

000 POLEGOR
Kravchenko 2
Neryngry, Republic Saklha (Yakutia)
678960 Russian Federation

Attn. Mrs. Elena Rudenko

Antwerp, 19 June 2006

TEST REPORT No 23311-02.001

Product Russian Coal
Reference Seam D-11 Erchim Thkan
Received on 06.06.2006
Samples packed in plastic bag
Seals none

The sample was received from 000 Polegor, Moscow and was analyzed according to the instructions received, resulting in:

Parameter	As received	Dry basis	Air dry	DAF
Moisture, % B (ISO 589:2003)	2.00			
Moisture analytical, % B (ASTM D 5142:2002)			0.44	
Ash, % B (ISO 1171:1997)	7.75	7.91	7.88	
Volatile matter, % B (ISO 562:1981)	30.19	30.81	30.67	33.46
Sulfur, % B (ASTM D 4239:C:2002)	0.38	0.39	0.39	0.42
Fixed Carbon, % (Calculation)	60.05	61.28	61.28	66.52

R.v.d. Wetering
Laboratory Manager

(1) Method set up together with the contractor.

Page 1 of 3

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Member of the SGS Group (Société Générale de Surveillance)

RPR/RPM Antwerpen BTW BE 404 882 750

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Dry basis

Ash analysis, % (ASTM D 2795:1995)				
	SiO ₂		51.28	
	Al ₂ O ₃		25.77	
	Fe ₂ O ₃		8.58	
	TiO ₂		1.18	
	CaO		5.24	
	MgO		2.53	
	Na ₂ O		0.62	
	K ₂ O		3.21	
	SO ₃		0.45	
	SrO		0.42	
	BaO		0.59	
	Mn ₃ O ₄		0.08	
	P ₂ O ₅		0.05	
Ash Fusion Temperature °C (ISO 540:1995 reducing atmosphere)		Initial Deform.	1223	
		Softening	1274	
		Hemispherical Temperature	1339	
		Flow Temperature	1359	
Gray King Coke Type			G 6	
Free Swelling Index (ISO 501:1981)			9	
Dilatation, (ISO 349:1975)	°C	Softening T1	348	
	°C	Max Contr T2	389	
	°C	Max Dilat T3	478	
	%	Contraction	-26	
	%	Dilatation	275	
Gieseler Plastometer Test (ASTM D2639:1998)	C°	Soft t°	371	
	C°	Max fluid t°	448	
	C°	Solid t°	495	
	ddpm	Max fluid	30000	
Sieve analysis, % (ISO 1953:1994) <input checked="" type="checkbox"/>	<input type="checkbox"/>	Dry		
	<input type="checkbox"/>	Wet	mm	
	<input checked="" type="checkbox"/>		mm	
		Plus 0.5	mm	86.8
		Minus 0.5	mm	13.2
			mm	
			Total	100

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Reactives, %

Vitrinoid Type	
V-09	28.1
V-10	40.8
V-11	16.2
Vitrinite	85.1
Exinite	1.5
Resinite	0.0
Semifusinite	<u>1.9</u>
Total Reactives	88.5

Inerts, %

Semifusinite	3.8
Micrinite	2.8
Fusinite	0.5
Mineral Matter *	<u>4.4</u>
Total Inerts	11.5
Composition Balance Index	0.32
Rank Index	3.65
Mean-Max. Vitrinoid Reflectance, % in Oil	1.04
Calculated Stability Factor	38

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