



SUPPLEMENTARY CERTIFICATE OF ANALYSIS

SGS Reference:	MKY22-58425.F
Vessel:	TTM Harmony
Port of Loading:	Dalrymple Bay Coal Terminal, Australia
Port of Discharge:	Any Port(s) in Japan
Commenced Loading:	01 June 2022 18:21
Completed Loading:	02 June 2022 06:30
BL Date:	02 June 2022
Quantity (as per Draft Survey):	44,000 MT
Description of Goods:	Thermal Coal

THIS IS TO REPORT that in accordance with instructions received from our Principal, to perform sampling and analysis of the above mentioned shipment, we hereby report the following:

SAMPLING: Mechanical Sampling was performed by SGS, as per ISO 13909 Part 2. Increments were collected using a mechanical sampling system (MSS) during the loading of the vessel.

ANALYSIS: Analysis performed in accordance with ISO Standards and SGS Procedures.

Ultimate Analysis		(Dry Basis)		
Carbon		70.3	%	
Hydrogen		3.93	%	
Nitrogen		1.48	%	
Oxygen		4.1	%	
Ash Fusion Temperature		(Reducing Atmosphere)		
ID		1420	DegC	
ST		1450	DegC	
HT		1450	DegC	
Flow		1480	DegC	
Trace Elements		(Dry Basis)		
Mercury		0.03	ppm	
Arsenic		0.3	ppm	
Phosphorous		0.056	%	
Chlorine		0.03	%	
Fluorine		120	ppm	

**Ash Analysis**

(Dry Basis)

SiO ₂	72.3	%
Al ₂ O ₃	17.1	%
Fe ₂ O ₃	4.14	%
CaO	2.35	%
MgO	0.62	%
Na ₂ O	0.22	%
K ₂ O	0.4	%
TiO ₂	0.8	%
Mn ₂ O ₄	0.039	%
P ₂ O ₅	0.65	%
SO ₃	0.32	%

Typical Size Distribution - % Passing

50mm	98.6	%
31.5mm	91.1	%
16mm	74.4	%
8mm	56.8	%
4mm	42.8	%
2mm	27.9	%
1mm	17.4	%
0.5mm	13.4	%

Signed and dated at
Dalrymple Bay Coal Terminal, Australia
06 June 2022



SGS issued at Load Port for and on behalf of
SGS Australia Pty Ltd.

**SGS Australia Pty Ltd.**

28 Reid Road
Perth Airport
WA 6105
t: +61 8 9373 3500
f: +61 8 9373 3556

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