



CCI/5545/87
CCI/5547/87
CCI/5548/87

ANALYSIS & TESTING OF
SAMPLES FROM
NILE COALFIELD
MACQUARIE ISLAND COAL
CARDIFF OPEN CUT COAL
CARDIFF SEAM



May 1987



HEAD OFFICE : NEWCASTLE
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This Laboratory is registered by the National Association of Testing Authorities Australia. The test(s) herein have been performed in accordance with its terms of registration and in accordance with the following standards:-

Methods for the Sampling of Hard Coal	AS2646 - 2	(1984)
	AS2646 - 4	(1984)
	AS2646 - 6	(1984)
	AS2646 - 8	(1984)
Float & Sink Testing of Hard Coal	AS1661	(1979)
Size Analysis of Coal	ASDR84043	
Total Moisture in Hard Coal	AS1038 - 1	(1980)
Proximate Analysis of Hard Coal	AS1038 - 3	(1979)
Gross Specific Energy of Coal	AS1038 - 5	(1979)
Ultimate Analysis of Higher Rank Coal		
- Carbon and Hydrogen	AS1038 - 6.1	(1986)
- Nitrogen	AS1038 - 6.2	(1986)
- Total Sulphur (High Temp. Combustion) (designated (A) on test report)	AS1038 - 6.3.2	(1986)
- Total Sulphur (Leco Infra Red) (designated (B) on test report)	AS1038 - 6.3.3	(1986)
Chlorine in Coal	AS1038 - 8	(1980)
Forms of Sulphur in Coal	AS1038 - 11	(1982)
Crucible Swelling Number	AS1038 - 12.1	(1979)
Gray King Coke Type	AS1038 - 12.2	(1979)
Dilatometer (Air - Core Furnace)	AS1038 - 12.3	(1984)
	ISO 349	(1975)
Analysis of Coal Ash and Coke Ash (Acid Digestion - Flame AAS Method)	AS1038 - 14.2	(1985)
Gieseler Plastometer	AS2137	(1981)
Fusibility of Coal & Coke Ash	AS1038 - 15	(1972)
Hardgrove Grindability Index of Hard Coal () Represents Mass% $-1.18 + 0.600\text{mm}$ material	AS1038 - 20	(1981)
Apparent Relative Density of Hard Coal	AS1038 - 21	(1983)
Relative Density of Hard Coal (Density Bottle Method)	AS1038 - 21	(1983)
Carbonate Carbon of Higher Rank Coal	AS1038 - 23	(1984)
Total Fluorine in Coal (Oxygen Bomb Combustion/Ion Selective Electrode)	D3761	(1984)



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ORIGIN: Department of Mines - Tasmania JOB NO. 5545
 DESCRIPTION: Nile Coalfield DATE REC'D 4/5/87
 DATE TESTED 21/5/87
 REPORTED TO: Ms C Bacon c.c. _____

ANALYSIS REPORT

SAMPLE NO. 21950

Relative Density		
Total Moisture (as)	%	
Moisture (ad)	%	4.4
ANALYSIS BASIS		ad
Ash	%	19.1
Volatile Matter	%	29.2
Fixed Carbon	%	47.3
Total Sulphur	%	
Chlorine	%	
Phosphorus	%	
Specific Energy	MJ/kg	25.58*
Carbon	%	
Hydrogen	%	
Nitrogen	%	
Carbon Dioxide	%	
DRY, ASH-FREE BASIS		
Volatile Matter	%	
Specific Energy	%	
Carbon	%	
Hydrogen	%	
Nitrogen	%	
Sulphur	%	
Oxygen (diff)	%	
Crucible Swelling Number		
Gray-King Coke Type		
Hardgrove Grindability Index		
ASH FUSION TEMPERATURES (reducing atmosphere)		
Deformation	°C	
Spherical	°C	
Hemisphere	°C	
Flow	°C	

* uncorrected for total sulphur

REPORTED BY *D. Gallop*

DATE 24/6/87



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ORIGIN: Department of Mines - Tasmania JOB NO. 5545
 DESCRIPTION: Macquarie Island Coal DATE REC'D 4/5/87
 DATE TESTED 21/5/87
 REPORTED TO: Mr C Bacon c.c. _____

ANALYSIS REPORT

SAMPLE NO.

21951

Relative Density		
Total Moisture (as)	%	
Moisture (ad)	%	2.2
ANALYSIS BASIS		ad
Ash	%	4.4
Volatile Matter	%	
Fixed Carbon	%	
Total Sulphur	%	0.70
Chlorine	%	
Phosphorus	%	
Specific Energy		
Carbon	%	
Hydrogen	%	
Nitrogen	%	
Carbon Dioxide	%	
DRY, ASH-FREE BASIS		
Volatile Matter	%	
Specific Energy	%	
Carbon	%	
Hydrogen	%	
Nitrogen	%	
Sulphur	%	
Oxygen (diff.)	%	
Crucible Swelling Number		
Gray-King Coke Type		
Hordgrove Grindability Index		
ASH FUSION TEMPERATURES (reducing atmosphere)		
Deformation	°C	
Spherical	°C	
Hemisphere	°C	
Flow	°C	



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24/6/87



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ORIGIN: Department of Mines - Tasmania JOB NO. 5547
 DESCRIPTION: Cardiff Open Cut Coal DATE REC'D 4/5/87
 DATE TESTED 21/5/87
 REPORTED TO: Ms C Bacon C.C. _____

ANALYSIS REPORT

SAMPLE NO.	PLY 11	PLY 13
Relative Density	1.35	1.39
Total Moisture (as) %		
Moisture (ad) %		5.8
ANALYSIS BASIS		
Ash %		ad 21.9
Volatile Matter %		25.3
Fixed Carbon %		47.0
Total Sulphur %		
Chlorine %		
Phosphorus %		
Specific Energy MJ/kg		22.84*
Carbon %		
Hydrogen %		
Nitrogen %		
Carbon Dioxide %		
DRY, ASH-FREE BASIS		
Volatile Matter %		35.0
Specific Energy MJ/kg		31.60
Carbon %		
Hydrogen %		
Nitrogen %		
Sulphur %		
Oxygen (diff) %		
Crucible Swelling Number		
Gray-King Coke Type		
Hardgrove Grindability Index		
ASH FUSION TEMPERATURES (reducing atmosphere)		
Deformation °C		
Spherical °C		
Hemisphere °C		
Flow °C		
* uncorrected for total sulphur		



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REPORTED BY *D. Gallagher*
 DATE 24/6/87



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ORIGIN: Department of Mines - Tasmania JOB NO: 5548
DESCRIPTION: Macquarie Island Coal DATE REC'D: 4/5/87
REPORTED TO: Ms C Bacon

PETROGRAPHIC RESULTS

Sample No: 21951

n Macerals	(AS 2856-1986)	: 500	
n Reflectance	(AS 2486-1981)	: 0	Rom
Telovitrinite	6.8		
Detrovitrinite	58.2	65	VITRINITE
Sporinite	6.4		
Cutinite	1.0		
Resinite	2.6	10	LIPTINITE
Micrinite	2.4		
Macrinite	2.6		
Semi-Fusinite	9.0		
Fusinite	4.4		
Inertodetrinite	4.6	23	INERTINITE
Minerals	2.0	2	MINERALS

The origin of the coal is difficult to assess. It does not seem to be from New Zealand but looks not unlike Greta coal.

Analysed By: C F K Diessel
Reported By: *[Signature]*
Date: 24/6/87

ORIGIN: Department of Mines - Tasmania JOB NO. 5548
DESCRIPTION: Cardiff Seam in Creek DATE REC'D 4/5/87
DATE TESTED 18/5/87
REPORTED TO: Ms C Bacon C.C. _____

<u>PLY N°</u>	<u>ARD</u>
1	1.40
2	1.47
4	1.53
5	1.30
6	1.54
8	1.40
10	1.50
11	1.55
12	1.39

Reported By: *J Gallop*

Date: 24/6/87