



Certificate No. 15268/COAAAL
Date: November 21, 2018



Issuing Office:
Jl. Raya Pasar Minggu Kav. 34, Jakarta 12780, Indonesia
Phone/Facs: +62 21 7983666/7983888
Email: min.pst@sucofindo.co.id

CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL : MV. MALAKAND
FROM : Taboneo, Indonesia
TO : Jimah East Power, Malaysia
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. H.R. Rasuna Said Blok X-5 Kav. 1-2
Jakarta 12950, Indonesia
BUYER : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO : Coal
DESCRIPTION : Envirocoal In Bulk
WEIGHT : 75,500 MT
LOADING DATES : November 16, 2018 up to November 19, 2018
SAMPLING : Samples on a lot basis were drawn from the mechanical sampling
system during vessel loading in accordance with ISO Standard.
SIZING : Size test carried out in accordance with ISO Standards "Higher rank
Coal-size analysis" showed that 20.7 % were between 31.5 and 50 mm,
4.7 % were above 50 mm, and 19.7 % were below 3 mm, and 16.6 %
were below 2 mm
ANALYSIS : Results of the analysis of the samples withdrawn as above and
analyzed in accordance with ISO Standards except for HGI which was
analyzed in accordance with ASTM Standards.

Parameters		Unit	Test Result
Total Moisture	(as received basis)	%	30.1
Inherent Moisture	(air dried basis)	%	18.0
Ash	(as received basis)	%	1.8
Volatile Matter	(as received basis)	%	34.7
Fixed Carbon	(as received basis)	%	33.4
Total Sulfur	(as received basis)	%	0.11
Gross Calorific Value (Gross)	(as received basis)	Kcal/kg	4746
Nitrogen	(dry basis)	%	1.09
Grindability (HGI)		:	45
Ash Fusion Temperature :	Reducing Atmosphere	Oxidizing Atmosphere	
Deformation	1180 °C	1250 °C	
Hemisphere	1210 °C	1280 °C	
Flow	1220 °C	1290 °C	

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Dept. of Coal Inspection



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Certificate No. 15269/COAAAL
Date: November 21, 2018



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CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL : MV. MALAKAND
FROM : Taboneo, Indonesia
TO : Jimah East Power, Malaysia
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. H.R. Rasuna Said Blok X-5 Kav. 1-2
Jakarta 12950, Indonesia
BUYER : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO : Coal
DESCRIPTION : Envirocoal In Bulk
WEIGHT : 75,500 MT
LOADING DATES : November 16, 2018 up to November 19, 2018

This Certificate is supplementary to our Certificate of Sampling and analysis No. 15268/COAAAL dated November 21, 2018

SAMPLING : Samples on a lot basis were drawn from the mechanical sampling system during vessel loading in accordance with ISO Standard.
SIZING : Size test carried out in accordance with ISO Standards "Higher rank Coal-size analysis" showed that 20.7 % were between 31.5 and 50 mm, 4.7 % were above 50 mm, and 19.7 % were below 3 mm, and 16.6 % were below 2 mm
ANALYSIS : Results of the analysis of the samples withdrawn as above and analyzed in accordance with ISO Standards except for HGI which was analyzed in accordance with ASTM Standards.

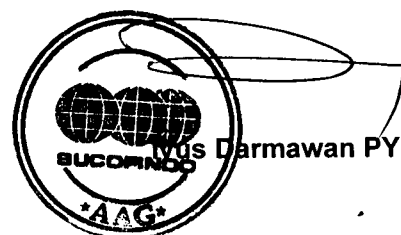
Proximate Analysis :

Inherent Moisture	(air dried basis)	:	18.0	%
Ash	(air dried basis)	:	2.1	%
Volatile Matter	(as received basis)	:	34.7	%
Fixed Carbon	(as received basis)	:	33.4	%
Total Sulfur	(as received basis)	:	0.11	%
Fuel Ratio	(as received basis)	:	0.96	

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ULTIMATE ANALYSIS :

- Carbon	(dry ash free basis)	%	73.8
- Hydrogen	(dry ash free basis)	%	4.86
- Nitrogen	(dry ash free basis)	%	1.11
- Sulfur	(dry ash free basis)	%	0.16
- Oxygen	(dry ash free basis)	%	20.07
- Phosphorus	(as received basis)	%	0.002
- Chlorine	(as received basis)	%	0.01
- Sodium	(as received basis)	%	0.005
- Abrasive Index		mg/kg	6

Ash Analysis : (Dry Basis)

- SiO ₂	(dry basis)	%	33.87
- Al ₂ O ₃	(dry basis)	%	11.02
- Fe ₂ O ₃	(dry basis)	%	18.05
- TiO ₂	(dry basis)	%	0.51
- CaO	(dry basis)	%	18.99
- MgO	(dry basis)	%	8.50
- K ₂ O	(dry basis)	%	0.79
- Na ₂ O	(dry basis)	%	0.57
- P ₂ O ₅	(dry basis)	%	0.29
- Mn ₃ O ₄	(dry basis)	%	0.29
- SO ₃	(dry basis)	%	6.67
- Undetermined	(dry basis)	%	0.45

Size Distribution :

0 x 50 mm	%	95.4
0 x 3 mm	%	19.7
0 x 2 mm	%	16.6
0 x 0.5 mm	%	6.0





Certificate No. 15270/COAAAL
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CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL : MV. MALAKAND
FROM : Taboneo, Indonesia
TO : Jimah East Power, Malaysia
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. H.R. Rasuna Said Blok X-5 Kav. 1-2
Jakarta 12950, Indonesia
BUYER : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO : Coal
DESCRIPTION : Envirocoal In Bulk
WEIGHT : 75,500 MT
LOADING DATES : November 16, 2018 up to November 19, 2018

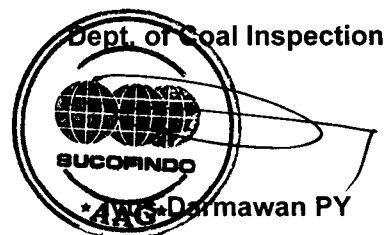
Results of the analysis of the samples withdrawn as above and analyzed in accordance with ASTM Standards except for Boron which was analyzed in accordance with ISO Standards.

Coal Specifications :	Test Result
Mercury, ppm in coal	0.02
Cadmium, ppm in coal	0.03
Boron, ppm in coal	33

This Certificate is supplementary to our Certificate of Sampling and analysis No. 15268/COAAAL dated November 21, 2018

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Certificate No. 15026/COAAAL
Date: November 21, 2018



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COAL QUALITY REJECTION LIMITS

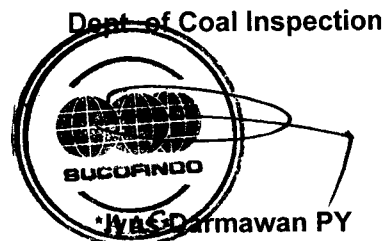
VESSEL : MV. MALAKAND
FROM : Taboneo, Indonesia
TO : Jimah East Power, Malaysia
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. H.R. Rasuna Said Blok X-5 Kav. 1-2
Jakarta 12950, Indonesia
BUYER : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO : Coal
DESCRIPTION : Envirocoal In Bulk
WEIGHT : 75,500 MT
LOADING DATES : November 16, 2018 up to November 19, 2018

Samples on a lot basis were drawn from mechanical sampling system during vessel loading in accordance with ISO Standard. Samples prepared and analyzed in accordance to ISO Standards, except HGI in ASTM Standard, showed the following average results :

Properties	Value as per Certificate of Sampling Analysis		Rejection Limit
Gross Calorific Value (Gross) (as received basis)	4746	Kcal / kg	Below 4600 kcal/kg
Total Moisture (as received basis)	30.1	%	Exceeds 32%
Ash Content (as received basis)	1.8	%	Exceeds 4.5%
Sulfur Content (as received basis)	0.11	%	Exceeds 0.25%
Volatile Matter (as received basis)	34.7	%	Below 32.2%
Hardgrove Grindability Index	45		Below 40 index points
Ash Fusion Temperature (reducing atmosphere - IDT)	1180	°C	Below 1100 °C
% of coal size more than 50 mm of total size distribution	4.7	%	Not more than 5%
% of coal size less than 3 mm fines of total size distribution	19.7	%	Not more than 30%
% of coal size less than 2 mm fines of total size distribution	16.6	%	Not more than 27%

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31-2007A

Certificate No. 15027/COAAAL
Date: November 21, 2018



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Email: min.pst@sucofindo.co.id

CERTIFICATE OF WEIGHT

CONSIGNEE : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC
DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR,
MALAYSIA

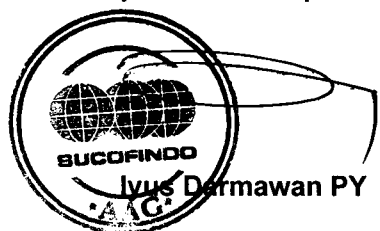
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. H.R. Rasuna Said Blok X- 5 Kav. 1-2
Jakarta 12950 , Indonesia

CARGO : Coal
DESCRIPTION OF GOODS : Envirocoal In Bulk
QUANTITY / WEIGHT DECLARED : 75,500 MT
NUMBER AND TYPE OF PACKAGES : In Bulk
MEANS OF CONVEYANCE : By Sea going Vessel
REMARK : The Consignment described above has been loaded
into holds of "MV. MALAKAND" where by the total
weight of cargo carried was determined by draft survey
is as follows :
Packing : In Bulk
Weight : 75,500 MT

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Dept. of Coal Inspection



078166

01-2007A

Certificate No. 15028/COAAAL

Date: November 21, 2018



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HOLD CLEANLINESS INSPECTION CERTIFICATE

VESSEL : MV. MALAKAND
FROM : Taboneo, Indonesia
TO : Jimah East Power, Malaysia
SHIPPER : PT. ADARO INDONESIA
Menara Karya 22nd – 23rd Floor
Jl. HR. Rasuna Said Blok X- 5, Kav. 1 - 2
Jakarta 12950 , Indonesia
BUYER : TNB FUEL SERVICES SDN BHD,
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,
JALAN DAMANSARA, 60000 KUALA LUMPUR,
MALAYSIA
CARGO : Coal
DESCRIPTION OF GOODS : Envirocoal In Bulk
CARGO HOLDS : No. 1 to No. 7 Holds
WEIGHT : 75,500 Metric Tons
INSPECTION : We Inspected the above mentioned cargo holds prior to the vessel
loading and found cargo spaces *No. 1 to No. 7 Holds* empty,
clean, dry and free from previous cargo, and suitable in all respect
to receive the cargo of coal.

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Dept. of Coal Inspection



078167

01-2007A



Certificate No. 15029/COAAAL
Date: November 21, 2018



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CERTIFICATE OF ORIGIN

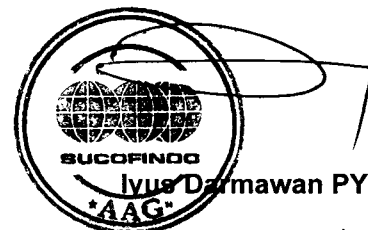
VESSEL	:	MV. MALAKAND
FROM	:	Taboneo, Indonesia
TO	:	Jimah East Power, Malaysia
SHIPPER	:	PT. ADARO INDONESIA Menara Karya 22 nd – 23 rd Floor Jl. HR. Rasuna Said Blok X- 5, Kav. 1 - 2 Jakarta 12950 , Indonesia
BUYER	:	TNB FUEL SERVICES SDN BHD, LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA, JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO	:	Coal
DESCRIPTION OF GOODS	:	Envirocoal In Bulk
WEIGHT	:	75,500 MT

We hereby certify that the coal mined and shipped is of Indonesian Origin.

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Dept. of Coal Inspection



078168

11-2007A



Certificate No. 15030/COAAAL

Date: November 21, 2018



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Email: min.pst@sucofindo.co.id

CERTIFICATE OF DRAFT SURVEY

VESSEL	:	MV. MALAKAND
FROM	:	Taboneo, Indonesia
TO	:	Jimah East Power, Malaysia
SHIPPER	:	PT. ADARO INDONESIA Menara Karya 22 nd – 23 rd Floor Jl. HR. Rasuna Said Blok X- 5, Kav. 1 - 2 Jakarta 12950 , Indonesia
BUYER	:	TNB FUEL SERVICES SDN BHD, LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA, JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA
CARGO	:	Coal
DESCRIPTION OF GOODS	:	Envirocoal In Bulk
WEIGHT	:	75,500 MT

Findings : Ascertainment of weight was done by draught reading of ship's prior to and after loading and converted to ship's displacement table and sounding table available on board

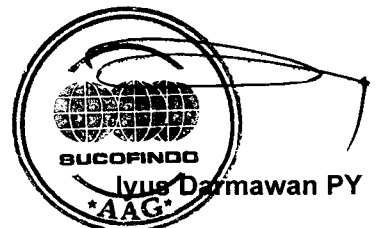
Net Displacement light (Initial on November 16, 2018)	:	10,929.000 M / tons
Net Displacement loaded (Final on November 19, 2018)	:	86,429.306 M / tons
Quantity of consignment	:	75,500.306 M / tons
Rounded to	:	75,500 M / tons

The Attachment available is an integral part of this certificate.

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CARGO QUANTITY CALCULATION TABLE

	Initial Survey 16/11/2018	Final Survey 19/11/2018
Forward mean draft, corrected, m	4.929	14.275
After mean draft, corrected, m	7.116	14.275
Midship mean draft, corrected, m	5.940	14.365
Fore and After mean, m	6.0225	14.275
Mean of means, m	5.98125	14.320
Mean of means corr. for deformation, m	5.960625	14.3425
Corresponding displacement, m.t.	34,040.481	88,227.087
Trim correction, m.t.	-423.477	0.000
Disp. Corrected for trim, m.t.	33,617.004	88,227.087
Water density, Kg/l.	1.018	1.019
Water density correction, m.t.	-229.580	-516.451
Disp. Corrected for density, m.t.	33,387.424	87,710.636
Total deductibles (oil, water, ballast etc.), m.t.	22,458.424	1,281.330
Net displacement, m.t.	10,929.000	86,429.306
By difference, total cargo loaded, m.t.	75,500.306	
Rounded to,	75,500	Metric Tons
See also attached schedule.		
Issued without prejudice.		

Vessel : MV. MALAKAND, PAKISTAN Flag

	Initial Survey 16/11/2018 (05:00 Hrs LT)		Final Survey 19/11/2018 (07:00 Hrs LT)	
Actual Draft	Port	Starboard	Port	Starboard
Forward, m	4.98	4.94	14.28	14.27
After, m	7.02	6.98	14.28	14.27
Midships, m	6.00	5.88	14.38	14.35
Deductibles				
Ballast Water m.t.	21,305.594		160.000	
Fresh Water m.t.	206.000		185.000	
Fuel Oil m.t.	757.300		746.800	
Diesel Oil m.t.	189.530		189.530	
Lube Oil m.t.	-		-	
	22,458.424		1,281.330	
Lightship wt	10,579.00 m.t.			
Apparent Constant, wt.	350.00 m.t.			

REMARKS :

1. Tank Calibration Soundings and Displacement Table / Hydrostatic Curves provided on board.
2. Original on board working sheet counter signed or acknowledge by Chief Officer / Master.
3. During Draft Survey carried out at Banjarmasin, Indonesia as loading port.

The state of sea : Swell Condition about 1.0 mtr during final draught survey



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