was 490 you know like a million tons that they sought approval to, to purchase in a particular you know like a manner whereby you do not necessarily have
20 to go through adjudication. So you get up front you know like approval to go conclude you know like a, a contract. You can receive unsolicited bids, but it was to expedite the process of concluding coal contracts and do it over a period of 10 years avoiding a repeat and the premise was also the time will also be used to conclude long term coal contracts. So it was to deal with the short and medium term you know like coal shortages. That that in a nutshell Chair was the rational why the 2008 mandate was

concluded which gave the Primary Energy Division the ability and flexibility to conclude coal contracts for a certain amount, for a certain value and a volume of coal for all power stations that had a coal shortage and utilising the quality criteria as I have highlighted in the example that I have given without going through you know like a, a, an adjudication process. However it was allowed if they wanted to issue open tender RFPs they could do that. If they wanted to do confine sourcing they can do that. If they wanted to entertain what we call unsolicited bids from suppliers they could do that. The process of concluding coal contracts you need to make sure it is you know like the pricing is fair, the quality meets the criteria. Chair it is in a nutshell what this mandate
10 was all about.

ADV KATE HOFMEYR: Thank you. If we just go to paragraph 2.1 on page 693 confirm for me if I am correct but that seems to capture what you have described as being the rational.

“What was resolved was that approve will be and hereby is given, is hereby given to negotiate and conclude contracts on a medium term basis for the supply and delivery of coal to various Eskom Power Stations for the period October 2008 to March 2018.”

So that is effectively the 10 years you were speaking about. Is that correct?

20 **MR DANIEL MASHIGO:** That is that is correct yes [intervenes].

ADV KATE HOFMEYR: And then your reference to 490 million tons is in the second line:

“The required volume coal will be 490.8 million tons.”

Is that correct?

MR DANIEL MASHIGO: That is correct.

ADV KATE HOFMEYR: And just to clarify what this meant in terms of processes for procurement within Eskom. I understand you to say it in, this was a delegation in and of itself of an authority to enter into these contracts. Is that correct?

MR DANIEL MASHIGO: Yes.

ADV KATE HOFMEYR: And it did not need to go through a tender adjudication process. Is that correct?

MR DANIEL MASHIGO: That is correct, because it is an up, it is an upfront approval.

ADV KATE HOFMEYR: Thank you. If we can then move to the checklist. That is at page 696. What was this checklist intended to do?

10 **MR DANIEL MASHIGO:** Okay. The, the checklist is, is basically a, a control, control sheet that accompanies a submission especially submissions that go to the Executive, Executive Committee, Sub Committees and Committees, Board Committees and Sub Committees and it is a, it is incumbent on the then I think we call them MDs. They evolve over time, but a Divisional Executive is accountable basically to sign off the submission that goes to, to those particular Committees and so on and I think this one was signed by Mr Dames when he was the Chief Officer for, for the Generation Business which is a level of a GE in current terms.

ADV KATE HOFMEYR: Mr Mashigo if from 20, 2008 this mandate allowed Eskom to procure one on one and to receive unsolicited bids for coal supply what protections
20 were put in place to ensure regularity in the process of procurement?

MR DANIEL MASHIGO: It is; what, what they did and I am talking about an error. It is part of, I was, I was not involved and, and some of you know I was. As I mentioned earlier RFPs were also allowed. There is quite a number, a sizeable amount of this coal that even though the mandate was given for one on one in the latter years of the, of this mandate I think post 2010 the more common practice was to either issue open

tender RFPs whereby you still within the mandate you follow that process. However the adjudication will be as delegated you know like to the Divisional Executive. That is the one I think control you know like that was used and you know reference was also made to previous you know like contracts that were concluded and I must state however there were unsolicited bids that within the period you know like 2010 and 2018 you know like that were allowed. The, the delegation to, to the Chief Officer Generation which I think subsequently with, with the amendments that were made to this mandate which were given later to the GE. It was incumbent on them to ensure that the process you know was fair and Eskom you know like pays you know like what is you know like

10 we would deem fair from a pricing perspective whereby the execution was given to the Senior General Manager the Head of Primary Energy. So the Sourcing Team would go do you know like the work led by the General Manager. However the authorisation of the contracts were segregated you know like from them and basically signed off by, by the then we had a Divisional Executive you know like Primary Energy before 2015.

ADV KATE HOFMEYR: And in March 2015 who would that person have been in Eskom?

MR DANIEL MASHIGO: In March 2015 we had Mr Vusi Mboweni who was that person.

ADV KATE HOFMEYR: Thank you. This medium term mandate was then amended in

20 2010. I would like to take you to that amendment. If we go to 742 of the same file.

MR DANIEL MASHIGO: I am on page 742.

ADV KATE HOFMEYR: Sorry, let me take you back just so I can orientate you as to where it starts. It starts at 738 the relevant page I want to take you to in due course is 742, but if we start at 738 you will see that that is reflected as the minutes of a Special Board Tender Committee Meeting held on Friday 3rd December 2010.

MR DANIEL MASHIGO: Yes.

ADV KATE HOFMEYR: Mr Mashigo as a precursor to the questions that will follow can you confirm that the 2008 mandate that we have just looked at allowed contracts to be concluded until 2018. Is that correct?

MR DANIEL MASHIGO: It was quite specific. It was specific volume, limited value and limited 10 year. So it was quite specific.

ADV KATE HOFMEYR: And then if you go to 742 that is the section of the minutes that reflects what was resolved by the Board Tender Committee and what I am interested in there is point three. Can you tell us how point three changed the arrangement from
10 what it was under the original 2008 mandate?

MR DANIEL MASHIGO: So the original mandate was to cover a, a, a period of 10 years which, which meant you can only conclude contracts using this mandate. The contracts should not go beyond I think 31st March 2018 you know. So it was a, a 10 year period. So what this resolution based on what the team saw was to allow for the team to conclude contracts for the life of a mine whereby the bidders have or the mine bid would say I can offer you coal and that life of mine goes beyond the March, 31st March 2018. That is basically in essence the, the, one of the key changes that happened you know like in 20, this was 20.

ADV KATE HOFMEYR: 2010 as I have it.

20 **MR DANIEL MASHIGO:** 2010, *ja*. That is.

ADV KATE HOFMEYR: 3rd December.

MR DANIEL MASHIGO: Yes, *ja*. That is the 2010 resolution that was made.

ADV KATE HOFMEYR: And then can you also just tell us about what point two is doing there?

“It begins with the Divisional Executive is granted the power to

delegate further the following contingencies to be executed by means of delegation consent forms for contracts already agreed.”

And then 2.2 says that:

“This power will encompass increase the value of individual contracts concluded by not more than 10 percent of the original contract value capped at 500 million and will not exceed the overall approved mandate.”

What does that mean?

- 10 **MR DANIEL MASHIGO**: All it, all it meant then was if the contract is concluded then there was scope to expand you know like the contract that is add additional you know like volume which will mean you know like also the value of the contract increase was to have the Divisional Executive granted the permission who can authorise those particular you know like expansion in the, in the construction if I can use construction contracts. You would also have what we call a contingency in case you have you know like a variation in scope or you know like the volume is much higher than was originally anticipated would have. That risk allowance you know normally set about, industry norm is about 10 percent I think. You know like for a Contract Manager when they come across those type of you know like an event, eventualities started being identified
- 20 in various profiles to do that. They did a similar thing with the Coal Supply Agreement to say where you have existing contracts and there is scope to expand you can expand to a certain limit. So it can only be maximum of six months. I think the 10 year and the value of the contract also has to be capped. That is now the, it is, I think it is 33, but the contract should not be more than 10 percent and however where the 10 percent maybe higher because the base contract was higher it should not exceed I think 500

million. Those I think are the controls that were put in.

ADV KATE HOFMEYR: So if a contract that existed after 2010 was sought to be extended beyond the limits placed here would there have been any authority for that to be concluded within Eskom?

MR DANIEL MASHIGO: The, the authority would then go to, to the Committee that authorised the mandate and not the people who were given a task to execute the limited authority. The, the norm is you always go back to the delegated authority in terms of a Committee. However a Divisional Executive would not have the capacity to basically authorise for example 12 percent you know contract expansion or where the
10 value goes beyond 500 or the 10 year goes beyond six million. They would have to go back to the Board Tender Committee that authorised it.

ADV KATE HOFMEYR: Thank you. Mr Mashigo I would then like to go to the Coal Supply Agreement that was concluded with Tegeta in relation to the Brakfontein Mine. You will find that in file 4 which is in front of you and it commences at page 857.

MR DANIEL MASHIGO: I am on page 857.

ADV KATE HOFMEYR: Can you confirm that that is the coal Supply Agreement between, well for the Brakfontein Colliery and Extension between Eskom and Tegeta? If you would like to see the signature page.

MR DANIEL MASHIGO: Yes I; that is where I am going to now.

20 **ADV KATE HOFMEYR:** That is at 920.

MR DANIEL MASHIGO: Okay. 10th March is the time?

ADV KATE HOFMEYR: Yes.

MR DANIEL MASHIGO: Yes and Mr Mboweni was the Acting Divisional Executive at that point in time [intervenes].

ADV KATE HOFMEYR: And who does he sign for?

MR DANIEL MASHIGO: He is signing on behalf of Eskom.

ADV KATE HOFMEYR: And who signed on behalf of Tegeta as reflected on that page?

MR DANIEL MASHIGO: It is, it is Mr Ravindra; I am going to assume it is Mr.

ADV KATE HOFMEYR: Huh-uh.

MR DANIEL MASHIGO: Ravindra. It is Mr Ravindra Nath.

ADV KATE HOFMEYR: Thank you.

MR DANIEL MASHIGO: *Ja*.

ADV KATE HOFMEYR: Thank you. If we can then go back to that first page 857, I drew a distinction in the overview I provided at the commencement of today's hearing
10 between the Brakfontein Colliery and the Brakfontein Colliery Extension, what do you understand that difference to be?

MR DANIEL MASHIGO: The Brakfontein Colliery was the operation that was in existence at the point of signing the contract, the extension from the mine planning is what was planned you know like as the mine developed to say at a certain point in time they would access, because they had mineral rights you know for that portion, you know like of the mine, it's a separate farm, it's at that particular point in time when they get to that then they will start mining that part. However what was contracted at this point in time was the main colliery that was active at that point.

ADV KATE HOFMEYR: Can I just confirm in terms of the coal quality that would then
20 have been tested when the contract was concluded was the coal in the extension tested at that stage?

MR DANIEL MASHIGO: No, no it was not, they only tested the existing you know like colliery, I don't even think they had geological you know like a sample and results out of the extension.

ADV KATE HOFMEYR: Thank you. If we can then go to page 879. 879 contains the

condition precedent that I also referred to in the overview, which I said did not reflect customary lawyer language, you will find it at the bottom of page 879.

MR DANIEL MASHIGO: Under Section 10?

ADV KATE HOFMEYR: Under clause 10 indeed, and if I may just read it into the record Chair because it is very important in the context of this case.

“The parties agree that this agreement will be subject to the fulfilment or waiver of the following conditions precedent.

10.2 In respect of the supplier;

10
10.2.1 By now later than 16h00 on 31 March 2015 the supplier had completed and reported the successful combustion test for coal supplied to Majuba Power Station.

10.3 It is specifically recorded that if the conditions precedent are not fulfilled or waived on or prior to the applicable date referred to in Clause 10.2.1 the remaining provisions of this agreement shall never become effective in such event neither party shall have any claim of any nature against the other.”

What was this condition precedent concerned with Mr Mashigo?

20 **MR DANIEL MASHIGO**: As highlighted in my statement with the evolution of the contract, that is in file 3 page 136 because I still have it open, there were numerous attempts to test you know like the coal, the Brakfontein coal Chair and those tests have revealed there were major concerns, especially those three parameters I have mentioned, energy content, CV, as we trivially call it CV, ash content and sulphur, so the team, because of the known history of that particular resource wanted you know like the coal to be combustion tested. Combustion testing is beyond what we do in a lab, so Eskom has got a research facility in Rosherville, Cleveland sorry, ja, Cleveland,

Rosherville, they've got a research facility where we've got a pilot scale combustion test rig and what happens is that the coal gets combusted in there and analysis is done on how the coal behaves in there. It gets compared with the combustion requirement of a particular power plant, so typically the coal from Brakfontein will be taken, put in this combustion test rig, the mine is expected to provide that particular sample, the coal gets combusted, the results are compared to how the coal behaves in the plant, this is beyond the lab you know like the testing and so on and that then gets given to the parties, if its within that particular you know like realm then the contract can proceed.

10 That was basically a precaution based on the history of the previous attempts you know that show that the coal failed on this particular, I think we did submit that evidence.

ADV KATE HOFMEYR: Thank you, and then if you go over the page to 880, you will see at the bottom of that page Table 1 reflects what's called the contract coal supply schedule.

CHAIRPERSON: Well before you proceed is – I know that you did say that this was put in by people who are not lawyers.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: But they were quite clear why they wanted it in.

20 **ADV KATE HOFMEYR:** Chair let me be clear, there was legal assistance in the formulation of the agreement, I was seeking to signify that the importance of this condition to the technical people within Eskom is signified by some of the language used which is not typically lawyerly, that was the point I sought to convey.

CHAIRPERSON: Yes, well I am just thinking about what it means at 10.1 subject to the fulfilment or waiver of the conditions isn't it that normally if it's condition precedent it just has to happen, if it doesn't happen then the contract doesn't take effect.

MS KATE HOFMEYR: Indeed.

CHAIRPERSON: So I'm just wondering whether the inclusion of waiver there doesn't tend to be contradictory to the normal sense of a condition precedent, but that may be something that if need be one can talk about it later, but I was just trying to look at it against what they clearly were trying to achieve.

MS KATE HOFMEYR: Chair if I may say two things in that regard, the investigation has not indicated any waiver of the conditions so as a matter of fact it is not the case that Eskom waived it, so that might take away the linguistic and interpretative question but over and above that even if we stay at the level of interpretation my submission
10 would be the reference to over the page this contract never coming into existence, sorry, never becoming effective is a clear indicator that what the purpose behind this condition was, was that you've got to have a successful combustion test by four o'clock on the 31st otherwise in essence the parties walk away from one another.

CHAIRPERSON: Ja, what it does emphasize simply from the language point of view is that probably waiver was a wrong word there, it doesn't seem to be consistent with what was intended as reflected in the first – on the next page at the top.

MS KATE HOFMEYR: Indeed.

CHAIRPERSON: Okay, alright, thank you.

MS KATE HOFMEYR: Thank you Chair. We were going over the page to page 880 Mr
20 Mashigo and you see at the bottom there the table specifying the contract coal supply schedule. Can you just take us through how we are to understand that supply schedule insofar as the periods for the agreement are concerned and in terms of the monthly quantity that was required to be produced by the Brakfontein Mine.

MR DANIEL MASHIGO: Let me first start by explaining maybe something that is on 10.4 to say this is an energy based contract, so ...(intervention)

CHAIRPERSON: On 10.?

MR DANIEL MASHIGO: Same page just above the table.

CHAIRPERSON: Yes, okay ja.

MR DANIEL MASHIGO: You will see he talks about the total contract, the quantity and he talks about megagigajoules, I am trying to explain that it's an energy based contract, energy means you know how much energy you're going to get out of the total coal that is supplied and it is assumed that energy comes at the nominal energy content, remember the 21.1 I mentioned.

CHAIRPERSON: Yes, yes.

10 **MR DANIEL MASHIGO:** So when you do that you get to the particular value, then we convert that into tons.

CHAIRPERSON: Okay, it's okay.

MR DANIEL MASHIGO: I'm just clarifying that so that when I navigate between you – you know like we don't get lost why are you referring to energy and yet when we measure the coal you know like over a waiverage it's mass, it is not energy based and so on, but it's because you would also derive back you know to that, you will take the mass that's delivered, the quality, then you multiply, you get the total energy in that particular coal consignment, so what the contract does is you can see it's set up as a ramp-up so there's a period between April 2015 when the contract comes into effect
20 after being signed on the 10th of March to September 2015 and it shows basically what will be the monthly you know like quantity, the minimum and the maximum, and the monthly quantity as you can see on column 1, 2, 3, 4, 5, on column 5 you know if you look at row two which says period April 2015 it's about 65, if you go to the next period which is October 2015 to October – to September 2020 the volume increases you know like at 2013 this is now the nominal volume and it shows that the minimum you know

like quantity will be 90 you know kilotons per annum or 90 000 tons per annum, sorry per month, my apologies and the maximum volume will be 135. From October 2020 you get you know like it's more or less, you know like the same quantum of volume you know like delivered and beyond that you know like you don't have anything, so it's broken down into three tranches, so basically it's your ramp-up, up until you get to steady-stay, and as we can see steady-stay it was expected to be a volume of 113 kilotons per month supplied from this particular colliery.

ADV KATE HOFMEYR: Mr Mashigo the period October 2015 to September 2020 and the period October 2020 to September 2025 on my understanding doesn't change at all
10 in this table, it remains entirely consistent. Can you shed any light as to why those periods were separately identified in the agreement?

MR DANIEL MASHIGO: I can't you know vouch for that but what I can see is that you've already achieved you know like a steady-stay but why it was you know categorised like that I can't vouch for that.

ADV KATE HOFMEYR: We will deal with that in the evidence of Mr Bester, who is coming next week Friday, he may be able to assist us there. Right, if we could then move to the question of technical compliance, which is at 886.

MR DANIEL MASHIGO: I'm on page 886.

ADV KATE HOFMEYR: If you go to Clause 14 there that clause is referring to the
20 technical compliance requirements of the agreement. If I just quote that clause it's not particularly long. The contract coal is to be supplied from both Brakfontein and Brakfontein Colliery Extension must at all times comply with Eskom's technical and coal supply requirements. For the avoidance of any doubt if these requirements do not render compliance for supply to Majuba Power Station Eskom reserves the sole and exclusive right to call upon a material breach as more fully provided for in this

agreement, and exercise its rights accordingly. Mr Mashigo is that a standard term of Eskom's coal supply agreements?

MR DANIEL MASHIGO: I would like to believe so Chair, and this is now post you know like a contract commencement to ensure that we meet you know like the compliance, and assurance that the quality will respect, so there are things that we put as controls to achieve that ja, it is standard.

ADV KATE HOFMEYR: And Mr Mashigo is it fair to say that the ...(intervention)

CHAIRPERSON: Well maybe let's clarify that, you say you would like to believe so, I think what Mr Hofmeyr is more interested in is based on your own experience is it
10 normal to find this kind of clause.

MR DANIEL MASHIGO: It is normal standard practice ja.

CHAIRPERSON: Ja okay.

ADV KATE HOFMEYR: Thank you Chair. And you gave evidence earlier where you spoke about the impact of out of specification coal on a power plant, does that – do those concerns lie behind a clause like this in an agreement?

MR DANIEL MASHIGO: Amongst other things yes, I may have not even highlighted the other party, which is the volume in itself because this being a pre-certified contract it means if the coal does not meet the requirement once the technical requirements are met you will not be able to dispatch any coal to Majuba, however in your planning you
20 know like a realm you would have provided for that coal to come through and if the coal doesn't come to Majuba then you start having other undesired impact that Majuba doesn't have sufficient coal to provide, I did not mention that but there is also that particular impact and hence it's important up-front for those technical requirements to be firmed up because it gives Eskom an assurance that you contract for it is deliverable so we hedge ourselves both on the quality, mitigating those impacts on plant etcetera,

but also on the security of supply because if the mine is incapable of delivering the coal it creates problems, you know like on the security of supply then on a short notice we have to go around you know like looking for coal to replace this particular consignment.

ADV KATE HOFMEYR: Mr Mashigo you've raised the issue of pre-certified stock pile, can I take you to the provision of the agreement that deals with that, it's at page 892, you will see at Clause 20 ...(intervention)

CHAIRPERSON: What page?

ADV KATE HOFMEYR: 892 Chair.

CHAIRPERSON: Oh okay thank you.

10 **ADV KATE HOFMEYR:** That page contains Clause 21 which deals with pre-certification of coal, and what I'm interested in Mr Mashigo is Clause 21.2, what does that clause tell us.

MR DANIEL MASHIGO: This is what we term contractual coal, that is for coal to be despatched to a power station in this case from Brakfontein Mine to Majuba Power Station, it should have been pre-certified and it should meet all the contractual specification and once that coal meets that requirement that means it's green, it's ready to go and we call it contractual coal. If the coal does not meet that requirement it is not deemed contractual coal so you can't despatch that particular coal, that's I think in a nutshell that's what it means, so the process is there's a process to pre-certify, I think
20 I've explained the process how we obtain a sample, but the important part is once a sample is analysed you go back to the contractual qualities, does it meet all the contractual qualities, if yes because the accountability sits with the mine to load the coal and despatch, that it must always meet the contractual requirement, if it does not that coal is not deemed contractual, then other contractual remedies are applied.

ADV KATE HOFMEYR: And Mr Mashigo would it be fair to say that this contract does

not envisage coal that has not been pre-certified leaving the gates of the mine.

MR DANIEL MASHIGO: Absolutely, it is a mechanism that was devised because of the complexity of delivering coal by road. If the contract is complied to fully by both parties you should not have quality issues when coal is received at the power station.

ADV KATE HOFMEYR: Let's just pause for a moment about the world in which the contract isn't being implemented properly. With a power station like Majuba that as you've already indicated in your evidence receives coal from numerous sources, how does it identify if there are coal quality problems that it is detecting on its end where the source of that coal comes from?

- 10 **MR DANIEL MASHIGO**: Firstly boiler is the best analyser you can get, your boiler will tell you if your – you know like the coal that is coming in you know like it's a sub-standard in this particular case, that is outside spec. So that's the first point we will pick up, whether it's physical you know like the attributes of the coal or is it the chemical properties when the coal is combusted and once we identify that you know the power station says we have an issue, you know we're not getting the output that we require or we're getting other undesired you know like the coal does not combust or you know we have too much edge that we need to handle or we have too much abrasion or there's too much foreign material so depending on what parameter is it, then we start with the process of elimination, where each and every single source that is delivered to your
- 20 power station if it comes on road every single truck is sampled based on the stock pile that was despatched at the source to do you know like your analysis and that's how we normally you know would do the process.

I mentioned earlier Majuba would on any given day you know like have on average ten contracts, and those ten contracts have to deliver in the region of about 40 000 tons per day, part coming through by train, on average 25 000 tons by train, the

balance come you know like a through road and that's more than 500 truck deliveries per day that we have so every single truck will have to be you know like sampled to create accumulative stockpile per source then we do the analysis and it will pinpoint which coal source is problematic then we start going you know like a back-watch to the supplier.

ADV KATE HOFMEYR: Mr Mashigo but given your description of the role that pre-certification plays in these contracts sounds to me like this process of having to identify which particular coal source is the problematic one, is an onerous one for Eskom to undertake, is that a fair comment?

10 **MR DANIEL MASHIGO:** It is indeed, because the cost of doing that exercise also is borne solely you know like by Eskom and it is undesired because your pre-certification if it's done properly and people are with scruples you know on the whole value chain you know you should not theoretically end in a situation where you have to do that.

ADV KATE HOFMEYR: Thank you, if we go back to page 890 this is the page we looked at previously that sets the coal quality specifications and rejection limits for Majuba, what I'm interested in is an aspect of this page that we didn't touch on earlier. You will see below the table at Table 3 there are some italicised sentences, the second of those or the one with two asterisks is the one that I would like you to provide us with comment on. Can you please first just read into the record what those two asterisks
20 provide?

MR DANIEL MASHIGO: As mentioned earlier this – you want me to cover both or just the second one?

ADV KATE HOFMEYR: Just the second one for now.

MR DANIEL MASHIGO: The second one relates to the full combustion test. As I have explained earlier Chair the combustion test is a small scale simulation of how the coal

will behave once it's combusted compared relatively to what will happen in the power plant and this is to deal with the suitability of coal, and it's over and above what we do on the lab test which we call proximate analysis, there are certain things about coal, coal can melt, you know and then when coal starts melting which means now the melting point of your ash is lower than what the furnace temperature is it starts creating you know handling problem, they have to shut down machines or coal doesn't combust at all. You have what you call flameouts and then basically it switches off, it's like your car switching off completely because it is not firing, whether it's your you know like your spark plugs not working or your injectors it's a similar thing. If coal is not reacting or

10 coal reacts very slowly, your furnace works on a time perspective. We – a power station like Majuba would have you know like in excess of 300 you know kilograms per second of coal that is fed into the boiler, at any given point in time and it is fed as a pulverised medium and if that coal reacts slowly which means you're going to have combustion happening in the places of your boiler where it's not supposed to happen creating undesired you know like consequences, so it is ash melting, it is ash – you know coal not combusting properly, causing flameouts, because flameouts it's also a high risk because if the coal reignites you can have uncontrolled explosion of boilers and we've had those globally. Fortunately in South Africa we haven't had in the Eskom fleet a catastrophic explosion you know like of a boiler, so all these things are meant to

20 ensure that over and above that the CV is fine, the ash is okay, the sulphur is okay, it's how the coal behave once you start combusting it because it creates problems and can the coal be handled, you know like when it moves from the coal stock pile into the boiler you don't have oversize, like you don't have excess stones, they don't cause physical damage, ripping conveyer belts and so on. That's basically why we do you know like these particular physical tests and combustion tests but the combustion test is once this

coal enters the boiler because it's a black box, you know like it is how does it behave and affect reliability and other liability of the plant.

ADV KATE HOFMEYR: Mr Mashigo if I can just read that double asterisk provision there into the record, it reflects:

“Full combustion tests will be conducted on all proposed coal prior to delivery and acceptance by Eskom. The objective of the combustion test is to ascertain suitability of the coal for use by Eskom.”

I just want to pause there for a moment. We previously looked at the combustion test in the context of the condition precedent. You will recall that was Clause 10 and that
10 related to a successful combustion test that had to take place by the 31st of March 2015, that was prior to the effective date of the agreement, you recall that?

MR DANIEL MASHIGO: Yes I do.

ADV KATE HOFMEYR: Okay, this provision seems at least to the reader to do something different, would you agree with that:? It refers to all proposed coal being subject to a combustion test, is that a fair reading?

MR DANIEL MASHIGO: It does not contradict in my view, all it says is that prior to any coal that is supplied you know like to Eskom you would have done a combustion test which had suitability, and one of the examples i can make the coal can be suitable for Majuba from CVS, however from the reactivity it is probably more usable at Tutuga, it is
20 also to make those type of decisions and so on, but I think that other clause was quite specific to hatch the implementation of the contract, because it was not done up front traditionally you would have done the combustion test before we even signed the coal contract because we would have identified at which power station is this coal suitable and what we do also we go to the general manager who is in charge of that particular asset and say here's a coal source we have identified, here's the volume, here's the

parameters and here's a combustion test report which is signed off by our research people and the power station manager will give it to his combustion engineers and they will say yeah the coal is fine we can receive or nay before we even sign the contract. So this is not a normal flow of things and as you can see these clauses are added at various points of the contract in implementation which should have been you know up-front normally you front-end load this type of you know like requirements because they form part of your technical evaluation when you still busy with the procurement process and you can see this was in my view an effort to hatch further because the contract did not follow the normal evolution of contracting where the functional requirements precede even your price negotiation, because if the functional requirements are not
10 right you don't even have to discuss the financial requirement because it does not meet requirement. Immediately that particular bid or tender you know becomes non-compliant and you don't even evaluate further and so on.

CHAIRPERSON: So this was an unusual clause in an agreement?

MR DANIEL MASHIGO: It is because it is in an execution state and it should be part of the requirements prior to contracting, absolutely Chair.

CHAIRPERSON: Yes, okay.

ADV KATE HOFMEYR: And just to pick up on the Chair's point there, I know that we are close to the lunch break but full combustion tests on all proposed coal prior to
20 delivery, it sounds like a considerable burden to place in a situation where you've described previously that pre-certification is supposed to deal with quality issues, right, the coal is not supposed to leave the mine, unless it is pre-certified, that was your evidence, is that correct Mr Mashigo?

MR DANIEL MASHIGO: Yes that's correct.

ADV KATE HOFMEYR: This seems to be a clause that's saying well in addition to that

there must be full combustion tests on all coal prior to its delivery to Eskom, is that fair?

MR DANIEL MASHIGO: Ja, I think the language may ...(intervention)

CHAIRPERSON: I guess you are asking whether that's a fair reading of it?

ADV KATE HOFMEYR: Yes indeed.

CHAIRPERSON: As opposed to whether it's fair to impose that.

ADV KATE HOFMEYR: Not at all, first of all is that as you read it, because if it is then I would ask some follow-up questions?

MR DANIEL MASHIGO: Ja, as I read it I think I would similarly have a similar interpretation, however it is not practical, you can't every single ton of coal you take to a
10 combustion test rig, the combustion test rig is done for the entire coal deposit, and hence I said you do it prior to contracting, because it is an anomaly you end up with clauses like this, trying to hatch in execution because you still have you know that debt that you did not pay at contracting now you're trying to do it in execution but now you can't every single time that the coal is despatched it goes to – it is not practical but I can see what the intent is, in other words to address something that was – that should have been done at the front end of the contracting process.

ADV KATE HOFMEYR: Thank you Mr Mashigo.

CHAIRPERSON: So would the – would you take the view that it was well intentioned but at a practical level there may have been practical difficulties complying with it in the
20 way that is envisaged, or not really?

MR DANIEL MASHIGO: Chair the literal meaning as it is stated it says exactly that, that you would have to do this combustion test for every coal consignment that goes, however it's supposed to be for every coal contract or coal source that is brought in to do a combustion test because a combustion test is done for the entire deposit. So I certainly can tell that the intention was to protect the business, the execution in the

language may present that practical – it is not practical I can tell you, that combustion test rig it takes you time to set it up, to get results, you will not be able to despatch coal on a daily basis and so on.

CHAIRPERSON: Yes, okay, thank you.

ADV KATE HOFMEYR: Thank you Chair I have a few more questions in relation to the coal supply agreement before we move to another topic, but I am happy to take the lunch adjournment now if that would be suitable.

CHAIRPERSON: Yes, let's take the lunch adjournment now, we will resume at two, we are adjourned.

10 **INQUIRY ADJOURNS**

INQUIRY RESUMES

CHAIRPERSON: Yes Ms Hofmeyr.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo could I please ask you to turn to page 895 of File 4 that you had in front of you. That is the next clause of the coal supply agreement I would like us to consider. And that is Clause 22.3 on page 895. You will see Clause 22.3 reads as follows: "Eskom Shell at its cost and including the cost of transport procure the analysis of such samples. Those are samples just for reference that are referred to over the previous page which I have taken to determine coal quality. And then it read on: By the laboratory defined as the nominated laboratory in Annex 1. If I could just take you to that definition you will find at page 925. Page 925 occurs within Annex A to the coal supply agreement which just to orientate you begins at page 922 and you will see that 925 contains a definition of nominated laboratory. Could you read for the Chair what that is defined as?"

MR DANIEL MASHIGO: Nominate – excuse me. Nominated laboratory means a 17025 accredited laboratory that is appointed by Eskom and approved by both parties.

ADV KATE HOFMEYR: Mr Mashigo what is a 17025 accredited laboratory?

MR DANIEL MASHIGO: It is a laboratory that is accredited to be compliant with ISO 17025 standard on coal analysis.

ADV KATE HOFMEYR: Thank you.

CHAIRPERSON: What is a 17025 standard?

MR DANIEL MASHIGO: It is an ISO standard for coal quality.

CHAIRPERSON: What is an ISO standard? ISO must mean for in something – is it not an acronym for something?

MR DANIEL MASHIGO: It is. It is an international standards organisation. It is a
10 European standards organisation

CHAIRPERSON: Oh okay alright.

MR DANIEL MASHIGO: Like you have ISO 9001 for quality.

CHAIRPERSON: Yes so it is an internationally accepted standard?

MR DANIEL MASHIGO: Absolutely Chair.

CHAIRPERSON: To which it refers ja. Okay.

ADV KATE HOFMEYR: And am I understanding the clause read with that definition correctly if I say it is providing that Eskom must ensure or procure that the analysis of the samples is taken by a laboratory that is accredited in accordance with that ISO standard, is that correct?

20 **MR DANIEL MASHIGO:** You referring to page 895?

ADV KATE HOFMEYR: Yes so 875 needs to be read with the definition in 925.

MR DANIEL MASHIGO: Yes, yes ja.

ADV KATE HOFMEYR: And I am suggesting to you that that combined meaning is that the laboratory doing the analysis of samples must be an accredited laboratory, is that correct?

MR DANIEL MASHIGO: That is correct.

ADV KATE HOFMEYR: Is that standard for coal supply agreements?

MR DANIEL MASHIGO: It is – these are pre-certified you know like coal it is standard in all coal that gets pre-certified and most of the conveyer type contracts we had to back feed that process so you know our labs also need to be ISO accredited basically by the relevant certification board but it has to be – it had to be [indistinct]. But everything that moves on road and rail it is a standard contract and we use the same template for contracting the same template for what we call coal quality management programme which is an annexure to this contract yes.

- 10 **ADV KATE HOFMEYR**: Would it be an unusual feature of the implementation of an agreement if a non-accredited laboratory was used to do coal sampling analysis?

MR DANIEL MASHIGO: It would be a deviation from the contract yes.

ADV KATE HOFMEYR: Thank you. I would then like to move to...

CHAIRPERSON: Well certainly it would be a deviation from the contract if the contract requires an ISO accredited laboratory. But the question is whether it is – it would be unusual. Do people normally do that or do they normally not do that?

MR DANIEL MASHIGO: No normally – no it is not normal practice it would be deviation from the norm.

CHAIRPERSON: Yes.

- 20 **MR DANIEL MASHIGO**: Plus it would be a deviation from the contract.

CHAIRPERSON: From the contract okay alright.

ADV KATE HOFMEYR: Are you aware of any cases where non-accredited laboratories have been used by Eskom to do coal sample analysis?

MR DANIEL MASHIGO: Ja just the one case the Brakfontein in 2015 when the analysis moved to [indistinct].

ADV KATE HOFMEYR: Thank you we will come to that.

CHAIRPERSON: But other than that have you ever had any other instances you have been at Eskom for 25 years, 26 years is it – have you known any other instance where a supplier uses a laboratory that is not ISO accredited?

MR DANIEL MASHIGO: Ja in my tenure in Primary Energy no Chair and it is not the supplier actually it is Eskom that is.

CHAIRPERSON: It is Eskom.

MR DANIEL MASHIGO: Ja it is Eskom in terms of the contract it is Eskom's obligation to ensure that the contractual lab that gets appointed is ISO accredited. No not as a
10 norm. I have no experience there.

CHAIRPERSON: Yes. But – so Eskom would always – would normally maybe always we will hear just now normally insist that the laboratory that they approve are ISO accredited laboratories?

MR DANIEL MASHIGO: It is exactly like that Chair.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: When we appoint them and should for whatever reason a laboratory lose their accreditation we immediately stop utilising them because we monitor it on a monthly basis so ja.

CHAIRPERSON: Ja. Okay thank you.

20 **ADV KATE HOFMEYR:** Thank you. Mr Mashigo I would not like to go to the financial assessment that was done of Tegeta that I mentioned in the overview this morning. You will find that commencing at page 800 in the same file.

MR DANIEL MASHIGO: I am on page 800.

ADV KATE HOFMEYR: Okay you will see that this document commences at 800 and ends at page 803 where the signatures of the compiler reviewer and approving

individuals are set out there. Can you just record for us what dates the – this financial report was signed by those three individuals?

MR DANIEL MASHIGO: The compiler signed on the 29th April. The reviewer signed on the 30th April and the approver also signed on the 30th April all in 2015 Chair.

ADV KATE HOFMEYR: Thank you. We know previously from your evidence that the coal supply agreement was concluded on the 10th March 2015 so this would put it after the date of conclusion of the agreement, is that correct?

MR DANIEL MASHIGO: That is correct.

10 **ADV KATE HOFMEYR**: If we can go back to page 800 you will see in the first paragraph on that page the purpose for which this financial evaluation report was prepared is set out. Could you read for us what that purpose is?

MR DANIEL MASHIGO: Okay. It says: Please note that the financial analysis was performed solely for the purpose of deciding whether Tegeta Exploration and Resources (PTY) Ltd is financially sound to be awarded a contract to the value of R4.3 billion South African rands for the supply of coal to Majuba Power Station over a period of ten years per reference number medium term mandate.

ADV KATE HOFMEYR: The first thing that I notice about that introduction is that it seems to be envisaging an award still to be concluded. Is that a fair reading?

MR DANIEL MASHIGO: That is a fair assessment Chair.

20 **ADV KATE HOFMEYR**: And if you go down to point 2 on that page there is an indication of what was considered for the purposes of compiling this report. Can you just tell us what was taken into account by this team when they prepared the report?

MR DANIEL MASHIGO: Okay. It says: Approved financial statement for the twelve months ended 28th February 2014 and 2013 comparative figures were obtained and analysed. A signed independent auditor's report issued by KPMG Incorporated

chartered accountants of South Africa registered audits accompany by financial statements. Oh sorry. Accompany the financial statements.

ADV KATE HOFMEYR: Thank you and then as we proceed over the next few pages there is the detail of the analysis. There is an identification of areas of concern. I would like to begin actually with the conclusion which you see at page 803 under paragraph 6. Can you please record what that conclusion is?

MR DANIEL MASHIGO: It says: In our opinion based on the issues raised under note 5 above Tegeta Exploration and Resources PTY LTD is relatively not sound enough financially to be awarded a contract to the value of 43 billion oh sorry 4.3 billion for the supply of coal to Majuba Power Station over a period of ten years per reference number
10 medium term mandate.

ADV KATE HOFMEYR: Thank you and let us go back to note 5 on the previous page to understand what those issues were that were raised by the assessors of the financial position. It commences at page 801.

MR DANIEL MASHIGO: Okay it says: The areas of concern are: The first one heading is Accumulated Loss and Loss for the Year. The company recorded an accumulated loss of 20.8 million and a loss for the year of 17.7 million. And then follow up is a negative DAT of equity ratio. The company recorded negative DAT to equity ratio for the period under review. This indicates that the company mind find it difficult to
20 raise additional finance if required. Profit Ratios. The profitability ratios were unfavourable at the end of the year. This poses a risk that the company might not be operating efficiently and that the fixed cost might be too high for its operations.

CHAIRPERSON: Sorry I missed that page Ms Hofmeyr which he is reading from.

ADV KATE HOFMEYR: 801.

MR DANIEL MASHIGO: 801.

CHAIRPERSON: Okay thank you.

ADV KATE HOFMEYR: We have just completed the three bullets at the foot of that page and we were going over to 802.

CHAIRPERSON: Thank you.

MR DANIEL MASHIGO: Okay. Top on page 802. The area concerned is Return on Assets Ratios and the finding is the return on asset ratios was unfavourable at the end of the year. This poses a risk for the company might not be affectively utilising its asset to generate profit. Negative Interest Cover Ratio. The recorded negative interest cover ratio indicates that the company is not generating enough review to cover interest
10 commitments. Negative Cash Generated from Operations. The company recorded negative cash generated from operation of 4.3 million. This means that the company cannot cover operations solely from running its business. The negative cash flows indicate a collection – a collections problem or poor debt structure. Contract Signs versus Cash Flow. Based on the company's working capital it may face cash flow challenges as a result of the magnitude of this contract. This contract award will require additional financial resources in terms of amongst other findings its direct employees and will also increase its operational gearing.

ADV KATE HOFMEYR: Thank you if this financial assessment had been done prior to the conclusion of the contract would it have been entered into?

20 **MR DANIEL MASHIGO:** Definitely not.

ADV KATE HOFMEYR: Thank you.

CHAIRPERSON: If you look at the recommendation immediately below the last bullet point on 802 it says: We are of the opinion based on the abovementioned concerns that Tegeta Exploration and Resources PTY LTD might face difficulty in financing the incremental working capital requirements that will result from this contract. And I think

also where you were reading we were at Ms Hofmeyr where was – where were we before he came here?

ADV KATE HOFMEYR: We were at 803 with the conclusion Chair.

CHAIRPERSON: 803 yes at 803 I note – I note here in the recommendation where I have just read that it says Tegeta might face difficulty. If you go to 803 it I think I saw something similar also. Yes where it says however subject to the satisfactory resolution of the issues raised under note 5 above the company might be considered should this contract be awarded. With these kinds of concerns should it be might or should it be it is likely to give problems or something like that? How high is the standard that must be
10 met before a company in terms of financial and other things before a company can be considered for such a big contract? Its situation must it – must it reflect that it is likely to have difficulty or must it simply reflect that it might have difficulty or must it reflect that it might have difficulty meeting the expectations of Eskom or is that something that would fall outside your experience?

MR DANIEL MASHIGO: Not really Chair I have done evaluations of bids, tenders and so on and there is reason why the language might is used because it is based on assessing the financial muscle of this company stand alone. And if you read below the concerns where the team say: However recommendation if the following things can be put in place it might change. Things like your parent company guarantees and so but
20 because those things were not part of the bid you know you cannot evaluate them in and so on. So I think they were in this case no it was based on the financials as provided by Tegeta as a standalone company not supported by a parent company. Typically in bids where companies are going for a contract size that normally is out – it is bigger than what they have done before they would have a parent company you know guarantee, performance bonds and those type of things to say although I am

small here is what I have got you know to cover me. You know like if I cannot raise capital myself the parent company would provide you know like those kind of funding facility. And the recommendations if you read them you know like the go into the banks have to say if these things are put in place you may consider you know like awarding a contract but if these things are not in place they would find it difficult. That is why they say might because other things may kick in and so on ja.

CHAIRPERSON: Well maybe I am being unfair or harsh but I would – these kinds of concerns seem to say to me and I do not have the experience and knowledge of the people who do the evaluation seem to say to me they should – you should not even
10 consider for such a big contract.

MR DANIEL MASHIGO: They do say that Chair.

CHAIRPERSON: Well it says might.

MR DANIEL MASHIGO: No, no Chair if you may indulge me a little bit.

CHAIRPERSON: Ja tell me where it is ja.

MR DANIEL MASHIGO: It says in the conclusion: In our opinion...

CHAIRPERSON: What page?

MR DANIEL MASHIGO: Page 803.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Right at the top. It says: In our opinion based on the issues
20 raised under note 5 above Tegeta Exploration Resources is relatively not sound enough financially to be awarded the contract to the value of 4.3 billion to supply coal to Majuba. It is quite – and they have actually put NOT in capital letters.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Yes.

CHAIRPERSON: But what is this qualification below that?

MR DANIEL MASHIGO: So hence I am saying Chair they – I think these qualifications say should you know Eskom want to pursue this thing further other considerations which is now referring back to the recommendation. So I think what the team was saying there can be a solution but based on the financials standalone Tegeta it is not in a sound financial to execute on this particular contract. I think there they are quite specific.

CHAIRPERSON: Okay alright.

MR DANIEL MASHIGO: Yes.

MR DANIEL MASHIGO: Thank you.

- 10 **ADV KATE HOFMEYR**: Chair if I may just take the point slightly further and it links Mr Mashigo to what you said about the limited resources on the basis of which the evaluation is made as compared with what might be produced which would change the conclusion right? What I mean by that is if we go back to 802. What you have there is a set of recommendations which if I understand your evidence are what might be considered if despite the conclusion on page – the next page 803 Eskom was inclined to award this contract and there are three bullets provided there. Can you take us through each of the bullets and tell us whether to your knowledge any of those requirements were met by Tegeta in this contract?

- 20 **MR DANIEL MASHIGO**: Okay the first without having to read the preamble to that the first recommendation based on the heading it says: It is therefore recommended that the company provide the following: The first one is a funding model that indicates how it will finance the incremental working capital requirements associated with this contract. Or guarantees from its financials or parent company to cover the incremental cash flows associated with this contract. And a written undertaking that should – a written undertaking that should this contract be awarded the company will be able to

honour this contract and all the existing contracts.

ADV KATE HOFMEYR: To your knowledge were either the first or the second provided in this case?

MR DANIEL MASHIGO: I am not aware, not aware Chair.

ADV KATE HOFMEYR: Thank you. We will take that up with Mr Bester. But at a minimum would you be satisfied to say these were recommendations for protections for Eskom that could have been obtained if this evaluation had been done prior to the conclusion of the contract?

MR DANIEL MASHIGO: No certainly Chair and I will qualify that by saying this process
10 you conduct prior to contract award. It is part of evaluating a bid. We do a technical evaluation which is the ability of the bid to meet the functional requirement. That is number 1. If it does not meet you do not do.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Then you come back and you do what you call financial evaluation which is broken into two. The first part is that you evaluate the bid that is now the bid price and so on. The second part you evaluate the company.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Its ability to deliver you know like on that. So based on all the evaluations then the multi dignitary team will make a determination to say is this
20 recommended you know like to the relevant adjudication authority or not so. And unfortunately this is done afterwards so it is out of norm

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: You do not do this type of evaluations after the contract has been awarded.

CHAIRPERSON: After – yes okay. Thank you.

ADV KATE HOFMEYR: What would be the possible utility of doing it after the contract was awarded?

MR DANIEL MASHIGO: I would not know off hand unless it was scheduled to be done and you know there was a rush to conclude the contract prior to that but I would not know of it Chair.

ADV KATE HOFMEYR: Thank you.

CHAIRPERSON: Unless I guess if somebody realise that it was not done when it was supposed to be done and then maybe doing it just to see if it will hopefully produce the desired results rather than expose a situation that goes against the very decision to
10 give the contract to the entity?

MR DANIEL MASHIGO: Very unlikely Chair because financial evaluation is one of the critical aspects of awarding a contract and PPPFA in itself that Preferential Procurement Framework that we use 90% of the decision to award is based on the financial you know viability of the bid. 10% is the functional requirement and when we produce our submission reports which some of the samples are in here there is a paragraph or said that talks about you know the financial evaluation. Whoever has to adjudicate and authorise this it is one of the significant consideration. And the multi dignitary team in it includes these financial you know like subject matter experts who evaluate and it is done by our corporate finance team. So it is very unlikely that a well
20 experience procurement team that was putting this in place would because your reference would be go to the other contracts that have concluded why would there be something...

CHAIRPERSON: Well I am just thinking of somebody who says look I see it was not done but if I do it now and all the boxes get ticked then maybe I might be able to say it was not done earlier but if it had been done it would have proved that this company

deserved to be given a contract or is that something would not normally happen?

MR DANIEL MASHIGO: It would not normally. You would not even award the contract without this ja.

CHAIRPERSON: In the first place.

MR DANIEL MASHIGO: Absolutely ja.

CHAIRPERSON: So as far as you are concerned you cannot see what purpose this exercise was meant to serve once the contract had been awarded.

MR DANIEL MASHIGO: Unless it is retrofit and tick all the boxes in retrospect of the audit report. Because we do – it is a – any transaction above R500 billion it goes – it is
10 subject you know like to a – to what we call an external audit and I – we have to check
you know in the 2000 mandate was – did he give exemption to that. But there were a
number of controls that are in place to prevent this from happening.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: The mere constitution of the team that does this procurement
you have a financial person that is sitting in the team purely to do the financial
evaluation. Why else would you have that person? Hence I am saying in our process
and experience.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: It is not a norm. It is probably the first time I am seeing it like
20 this and the only one I have so far.

MR DANIEL MASHIGO: Ja.

MR DANIEL MASHIGO: But you know where we basically did the financial evaluation
which is supposed to be stage gate.

CHAIRPERSON: Ja.

MR DANIEL MASHIGO: Before you actually conclude a contract. So it is – actually

before you complete the evaluation let alone you know like you signing the contract and so on ja.

CHAIRPERSON: Yes. Yes. Okay thank you.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo has Tegeta proved itself to be financially viable enough to perform under this contract?

MR DANIEL MASHIGO: A difficult one to tell but based on their under-supply performance there may be indicative elements that you know they found it difficult to perform but I cannot say that outright [indistinct].

ADV KATE HOFMEYR: Have they gone into business rescue?

10 **MR DANIEL MASHIGO**: They have gone into business rescue from February 2018.

ADV KATE HOFMEYR: And did they stop supplying coal from that point?

MR DANIEL MASHIGO: The last time they supplied was March 2018.

ADV KATE HOFMEYR: And that would have been three years into the contract?

MR DANIEL MASHIGO: It is not even halfway in the contract yes.

ADV KATE HOFMEYR: Thank you. Chair at this...

CHAIRPERSON: And many years before the end of that contract?

MR DANIEL MASHIGO: Ja that is how many years – six more years to go.

CHAIRPERSON: Ja.

20 **ADV KATE HOFMEYR**: Thank you Chair. Chair at this point in the evidence I propose to deal briefly with Doctor Van Der Riet's statement simply because it comes now in the chronology of events.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: It is to be found in the same File 4 and it is – actually the first page is the cover page that is 443 and then the statement begins over the page at 444. Mr Mashigo you will have to forgive me this is the point at which I will do a bit more

speaking than you but there will be a few aspects of Doctor Van Der Riet's statement that I will ask you to comment on. Chair I do not want to go through it in too much detail. I did give an overview previously.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: What I think is important to highlight though is the following: Doctor Van Der Riet tells us on page 444 of the statement that he was employed for more than 30 years by Eskom.

CHAIRPERSON: That is 444 of Exhibit?

ADV KATE HOFMEYR: Of Exhibit U4 File 4.

10 **CHAIRPERSON**: Otherwise it would be very long statement.

ADV KATE HOFMEYR: Indeed Chair. Thank you. So we are in File 4 at the moment at page 444. He talks about the 30 years that he has spent at Eskom and he talks about the awards that he had received during that time. He was awarded two Eskom Chairman's awards for excellence. He won the national and international awards for his work in 2011 and a Fuel Fossil Foundation of Africa award for his lifelong advancements in coal research and development. He was appointed as an honorary professor at WITS from 2005. You will find that over the page at 445. Chair importantly at page 447 Doctor Van Der Riet tells us about his secondment to the Primary Energy Division. This was a point that I highlighted in the overview. I was going to make...

20 **CHAIRPERSON**: Well did you – did you just for the record mention his qualifications and what he was doing or are you still coming to that?

ADV KATE HOFMEYR: I am going to come to that in a moment.

CHAIRPERSON: Ja okay.

ADV KATE HOFMEYR: I thought I would place him in the Energy division and then we will go through his qualifications. But if we go to 447 he explains in the first paragraph

on that page that on the 1 February 2015 he was seconded from his owner division which was RT and D. What does that mean Mr Mashigo RT and D?

MR DANIEL MASHIGO: RT and D is our...

ADV KATE HOFMEYR: Mr Mashigo if you will just turn on your – thank you.

MR DANIEL MASHIGO: My apologies. RT and D is a department in Eskom. It is our research technology development function.

ADV KATE HOFMEYR: And R and S?

MR DANIEL MASHIGO: It is Risk and Sustainability ja.

ADV KATE HOFMEYR: Thank you. So he says he was seconded from that division to
10 the Primary Energy Division with an advisory support mandate. This was part of an Eskom recovery strategy to assist in resolving the countrywide load shedding prevalent at the time. The rationale was that unacceptable coal quality was leading to coal related load losses which was a major contributor to the load shedding. He says I was one of 25 senior Eskom experts drawn from our normal jobs and seconded to various parts of the business that needed assistance. He says during my secondment I reported directly to the senior general manager SGM of PED that Primary Energy
20 Division Vusi Mboweni. So he moves there and he goes with the qualifications that are set out at page 445. What Dr van der Riet records there is that he has a BSc, a BSc Honours in Industrial Chemistry, a Post Graduate Diploma in Engineering Management and he also earned his PhD in Coal Conversion in 1988 from the University of the Witwatersrand. He is a registered, he was a registered Natural Scientist Professional and a Member of the South African Chemical Institute. So Chair he, he indicates.

CHAIRPERSON: And had been employed in Eskom from 1988 as a Coal Special Scientist.

ADV KATE HOFMEYR: Scientist.

CHAIRPERSON: *Ja.*

ADV KATE HOFMEYR: Indeed. He, he, he does go on to explain that his speciality is Coal Science and the utilisation of coal and combustion, gasification and conversion processes. So if we step back for a moment Chair what happens in February 2015 if we understand Dr van der Riet's statement is that there is a coal crisis. There is an energy issue and they are trying to work out if there is a link between unacceptable coal quality and the coal related load losses which are leading to load shedding and so he and 25 other experts are drawn in as a sort of Task Team to deal with this issue. So he explains that is why he finds himself in the Primary Energy Division in 2015 which is not
10 his usual home in the structure of Eskom. When he arrives and I am now at page 449 of the statement. He, he indicates there that he was informed by his QA Staff. Mr Mashigo is that Quality Assurance, an acronym?

MR DANIEL MASHIGO: It is Quality Assurance which is part of the Technical Services Department.

ADV KATE HOFMEYR: Thank you. So at the top of 449 he says:

“I was informed by my Quality Assurance Staff during my
tenure as Acting TSD Manager from 1 July to 31 August 2015
that the Brakfontein Coal Supply Agreement was signed in
March 2015 and the Q and A Staff professional opinion was
20 that coal qualities from this colliery were fair until 2015 when
tonnages delivered increase substantially and qualities...”

CHAIRPERSON: I am sorry.

ADV KATE HOFMEYR: “...deteriorated”.

CHAIRPERSON: Until July 2015.

ADV KATE HOFMEYR: July 2015.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: Apologies Chair and he says:

“At that point tonnages delivered increased substantially and qualities deteriorated.”

He goes on in the next paragraph to record that:

10 “Anecdotally the Eskom Geologist responsible for overseeing the Brakfontein Operation believed that this was due to commencement of deliveries from the four upper seam which was apparently deemed to be of too low quality to meet Eskom’s specifications. The four lower seam met Eskom’s quality specifications, but this was underneath the four upper seam which therefore had to be removed and discarded first. Eskom Geologists hypothesis therefore had merit as a mixing of the four lower with four upper seams would correlate with the increased tonnages delivered.”

He goes on however to say the following:

20 “This hypothesis was never tested as the Eskom Geologist Mr James Maddow, the Eskom Quality Assurance Manager Mr Charlotte Ramavhona and Eskom Senior Quality Assurance Mr Sam Phetla responsible for Brakfontein Colliery and myself were all suspended on 1 September 2015 prior to being able to initiate the investigation.”

Chair there is one error in that paragraph that I need to bring to your attention. We were not able to transverse this with Dr van der Riet.

CHAIRPERSON: Huh-uh.

ADV KATE HOFMEYR: But our investigations have indicated his reference to Mr James Maddow.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: As being one of the people who was suspended with him is in fact incorrect.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: He was the Geologist on the team.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: But he was not in fact suspended. He has confirmed that to
10 our investigators.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: The person who was suspended in the group of four is a man of the name of Sphelele Ngobeni.

MR DANIEL MASHIGO: It is a lady.

CHAIRPERSON: Huh-uh.

ADV KATE HOFMEYR: A lady?

MR DANIEL MASHIGO: It is a lady.

ADV KATE HOFMEYR: I do apologise.

CHAIRPERSON: Hm.

20 **ADV KATE HOFMEYR:** My note had it as a man.

CHAIRPERSON: Huh-uh.

ADV KATE HOFMEYR: She was also a Geologist. Is that correct Mr Mashigo?

MR DANIEL MASHIGO: Correct.

ADV KATE HOFMEYR: Thank you. So that is just a, a correction that would need to be made there just on the basis of what we have uncovered in the investigation, but the

important point while we are on this paragraph Chair is you will recall in the evidence yesterday there was a particular email that was sent between Mr Koko and infoportal1@zoho.com. Attached.

CHAIRPERSON: The “Businessman”?

ADV KATE HOFMEYR: The “Businessman”.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: Indeed, and attached to that email which was sent on 21st September 2015 was a copy of the suspension letter to Mr Sam Phetla. So the links are starting to be created in terms of what was going on in relation to this contract.

10 After Mr Phetla was suspended and that occurred on 1st September a copy of his suspension letter is then sent to the “Businessman” on 21st September of that month. The reference there Chair just so that you can make a note of it. It is in U1 and the page is JAM512.

CHAIRPERSON: 512?

ADV KATE HOFMEYR: Correct.

CHAIRPERSON: Thank you. Mr Mashigo can I ask you something in regard to this, to what Dr van der Riet says here? He talks about the mixing of I think coal from four upper seams, four upper seams and coal from four lower seams, seams. What would normally come out of there because you, you said maybe that is the point he is making
20 that the lower seams are as I understood your evidence are likely to have higher quality of coal compared to the upper seams or did I get that wrong?

MR DANIEL MASHIGO: You, you got it right Chair and this one is actually not even a likelihood. It is, it is actual fact that based on the geological model that is now what the mine has, had drilled and they found that that four seams had you know like a different qualities on the lower part which is what they call forcing lower and the higher part

which is forcing upper which was of poor quality and, and the contract was also specific on what should be supplied you know like to Majuba on this four seam.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Yes, *ja*.

CHAIRPERSON: Yes, okay.

ADV KATE HOFMEYR: Thank you. Chair if we then go to over the page 450 you will see that we start to enter the period towards the end of August 2015. At four, at 9.4, middle of the way Dr van der Riet is talking about a call he received from Mr Koko. Just to orientate you that is happening on the same day as is described in 9.1 over the
10 page. So that is 25 August 2015. He says midway down that paragraph:

“Mr Koko called me to his office in Megawatt Park to report personally on the briefing note.”

That he has described above he was putting together.

“The TSD QA Manager, Ms Charlotte Ramavhona and I met with Mr Koko and the Eskom Head of Legal Ms Suzanne Daniels.”

He says:

“A plan was devised to recall reference samples for August 2015 held by Sibonisiwe the laboratory contractor to the
20 employer and to resubmit these for reanalysis to the SABS Coal Laboratory in unmarked bags.”

CHAIRPERSON: It, it looks like it is the reanalysis that was to happen, but the submission was the submission that resubmission. I thought you said resubmission.

ADV KATE HOFMEYR: Apologies.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: So to submit.

CHAIRPERSON: [Laughing].

ADV KATE HOFMEYR: "...those reference samples for reanalysis..."

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: "...by the different laboratory."

Now they were going to move the SABS Coal Laboratory. Mr Mashigo can I just confirm there Sibonisiwe is it an accredited lab?

MR DANIEL MASHIGO: Yes, it was at that point.

ADV KATE HOFMEYR: And SABS was it an accredited lab?

10 **MR DANIEL MASHIGO:** It was also a, an accredited and contracted lab.

ADV KATE HOFMEYR: So is it fair to understand it is going from one accredited lab to another accredited lab?

MR DANIEL MASHIGO: Just repeat your question.

ADV KATE HOFMEYR: The, the reanalysis is going from an accredited lab to another accredited lab?

MR DANIEL MASHIGO: Yes.

ADV KATE HOFMEYR: Thank you and just in terms of what the reason was for that change, if we go back a page. You will see at paragraph 9.1 Dr van der Riet talks about the call he received on that same day which was from the SGMPED that is a
20 reference to Mr Mboweni. We have read that earlier in this statement regarding an accusation from I quote:

"Gupta owned mine"

Suppling coal to Eskom. The allegation was that the Eskom contracted laboratory monitoring the colliery re coal quality had requested a bribe. So that gives you the background to why at this meeting the decision was taken to do reanalysis at the SABS

Laboratory. Mr Mashigo can I just ask you here how common is it for the likes of a, a, a person in the position of Mr Koko and the Head of Legal, Ms Suzanne Daniels, to be engaged in an issue related to coal quality in a contract?

MR DANIEL MASHIGO: It is, it is, it is very, very unusual unless it was escalated when people who dealing with the contract have failed to, to resolve but it is a, it is an issue that on a day to day basis should be handled between a Contract Manager, the Quality Advisor and whoever the, the contracting mine partner has appointed as a contractor.

ADV KATE HOFMEYR: Thank you. If we then go onto 9.5 on page 450. Dr van der Riet makes the point here that I made in the overview this morning. He
10 records that:

“Sibonisiwe had shown that...”

This is the second sentence.

“...that 15 out of the 30 coal consignments in August 2015 had failed, but when it was re-evaluated by SABS, SABS showed that 29 out of the 30 should have failed.”

When this was brought to Mr Koko’s attention Dr van der Riet indicates that he responded that:

“SABS and RT & D laboratories should replace the designated
laboratory Sibonisiwe for Brakfontein Colliery and a written
20 instruction was issued to that effect.”

Chair the next thing that happens is that an agreement is made at that meeting that Eskom will now observe the sampling, because they need to get to the bottom of what is going on with this poor quality of coal. So over the page at 451 you will.

CHAIRPERSON: Before, before.

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: We do that I just want to confirm there, there, there was no connection between Sibonisiwe the laboratory and Sibonisiwe Dube that I think we came across at one of the pages or was it not Sibonisiwe?

MR DANIEL MASHIGO: Chair I, I, I.

CHAIRPERSON: You, you cannot remember?

MR DANIEL MASHIGO: I cannot remember. This is a company that we have been.

CHAIRPERSON: *Ja*.

MR DANIEL MASHIGO: Been doing business with.

CHAIRPERSON: Okay.

10 **MR DANIEL MASHIGO:** And it is the name of the company.

CHAIRPERSON: Oh.

MR DANIEL MASHIGO: Whether it is named after a person I would not know Chair.

CHAIRPERSON: Okay. Well I think that that one would have been somebody employed within Eskom. So probably it cannot be that such a person employed by Eskom would not be doing business with Eskom.

MR DANIEL MASHIGO: Should not Chair.

CHAIRPERSON: *Ja*, okay alright.

ADV KATE HOFMEYR: Thank you Chair.

CHAIRPERSON: Thank you.

20 **ADV KATE HOFMEYR:** We then over the page at 451 where Dr van der Riet talks about the sampling exercise that was supposed to be performed on Saturday 29 August. He records that:

“Mr Maddow and he were scheduled personally to witness the sampling to ensure compliance with standards.”

He goes on and says:

“However on Mr Koko’s telephonic instruction to myself Mr Maddow were informed that we will not be involved from witnessing the sampling. This was in contravention of the CQMP.”

Chair that is a reference to Annexure A to the Coal Supply Agreement. It is a, an acronym for Coal Quality Management Procedure and that procedure allows the employer to witness any sampling. Dr van der Riet goes on and says that:

10 “He made Mr Koko aware of this and Mr Koko suggested that the sampling exercise go ahead, but the Brakfontein stockpiles would be sampled again in the next week in the presence of the Eskom representatives including himself.”

So the scheduled witnessing of the sampling by Eskom Officials gets cancelled for the Saturday and if you go down to 9.11 you will see what the testing result for those samples that were taken on the Saturday were. Dr van der Riet records:

20 “The testing of the samples taken on Saturday 29 August came to a preliminary finding that the coal was in fact fit for purpose. This in and of itself should be a cause for considerable concern as Eskom staff were not present when the coal was resampled. In effect I could not vouch for the authenticity and representivity of the samples. So I stand by the initial findings that the coal was not fit for purpose.”

Chair despite that and this will be revealed in the evidence in due course, the suspension letter that had been sent to Tegeta when all of this erupted at the end of August 2015 was then reversed five days later when a letter was sent to them saying that they can continue to supply under the contract. We will deal with that in more

detail in the evidence of Mr Opperman who will come next Friday, but Chair the statement then goes on to explain how despite not attending the Saturday sampling Dr van der Riet and his team are working to put together a complete investigation file on this matter. He is asked to have it ready for Monday 31st August. He does so, but then if you go over the page to 452 you will see at paragraph 9.14 he tells us what happened on Tuesday 1st September. He said:

“At 10:30 he reported to SGMPED’s office...”

That is reference to Mr Mboweni in Megawatt Park.

10 “...to ostensibly handover the investigation file and discuss any technical queries.”

He said he took his laptop/PC with for this intent. The meeting started late as the SGMPED was occupied in his office.

“When I finally entered SGMPED’s office he passed me a letter of intent to suspend written by Mr Masingita Rikhotso of the Eskom Industrial Relations Department.”

20 And what we then read in the remainder of the statement is that Dr van der Riet was immediately suspended. He left the premises and from that point he engaged with Eskom in his efforts to expedite the disciplinary process, because he, he; Chair this is the paragraph that you may have been recalling earlier when you raised the question of me, with me that he had welcomed an investigation into the matter. You will see.

CHAIRPERSON: [Intervenes].

ADV KATE HOFMEYR: At 916. He says there:

“I initiated correspondence on Wednesday 2 September.”

So the second day. The day after he was suspended with reasons why he believed he should not be suspended.

“I believed that I had been doing my job and I welcomed an investigation.”

But then it takes 32 months for that process to unfold, for the disciplinary finally to be held, but for him ultimately you will see at page 454 to be asked to return to Eskom. At 9.32 he records that:

“Eskom reviewed the Chairman’s findings and on 26th April 2018 I received a disciplinary determination that the Chairman’s sanction was irrational.”

Chair you will recall from my overview that there was a finding against him in relation to the emails. Eskom determined that that was irrational, the sanction of dismissal that followed that finding and that he should be returned to his duties on 1 May and he did so. You see at paragraph 9.33 after 32 months of suspension. Chair those are the pertinent aspects of Dr van der Riet’s statement.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Mr Mashigo if I, if I could ask for your comment on the likely impact of the loss of Dr van der Riet to Eskom over those 32 months? Do you have a sense of what that impact would have been?

MR DANIEL MASHIGO: I, I certainly have. I think he, he explains what is role, role was and, and when this team of various experts were appointed they were not investigating possible impact. There were incidents and they were coming up with solutions how to mitigate the impact of coal quality you know like across the fleet and, and he was appointed basically based on his you know like knowledge. He was a “Mr Coal” in Eskom and, and I think with him not being there I think it, it compromised obviously what the Eskom Exco identified as critical to have recovery plan and, and also his input I think in this environment. I mean he was, he was key in a number of

projects including the underground coal classification which is in an attempt for a cleaner you know, you know coal technology to reduce carbon emissions and so on. I mean it is one of the projects that you know he started from, from conception that was being driven up until the pilot case was completed and so on. So it was certainly, it is counterproductive to what the original intent was for a person of you know like his stature, knowledge and, and input.

CHAIRPERSON: Would you know whether anybody was appointed to do his job in the meantime whatever the job was that he was supposed to have been doing during those 32 months?

10 **MR DANIEL MASHIGO:** I, I would not know in the research environment, but in Primary Energy his advisory role that he was brought in, because there were two people. He is not only.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: The person who was brought in. There was also another.

CHAIRPERSON: Yes.

MR DANIEL MASHIGO: Person and a General Manager in the Engineering Fraternity.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: So that that gap was, was never closed.

CHAIRPERSON: *Ja.*

20 **MR DANIEL MASHIGO:** The only gap that was closed was.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: The, the Technical Services Department.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: You know like a, a Manager.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: But no, his role, so we lost that.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: I think we lost that.

CHAIRPERSON: Hm.

MR DANIEL MASHIGO: That skill and input.

CHAIRPERSON: *Ja*, okay. Thank you.

ADV KATE HOFMEYR: Thank.

MR DANIEL MASHIGO: And Chair if I may add one, one of the things that we were working on at that point in time was to enhance our assurance controls for the coal that is delivered you know by road and rail based on you know similar events based on some reports of malfeasance and collusion between laboratories, people who observed truckers and so on. So we were looking at a system to enhance and move you know what we call the pay point to the power station. Out of that came a project you know that says you know pay point moving where we could do quality determination instantly when the coal gets delivered. To move the risk you know like a or to shift the risk exposure for Eskom that you know we determine the coal when the coal comes and it is not acceptable we turn back the truck or train and it is the suppliers risk and so on. Like they do in the export market. If you take a train down to Richard's Bay. It does not meet the requirement the risk sits entirely you know with the supplier. Hence you find it very strict when coming to that. So it is one of the projects that I think you know like we lost a bit of traction which was to the, for the interest of the company.

CHAIRPERSON: Thank you.

ADV KATE HOFMEYR: Chair the next event in the chronology is what happened when that sample the next week was taken from Brakfontein Colliery. You will recall that Mr Koko indicated to Dr van der Riet well there will be another sample taken in the next

week. That occurred on 6th September 2015. Our reference for those facts Chair actually come from one of the reports to which I made reference previously. It is the Fundudzi Report which you will find in file 5. The relevant page where this is all set out pursuant to a detailed analysis that Fundudzi did of these events at this time appears at 244 of file 5.

CHAIRPERSON: 204?

ADV KATE HOFMEYR: Sorry, apologies. 1244, Chair. I think it is.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Slightly late in the day.

10 **CHAIRPERSON:** 1204?

ADV KATE HOFMEYR: 1244. 1244.

CHAIRPERSON: [Laughing] okay.

ADV KATE HOFMEYR: Chair that is quite a way into the Fundudzi Report. Just to orientate you the Fundudzi Report commences at page 1114 in that file. It is an extremely detailed report that was produced in November 2018 that looks in extensive detail at this Brakfontein Colliery Coal Supply Agreement. What we do for the purposes of the presentation of the evidence before you is use it only to fill in gaps which are not going to be dealt with by witnesses who give oral evidence and where relevant we will point to the responses that were given by persons implicated in the course of the
20 investigation to Fundudzi. So for example Mr Koko was sent a detailed set of question arising from their investigation together with his responses to that and that is reflected in the report itself, but we have also obtained the actual underlying documents. They are placed before you as well, but just on this question of what happened with that second sample that was tested. You will see at page 1244 and I am summarising now so that we do not have to spend too long on this, but there was a second sample that

was taken on the 6th September. You will see that over the previous page at 1243.

They say:

“As indicated above...”

This is at the bottom of the page, paragraph 6.28.14.

“...on the 6th September 2015 SABS collected two samples from the Brakfontein Mine with two particular sample numbers.”

You go over the page just to summarise what they conclude there is that the SABS Laboratory tested those samples. The samples differed so materially from the samples that were tested on that Saturday, taken and then tested on the Saturday that they
10 concluded that they could not have come from the same mine. That is the conclusion of Dr Alphen who is referred to at paragraph 6.28.20. Who is Dr Van Alphen, Mr Mashigo?

MR DANIEL MASHIGO: Dr Chris Van Alphen is one of our specialists in research and he is still in the employ. So.

CHAIRPERSON: This, this is a different testing or analysis to the one where the results were the 29 of 30?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: Were not good enough in circumstances where another analysis earlier had shown that 15.

20 **ADV KATE HOFMEYR:** Correct.

CHAIRPERSON: Of 30 were not good enough.

ADV KATE HOFMEYR: Indeed.

CHAIRPERSON: This is separate?

ADV KATE HOFMEYR: This is separate.

CHAIRPERSON: *Ja.*

ADV KATE HOFMEYR: Chair just to be clear on those facts. There were original samples taken during the month of August. Those were first analysed by Sibonisiwe, 15 of 30 were failed. The reserves of those samples were then sent unmarked to the SABS Laboratory. It conducted an analysis and failed 29 out of the 30, but those are talking about samples taken historically in August.

CHAIRPERSON: Yes, okay.

ADV KATE HOFMEYR: Then you have the sampling on the 29th August. The one that.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Dr van der Riet was not present at.

10 **CHAIRPERSON:** Was not a witness, *ja*.

ADV KATE HOFMEYR: It was determined to be fit for purpose.

CHAIRPERSON: *Ja*.

ADV KATE HOFMEYR: Right.

CHAIRPERSON: Everything?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: And then a further sample is taken by Eskom at the Brakfontein Colliery.

CHAIRPERSON: Yes.

20 **ADV KATE HOFMEYR:** On the 6th September 2015.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And the samples differ so markedly.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: From the ones that were taken on the Saturday the 29th.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: That the conclusion is they must have come from, well they could not have come from the same mine.

CHAIRPERSON: Yes. What paragraph at 1244 do I find that conclusion?

ADV KATE HOFMEYR: Let me find it for you.

CHAIRPERSON: Oh, I think it is 6.28.21.

“Based on the consultations conducted with officials from SABS and Eskom it is evident that the samples tested by SABS on 29 August 2015 were not from Brakfontein Mine.”

ADV KATE HOFMEYR: Yes Chair.

10 **CHAIRPERSON:** Yes.

ADV KATE HOFMEYR: And that is even further confirmed just in the paragraph above.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: Because the reference is made to Dr Van Alphen there.

CHAIRPERSON: Hm.

ADV KATE HOFMEYR: So the observation, so [indistinct] first in the story makes the observation that it is unlikely they come from the same mine.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And then what is recorded here was that that observation was also made by Dr Van Alphen when we presented him with the two test results during
20 our consultations with him. Dr Van Alphen stated that it was not possible that the source of the coal tested on 29 August 2015 and 6 September 2015 was Brakfontein Mine.

CHAIRPERSON: Huh-uh, hm. Yes, thank you.

ADV KATE HOFMEYR: Chair the next event in the chronology is what then happened to ongoing coal quality assessment from Brakfontein and Chair you will find the answer

to that question in one of the affidavits that I indicated this morning I would be referring you to. It appears in file 4 at page 479.

CHAIRPERSON: 5, page?

ADV HOFMEYR: File 4, apologies and it's at page 479.

CHAIRPERSON: Okay. Yes?

ADV KATE HOFMEYR: Chair this is an affidavit of Mr Magwasa, he describes in the first paragraph that he is a Chief Mining Engineer, currently acting as Senior Manager Technical Services Department and Project Management Office with Eskom Primary Energy. You will see that his affidavit continues, absent the annexures to page 488 and
10 you will see that he signed the affidavit last week on the 19th of February. What Mr Magwasa sets out in this affidavit is the interactions that he had with Mr Koko in October 2015, so just to orientate ourselves in time Dr van der Riet is suspended with his colleagues on the 1st of September, we've looked at the further sample that was taken on the 6th of September 2015 and the conclusion that it couldn't have come from the same mine as that which was sampled on the 29th and now we move ahead in time to October 2015 where if you start at page 481 Mr Magwasa tells us about an interaction that he had with Mr Koko on that day. He was summoned to Mr Koko's office, and he talks in some detail at the bottom of the page, page 454, about the fact that Mr Koko from the third line expressed his displeasure about, and he quotes "not
20 just you, but people in PED, that's Primary Energy Division in general, who are fighting other people's battles" and then he goes on to say "if I remember well Mr Kiran Maharaj, the previous PED Divisional Executive who was Mr Mbwene's predecessor was on suspension and Mr Johan Bester, former General Manager Fuel Sourcing in PED had resigned suddenly, just to pause there, Mr Bester is one of the witnesses who will give testimony next Friday. He goes on and he says "Mr Koko proceeded to tell me

about where Mark, Dr van der Riet, had been seated in Mr Koko's office when he was telling him exactly what he was telling me". At 455 he says "I felt threatened when he proceeded to say the only reason I am not suspending you is because you do not deserve it. You think you are right, you are right at your house, not here, this is Eskom. Mr Magwasa says I wonder whether he meant that I was one mistake away from being suspended like Dr van der Riet I noticed that Mr Koko had a way of getting his message across without raising his voice.

Chair it goes on in some detail, not relevant for present purposes, but the point I do want to highlight from this affidavit is that at paragraph 456 on that page he-
10 Mr Mgwasa records that Mr Koko instructed him to do the following in no particular order, and if we jump down to 4563 one of the instructions given was that Kendall Laboratory was to be used to analyse Brakfontein mine samples.

If we can just pause there, Mr Mashigo in 2015 was Kendall Laboratory an accredited laboratory?

MR DANIEL MASHIGO: Not to do for total complete, it was not fully accredited at that time.

ADV KATE HOFMEYR: That accreditation 17205 would it have had that accreditation?

MR DANIEL MASHIGO: Not at that point no.

ADV KATE HOFMEYR: And is it an independent laboratory or a laboratory linked to
20 Eskom?

MR DANIEL MASHIGO: It's an Eskom owned co-laboratory that primarily analyses coal from the (indistinct) Colliery, Gupta colliery that supplies Kendal, the anchor supply to Kendal Power Station.

ADV KATE HOFMEYR: Thank you Mr Mashigo that is confirmed over the page by Mr Magwasa at page 483. You will see at paragraph 459 on that page Mr Magwasa says

the use of Kendal Lab to analyse Brakfontein samples was out of the norm as other short to medium term coal contracts were analysed at nominated labs. I believe this was an executive decision discussed between Mr Koko as the head of both generation and PED and Mr Christopher Nane the then Kendal Power Station manager. If I remember well funds had been paid available to upgrade the Kendal Lab before my time. He says going on at the next paragraph:

“The instruction to change the lab analysing Brakfontein Mine coal samples from SABS lab to Kendal Power Station Lab came from Mr Koko. In my view it was out of the norm for a Group Executive to issue such an instruction.”

10 And the point about the ISO accreditation Chair you will find at the next page 484, where Mr Magwasa says that paragraph 4, 5, 15 it is important to note at the time of the change the Kendal Power Station lab was not ISO 17025 accredited.

Chair the change was made in October 2015, and what the investigators sought to do was to place before you what the outcome of the sampling analysis that was done from – by Kendal from October 2015 for the rest of the contract, as compared with the analyses that had been done by the accredited independent labs prior to that. You will find that in Mr Petzo’s affidavit which you will find at page 604 of the same volume, Mr Petzo’s affidavit begins at page 605, he confirms in the first paragraph that he’s a senior geologist in the technical services department of Eskom and if you go
20 over to page 607 you will see that he signed the affidavit before a Commissioner on the 18th of February so also during the course of last week.

Chair the important part of Mr Petzo’s affidavit in fact comes in the annexure which I will take you to now, the Annexure is at page 609.

CHAIRPERSON: I see that it says 18 February without saying the year but obviously it is this year.

ADV KATE HOFMEYR: It is indeed, I can confirm that, because I know the investigators were terribly eager to get it done in advance of today, so it couldn't have been a previous year. Oh, you will just see down where the ...(intervention)

CHAIRPERSON: Yes I was looking for that as well.

ADV KATE HOFMEYR: The Commissioner, we've got the 2109, it will assist there.

CHAIRPERSON: That will help ja.

ADV KATE HOFMEYR: Chair the relevant part is actually in the Annexure to the affidavit, which you will see at page 609, Chair unfortunately in the haste to prepare this affidavit the first column of that spreadsheet at page 609 was cut off, but we do have a
10 copy of it, it is at page 963 in the same bundle.

CHAIRPERSON: I've just remembered now about something else, now that you talk about annexures, yesterday there was an annexure that Mr Maleka promised would be put into my file during one of the breaks to replace an annexure that was not legible or that was dark, I hope that that has been done.

ADV KATE HOFMEYR: I can see some considered nodding from your registrar, so it has been done, I think that's what it indicates.

CHAIRPERSON: Okay, okay.

ADV KATE HOFMEYR: Chair if we just look at 963 it's a better version and just for orders purpose we will get Mr Petzo to just reconfirm that the correct annexure is the
20 one that appears at 963 it really was a copying error that the first column was omitted, but it's only intelligible if you have the first column.

CHAIRPERSON: And that one is an annexure to an affidavit, the one that was a problem?

ADV KATE HOFMEYR: It is indeed so when it was signed for some reason in the printing the first column was deleted. We had been sent that spreadsheet

independently and in advance of the affidavit which is why we have it in its full version but we will certainly ensure that Mr Petzo just confirms and replaces the correct affidavit.

CHAIRPERSON: Yes, okay.

ADV KATE HOFMEYR: But it won't make sense unless we look at the one that's got the first column, so if we can look at page 963, Chair what you will see there is the first column has a number of items that indicate what are in each line of the spreadsheet, the first is the number of stockpiles produced. The second is the number of stockpiles failed, the third is the percentage of failed stockpiles and then the fourth is disputes raised per the contract, the next line is tonnage delivered and the last line is parameters failed.

10

Chair if you then look across the top line what is indicated there is which labs were doing the analysis of these samples at the relevant months that appear below it, so if you go to April 2015 you will see that SGS is doing the analysis. Mr Mashigo SGS what does that signify?

MR DANIEL MASHIGO: I don't know what SGS is but it's a commercial lab, that's the name ja, it's the same lab that's doing analysis at Richards Bay for all the export coal there.

ADV KATE HOFMEYR: Thank you, so SGS was analysing in April 2015, this is spelt out in Mr Petzo's affidavit, SGS and Sibonisiwe was doing the analysis in May 2015, Sibonisiwe alone in June 2015, again in July 2015, again in August 2015, you will recall that's when the critical allegation of a bribe to Sibonisiwe is made and so from September 2015 you have SABS, in that month and in October and then you move from October 2015 to Kendal Lab 24 and then to Kendal Lab for the remainder of the contract, because the last column there with a date runs to February 2018 which is

20

when we understand the – well the supply actually stopped in March 2018.

Chair the relevant part here is in the last two columns, because that is a comparison between the percentage of failed stockpiles, when the analysis is being done by accredited labs as compared with the percentage of stockpiles failed when the analysis was being done by the Kendal Lab, and those percentages respectively are 23% were failed by the accredited labs and 3% were failed by the non-accredited lab. The other important point is the periods of time ...(intervention)

CHAIRPERSON: That's a big difference.

ADV KATE HOFMEYR: It's a big difference but also the periods of time, remember we
10 have independent laboratories only for the first seven months of the contract, we then have Kendal over a much longer period of the contract and only failing 3%, Chair that will be a matter that will be explored further in the evidence but for today's purposes it's just to place those facts before you.

CHAIRPERSON: Thank you.

ADV KATE HOFMEYR: Mr Mashigo the next aspect I would like to move to is the variation of the contract that was sought in mid-2016, well to be more accurate August 2016, Chair you will recall in the overview that is when Eskom was required to approach Treasury in order to increase what coal they would be receiving from Tegeta. I would like to take you first Chair if I may to that instruction from National Treasury,
20 which says that all Schedule 2 Public Entities must seek their approval, you will find that in file 4 at page 824.1.

CHAIRPERSON: Page 82?

ADV KATE HOFMEYR: 4, 824.1.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Chair you will see that this is a National Treasury instruction,

SCM, Supply Chain Management instruction note 3 of 2016/2017, it's a lot of background to it but the pertinent paragraph comes at page 824.4 at the bottom of that page under paragraph 9 the heading is "Expansions or Variations of Orders" and at 9.1 it's recorded there that:

"the accounting officer or accounting authority must ensure that contracts are not varied by more than 20% or R20million including VAT for construction related goods."

That's not our case here but it goes on – sorry construction related goods works or services and 15% or R15million for all other goods or services of the original contract value, so they must ensure that they are not varied by more than those percentages unless in essence if you read 9.2 any deviation in excess of the prescribed thresholds will only be allowed in exceptional cases subject to prior written approval from the relevant treasury.

So Chair that is the instruction note that comes out in April 2015 pursuant to which there has to be an application by Eskom when it wants to increase the terms of the agreement extend them beyond the original terms contracted with Tegeta.

CHAIRPERSON: What's the date of this instruction when it's issued?

ADV KATE HOFMEYR: It is issued if you look on the last page which is 824.6 it's signed by the Chief Procurement Officer of the National Treasury on the 19th of April 2016.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: So that's April 2016 and then what we move to next in the file is the submission to the Board Tender Committee of Eskom on the 8th of August 2016. This is the document which is submitted to the Board Tender Committee to seek approval for a variation of the Brakfontein contract. What I propose to do is to jump

ahead to the actual letter that was then sent to Treasury pursuant to the Committee's approval that the extension be requested. You will find that at page 833.1.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: Chair you will see that that is the letter that was addressed by the Chief Procurement Officer of Eskom, Mr Malebane to the Chief Director Supply Chain Management Governance in the National Treasury, it's dated 19 August 2016. Now if you go over the page that is the submission that was presented to National Treasury to seek this approval, and if we just look at the first paragraph on that page, Mr Mashigo can you please indicate for us what is recorded there as the total value of
10 the original contract?

MR DANIEL MASHIGO: It's R3 794 748 750,00 (Three Billion Seven Hundred and Ninety Four Million Seven Hundred and Forty Eight Thousand Seven Hundred and Fifty Rand), for the duration of ten years and five months.

ADV KATE HOFMEYR: Thank you, and then there is the last item there, they say that there was a first addendum which had no value implications that was – and the date there is the 12th of May 2015. Chair that is an aspect that we will deal with, with Mr Bester, he is the author of that first revision, but then if you – Mr Mashigo could tell us what the second addendum which is what is sought, for which approval is sought in this submission would have done to the contract value.

20 **MR DANIEL MASHIGO:** The second – this is basically the value of the addendum itself, it's an additional R2 937 870 000 (Two Billion Nine Hundred and Thirty Seven Million Eight Hundred and Seventy Thousand Rand).

ADV KATE HOFMEYR: And in the brackets there can you just tell us what that indicates is the percentage increase on the contract value if this approval had been granted.

MR DANIEL MASHIGO: 77.42% increase on original contract.

ADV KATE HOFMEYR: Thank you.

CHAIRPERSON: So roughly had this had been approved this increase or expansion it would have put the value of the contract beyond Five Billion or close to Six Billion.

MR DANIEL MASHIGO: Six Billion.

CHAIRPERSON: Ja.

ADV KATE HOFMEYR: Thank you Chair. Mr Mashigo ...(intervention)

CHAIRPERSON: I'm sorry, this kind of value for a coal contract like initially it was R3.7billion is that a normal kind of value that Eskom enters into with the different
10 suppliers or is that an unusually high value?

MR DANIEL MASHIGO: No it is not unusually high value.

CHAIRPERSON: Oh, okay.

MR DANIEL MASHIGO: It's a volume business Chair so the higher you know like the volumes the longer the tenure you know you end up with this ja, because it's a rate based contract, you multiply.

CHAIRPERSON: And I guess the duration of the contract comes in as well in terms of the value the longer it is the higher the value.

MR DANIEL MASHIGO: Certainly Chair.

CHAIRPERSON: Ja, okay thank you.

20 **ADV KATE HOFMEYR**: Mr Mashigo I would just like to take you to one or points that are made in the submission to National Treasury, you will see at paragraph 2.2.3 on the page what is recorded there is that the supplier, that's a reference to Tegeta, has Commissioned the Brakfontein Colliery Extension and is ready to supply coal from this resource. Eskom has since validated the reserve base in the Brakfontein Colliery Extension and has confirmed that the offer from the supplier meets its coal quality and

quantity requirements for the duration of the coal supply agreement. Do you know whether that indication is factually correct or not?

MR DANIEL MASHIGO: No I can't tell Chair.

ADV KATE HOFMEYR: Thank you. That is an aspect Chair that we will then take up with Mr Opperman, who was the contract manager of Brakfontein Mine and he will give you the detailed facts about what testing had been done of that coal resource at the time that this letter was in fact sent to National Treasury.

CHAIRPERSON: Okay.

ADV KATE HOFMEYR: Chair if we go over the page, and Mr Mashigo to page 834 we
10 have National Treasury's response to this request ...(intervention)

CHAIRPERSON: I'm sorry, so that page 833.2 from which you have just read was that an annexure to the letter at 833.1 or is that separate?

ADV KATE HOFMEYR: Correct.

CHAIRPERSON: That's an annexure to it.

ADV KATE HOFMEYR: Indeed Chair.

CHAIRPERSON: And it's just one page?

ADV KATE HOFMEYR: It is one page, a great deal more detail to the justification of this approval is actually seen when we look at the Board Tender Committee submission, but it's an aspect that I think it will be more profitable to deal with, with Mr
20 Opperman.

CHAIRPERSON: Okay, that's fine.

ADV KATE HOFMEYR: Because he will have slightly more personal knowledge of some of those facts.

CHAIRPERSON: Ja, okay.

ADV KATE HOFMEYR: So I will leave that for now with your leave. We then go over

to 834 to find National Treasury's response and Mr Mashigo if you go to paragraph 4 of that letter could you please indicate for the Chair what is recorded there.

MR DANIEL MASHIGO: It states:

"the reason for the variation is that Majuba Power Station needs additional tons of coal, Tegela Exploration and Resources is a current supplier of coal appointed for a period of ten years effective 10 March 2015 to supply coal to Majuba Power Station. The supplier has since agreed to offer additional tons of coal from the Eskom Brakfontein Collier."

I don't know why they call it Eskom Brakfontein.

10 **ADV KATE HOFMEYR**: At paragraph 5 if you could just read on.

MR DANIEL MASHIGO: It says:

"the reason provided for this extension is valid however the question of quality of coal is not cleared."

ADV KATE HOFMEYR: Not yet cleared I think.

MR DANIEL MASHIGO: Yes, not yet cleared.

ADV KATE HOFMEYR: And then at six?

MR DANIEL MASHIGO: "National Treasury does not support extension of this contract until the question of quality of coal is cleared."

20 **ADV KATE HOFMEYR**: Chair over the page at 835 you will see a further letter written by Eskom to the Chief Director of Supply Chain Management Governance in the National Treasury. That is a letter if you go to the bottom of the 6th of January 2017, it's a response to the previous National Treasury letter, and what it does in the third paragraph is seeks to motivate for a changed circumstance in relation to coal quality, it's recorded there by Mr Malibane again that in order to enhance the pre-certification process coal is sampled using auto-mechanical samplers instead of manual sampling

to improve sampling accuracy and minimise human intervention. In this regard an auto-mechanical sampling system has been installed at Brakfontein Colliery and is currently being Commissioned. Mr Mashigo prior to January of 2017 was there an auto-mechanical sampler operational at Brakfontein?

MR DANIEL MASHIGO: No there wasn't.

ADV KATE HOFMEYR: And what was the contractual requirements in relation to that auto-mechanical sampler?

MR DANIEL MASHIGO: They are specific on this one it gave the supplier three months from the time the contract came into effect to install and Commission the auto-mechanical sampler and it's quite consistent with how we implement new contracts when new suppliers come on board.

ADV KATE HOFMEYR: So just to be clear that would have been three months from the 1st of April 2015.

MR DANIEL MASHIGO: Yes.

ADV KATE HOFMEYR: Whereas it was in fact only installed in January of 2017, is that correct.

MR DANIEL MASHIGO: That's correct ja.

ADV KATE HOFMEYR: Chair just a ...(intervention)

CHAIRPERSON: I'm sorry, so did you say that what is said in that paragraph at page 835, the letter from Mr Edwin Mabulane to Mr Solitje Tangano you say that is not factually correct insofar as it is suggested that coal was sampled using auto-mechanical samplers at Brakfontein?

MR DANIEL MASHIGO: No certainly that's not what we are asserting nor what the letter is saying.

CHAIRPERSON: Sorry?

MR DANIEL MASHIGO: No, that's not what I'm asserting, what I am asserting is that the contract clearly stipulated they had three months to install the auto-mechanical sampler from the time the contract came to an end, so implying from July 2015 the auto-mechanical sampler should have been installed and sampling should have been automatic, however in actual bold the auto-mechanical sampler was installed you know like only in January 2017, which is way beyond the three months allowed time and so on, so the letter is correct, it tells about ...(intervention)

CHAIRPERSON: Okay so the letter is correct ja.

MR DANIEL MASHIGO: Ja.

10 **CHAIRPERSON**: Okay, okay but it happened much later.

MR DANIEL MASHIGO: Much later, which is outside what the contractual agreement was.

CHAIRPERSON: Yes, okay now I understand okay.

ADV KATE HOFMEYR: Indeed Chair so the motivation for going back to Treasury was this new event as we read the letter that the auto-mechanical sampler had finally been installed, the point I was traversing with Mr Mashigo was that that was out of the contractual requirement.

CHAIRPERSON: Yes.

20 **ADV KATE HOFMEYR**: And Chair if I may just give you a reference, I don't suggest we go there but that provision of the contract which required the auto-mechanical sampler to be there within the first three months you will find at page 926. Chair it actually appears in the Annex A to the contract it deals with the coal quality management procedure, but you will see it there if we do just go to for convenience, if we go to 926 this is in the section which is Annexure A and I mentioned earlier that sets out the coal quality management procedure, and if you go to Clause 5.1.1 on that page

it says within three months of the commencement day of this agreement the supplier shall ensure that the payment sampling plant is available for sampling coal. Now a payment sampling plant Mr Mashigo please can you explain to us what does that mean in relation to auto-mechanical samplers?

MR DANIEL MASHIGO: It is basically that auto mechanical sampler.

ADV KATE HOFMEYR: Thank you.

MR DANIEL MASHIGO: Where the tariff sample is taken from and the contractual coal quality which I used to determine the payment thereof you know like you sourced it.

ADV KATE HOFMEYR: Thank you. Chair it is then necessary to move to what
10 happened after this next attempt to extend the agreement was made to Treasury. The facts are Treasury never gave that approval. But under delivery started with a vengeance from November 2017 and you will see that notice is then given to Tegeta in relation to that under delivery. You will see that over the page at 836. You will see at 836.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: It is a letter from a Mr Mamabolo who is the general manager of Coal Operations it is dated the 29th November 2017 and it is sent to Mr George Van Der Merwe the chief operating officer of Optimum Coal Holdings. It is in relation to the Brakfontein colliery and Brakfontein colliery extension supply agreement. And it
20 records the underperformance that is then reflected in the table. It under the table requests Brakfontein colliery to submit a rectification plan and in the last paragraph it says: Please be advised that your failure to submit the same to Eskom on or before 11 December 2017 will leave Eskom with no choice but to invoke the provisions of Clause 12.3.3. of the Coal Supply Agreement entered into between the parties on 10 March 2015. Chair that is a reference to the penalty provisions of the coal supply agreement

and you will find that at page 883 for your reference. Mr Mashigo can you tell us about penalties and how they work under a coal supply agreement. When is Eskom entitled to impose penalties on a supplier?

MR DANIEL MASHIGO: Okay let us maybe stick to this type of contracts.

ADV KATE HOFMEYR: Indeed.

MR DANIEL MASHIGO: Where it is a road or rail delivered contract on precertification. The penalties apply when the supplier underperforms. However the contract does take into cognisance of supplier variation in the mining process. There can be interruptions. So it gives the supplier on average a period of about three months. You looking at how they perform and give them opportunity to rectify you know like that undersupply. The supply would come to Eskom and say I have undersupplied X amount of coal to you and I will be able to rectify this coal that I have undersupplied over a period of three months over this period of time and if Eskom is happy with that rectification plan we accept the rectification plan and that becomes basically you know for that particular period time what contractually they need to deliver. It is governed by that. In the event that they supply that coal everybody is happy they go back to contractual norm. If they are unable to supply that coal the shortfall coal is then you know like a levy to them you know like as a penalty and depending on how the contractual clauses are you know they may be clawed back out of an existing invoice and so on. But that is basically where the penalties are applied ja. They clearly stipulated you know like in the contract.

ADV KATE HOFMEYR: Mr Mashigo if I could take you to an annexure to a further affidavit Chair that we procured as recently as yesterday. The affidavit is at page 9 – sorry 691.9. That is the affidavit of Ms Singh who is a qualified management accountant registered with the Chartered Institute Of Management Accounting and who

is employed at Eskom. What she has done is put together some excel spreadsheets which record some of these aspects including the penalties that have been levied against Tegeta and you will find that Mr Mashigo at page 691.11. Can you just explain to the Chair what is reflected on this spreadsheet?

MR DANIEL MASHIGO: Okay it is a – the – it is basically the calculation of how we get to the penalty on top it is a formula where P represents you know what the penalty is and it is linked to what we call API4 which is the how can I call it? It is an index that is used for export coal out of Richards Bay so that is API 4. And that is how this is linked. So what you will see is what was the API4 in the month that they undersupplied.

10 Example February 2018 the API4 was 97.31 you know like rand per – what is it – sorry it was 93.- 97.31 US dollars per ton. And then you have the rate of exchange you know to convert basically then it brings in the tariff you know like on the coal line because then you have to deduct the transportation cost and work back out – backwards to the mine gate price and so on. Then there is other things yield factor what is expected CV – this is now the contractual CV for Brakfontein as I have mentioned it is 21.1. The reject was about 20 – 20 sorry. And then it shows what is the export you know CV that is compared to that export CV that gives you that particular API price. Because the API – it is linked for different products you know. Different CV's are different products on your API4. Then it gives you what is a contract price next to it and then the rand per
20 ton. The shortfall coal and then it works out you know like the penalty. So basically what it does it takes the coal that is shortfall and it applies the factor of the replacement coal using the API4 index calculates that using that rate and then it gives you you know like the nett amount that should be paid.

ADV KATE HOFMEYR: And what is the total penalty amount for the period February 2018 to December 2018?

MR DANIEL MASHIGO: It is R531 432 308,16.

ADV KATE HOFMEYR: Thank you.

MR DANIEL MASHIGO: And this is for the period that they have been business rescue literally.

ADV KATE HOFMEYR: Thank you. Mr Mashigo I would then like to spend the last bit of your evidence covering with you what the impact on Eskom has been as a consequence of Tegeta going into business rescue and being unable to perform under this contract and for that purpose you have kindly prepared a spreadsheet for us which I would like to take you to. It is in File 4 – sorry File 3 of Exhibit U4. It is being placed
10 at the end of the slides that you addressed earlier this morning. So you will find it at U4A.27.

MR DANIEL MASHIGO: I am on that page.

ADV KATE HOFMEYR: Thank you. Can you confirm that you prepared that spreadsheet?

MR DANIEL MASHIGO: I did I can confirm that.

CHAIRPERSON: I am sorry File 3?

ADV KATE HOFMEYR: Yes.

CHAIRPERSON: And did you say page 27?

ADV KATE HOFMEYR: Well it is an insert right at the beginning of the file Chair that is
20 why it has got an odd numbering. It is Brak-U4(A) and then it is point 27 of that. So it is the last page after the slides that you will see there.

CHAIRPERSON: Yes okay.

ADV KATE HOFMEYR: Thank you. Mr Mashigo can you take us through what this spreadsheet reflects? I would particularly like you to start right at the last column which is identified as the drop in stock days.

MR DANIEL MASHIGO: Okay.

ADV KATE HOFMEYR: Can you please explain to the Chair what this reflects about the impact of Tegeta going into business rescue from February 2018 and not being able to supply coal to Majuba Power Station from that period onwards?

MR DANIEL MASHIGO: Okay. Chair if you may recall earlier in the day I mentioned that once when we do the planning for coal we allocate per power station how much coal is required to make sure that we meet the band requirement for that particular power station and we can maintain the strategic stock holding that we keep on site for any eventuality of coal supply interruptions. Majuba you know like any other power station has got those particular requirements. So coal must meet the band requirement and we must also maintain the stock requirements. There is two reasons why it is security should there be supply interruptions let us say a strike in the mining sector that lasts for a number of days. Because Majuba does not have a tight colliery its stock holding level is significantly high. It is about 40 I think 40 days minimum stock that they need to keep. They far out of the coal fields they do not have a tight colliery. So Majuba need to maintain that. At the same time coal supply needs to match the band requirement to produce the energy that has been allocated or allotted to Majuba out of the whole integrated plan. So what happens is that now Majuba when it is running nominally you know like its what we call standard daily burn it is about 42 000 tons per day. That is all six units running and so on. So the coal holding on the stockpile is measured in number of days. It is the amount of coal that you can keep on the stockpile should you have total disruption how many days can you run that particular power station's directly from your own strategic pile. So this is where the 40 days minimum that Majuba is supposed to keep. So the standard daily burn as I mentioned 42 000 tons. So Tegeta contract it is supposed to supply 113 000 tons per month but of

that 113 000 the penalties are accrual – can accrue only if they supply below the contractual minimum. So you have got the what we call nominal volume, contractual minimum and the maximum they can supply. Maximum is about 135, the nominal is 113 and the minimum is about 106. So we work on the minimum in this case because that is what you can penalise them for. That 106 it is equivalent to about 2.4 stock days for Majuba. So you take the 106 you divide by the standard daily band of 42 000 you get the equivalent. So basically it means for the – every month that Tegeta has failed to supply coal to Majuba from Brakfontein it is equivalent to 2.4 days. Meaning that we had to go to our strategic pile and burn off the two days because it is not coming from

10 Tegeta. And we could not replace that coal you know like quick enough hence Majuba is one of the power stations that had a severe deterioration of coal stock level to a point that it actually dropped below 10 days at some point in time which is very, very critical. It was very low. But the total amount the equivalent amount of stock that Majuba lost by virtue of Tegeta not supplying it is equivalent to 24 days so it is quite significant. If you take 24 days as a percentage of you know the minimum stock holding it is almost half. You know like the stock holding that had to be burnt off the strategic pile to basically keep up with the burn and so on. I am in no mean saying it is the only contributor for Majuba but you can see it is quite you know like significant 50% and that placed Majuba you know like at risk. You know like should there be an interruption and

20 fortunately we have not had you know interruption that was consistent. We do have you know intermittent interruptions when we have community you know like protests you know or supply disruption when trains derail etcetera but not you know like your typical extended interruptions because of an industry sector you know like a strike whether it is in the transportation or the mining industry. That is basically what the 24 days you know like signifies Chair.

ADV KATE HOFMEYR: Thank you Mr Mashego. You – in your description to the Chair made reference to your inability to contract for other coal. Can you explain to us about that over the period that Tegeta was not supplying coal?

MR DANIEL MASHIGO: Ja Chair what has been happening is that continuously we in the market we source coal and so on. But this is coal that was contracted, it was in a plan it was supposed to be there for 10 years since 2015. So there was absolutely no reason to plan for this coal not coming in. So the moment the mine was placed under business rescue on the 17th February you only that time you have to start looking for replacement coal and the procurement process is not that quick enough to can find the replacement coal. And it is during the time where you know like the price of export coal was high so there is competition for exporter and our processes is quite you know like [indistinct] and lengthy to conclude coal contract which is why Majuba decade and in and around October that is when the new – some of the new contracts started kicking in and we could supply more than what we were consuming and we started stock piling more and as I am talking to you now Majuba sits slightly above 20 days of coal. It is in a much better situation and it is in line with what the national grid code is saying.

ADV KATE HOFMEYR: Just on that last point it is sitting at about 20 days of stock pile coal but you did mention a 40 day requirement earlier. How does the 20 days relate to the 40?

20 **MR DANIEL MASHIGO:** Okay. 20 days is the national grid code this is basically you know like the act that governs how the power system should be secured. It is not only looking at the production of electricity but it is also the downstream you know like a process it is including critical commodities like coal. And the different generators are licensed by NERSA to keep a certain stockholding and for Majuba the grid code requirement is 20 days. However Eskom has got a much more higher requirement for

the reasons that I have mentioned that Majuba does not have a tight colliery. The risk element based on our statistical model which is 40 days. So we may be sitting better compared to you know like a few months ago however we have still not achieved what Eskom internally prescribed should be the minimum requirement Majuba. There is still 18 more days to go before we can get into the grid.

ADV KATE HOFMEYR: Thank you. Mr Mashigo those are my questions Chair unless there is further from your side?

CHAIRPERSON: No I do not think so. Thank you very Mr Mashigo you certainly have enlightened me considerably on geology 101. Thank you very much. Should we need
10 you again you will be asked to come back. Thank you very much you are excused.

MR DANIEL MASHIGO: Thank you Chair.

ADV KATE HOFMEYR: Thank you Chair.

CHAIRPERSON: We –

ADV KATE HOFMEYR: Chair our next witness is scheduled for tomorrow. He will be Mr Ephron.

CHAIRPERSON: Yes.

ADV KATE HOFMEYR: And as I understand it he is scheduled to commence at ten o'clock.

CHAIRPERSON: Yes.

20 **ADV KATE HOFMEYR:** Subject to your direction.

CHAIRPERSON: Yes. No it is fine. I think let us leave it at ten o'clock, ja, thank you.

ADV KATE HOFMEYR: Thank you Chair.

CHAIRPERSON: We will adjourn the proceedings then until ten o'clock tomorrow. We adjourn.

INQUIRY ADJOURNS TO 27 FEBRUARY 2019

TRANSCRIBER'S CERTIFICATE FOR COMMISSION OF INQUIRY INTO STATE

CAPTURE

HELD AT

PARKTOWN, JOHANNESBURG

DATE HELD : 2019-02-26

DAY: : 56

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