

Reference number:	1920-638
Sample submitted	13/05/2019
Contact Person:	Willem Swanepoel
Report date:	2019/06/04
Report status:	FINAL

TEST REPORT / CERTIFICATE OF ANALYSIS

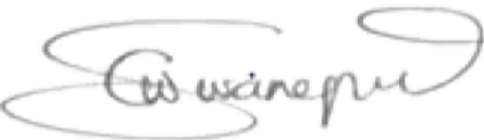
Sample Identification	% Inherent moisture content	% Ash content	% Ash content	% Volatile Matter	% Volatile Matter	% Fixed carbon (by calculation)	% Total sulphur	Gross Calorific Value (MJ/kg)	% Carbon Content	% Hydrogen Content	% Nitrogen Content	% Oxygen Content (calculation)
	(air-dried)	(air-dried)	(dry basis)	(air-dried)	(dry basis)	(air-dried)	(dry basis)	(air-dried)	(air-dried)	(air-dried)	(air-dried)	(air-dried)
PBH-2 24.4- 24.9 LIGNITE	11.3	21.0	23.7	36.9	41.6	30.8	4.17	16.40	41.8	3.42	0.78	17.53
PBH-2 25.5- 26.9 LIGNITE	10.9	27.7	31.0	36.8	41.2	24.6	6.97	14.40	35.8	3.49	0.65	14.60
PBH-2 31.1- 32.1 LIGNITE	18.3	7.0	8.6	39.1	47.9	35.6	1.52	20.03	51.0	3.26	0.82	18.09
PBH-2 42.3- 44.45 LIGNITE	17.0	4.6	5.5	45.8	55.2	32.6	0.36	22.95	56.0	4.72	0.92	16.40
PBH-3 42.65- 43.15 LIGNITE	11.2	35.8	40.2	32.9	37.0	20.1	6.58	12.10	30.0	3.16	0.54	12.82
PBH-3 49.7- 50.5 LIGNITE	12.7	16.2	18.5	42.1	48.1	29.0	1.74	19.86	48.8	4.33	1.04	15.24
PBH-12 22.4- 24.5 LIGNITE	7.0	26.8	28.8	41.7	44.8	24.5	0.40	19.99	48.0	4.52	0.78	12.55
PBH-12 24.7- 25.2 COALY SHALE	2.9	72.1	74.3	20.1	20.7	4.9	0.24	4.47	11.4	1.99	0.24	11.14
PBH-12 25.2- 25.4 SHALE	1.2	85.1	86.1	13.4	13.6	0.3	0.11	1.00	3.6	1.17	0.09	8.75
PBH-12 47.3- 49 LIGNITE	11.2	21.5	24.2	42.8	48.2	24.5	2.34	19.75	46.0	4.55	0.67	13.74
PBH-16 10.3- 11.8 LIGNITE	13.8	13.8	15.9	43.4	50.3	29.0	0.85	20.74	49.6	4.41	0.85	16.79
PBH-16 11.8- 12.35 COALY SHALE	8.3	56.1	61.1	23.5	25.6	12.1	4.34	6.65	17.3	2.10	0.24	11.67
PBH-16 12.35- 13.25 LIGNITE	9.8	38.5	42.7	31.3	34.7	20.4	4.93	11.93	30.4	2.94	0.55	12.88
PBH-16 14.1- 15 LIGNITE	12.2	18.0	20.5	40.0	45.5	29.8	3.48	17.73	44.9	3.64	0.74	17.09
PBH-16 19- 20.62 LIGNITE	10.0	13.7	15.2	46.0	51.1	30.3	0.84	21.63	53.0	4.63	0.82	17.06
PBH-16 26.75- 28.23 LIGNITE	15.4	10.1	11.9	43.0	50.8	31.5	0.62	20.93	52.6	4.19	0.84	16.25
PBH-19 35.15- 37.74 LIGNITE	19.2	3.3	4.0	41.2	51.0	36.3	0.83	21.40	53.1	4.04	0.95	18.62
PBH-19 38.25- 40.87 LIGNITE	15.2	7.3	8.5	46.1	54.3	31.4	4.77	21.38	51.6	4.54	0.72	15.97
PBH-19 43.14- 46.49 LIGNITE	11.6	12.7	14.4	46.0	52.0	29.7	1.43	22.28	53.0	4.73	1.01	15.52
PBH-19 50.75- 53.35 LIGNITE	14.1	5.1	5.9	45.1	52.4	35.7	0.56	22.58	56.8	4.37	0.87	18.25
PBH-19 56.95- 57.65 LIGNITE	13.9	13.7	15.8	41.1	47.6	31.3	6.98	18.45	44.3	4.04	0.63	16.55
PBH-21 21.85- 24.29 LIGNITE	11.9	5.9	6.7	53.0	60.1	29.2	0.76	25.21	60.2	5.46	0.86	14.97
PBH-21 25.8- 26.5 LIGNITE	13.1	28.0	32.2	34.6	39.7	24.3	5.35	14.39	36.1	3.22	0.66	13.62
PBH-21 27.4- 28.5 LIGNITE	6.7	58.5	62.6	24.7	26.5	10.1	0.74	9.26	22.3	2.25	0.40	9.16
PBH-21 29.3- 32.9 LIGNITE	12.5	12.0	13.7	48.1	54.9	27.4	0.79	23.03	53.7	5.05	0.97	15.05
PBH-21 34.8- 37.55 LIGNITE	13.2	13.7	15.8	43.1	49.6	30.0	0.41	21.47	52.1	4.55	0.80	15.29
PBH-22 48.4- 50.8 LIGNITE	14.3	15.1	17.6	44.1	51.4	26.5	1.08	20.77	48.8	4.59	0.81	15.43
PBH-22 51.45- 52.1 LIGNITE	10.1	37.6	41.7	33.1	36.7	19.2	4.95	12.99	32.0	3.13	0.55	11.78
PBH-22 55.8- 59.3 LIGNITE	12.7	11.5	13.2	46.8	53.6	29.0	1.19	22.64	54.0	4.60	0.95	15.06
PBH-22 61.82- 64.27 LIGNITE	9.4	24.4	26.9	41.8	46.1	24.4	1.53	18.86	45.6	4.25	0.82	14.01
PBH-24 44.35- 46.75 LIGNITE	9.2	11.5	12.6	50.1	55.2	29.2	2.44	23.73	55.6	5.27	0.89	15.15
PBH-24 46.85- 48.15 LIGNITE	8.7	34.9	38.2	34.3	37.6	22.1	2.93	15.34	37.4	3.40	0.62	12.05
PBH-24 51.4- 55.3 LIGNITE	11.5	7.6	8.6	51.7	58.4	29.2	1.14	24.91	58.5	5.35	0.90	15.01
PBH-24 58.2- 60.65 LIGNITE	10.0	10.0	11.1	44.4	49.3	35.6	0.52	22.36	55.4	4.41	0.86	18.86
PBH-24 64.5- 64.98 LIGNITE	9.6	11.4	12.6	46.9	51.8	32.1	2.87	22.66	54.9	4.67	0.76	15.85
PBH-25 26.2- 28 LIGNITE	9.7	3.9	4.3	55.7	61.7	30.7	2.37	26.17	61.6	5.59	0.84	16.05
PBH-25 28.4- 28.8 COALY SHALE	7.0	56.4	60.6	25.2	27.0	11.4	4.27	6.71	18.4	2.22	0.35	11.46
PBH-25 28.8- 32.1 LIGNITE	9.9	19.5	21.6	41.9	46.5	28.7	1.21	20.44	49.5	4.31	0.74	14.83
PBH-25 33.3- 37.2 LIGNITE	9.5	10.7	11.8	46.9	51.8	32.9	1.44	23.09	56.0	4.72	0.94	16.75

Description	Procedure / Test M	1.86
Sample preparation	BV-TPM-001 based	7.459395
Moisture content (%)	BV-TPM-010 based on ISO11722: 1999	
Ash content (%)	BV-TPM-011 based on ISO 1171: 2010	
Volatile matter content (%)	BV-TPM-012 based on ISO 562: 2010	
Total sulphur (%)	BV-TPM-013 based on ISO 19579: 2006	
Gross calorific value (MJ/kg)	BV-TPM-014 based on ISO 1928: 2009	
Ultimate analysis	Based on ISO 12902 - CHN Instrumental method (Subcontracted Test)	

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 Technical Signatory