

МNАS монголын итгэмжлэлийн тогтолцоо тL-09 ммs ізолес 17025

SGS IMME Mongolia LLC

MRN: 5616077

Energy Resource LLC

TTD: 2887746

Central Tower, 15th Floor, Suite 7, Sukhbaatar Square 2

Sukhbaatar District,-8

Mongolia

Lab Ref: UC004839

Client Ref ER-24002

Project Coal

Sample type

Status Final
Received 2/22/24
Started 2/23/24
Reported 3/2/24

Samples :

First Sample HCC_240221_1
Last Sample HCC_240221_1

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Result apply to sample as submitted.	
Notes	
Notes	

Authorised by

On behalf of:

Ankhbayar Luvsansharav Operations Director Email: luv.ankhbayar@sgs.com

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Uildveriin toirog 101 toot 20th Khoroo Bayangol Duureg Ulaanbaatar 36, Mongolia

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Scheme	ASTM3302	ASTM3302	ISO11722:2013	ISO 1171:2010	ISO 1171:2010	ISO 1171:2010
Units	%	%	%	%	%	%
Detection Limit	0.1	0.1	0.1	0.5	0.5	0.5
Upper Limit	50	50	50	99	99	99
	Moisture, Total	Air Dry Loss	RM_ADB	Ash, ARB	Ash, ADB	Ash, DB
HCC_240221_1	7.77	7.07	0.76	9.88	10.63	10.71



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Scheme	ISO562:2010	ISO562:2010	ISO562:2010	ISO562:2010	ISO 1213-2:2016	ISO 1213-2:2016
Units	AR %	AD %	DB %	DAF %	%	%
Detection Limit	0.1	0.1	0.1	0.1	0.01	0.01
Upper Limit	75	75	75	75	100	100
	VM_ARB	VM_ADB	VM_DB	VM_DAF	FC_ARB	FC_ADB
HCC 240221 1	20.47	22.03	22.20	24.86	61.87	66.58



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Scheme	ISO 1213-2:2016	ISO 1213-2:2016	ISO19579:2006	ISO19579:2006	ISO19579:2006	ISO19579:2006
Units	%	%	AR %	AD %	DB %	DAF %
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01
Upper Limit	100	100	5.21	5.21	5.21	20
	FC_DB	FC_DAF	Sul_ARB	Sul_ADB	Sul_DB	Sul_DAF
HCC 240221 1	67.09	75.14	0.62	0.67	0.67	0.75



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Scheme	MNS ISO1928:2020	MNS ISO1928:2020	MNS ISO1928:2020	MNS ISO1928:2020	ISO 501:2012	ISO 15585:2019
Units	KCAL/KG	KCAL/KG	KCAL/KG	KCAL/KG	/	/
Detection Limit	0	0	0	0	0	0
Upper Limit	10,000	10,000	10,000	10,000	9	110
	GCV_ARB	GCV_ADB	GCV_DB	GCV_DAF	CSN	G
HCC 240221 1	7083	7622	7680	8601	7.5	77



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Scheme	ICP40B	GB/T 4633-2014	GB/T 3558-2014	XRF76V	CVA20A	GB/T 479:2016
Units	PPM	PPM	%	%	PPM	mm
Detection Limit	3	20	0.003	0.01	0.004	0
Upper Limit	10,000	2,000	0.4	70	5.2	30
	As	F	CI	Р	Hg	Y
HCC 240221 1	<3	165	0.200	0.11	< 0.004	12.0



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Scheme	GB/T 479:2016	ISO 1928:2020	ASTM D5373-21	ASTM D5373-21	ASTM D5373-21	ASTM D5373-21
Units	mm	KCAL/KG	AD %	AR %	DB %	AD %
Detection Limit	0	0.1	0.001	0.001	0.001	0.001
Upper Limit	45	9,000	100	100	100	100
	X	NCV_AR	C_AD	C_AR	C_DB	H_AD
HCC 240221 1	22.5	6853	78.81	73.24	79.41	4.12



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Scheme	ASTM D5373-21					
Units	AR %	DB %	AD %	AR %	DB %	AD %
Detection Limit	0.001	0.001	0.001	0.001	0.001	0.001
Upper Limit	100	100	100	100	100	50
	H_AR	H_DB	O_AD	O_AR	O_DB	N_AD
HCC 240221 1	3.82	4.14	3.36	3.12	3.40	1.66



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Scheme	ASTM D5373-21	ASTM D5373-21
Units	AR %	DB %
Detection Limit	0.001	0.001
Upper Limit	50	50
	N_AR	N_DB
HCC_240221_1	1.54	1.67



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ANALYTICAL REPORT

Description

ASTM2013 : Standard Practice for Preparing Coal Samples for Analysis

ISO11722 : Determination of moisture in the general analysis test sample by drying

nitrogen

ASTM3302 : Moisture, Air-Dry Loss

ISO 1171 : Solid mineral fuels-Determination of ash

GB/T 3558 : Determination of Chlorine in coal

ISO501 : Hard coal-Determination of the crucible swelling number

GB/T 4633 : Determination of Fluorine in coal

ISO 1213-2 : Fixed Carbon (by calculation)

ISO 15585 : Hard coal-Determination of Caking index

CVA20A : Mercury by AFS method

ISO 1928 : Coal and coke — Determination of gross calorific value

ISO19579 : Solid mineral fuels-Determination of sulfur by IR spectrometry

ASTM3302 · Standard Test Method for Total Moisture in Coal

ASTM D5373 : Standard Test Methods for Determination of Carbon, Hydrogen and

Nitrogen in Analysis Samples of Coal

ISO562 : Hard coal and coke-Determination of volatile matter

GB/T 479 : Determination of plastometric indices of bituminous coal

ICP40B ICP-OES after DIG40B

 ${\sf ISO1928}$: Coal and coke — Determination of gross calorific value

XRF76V : Meta/Tetraborate Fusion, XRF (0.7000gr)



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