

3 COAL IN-SITU QUALITY

In-situ coal quality is based on the borehole database includes all seam occur within the concession. Coal In-Situ quality in TMJ concession is considered as medium rank coal with CV ranging from 5000 kcal/kg to 6100 kcal/kg (ar basis).

The quality parameter analysis has been undertaken included Total Moisture (TM), Proximate Analysis (Inherent Moisture, Ash, Volatile Matter and Fixed Carbon), Total Sulphur (TS), Calorific Value (CV).

Table 3-1 below shows the summary of composite coal quality on a seam by seam basis.

Table 3-1 Summary of Composite In-situ Coal Quality by Seam

SEAM GROUP	TM %	Proximate Analysis (adb)				TS %	CV Kcal/Kg	
	(ar)	IM %	Ash %	VM %	FC %	(adb)	(adb)	(ar)
Q	19.29	12.37	4.80	39.75	43.07	1.87	6147	5662
P	19.38	12.10	4.89	40.17	42.83	0.50	6122	5617
O	20.04	11.89	6.98	39.78	41.35	2.21	5981	5425
N	17.49	11.81	4.57	41.23	42.39	1.60	6157	5762
M	16.79	11.71	11.05	36.59	34.93	2.95	5463	5096
L	16.43	11.25	6.67	37.85	38.92	2.18	5960	5590
K	17.12	11.57	4.73	41.12	42.58	2.38	6146	5760
J	15.24	10.23	10.73	37.31	37.67	2.62	5829	5506
I	15.84	10.52	8.36	22.51	25.03	1.65	5922	5569
H	12.52	8.61	5.51	24.92	26.09	1.39	6388	6118
G	14.00	8.73	13.62	37.06	37.83	3.32	5751	5420
F	14.15	9.74	4.25	23.04	24.74	2.22	6401	6090
E	15.23	10.51	12.19	30.21	29.80	3.19	5698	5403
D	17.93	10.08	14.16	37.80	37.96	1.97	5586	5092
C	15.57	11.49	7.99	39.79	40.72	1.92	5950	5676
MIN	12.52	8.61	4.25	22.51	24.74	0.50	5463	5092
MAX	20.04	12.37	14.16	41.23	43.07	3.32	6401	6118
AVERAGE	16.47	10.84	8.03	35.28	36.39	2.13	5967	5586

The coal quality was not included in the geological model at this time. Coal quality reported in the Resource (in-situ) represents from TMJ's quality modeling data.

Total Moisture (ar)

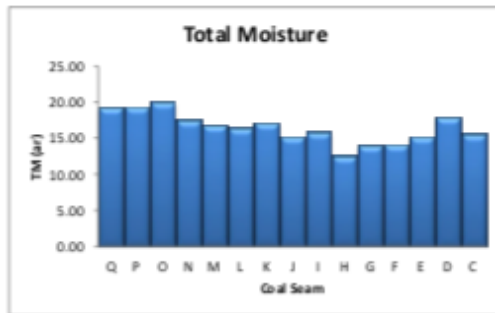
The following chart show the weighted average Total Moisture for Coal Seams Q – C on an as received or (ar) basis. The analysis of the outputs shows small variations, ranging between 12.52 % to 20.04 %.

6.3 ROM COAL QUALITY

The ROM Coal Quality has been generated from Pits E1 and E2 as in the ROM quality simulation is shown in table 6-6.

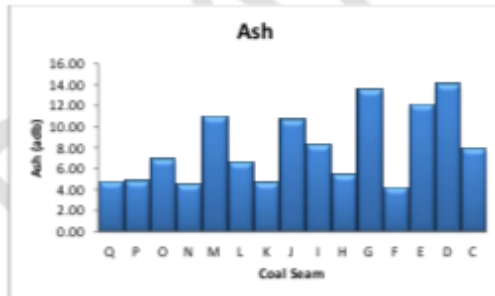
Table 6-6 ROM Coal Quality

RT	SEAM	OR	COAL	SR	ASH	CV	FC	HM	RO	TM	TS	VM	Cvash
PT E1	1		5,224,766	-	-	-	-	-	-	-	-	-	-
	2		366	1.48	2.95	7.35	6.074	41.87	10.31	1.30	35.23	2.75	40.40
	3		356	48	4.13	38.04	3.953	27.58	7.35	1.30	25.46	2.07	27.02
	4		5,403,628	30.53	301.26	4.92	6,205	44.70	11.06	1.32	35.43	1.17	36.20
	5		3,393,643	46.29	76.04	11.34	6,025	42.05	8.08	1.35	33.80	1.71	38.52
	6		240,087	36.53	2.49	6.31	6,229	43.77	10.26	1.31	37.01	0.91	39.16
	7		1,146,571	47.917	23.98	23.75	4,983	34.78	7.19	1.30	11.77	4.20	32.30
	8		3,875,856	347.79	11.09	6.80	6,463	42.87	8.33	1.31	12.89	2.08	41.97
	9		113,624	35.291	1.45	5.98	6,449	44.91	8.30	1.30	12.97	2.39	41.02
	10		713,177	21.303	33.17	16.13	5,741	41.14	8.92	1.30	34.05	2.76	35.08
	11		6,037,823	399.32	16.57	10.87	5,993	40.68	8.81	1.33	35.38	3.17	39.30
	12		67,532	38.033	2.30	15.56	5,716	38.20	7.76	1.30	12.96	2.90	38.30
	13		3,166,242	327.712	9.06	8.71	5,988	42.06	10.07	1.32	34.34	2.75	39.08
	14		8,406,126	1,878.53	4.48	4.47	6,384	45.69	9.23	1.31	33.82	2.00	41.88
	15		167,873	811.380	0.28	4.61	6,414	44.24	9.68	1.32	34.57	2.00	40.61
	16		682,062	36.367	11.89	21.75	5,139	32.67	9.18	1.48	16.11	3.40	36.30
	17		7,843,581	72,885	10.82	13.52	5,683	40.00	8.82	1.32	35.13	2.69	37.02
	18		128,405	36.948	3.07	16.95	5,427	37.81	8.80	1.44	35.36	2.00	38.48
	TOTAL		46,591,316	4,896,739	9.92	7.48	6,166	43.32	9.18	1.32	34.36	2.74	40.34
	PT E2	1		331,292	-	-	-	-	-	-	-	-	-
2			726	3.745	0.37	13.05	5,360	35.81	13.35	1.30	38.49	2.76	37.79
3			1,812,283	30.748	45.39	5.54	5,925	43.78	12.74	1.31	38.38	3.02	37.05
4			62,317	9.239	1.22	2.95	6,121	44.62	13.61	1.30	38.67	0.39	38.50
5			675,373	76.491	12.31	6.61	5,996	41.53	12.32	1.30	38.63	1.39	39.59
6			819,721	46.372	17.38	5.59	6,111	41.77	10.80	1.32	34.45	4.19	41.08
7			499,416	34.493	8.73	6.48	6,045	41.16	6.95	1.36	35.97	3.75	45.44
8			133,490	38.887	5.37	4.36	6,164	44.28	12.12	1.31	36.43	0.96	38.98
9			61,878	36.130	1.12	3.89	6,048	45.39	11.88	1.33	36.62	1.00	38.88
10			838,838	46.807	19.13	6.19	6,218	39.79	10.67	1.32	34.17	2.88	43.25
11			118,218	17.859	6.92	22.05	4,858	34.58	10.98	1.37	36.59	4.49	32.30
TOTAL			5,301,721	388,334	13.02	6.07	6,009	42.30	11.31	1.32	35.74	2.30	40.31
GRANDTOTAL			51,893,037	5,285,073	9.94	7.37	6,173	43.34	9.34	1.33	34.46	2.74	40.34



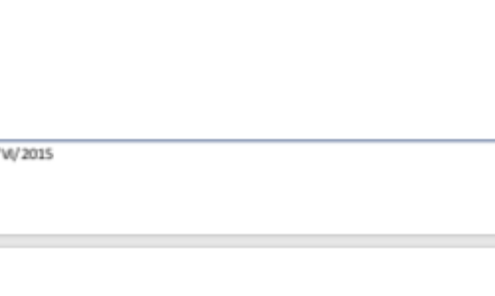
Ash Content

The following chart show the weighted average Ash Content for Coal Seams Q – C on air dried (adb) basis. The ash content of the various coal seams demonstrates a wide range in variation. Seams M, seam J, seam G, seam E, seam D have an ash content > 10 %. The remaining coal seams generally have ash contents in the range of > 4 % to ≤10% as shown in the chart below.



Sulphur Content (TS)

The following chart show the weighted average Total Sulphur for Coal Seams Q – C on an air dried (adb) basis and all coal seams (except seam P) generally have Sulphur contents above 1% as shown in the chart below.



Caloric Value (ar)

The following tables show the weighted average Caloric Value for Coal Seams Q – C on an as received (ar) basis. The analysis of the outputs shows wide variations, ranging between 5092 to 6118 %.

