

MCLNEWS

A Publication of Maamba Collieries Limited Corporate Affairs Department

Construction of Thermal Power Plant Progresses

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Message from the Resident Director (RD)

t the outset, my greetings to you on the occasion of the New Year. May you and your families enjoy all the happiness and prosperity in the New Year. In 2015, we faced many challenges, particularly in the project financing area, but I am happy to say we over-

As we enter 2016, we are poised on the threshold of creating history in this Country, when in the middle of the year we will commission the first coal fired Power Plant.

I am sure with your continued support, hard work and dedication, we will, together, make this project a grand success.



Mr. Ashwin Devineni Resident Director



came all of them successfully.

Rear Admiral Venkat Shankar (Rtd.) Chief Executive Officer

Message by the Chief Executive Officer (CEO) will look after the

s the year comes to an end and New Year dawns, MCL looks forward to a very challenging period. The year should see the Power Plant "up and running" and MCL transforming itself from an 'under construction' project to a fully fledged operational unit. We will add many more employees to our rolls and a new company, Nava Energy Zambia Limited,

will look after the operation and maintenance of the Power Plant.

It has been an active 2015 and I take this opportunity to express my gratitude to my team of senior executives, the Heads of Department, the staff and all the employees for their cooperation and the hard work they have put in. My personal gratitude is also extended to the spouses who have kept the home and hearth warm even as their other significant half toiled away in their work places.



nergy Minister, Honourable Dora Siliya and her delegation visited MCL on 1st December, 2015. Honourable Siliya was accompanied by Energy Permanent Secretary, Brigadier General Emelda Chola,, Director, Ministry of Energy, Mr. Oscar Kalumiana and other senior Government officials.

The high level delegation wanted to ac-

quaint themselves with the construction and progress of the Thermal Power Plant (TPP). The delegations were given a detailed presentation of various activities of the Company in the Board Room, before they were taken on a conducted tour of the operations. The team also visited the Resettlement Site.

The Energy Minister and her team were

Energy Minister, Honourable Dora Siliya (centre) seen with the CEO, the District Commissioner (second from left) and the Permanent Secretary, Energy (far left) outside the Power Plant.

highly impressed with the scale of activities and the extensiveness of the investment. They expressed their full support for the project.

Director General of Zambia Development Agency visit MCL



r. Patrick Chisanga, the Director of Zambia Development Agency (ZDA), accompanied by directors and senior officials of ZDA visited the TPP and the Mine on 30th November, 2015. The visitors were given a detailed presentation and taken around the TPP and the Mine by the CEO. Mr. Chisanga, on completion of the visit, commented on the importance of the project to Zambia and pledged the support of his organization to the project.

ZDA Director General, Mr. Patrick Chisanga (third from left) and his entourage during a visit to MCL on 30th November, 2015

Chairman and CEO of First Quantum Minerals Visit TPP

n 26th October 2015, on a typically hot Maamba day, Mr. Philip Pascall, Chairman and CEO of First Quantum Minerals Limited, with a team of four other officials landed at Maamba airstrip in their private aircraft. During their daylong visit, they interacted with the CEO, MCL, received a presentation in the Conference room and toured

the Thermal Power Plant. Mr. Pascall evinced keen interest in the construction aspects as First Quantum is building a similar plant in Panama. The visitors concluded their visit with a late but sumptuous lunch at the Presidential Lodge. The Chairman of First Minerals Quantum invited the CEO and the MCL team to visit their plant in the North Western Province.

Copperbelt University Students visit MCL

ifty- Six (56) Students from the Copperbelt University (CBU) and two (2) staff members (Lecturers) visited MCL on 3rd December, 2015 on an educational tour. The team was received by the Chief Operating Officer who briefed them on some major highlights of the company before they were taken on a conducted tour of the Mine by the

Mine Manager. Prior to the tour, a detailed presentation on the Thermal Power Plant (TPP) and mining operations was given to them at the MCL Training Institute. In their Vote of thanks, the students appreciated the visit as it had translated the theories they had learnt in class into the realities they had seen for themselves at the Mine

Africa Finance Corporation (AFC) at Maamba

high level, two member delegation led Batchi Baldeh. Director and Head Power. AFC visited Maamba Collieries Limited on 22nd November, 2015. Africa Finance Corporation, founded in 2007, by a treaty between sovereign states brings in wealth of expertise to bridge the infrastructure investment gap in the African region even while seeking a competitive return on the capital investment. The team showed keen interest in both the Mine and the TPP and appreciated the professional standards on display at the Maamba Power Plant and the Mine site. The team spent a night in Maamba and had useful interactions with the Resident Director and other senior officers of Nava Bharat Projects and MCL.

(Below): Copperbelt University (CBU) Students, when they visited MCL on Thursday, 3rd December, 2015





The Chief Executive Officer, Rear Admiral Shankar and the MUZ Chairman, Mr. Evans Moyo (blue worksuit), cutting the cake during the launch of the festive season.

Launch of Festive Season at MCL

n Thursday, 24th December, 2015 MCL staff, based in Maamba, were addressed by the CEO, at which he thanked them for their support during the year 2015. Amongst other things, the CEO informed the gathering on the milestones that had been achieved by the Company. In particular, he stressed on the following:

- The attainment of Financial Closure. This would enable the Company accelerate construction of the 300 MW Power Plant.
- That the Power Plant had reached 83% completion rate.
- · Mining Operations had significantly stabilized, with the support of all the Departments.
- The Corporate Social Responsibility (CSR) activities undertaken by the Company during the year 2015 des-

pite it being in the construction phase. Activities addressed were planned donation of a Generator Set to the Maamba School for children with special needs and the provision of another Generator Set at the Golf Club to enable the Maamba Community relax and watch football matches as well as other sports events during periods of power outages.

The CEO appealed to all employees to remain committed in their duties in 2016 so that the plant could be completed as scheduled. He also called upon the young Zambian Engineers working under the Thermal Power Plant (TPP) project to acquire as much technical knowledge as possible from their mentors (expatriate engineers) so as to enable them become experts in the operation and maintenance of the plant in the years to come.

Employees queuing up to receive a piece of cake and drinks during the launch of the festive period function on 24th December, 2015 at MCL Offices in Maamba. The MCL Christmas cake below.



Thereafter, the MCL cake was cut as a way of launching the festive period and the staff were treated to the cake and soft drinks

MCL gives its employees **Christmas Hampers**

hristmas comes, but only once every year. Christmas celebrations entail a period for the employees to spend quality time with their families and to reflect over the happenings of the passing year. As a gesture of ensuring that employees celebrating the 2015 Christmas festivities with their families in a festive mood, Management gave all employees Christmas Hampers. The hampers contained assorted goodies. As always, the hampers were welcomed by all the employees. Some of the employees whose families reside outside Maamba were given SHOPRITE Gift Vouchers of equivalent value.

> Human Resource Manager - Patrick M Nalumino handing over some Christmas hamper to one of the employees.



MCL organises a "New Year Get - Together Party" for staff

s a strategy for promoting team building among staff members as well as to appreciate their services to the organization during 2015, MCL Mangement, staff members and their spouses were treated to a "New Year Get A few Heads of Government Departments, were invited and present. - Together Party" on 30th December, 2015 at the Golf Club.

The popular "No Parking Band" from Lusaka was hired to perform at the said function. The event was marked by the Band belting local favourites and also a few bollywood numbers much to the enjoyment of the expatriates and to the amusement of the Zambians. The event also saw a sumptuous spread for all the attendees. Indeed, the function, music and food were a befitting "curtain raiser" to ring in the New Year.



MCL meets stakeholders

n keeping with the policy to develop good working relationships with employees of MCL and the community in which it operates, MCL has developed a 'Stakeholder Engagement Plan'.

In line with its Stakeholder Engagement Plan, MCL held a stakeholders' meeting

with Headmen Sikalonzo, Sipuumina, Maamba and Siankodobbo on 9th November, 2015, to discuss measures MCL was intending to take to curb encroachment on MCL Land and other issues that affected operations at MCL.

The meeting was chaired by the Chief Op-



erating Officer (COO). The COO informed the headmen that future expansion of the Mine would not be possible if encroachment on MCL Land was not controlled and, therefore, there was need to put in stringent measures to control it.

On the issue of encroachment, MCL informed the headmen that it had put in measures to ensure that open spaces were protected from further encroachment and requested for their support.

On Friday, 13th November, 2015 MCL held another stakeholders' meeting with leaders of various churches within Maamba Township to update them on the construction progress of the TPP and other activities the Company was undertaking. Management appealed to the church leaders to provide correct position of MCL to the community on various issues.

The leaders promised to continue supporting MCL so that the completion of the project would not be delayed.

MCL holds meeting with His Royal Highness Chief Singani

here have been some reports of vandalism of the 330KV DCTL infrastructure. As part of mitigating measures to curb vandalism of the said infrastructure, MCL held a meeting with His Royal Highness Chief Singani at his Palace on Friday, 30th October, 2015, to discuss the issue of vandalism of the 330KV DCTL infrastructure by suspected villagers.

His Royal Highness promised that he

would embark on a sensitisation tour of his subjects living along the 330KV DCTL corridor.

We wish to appeal to everyone to protect this massive investment against all forms of vandalism. In this regard, please report all acts of vandalism to MCL, Zambia Police or your headman.

His Royal Highness Chief Singani (Choma District) with MCL Staff at his palace.



Construction of the TPP is progressing very well as can be seen from the photos below.

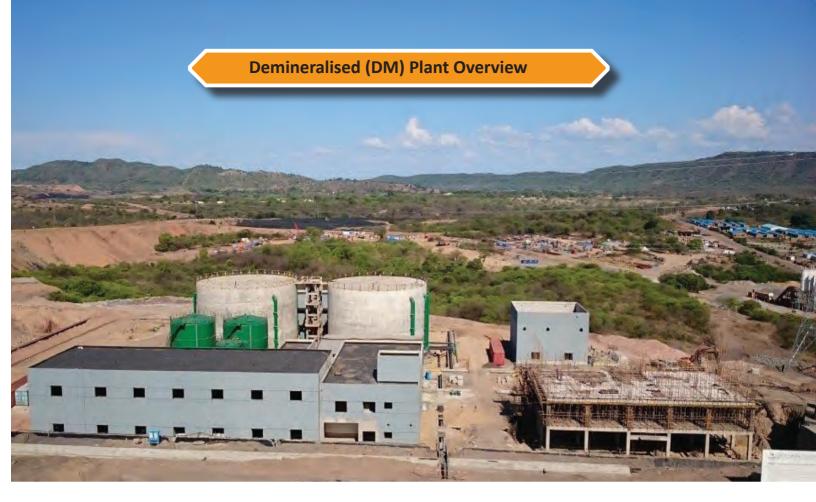
Transmission Line

Construction (109 Towers) and stringing of the 330 kV Double Circuit Transmission Line (DCTL) from Maamba switch yard to Muzuma Substation has been completed.





Works in the TG Building are progressing well.



The (DM) Plant will be commissioned soon.



All the civil works at Kariba Lake Water Pumping System have been completed. Testing of high lift pumps, transformers, PLC and switchgear has been successfully completed. Pumping of water into the Raw Water Reservoir (RWR) has commenced.



Mining Operations

ith the scheduled commissioning of the Thermal Power Plant (TPP) getting closer and closer, the Mining Department has been getting ready to expand its operations in Izuma Pit "A" so as to ensure adequate supply of coal to the Thermal Power Plant. A number of hi-tech equipment has specifically been procured for this task. These include excavators, dozers, tipper trucks, Graders, compactors, etc.



Part of the newly purchased mining equipment to be deployed in Izuma Pit "A" that will ensure adequate supply of coal once the TPP is commissioned.

MCL Vocational Training Centre records 100% pass rate

he Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) has released final examination results for the first intake of the Metal Fabrication and Welding Class at Trade Test Level 2 at the MCL Vocational Training Centre. All the students passed the examination.

Eight (08) of them have since been employed by SEPCO after successfully passing job interviews.

(Right) First Welding and Metal Fabrication class at Maamba Collieries Limited Training Institute in 2015



MCL Promotes Rural Sanitation

National function to commemorate World Toilet Day was held at Chief Singani's Palace on Wednesday, 19th November, 2015. MCL was among the stakeholders that contributed towards the successful hosting of the function. During the said function, Chief Singani's Chiefdom was also declared as one of the models that had achieved the status of "Open Defecation Free Zones" by promoting hygiene in the chiefdom through construction of toilets in the area.

MCL was represented by the Chief Op-

erating Officer, Mr. Gurram Venkata Narayana and the Human Resource Manager, Mr. Patrick M. Nalumino.

The function was graced by the First Lady, Mrs. Esther Lungu.

Further, to promote cultural heritage among the people, especially the youth, Maamba Collieries continues to provide material and financial aid to annual traditional cultural ceremonies of Chiefs Mweemba, Sinazongwe, Singani and Shakumbila.



Chief Operating Officer, Mr. Gurram Venkata Narayana with Chief Singani during the Commemoration of the National Toilet Day on 19th November, 2015 at the Palace.

MCL hands over a 1 x 3 classroom block to Mweela School

he 1 x 3 Classroom Block which was built at Mweela Primary School as part of the RAP package was handed over to the Ministry of Education, Sinazongwe District. The District Education Board Secretary (DEBS), Mr. Kambunga, received the facility on behalf of the Ministry of Education. The DEBS assured MCL that the school administration would take good care of the facility. He was particulary impressed with the quality of the building.

The ceremony was attended by Headman Mweela, staff members and Parent Teacher Association (PTA) members of Mweela Primary School.

Speaking on behalf of parents, PTA Chairperson, Mr. Samuel Siatembo thanked MCL Management for putting up a modern structure at the school.



Chief Operating Officer, Mr. Gurram Venkata Narayana, handing over the 1 x 3 Classroom Block to the District Education Board Secretary (DEBS)

Mayford Chikoya

efore joining MCL, Mr. Chikoya was Manager – Finance and Administration at the Securities and Exchange Commission - Zambia. He previously worked for Zambia State Insurance Company (ZSIC) and Madison Insurance Company.

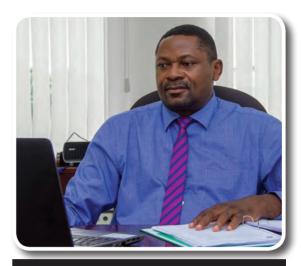
Mr. Chikoya brings his experiences in dealing with corporate bodies as he served as Secretary on the then Registration Committee, a Committee of the Securities and Exchange Commission which scrutinizes applications for registration of securities (Shares and Corporate Bonds) of various Corporate bodies.

He also sat on the National Task force

for the Anti-Money Laundering and interacted with various Government ministries and departments. Mr. Chikoya is a keen sportsman who has played basketball at international level, volleyball and football and was one time president of the Zambia Basketball Association. He currently plays squash during his spare time and "Madalas" Sunday basketball.

Mr. Chikoya is married to Maureen and has two children, a girl and a boy.

MCL wishes him a very happy and successful career with the Company.



Mr. Mayford Chikoya, Senior Manager- Corporate Affairs

Meet MCL'S longest serving employee - Engineer Mukanwa Simunji

Engineer Mukanwa Simunji

ngineer Mukanwa Simunji, born 64 years ago is MCL's longest serving employee. "Muka" as he is popularly known among his peers and close friends, joined Maamba Collieries Limited as a college graduate in Electrical Engineering on 20th April, 1978. Due to his dedication to duty, he was sponsored by MCL to the then Zambia Institute of Technology (ZIT), currently Copperbelt University (CBU), to study Electronic Engineering from 1981 to 1984 and graduated with a Diploma. Since then, "Muka" has risen through the ranks in the Electrical Department. From 1993, he held the position of Assistant Chief Electrical Engineer up to 2003, when he reached statutory retirement age, after he had served MCL for 25 years. Immediately after retirement, he was engaged on contract basis to head the Electrical Department as Chief Electrical Engineer. During his electrical engineering career at MCL, "Muka" also lectured in Electrical Engineering at the MCL Vocational Training Centre and helped a lot of trainees acquire the National Craft Certificate in Electrical Engineering.

"Muka" recalls that his happiest moment was in 1992 when the Electrical / Electronic Control System Upgradation Project of the Rope Way, under his charge, was successfully commissioned without a single malfunction.

"Muka" currently holds the following rare unbeaten service record in MCL;

• Longest serving employee as a Senior

Staff member (37 years)

- Longest serving Head of Department (13 years)
- Longest serving contract employee (13 years)

He currently holds the position of Mine Electrical Engineer. His advice to fellow employees is that, commitment to duty, honesty and hard work, are critical if anyone has to beat his service record.



Engineer Mukanwa Simunji

Mayaba Gloria Munkombwe

ppointed on 2nd September 2014, Ms Munkombwe is a Chartered Accountant (ACCA), Associate member of the Zambia Institute of Certified Chartered Accountants (ZICA) and global member of the Institute of Internal Auditors (IIA). She brings with her vast experience in governance and internal controls having previously worked in one of the "big four" international auditing firms – Ernst & Young. Ms Munkombwe also serves as Commissioner on the Board of Directors of the Securities and Exchange Commission of Zambia.

As MCL Internal Audit Manager, her resolution for the year 2016 is "To Provide Impactful Assurance on the Effectiveness of Governance at MCL".



Mayaba Gloria Munkombwe Internal Audit Manager



Il work and no play makes Jack a dull boy," so goes the saying. This is true with Maamba Community where recreational activities are limited. In a bid to provide recreation to community members, MCL facilitated hosting of the Southern Province Amateur Football Association (SPAFA) 2015 Soccer Season FAZ Division 3 promotion play-offs tournament in Maamba at Kanzinze Stadium from the 4th to the 6th of December, 2015.

This is an annual tournament which is held by the SPAFA to select the teams that are promoted from the District Amateur Leagues to the FAZ Division 3 National League. The holding of the said tournament is rotated every year amongst the districts within Southern Province. In 2015 the honour to host the SPAFA tournament came to Sinazongwe District, Maamba, Kanzinze Stadium. Teams from the 12 districts of Southern Province attended the tournament. MCL made a

Malala Diggers of Chikakanta District and Show Stars of Monze District lining up for the final match at Kanzinze Stadium.

financial contribution and availed its facilities for use by the visiting teams.

Our Football Coach, Christopher Chibuye, used the opportunity to identify talent for possible recruitment to ZAMCOAL Diggers Football Club, which enjoys full sponsorship of Maamba Collieries Limited.



he history of wildlife management in Maamba began in March 2013 when MCL Management, with the help of the Zambia Wildlife Authority-introduced wild animals within the golf course. Archaeologically, it was the first and still remains the only game ranch in

MCL Resident Director, Mr. Ashwin Devineni, teeing off at the Golf Course with grazing Impalas in the foreground.

Maamba but the second in Sinazongwe District of the Southern Province. For a start, three species namely Zebras, Impalas and Bushbucks were introduced.

Since then these species have been a part and parcel of Maamba Collieries' growth. What started as a small initiative with 3 Zebras, 18 Impala, and 4 bushbucks has now grown to 36 Impalas, 16 bushbucks while the Zebras have remained at 3.

The three year old Maamba Collieries Limited Game Ranch displays the importance of animals and Management's commitment to maintain ecological balance and to keep the animals as close to wild conditions as possible. The animals also offer Maamba residents a pleasant sight in the Golf Course when they stray on to the fairways to nibble the fresh grass. The photograph shows the Impalas oblivious of the precision hitting of golfers....or are they applauding??????

Mr. Henry Chaile, who does the mantle of gamekeeper in addition to his other duties, states that, the care and nurturing of animals has continued to be a success in 2015. This was achieved in collaboration with stakeholders, which include Zambia Wild Life Authority (ZAWA) and Dr. Munyeme and Associates of the University of Zambia School of Vet medicine, who rendered professional Veterinary and Ecological guidance.

A LOOK AT THE CORPORATE OFFICE

CL's Corporate Office is based in Lusaka, on Alick Nkhata Road, opposite Mass Media Complex and has a team of seven strong individuals headed by Senior Manager — Corporate Affairs, Mr. Mayford Chikoya. He is supported by Legal Manager, Mr. Mwape Kaira, Business Development Manager, Mr. Roopesh Nekkanti, Administrative Executive, Ms Mumtaz Moosa, Procurement Officer, Mr. Innocent Chisanga, Driver, Mr. Austin Kanyanga and Office Assistant, Ms Mulengwa Mwila.

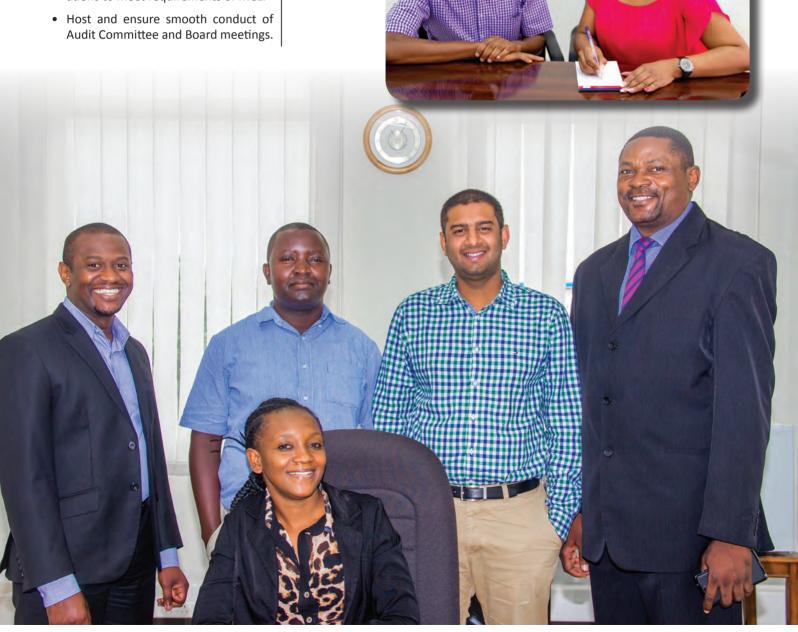
The Corporate office is charged with various responsibilities which, include among others.

 Liaising with Government Ministries, Organisations, Agencies and Associations to meet requirements of MCL.

- Liaising with all Lusaka based Directors on all Board issues.
- Being responsible for all public relations and media matters.
- Being a focal point for all immigration and work permit issues for expatriate staff and coordinating the movement of expatriate staff.
- Assisting in procurement activities as requested by Procurement Department

 Working closely with MCL Site on all issues requiring assistance of Government Agencies

The Legal Department of the Company is based at the Corporate Office in Lusaka. All legal and contractual matters of the Company are handled by the Legal Department. The Department also handles land and conveyance matters in collaboration with the Estates Department based at Maamba.



ne finds it difficult to classify this machine. This machine is definitely in a class of its own! This rider from Sinazongwe District modified his bicycle to the level you see in the pictures below. The 'machine' has a special compartment used for carrying religious books.

Our correspondent met him along the Maamba - Sinazeze Road in December 2015. The rider informed our correspondent that the plan to "design" his bicycle came through a vision in 2002. When asked whether the machine was excessively heavy, he answered with a convincing laugh and said, "banene (old man), this is just like any other ordinary bicycle!"

Our correspondent was informed that, the "machine" is mainly to help the needy, especially the sick to access nearest health facilities.





Maamba – Sinazeze Road, December 2015





JOKES

ne day, Mubita went to church to pray. While praying, God appeared and asked, "Mubita, what do you wish for?"

Mubita replied, "God, I want to drive a big car with plenty of girls in it."

God exclaimed, "Amen, may your wish be done."

Currently, Mubita is now a bus driver at a Girls' Secondary School!

Next time pray seriously!

n a Psychiatric Hospital, a mental patient with a knife in his hand was chasing a Doctor. The Doc furiously sprinted for his dear life until he reached a dead end! He had nowhere to run to. Knowing that all was lost, he was shivering knowing very well that he would die any second.

The mad man then stretched his hand and said,....." "Here, take the knife, it is your turn to chase me."

Five Rules To Remember In Life

- Forgive your enemy but remember the crooks name.
- Money cannot buy happiness but it is more comfortable to cry in a Mercedes than on a bicycle!
- Help someone when they are in trouble and they will remember you when they are in trouble again!!
- Many people are alive only because it is illegal to shoot them!
- Alcohol does not solve any problems, but then again, neither does milk!!



Coal Product Specifications

MCL established a modern, <u>Coal Handling and Processing Plant (CHPP)</u> which has facilitated production of washed coal of different specifications with consistent quality and eliminated pollution of nearby streams.

Product Specifications

Washed Coal Nuts	Parameter	Min & max
THE CONTRACTOR OF STREET	Size	+20 - 50 mm
	Inherent moisture %	1.5 - 1.9
	Total moisture %	3.0 - 9.0
THE RESERVE OF THE PARTY OF THE	Ash %	18 - 20
	Volatile Matter %	18 - 21
CAN THE STATE OF T	Fixed Carbon %	59.1 - 60.5
THE RESERVE OF THE PERSON OF T	Phosphorous % (Average)	0.0025
	Total Sulphur %	0.7 - 1.5
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Washed Coal Peas	Parameter	Min & max
	Size	+10 - 20 mm
	Inherent moisture %	1.5 - 1.9
	Total moisture %	3.0 - 9.0
	Ash %	18 - 20
	Volatile Matter %	18 - 20
Section 2	Fixed Carbon %	60.1 - 60.5
	Phosphorous % (Average)	0.0025
	Total Sulphur %	0.7 - 1.5
	Gross Calorific Value (kcal/kg)	6294 - 6482
Washed Coal Fines	Parameter	Min & max
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	C!	.0 5 10
	Size	+0.5 - 10 mm
	Inherent moisture %	1.5 - 1.9
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	Inherent moisture % Total moisture % Ash %	1.5 - 1.9 5.0 - 12 18 - 20
	Inherent moisture % Total moisture % Ash % Volatile Matter %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20
	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5
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Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm 1.0 - 1.4
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture % Total moisture %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm 1.0 - 1.4 5.0 - 12
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture % Total moisture % Ash %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm 1.0 - 1.4 5.0 - 12 21 - 25
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture % Total moisture % Ash % Volatile Matter %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm 1.0 - 1.4 5.0 - 12 21 - 25 17 - 19
Unwashed Coal Fines	Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg) Parameter Size Inherent moisture % Total moisture % Ash % Volatile Matter % Fixed Carbon %	1.5 - 1.9 5.0 - 12 18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482 Min & max +0.5 - 10 mm 1.0 - 1.4 5.0 - 12 21 - 25 17 - 19 55 - 59.6



Maamba Collieries Limited Head Office

P.O Box No.99, Maamba, Zambia For product inquiries please contact: roopesh@maambacoal.com Business Development Manager

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