

TPP AGHIEVES NILESTONE BOTH UNITS OPERATING AT FULL CAPACITY

GOVERNMENT SAYS NO LOAD SHEDDING DUE TO NEW IPPS

CBU STUDENTS APPRECIATE MCL'S ENVIRONMENT PROTECTION INITIATIVES

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Commodore PJ Sudhir (Retd) Jethro Sikalunda Patrick Nalumino Chiwoyu Sinyangwe



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EXECUTIVE MESSAGES

Foreword by the Resident Director

welcome you to the last edition of the MCL newsletter for the year 2017. This year has been momentous for MCL and the Community of Maamba, as we have collectively achieved significant milestones, especially during the past few months.

Our flagship, the 300–MW Thermal Power Plant (TPP) is operating at optimal efficiency. During the quarter, we successfully completed annual maintenance of both Units of the TPP, which are now operating at Maximum Load capacity thanks to a robust Operation and Maintenance (O&M) programme.

While the current operational efficiency, including meeting our coalmining targets is admirable, we must continuously strive towards sustained uninterrupted generation at full power, as this is a strategic requirement for Zambia.

I am particularly happy to hear of the successes of the school and note with satisfaction the progress on the Maamba roads. As we begin the New Year, I reiterate MCL's commitment to bettering our community. I take this opportunity to wish our stakeholders and all our employees success in all their endeavors.



Mr. Ashwin Devineni - Resident Director

Ndalumba kapati, Natotela saana, Dzikomo kwambiri

Message by the Chief Executive Officer

ear Readers,

This last edition of MCL Newsletter published in 2017 comes with good tidings from the Power Plant of the year end activities. Both the Units in the Power Plant went through their annual shutdown and mini-overhaul, and even as we were busy 'ringing out 2017', both Units were producing full power! My compliments to the Operation and Maintenance (O&M) and the mining teams for working tirelessly to meet the deadlines towards full operationalization.

As we move onto the New Year, my message to my colleagues, fellow employees, contracted workers and their families in Zambia and elsewhere in the world is to wish them a very Happy and Prosperous 2018 and to remind that their prosperity is linked to MCL's prosperity in many ways.

Towards this, I would urge them to put in hard work, quality work and most importantly, work safely in the New Year too.

Compliments of the season to our readers from MCL as well.



Rear Admiral Venkat Shankar (Retd) - CEO

God bless

Township Road Works on Fast Track



Bitumen surfacing of the road near Hospital

he K20-million massive road works on the Maamba Township fully-funded by MCL gained momentum, with almost half the works planned having been completed last quarter.

The road works are the first ever complete facelift for the road network in Maamba Township since the 1960s. This is an in-house project under the supervision of MCL civil engineering department, with technical support from Bicon Zambia Limited.



From left to right: MCL Chairman Mr. Ashok Devineni, CEO Rear Admiral Venkat Shankar (Retd), Manager Civil Engineering Mr. G.V Pantulu and General Manager Mining Mr. David Vijay Kumar inspecting progress of the road works

The construction of new roads in the township by MCL was inaugurated on 30th August 2017, much to the delight of community members and district officials present at the flagging off ceremony.

According to Manager Civil Engineering Mr. G.V Pantulu, the road repairs being done by MCL under its CSR activities are progressing well. Mr. Pantulu, Manager Civil explained that a number of milestones had been achieved so far - including construction of diversions, installation of culverts, road profiling for easy access of vehicles to the shops and market, approach to Maamba Hospital, as well as the restoration of SWASCO waterlines that might have been affected by the project.

"By end December 2017, out of a total of 5.1 Km planned road reconstruction in the first phase, 1.8 Km has been completed. This includes the stretch from Maamba Hospital to Malaiti House turn off and the Market Road," Mr. Pantulu told MCL News.

The road from the main market to Malaiti House is currently being worked on.

The freshly refurbished roads will greatly help the community who, in the past, have had to navigate gutted worn-out roads, that had never seen any repairs since construction in the late 1960s.

Additionally, road diversions are greatly helping the community by providing them easy access to vital community infrastructure, like the hospital, mothers' shelter and the mortuary.

TPP ACHIEVES MILESTONE... operates both Units at full capacity



*Control room monitors show both Units operating at full capacity of 150-MW each



HE 300-MW Thermal Power Plant (TPP), flagship of Maamba Collieries Limited, achieved a major milestone last quarter - generating power at full capacity on both Units and supplying 264 MW on sustained basis to the national utility, ZESCO.

TPP officials indicated that timely and quality maintenance as well as increased efficiency of the plant has resulted in the optimal performance of the power plant. Last year, both Units of the TPP underwent planned annual maintenance works – involving minor overhaul of each of the 150-MW power generation machines. This timely activity, including a lot of work on preventive maintenance, has contributed to the current efficiency of power generation.

Since 12th November last year, Unit 1 has been operating at maximum load capacity after being shut down for routine maintenance works and with the completion of annual maintenance on Unit 2, MCL has been continuously operating both Units at full capacity from 20th December 2017 and supplying much needed base-load power continuously to the national grid.

At the time of going to print, both Units had achieved continous operation at full capacity for over 2 months.

For Zambia, it is crucial that the largest Independent Power Producer in the country operates both Units at full capacity and provides 100 % power output, as it accounts for 10.6% of total power generated in the country.

MCL's TPP, the only coal-fired power plant in the country is strategic to Zambia because of the contribution to power generation capacity. Given the adverse effects of climate change and specially to cater for the rainfall deficit which affects hydropower generation, it is critical that MCL continues to operate at full capacity to reduce the probability of load shedding.

Maamba Private Pre-School students Graduate

n the 24th November, 2017, Maamba Private School held its sixth Graduation Ceremony for the students of Pre-School Class.

The event was graced by Mrs. Lakshmi Shankar, spouse of the CEO Rear Admiral Venkat Shankar (Retd), and MCL was represented at the graduation ceremony by Mr. Jethro Sikalunda, Maamba Development Trust Manager.

Addressing the gathering, Mrs. Shankar, reminded everyone that it was a great occasion in the lives of all the little ones and hoped that the children were well prepared to move on to the next step in their lives.

Mrs. Shankar appreciated the graduates' many achievements in numbers, shapes, words, letters and so many other topics.

She also encouraged the children to take a steady approach in their lives, reminding them of the old fableof *Hare and the Tortoise*. She told them: "All of you, children know the story of the *Hare and the Tortoise*. If you recall the race between them, the hare ran as fast as he could but could not keep up the whole race. The tortoise on the other hand, kept going at a slower pace but surely from the start of the race up to the finish line. The tortoise won!"

Highlighting that children always benefit from a steady approach to learning, taking their time to get things right-Mrs. Shankar, a teacher of many years, thanked the members of staff for their outstanding works.



She said through the teachers, the children learnt many priceless lessons, namely; to take on challenges, to be loving, to love learning, to be part of the community and above all to have good attitude.

During the vote of thanks, School Principal Mr. Ernest Makasa thanked Mrs. Shankar for officiating at the graduation ceremony. He said the success of the pupils was achieved because of rigorous training by the staff for a three - year period.

As the graduation event closed down, most children had their eyes fixed on their new classrooms for Grade One in 2018.



Mrs. Lakshmi Shankar is flanked by the PTA Vice-Chairperson and MDT Manager Mr. Jethro Sikalunda (right) and the School Principal, Mr. Ernest Makasa (left) during the graduation ceremony

MCL to Upgrade Maamba Private School



Inside the newly-built Science Laboratory at Maamba Private School

he MCL-run Maamba Private School currently goes only up to Junior Secondary level and the Management has plans to upgrade Maamba Private School to Grade 12 level and a vision to make the school one of the best in the region and in Zambia.

Accordingly, MCL is helping to upgrade the existing infrastructure at the school to meet the overall planned vision, and the Science Laboratory is just one of them.

Construction of the first-ever Science Laboratory at Maamba Private by the Civil Engineering Department of MCL is almost 90% complete, in keeping with company plans to turn the institution into a full-fledged Secondary School.

The construction of a Science Laboratory with a capacity to handle 80 students at a once, is expected to improve quality of teaching and make learning more effective, thereby greatly influencing the level and quality of participation and performance by students.

School Principal, Mr. Ernest Makasa thanked MCL management for the continued investment in the school and assured the Management of concerted efforts by his staff in realizing the aim of making the school one of the best and providing quality education to the children in the community.

He also brought out that the School is seeing a changing dynamic in Maamba – with the rising number of admissions of expatriates' children transforming the school into a more

cosmopolitan environment.

In keeping with MCL vision of developing the school in to a Centre for Excellence, the Principal said, "The School's focus is not so much the position in the district but the overall quality of results; what is the point of being number 1 with a 20 percent grade? We want to be number 1 with a 90 percent grade."



Outside view of the new Science Laboratory

MCL's robust Environment Protection

E are very impressed to see that Maamba Collieries Limited is using latest stateof-the-art technologies in preserving the environment from possible pollution, says Copperbelt University (CBU) Environmental Engineering student Leah Munthali.

Last December, Ms. Munthali was among the 37 CBU Environmental Engineering students who undertook the 700-kilometre long road trip from Kitwe on the Copperbelt to Sinazongwe District in the Southern Province, to understand operations of MCL's 300-MW Thermal Power Plant (TPP), Zambia's only coal-fired TPP.

The students who travelled under the auspices of their Professional Club – the Copperbelt University Environmental Engineering Society - conducted an educational tour of MCL to understand its integrated operation - from coal mining to the production of electrical power in an environment friendly manner, which embraces international best practices that endeavors to preserve the environment.

The educational tour tied in with one of MCL's main objectives of undertaking training and education initiatives, and also to work with its stakeholders to promote environmental awareness.

The tour to the company's key operational areas including the Open Pit Mine and Coal Processing Plant, culminated in a visit to MCL's flagship - the Thermal Power Plant.

Operations at MCL are centered around mitigating its impact on the environment by reducing harmful emissions into air, water and land, while continually improving the efficiency of usage of raw materials, energy and natural resources, thereby ensuring minimum wastage.

Ensuring that mining and energy production is done in a safe, environmentally sustainable manner forms part of the core values and practices that govern business practices at MCL.

Ms. Munthali said that MCL employs best international practices to ensure minimal adverse impact of mining and power generation on the environ-



Environmental Engineering Students from the Copperbe ment and the community.

She also noted that MCL practices international best standards in environmental management. This is also in line with what CBU teaches its budding environmental Engineers to ensure Zambia's environment is taken care of for the future generation, while ensuring economic utilization of mining assets.

"It was really nice getting to see the theory that we learn (at University) being put into practice at the mine," Ms. Munthali explains. "The experience was awesome and I was impressed that MCL is using some of latest technologies and techniques that are helpful in preserving the environment."

She was particularly impressed by MCL's comprehensive water recycling process – where waste water used in the mining and electricity production processes is treated and used for arboriculture and greening the surroundings around the TPP.

Programme Impresses CBU students



elt University who toured MCL in December 2017.

Ms. Munthali also lauded MCL's continued efforts in closing the gap in gender inequality by employing an increasing number of female engineers and artisans.

"Seeing a former schoolmate of mine working (at MCL), I was encouraged because seeing someone who has been in the same environment that I have been and now working there and seeming to be doing fine made me to think that 'you know what, I can also do ...," said the jovial Ms. Munthali.

Copperbelt University Environmental Engineering Society President Mr. Clinton Shamakamba said that the trip to MCL helped the students to actualize what they had been learning in class.

Mr. Shamakamba explains that the focus of their trip to MCL was to see how the mine was specifically dealing with the control of air pollution, one of the biggest challenges of coal mining.

"For most of us, it was the first time we were seeing the electrostatic precipitator of that size in operation. We learn about them in class and to see such a massive Unit in actual operation as well as other state-of-the-art equipment was a great learning experience," said Mr. Shamakamba, who also revealed that MCL was the first coal mine his organisation was touring.

Another student Ms. Twange Maluba said the visit to MCL was a converging point for the students between theory and industrial best practices.

Ms. Maluba said, "Of the many measures we have learnt about (to contain air pollution), we saw the electrostatic precipitators which we consider as the most efficient equipment (to curb air pollution) in actual operation and the positive effect on the environment of Maamba."

Government assures...no load shedding in Zambia despite recent dry spell

Inistry of Energy Permanent Secretary Brigadier-General Emelda Chola (Rtd) recently told **Radio Phoenix** that despite lack of rainfall in some parts of the country, Zambia will not experience load shedding.

Starting late December 2017, some parts of the country - predominantly Lusaka, Southern, Eastern as well as some parts of Central and Western Provinces experienced prolonged dry spells which was attributed to changing weather patterns.

According to the Zambia Meteorological Department (ZMD), the poor rainfall distribution was due to the tropical cyclone Ava, which diverted moist airflow away from the country.

ZMD explained that the effects of cyclone Ava was compounded by

a high-pressure system over Botswana, which suppressed cloud development, resulting in clear skies and warm to hot temperatures in the affected parts of Zambia.

As a result of the dry spell, several stakeholders in the country fear a return to intermittent power outages which had afflicted Zambia in the past few years,

Brig. Gen. Chola, however, said the country will not experience acute power shortages reminiscent of 2015-2016, when the state power utility ZESCO was forced to cut power supply to households and industries for as long as 8 hours a day.

She said the coming on board of Independent Power Producers like Maamba Collieries Limited's 300-MW mine-mouth coal-fired Thermal Power Plant and the 120-MW Itezhi Tezhi Hydro Power Plant would provide some level of comfort to the country.

"As a Ministry, we are also concerned over the dry spell but I think the water levels we have right now in the Lake Kariba are much better compared to 2015 when we had the worst drought," Brig. Gen. Chola told Radio Phoenix.

She indicated that ZESCO had restricted water usage for power generation at Lake Kariba in a bid not to drain the largest man-made lake in the world, while increasing utilization of water on Kafue River.

Separately, according to the official website of the Zambezi River Authority, a Company constituted by Zambia and Zimbabwe to manage the lake on behalf of the two countries, Lake Kariba is presently only 35% full, following the poor rainfall patterns in the wet seasons in 2015 and 2016.

Brig. Gen. Chola remains confident the country's power system in the country would remain fairly stable despite the lack of rains. "We will not go back to load shedding like we were doing last time," said Brig. Gen. Chola. "In 2015, we did not have Maamba Collieries on board and we did not have Itezhi Tezhi also. So, the thermal plant and the hydro power plant are going to cushion some of the requirements that we may need because we are now getting full supply from Itezhi Tezhi and Maamba



Zambia Sugar Engineers Visit MCL

team of 15 Zambia Sugar Company Limited staff (in orange vests) from the Electrical Department visited MCL's Thermal Power Plant on Friday 10th November, 2017, to see the Plant after its completion. The same team had visited the TPP in 2015 during the

construction phase and the visitors were impressed with the way the Plant was operating and appreciated the massive investment made by the sponsors and MCL management's efforts in providing much needed power to Zambia.

MCL welcomes new members

And the second s



Col (Dr). Ravi Sood

During his 32 years of distinguished service in the Indian Army in difficult field assignment including command appointments, Colonel Sood was actively involved in treatment and management of sick and wounded, with specific training in managing life threatening medical emergencies and their complications. He also has vast experience in dealing with trauma and accidental injuries; life and limb saving surgeries all within the 'Golden Hour Concept'; tropical diseases with emphasis on preventive measures; large & small scale disaster management with specialized care and rehabilitation of the patients.

Most recently, he held the prestigious appointment of Deputy Director Med Services at Lilavati Hospital - an internationally acclaimed, 320-bed, NABH accredited, modern multi-specialty hospital at Mumbai, India for almost two years.

During this he had extensive experience in specialized modern multi-disciplinary approach currently in vogue in medical practice in the management of patients and diseases. He has joined MCL as Medical Officer & Manager Health Services and brings with him the best of the medical practices, knowledge and experience drawn from his unique experience of working as a Medical Officer in the Indian Armed Forces as well as a Doctor in a modern corporate hospital. r Chiwoyu Sinyangwe – a professional journalist joined Maamba Collieries on 1st October, 2017 as Public Relations Officer in the Corporate Office in Lusaka, after over 8 years of experience with local and international news outlets.

In the past 8 years, he has worked for a number different Media Houses, both in fulltime capacity as well as a Correspondent.



Mr. Chiwoyu Sinyangwe

Starting out as a Cub Reporter at the Zambia Daily Mail in Lusaka, he later joined The Post Newspaper where he rose to the position of Deputy News Editor, before he left to join Reuters News Agency as a Back-Up Correspondent in Zambia.

As a journalist, he specializes in reporting Business, Financial Markets, Energy, Investment Trends and Politics. He is keen about investment developments in Mining, Energy, and Commodities as well as Social Trends.

He is passionate about youth education. He currently sits on the Board of Luapula Girls Technical High School, the only Technical School for girls in Luapula Province.

An active sportsperson, Mr Sinyangwe is an International Assistant Referee with affiliation to the Football Association of Zambia, Confederation of African Football and FIFA.

MCL WELCOMES THEM BOTH ON BOARD!



MCL General Manager – Commercial Mr. Ravi Ahuja presenting a completion certificate to one of the graduating PAPs.

Second Batch of PAPs Complete Livelihood Training Programme

he second batch of 28 Project Affected Persons (PAPs) who were undergoing Livelihood Training Programmes in Carpentry and Tailoring held a colourful graduation ceremony on 22nd December, 2017.

The graduation ceremony was graced by the General Manager – Commercial Mr. Ravi Ahuja who was accompanied by the Human Resource Manager Mr. Patrick Nalumino, MDT Manager, Mr. Jethro Sikalunda and the Community Services Officer Mr Chimense.

The ceremony was also attended by the Area Councillor,

officials from Monze Diocese, Maamba Youth Project, family members of graduating students and other community members.

The Development Promoter, Mr. Solomon Phiri, who led the delegation from Monze Diocese, praised MCL for uplifting the standard of living of community members by providing them with valuable skills.

He further, advised other business houses to emulate MCL by investing in the Community.

The Area Councillor requested MCL to consider extending the training programmes to other community members apart from PAPs, once PAPs were covered. He also appealed to the graduating PAPs to fully utilise the skills they acquired.

Some of the products made by Graduating PAPS (Carpentry & Joinery Class)

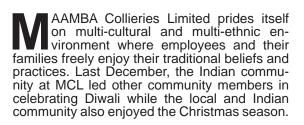
Best PAP student in Design and Tailoring Ms. Regina Mpundu Chiti modelling her self-made dress

Family Festivities at MCL

Indian ladies lead the MCL community in igniting the Diwali torch.

Calada Haland







From left: MCL CEO Rear Admiral Venkat Shankar (Retd), Security Manager Mr. Henry Chaile and MDT Manager Mr. Jethro Sikalunda enjoying proceedings at the Diwali festivities



General Manager Mining Mr. David Vijay Kumar (left) and Manager – Internal Audit and Controls Ms. Gloria Munkombwe (right) being aided to cut the official MCL Christmas Cake

Maamba Private School Grade 7 boy tops Sinazongwe

When the second end of the sec

Born to a father who is a professional engineer and a teacher at one of the schools in Maamba, Mulenga is the second born in a family of three. Mulenga who was born on 21st August 2003 in Mongu, spent his formative years at MCL's wholly-owned Maamba Private School, having joined in the pre-school stage. According to records at Maamba Private School, Mulenga throughout his academic journey, excelled and always topped his class during end of term tests.

Mulenga's passion for science is indeed heartening. Last year, he represented Maamba Private School at the Southern Province JETS fair in Mazabuka. JETS – (Junior Engineers, Technicians and Scientists) is annual competition organized under the auspices of the Ministry of Education to promote excellence in the field of science and mathematics among pupils as a platform to harness scientific and technological prowess and innovations among school going children. Sampa's journey with Maamba Private School peaked last December, when he topped the Grade 7 examination not only in the Maamba Private School but also in the whole Sinazongwe District - amassing an impressive aggregate of 864 marks.

His outstanding performance helped him secure admission to St. Canisius Secondary School in Monze District within Southern Province, a boarding school run by the Jesuits priests.

MCL wishes Mulenga the very best in all his endeavors and for his continued success!

Mulenga Sampa with Mr. Ernest Makasa Maamba Private School Principal

Personal Security Tips

The Importance of Personal Security – By Henry Chaile

s observed by Mr. Chaile Henry, personal security is a general condition that occurs after adequate efforts are taken to deter, delay, and provide warning before possible crime and if such warning occurs, to summon assistance, and prepare for the possibility of crime in a constructive manner.

Whether it is about securing your finances or ensuring your house and yourself are safe, a sense of safety in one's community is something everyone wants and yet should not obsess over.

While considering enhancing personal security, it is fundamental and aware of the fact that criminal opportunity is aided by a lack of witnesses, or the creation of an easy target. Essentially, the probability of being detected influences a criminal's decision to commit a crime.

Therefore, in an effort of enhancing personal security, it is obvious that increasing witness potential is one way to reduce criminal opportunity, but being more observant and aware of surroundings is another pro - active method of enhancing your personal security. The bottom line therefore is; "do not make it easy for the criminal to make you a victim consequently!"

• Be alert and aware!

Be alert and use common sense. Develop a personal safety plan for different situations; when you are home, when you are out and when travelling.

• Display confidence.

Walk and or drive with purpose, scan the area around you and make casual eye contact with others to display confidence. This reduces your chances of being targeted by criminals.

• Trust your instincts.

If you have an intuitive feeling something is wrong, trust your instincts. React immediately and take action to reduce your risk. Do not suppress your gut feeling.



Coal Product Specifications

MCL established a modern, Coal Handling and Processing Plant (CHPP) 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
AND	Size	+20 - 50 mm
	Inherent moisture %	1.5 - 1.9
	Total moisture %	3.0 - 9.0
	Ash %	18 - 20
	Volatile Matter %	18 - 21
COLORADO AND	Fixed Carbon %	59.1 - 60.5
	S Phosphorous % (Average)	0.0025
	Total Sulphur %	0.7 - 1.5
	Gross Calorific Value (kcal/kg)	6294 - 6482
Washed Coal Peas	Parameter	Min & max
	Size	+10 - 20 mm
	Inherent moisture %	1.5 - 1.9
and the second s	Total moisture %	3.0 - 9.0
	Total moisture % Ash %	3.0 - 9.0 18 - 20
	Ash %	18 - 20
	Ash % Volatile Matter %	18 - 20 18 - 20
	Ash % Volatile Matter % Fixed Carbon %	18 - 20 18 - 20 60.1 - 60.5
	Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average)	18 - 20 18 - 20 60.1 - 60.5 0.0025
Washed Coal Fines	Ash % Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur %	18 - 20 18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5



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Unwashed Coal FinesParameterMin & maxSize+0.5 - 10 mmInherent moisture %1.0 - 1.4Total moisture %5.0 - 12Ash %21 - 25Volatile Matter %17 - 19Fixed Carbon %55 - 59.6Phosphorous % (Average)0.0025Total Sulphur %1.6 - 2.5Gross Calorific Value (kcal/kg)5824 - 6200		Volatile Matter % Fixed Carbon % Phosphorous % (Average) Total Sulphur % Gross Calorific Value (kcal/kg)	18 - 20 60.1 - 60.5 0.0025 0.7 - 1.5 6294 - 6482
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Ash % 21 - 25 Volatile Matter % 17 - 19 Fixed Carbon % 55 - 59.6 Phosphorous % (Average) 0.0025 Total Sulphur % 1.6 - 2.5		Inherent moisture %	1.0 - 1.4
Volatile Matter % 17 - 19 Fixed Carbon % 55 - 59.6 Phosphorous % (Average) 0.0025 Total Sulphur % 1.6 - 2.5		Total moisture %	5.0 - 12
Fixed Carbon % 55 - 59.6 Phosphorous % (Average) 0.0025 Total Sulphur % 1.6 - 2.5		Ash %	21 - 25
Phosphorous % (Average)0.0025Total Sulphur %1.6 - 2.5		Volatile Matter %	17 - 19
Total Sulphur %1.6 - 2.5		Fixed Carbon %	55 - 59.6
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Gross Calorific Value (kcal/kg) 5824 - 6200			1.6 - 2.5
		Gross Calorific Value (kcal/kg)	5824 - 6200

Inherent moisture %

Total moisture %

Ash %

1.5 - 1.9

5.0 - 12

18-20