



**REPORT OF THE
COMPTROLLER AND AUDITOR GENERAL
OF INDIA**

**UNION GOVERNMENT
No. 6 (COMMERCIAL) OF 1992**

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BHARAT COKING COAL LIMITED



सत्यमेव जयते

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BHARAT COKING COAL LIMITED

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STATE OF TEXAS

COUNTY OF _____

THIS _____ DAY OF _____

19____

WITNESSED my hand and seal of office this _____ day of _____

19____

PREFACE

Audit Boards are set up under the supervision and control of Comptroller and Auditor General of India to undertake comprehensive appraisals of the performance of the Companies and Corporations subject to audit by CAG.

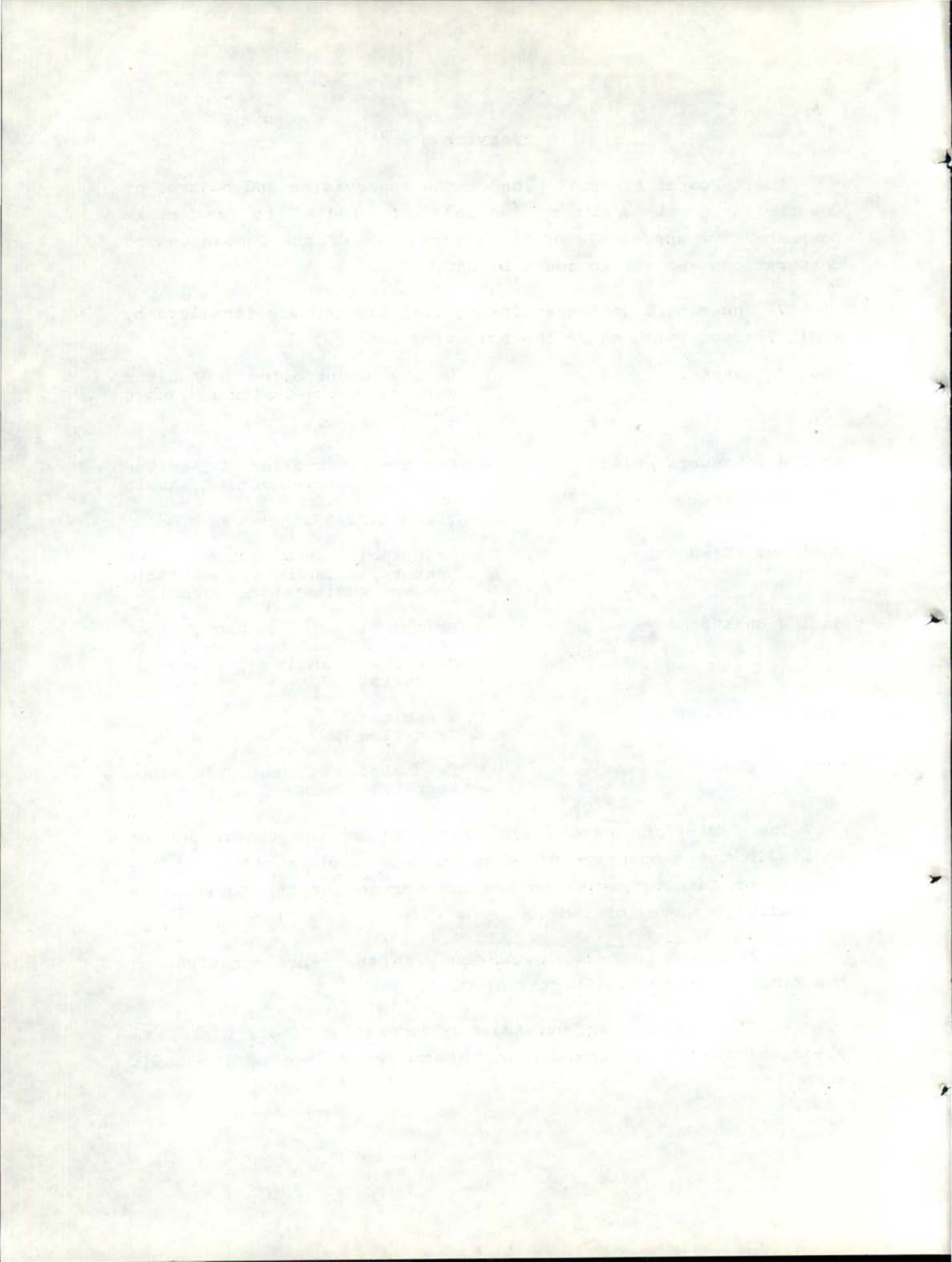
2. The report on Bharat Coking Coal Limited was finalised by Audit Board consisting of the following members.

Shri P K Sarkar	Deputy Comptroller & Auditor General, -cum-Chairman, Audit Board. (upto 30.6.1992)
Shri N Sivasubramanian	Deputy Comptroller & Auditor General, -cum-Chairman, Audit Board (from 1.7.1992)
Shri Ravi Saxena	Principal Director of Commercial Audit & Ex-Officio Member, Audit Board, Ranchi.
Shri U Bhattacharya	Principal Director of Commercial Audit & Ex-Officio Member, Audit Board-II, Calcutta.
Shri G S Marwaha	Consultant Part-time Member
Shri I M Aga	Ex-Chairman, Bharat Gold Mines Part-time Member

The Part-time members are appointed by the Government of India (in the respective Ministry or Department controlling the Company or Corporation) with the concurrence of the Comptroller and Auditor General of India.

3. Audit Board held discussion with the representatives of the Ministry of Energy, Deptt. of Coal.

4. The Comptroller and Auditor General of India wishes to place on record his appreciation of the work done by the Audit Board.



OVERVIEW

Achievement of Objectives

I. Bharat Coking Coal Limited was incorporated on 1st January 1972 to take over the management of coking coal mines in the private sector. It became a subsidiary of Coal India Limited from November 1975. The objectives of the Public Sector Undertaking were (i) Promotion, development and utilisation of coal reserves, (ii) raising productivity, (iii) generation of surpluses, (iv) making efficient arrangement for marketing coking coal and (v) promoting research and development.

(Paragraphs 1.1, 1.2 and 2)

II. The Company took up 72 new projects and 6 new washeries upto March 1992. Of them 33 coal projects were completed, 7 projects are progressing on schedule, 27 projects are behind schedule and 5 coal projects were dropped or suspended. Of the 6 washeries, 4 washeries have so far been completed.

(Paragraphs 5.1 and 5.7)

III. The production of coal went up from 20.68 million tonnes in 1976-77 to 27.01 million tonnes in 1991-92 and the sales went up from Rs.240.1 crores in 1980-81 to Rs. 1089.70 crores in 1991-92. Production in 1971-72 was around 14 million tonnes employing 1.25 lakh workers. The number of employees which was 1.69 lakhs in 1976-77 and 1.66 lakh in 1991-92 had gone up to 1.74 lakh in 1986-87. The first two objectives of the undertaking were, therefore, by and large achieved, but the other three only partially.

(Paragraphs 6.4, 7.4 and 9.1)

IV. Far from generating surplus, company had to borrow from parent Company, Coal India Limited to pay for accumulated losses of Rs. 1086.13 crores arising from annual turnover of around Rs. 1,000 crores per year. But the losses were more the result of prices having been fixed unremuneratively though wastages did add to the losses.

(Paragraphs 4.1 and 4.2)

V. Arrangements for marketing were not implemented at all effectively especially to major customers who had to resort to imports.

(Paragraphs 6.2 and 7.1)

VI. New technologies adopted in underground projects have by and large not been successfully implemented.

(Paragraph 5.5)

CHAPTER 1

INTRODUCTION :

1.1 Bharat Coking Coal Limited (BCCL) was formed in January 1972. It took over 214 Coking Coal Mines producing 14 million tonnes per annum when they were nationalised in May 1972. It was to reorganise and restructure such mines for the purpose of protecting, conserving & promoting scientific development of coking coal resources needed to meet the requirements of the Iron & Steel Industry in the country. With the nationalisation of noncoking mines in 1973, the Company also took over 182 noncoking coal mines.

1.2 BCCL became a subsidiary of Steel Authority of India Limited in March 1973. With the formation of a separate Ministry of Energy in February 1975 it was placed directly under the Ministry. On formation of Coal India Limited (CIL), Bharat Coking Coal Limited became subsidiary of CIL in November 1975.

1.3 The Sudamdih and Moonidih Coal Projects were transferred from National Coal Development Corporation (now Central Coalfields Limited) to Bharat Coking Coal Limited in April 1975. The Central Coal Washeries Organisation was transferred from Steel Authority of India Limited to BCCL in October 1983. The Loyabad Power House which belonged to Bihar State Electricity Board was transferred to BCCL from 1st October 1980. The Ministry stated in December 1991 that a comprehensive bill to legally transfer the 2 projects and power house to BCCL was still to be enacted. On 31st March 1992, BCCL was running 56 Under Ground Mines, 13 Open Cast Mines, 25 combined mines and 9 washeries and capacity to produce 32.87 million tonnes of coke in 1991-92.

CHAPTER 2

OBJECTIVES :

The objectives of the Company were :

i) To promote the development and utilisation of the coal reserves in the country for meeting the present and likely future requirement of the national economy with due regard to the need for conservation of non-renewable resources and safety of mine workers.

ii) To raise the productivity of Coal Mining and related activities through introduction of improved technology, streamlining of organisation and management and improving the skills and motivation of the work force.

iii) To generate surpluses by optimum utilisation of production capacity, improving efficiency of operations and adopting appropriate cost reduction and cost control method.

iv) To make efficient arrangement for marketing and supply of coal so that coal, coke and other similar derivatives are available to consumers throughout the country conveniently and at reasonable prices.

v) To promote research and development activities on a continuing basis in the areas of coal mining, beneficiation, development of new coal-based products and by-products, fuel technology or any other area bearing on conservation, development or utilisation of the coal reserves of the country.

CHAPTER 3

MANAGEMENT

The Company has a Board of Directors with a Chairman and Managing Director (CMD) and 5 whole time functional Directors.

CHAPTER 4

CAPITAL STRUCTURE :

4.1 The Company was formed with an authorised capital of Rs. 50 crores which had gone upto Rs. 1200 crores by 31st March, 1992. The paid up capital on 31st March, 1992 stood at Rs. 1122.00 crores which was entirely subscribed by Coal India Limited. The balance of loans from Coal India Limited to BCCL outstanding at the end of 31st March 1992 was Rs. 1829.37 crores. Debt equity ratio was 1.63 : 1 as on 31st March 1992.

4.2 Cumulative Losses

The cumulative losses of BCCL as on 31st March 1992 stood at Rs. 1086.13 crores wiping out almost the entire paid-up capital. The Company stated (April 1988) that it has been incurring heavy losses mainly due to the unremunerative administered prices for coal and soft coke fixed by the Government from time to time. But the losses were also to some extent the result of avoidable expenditure as indicated below :

4.3 The inventory which stood at Rs. 122.27 crores in 1980-81 rose to Rs. 510.32 crores in 1991-92 mainly due to build up in pit-head stock. A provision for deterioration in coal stock amounting to Rs. 12.12 crores was made. The Ministry stated (December 1991) that the Company was able to reduce the stock holding from 11.63 to 9.74 months' sales upto 1989-90.

4.4 The Sundry Debtors have increased from Rs. 38.97 crores in 1980-81 to Rs. 315.04 crores in 1991-92. The company made provision of Rs. 35.50 crores at the end of 1991-92 for doubtful debts.

4.5 The Company made a provision of Rs. 3.13 crores at the end of 1991-92 for doubtful advances.

4.6 An amount of Rs.4.38 crores was paid as damages for making belated deposits of provident fund dues with the Provident Fund

Commissioner from 1982-83. The Ministry in reply (December 1991) stated that due to poor ways and means position in BCCL there was delay in payment.

CHAPTER 5

DEVELOPMENT AND PROJECTS

5.1 Bharat Coking Coal Limited was given the task of increasing Coal production from the 20 million tonnes per annum to 32.20 million tonnes by 1985-86 and 50 million tonnes by 1990-91 by Coal India Limited. BCCL took up 72 projects to increase capacity by 22.38 million tonnes. In 34 underground projects capacity of 11.21 million tonnes and in 33 open cast projects capacity of 11.17 million tonnes were created till March 1992. Till March 1992, 33 projects were completed creating capacity of 10.56 million tonnes (11 Under Ground and 22 Open Cast) and 5 projects were abandoned for technical and other reasons. 7 projects are ongoing as per schedule and 27 are behind schedule. Against sanctioned cost of Rs. 1480.68 crores, expenditure of Rs. 946.69 crores was incurred upto March 1992.

5.2 Open cast mining :

The Company laid emphasis more on Open Cast Mining techniques to raise coal production. The Ministry stated (December 1991) that expenditure on geological exploration and studies for locating potential mine fields are inevitable, and explored areas may not be techno-economically viable for mining. On the Sitanala underground project heavy losses were foreseen and it was abandoned after running for more than 5 years and incurring expenditure of Rs. 1.55 crores.

5.3 Delay in Execution of Projects :

The following reasons for delays in the completion of the Projects were noticed.

Sl.No	Reason	No.of affected projects	Details of projects
1.	Delay in land acquisition	5	Block II, Gutway OCP & Phularitand XVI Seam, Patherdih Incline, Block-5.
2	Selection of appropriate technology	1	Katras
3.	Occurrence of Fire	1	Bhowra IX B Seam
4.	Adverse mining condition	5	Murlidih 20/21 pit, Gopalichuk, Buragarh Augmentation, Bararee Augmentation Bagdigi
5.	Delay in Shaft Sinking	3	Bhalgora, P.B. Project East Bhuggatdih
6.	Fund Constraints	8	Ghanoodi patch, Bhowrah 3 pit, Lodna 11/12/13 Seam, Mahespur IX Bottom, Mahespur Mech. extraction, Basantimata Mech. loading, Nudkhurkee OCP Madhuban Sector 'A'

5.4 Excess over original estimates

There were significant excesses over original project estimates.

(Rs.in.crores)

Sl. No.	Name of the Project	Original estimate	Revised estimates/ anticipated	Actual Expenditure (upto 31.3.91)
1.	Moonidih	16.09	182.13	*179.81
2.	Bhurungiya	3.74	9.47	9.49
3.	Golukdih OCP	7.68	15.49	14.68
4.	Kusunda OCP	11.85	18.92	20.18
5.	Jhukundar OCP	3.69	6.11	6.11
6.	Damagoria OCP	1.74	3.18	3.18
7.	Tesra OCP	1.99	3.01	3.01

* Upto March 1992

5.5 New Mining Technologies :

The most prevalent technology in India is the manual board and pillar, which has low productivity per capita Coal India proposed to try out some new technologies.

Trials with Side Loaders was made at Maheshpur colliery but the implementation of this Project was delayed due to paucity of funds. The Ministry stated (December 1991) that it has now been decided to implement the scheme with Scrappers in place of side discharge loaders originally envisaged in the Project Report.

Hydraulic Mining was done at Gopalichak Colliery. The first trial of the technology imported from Germany was commissioned in October 1988 and continued till February 1989. Due to hardness of coal the trial did not succeed. The trial was again started in December 1989 and continued till February 1990 when due to roof collapse the trial was abandoned. The Ministry stated that the Company has now identified a new site for trial.

Sub Level Caving technology was to be tried at Kondwadih. But, test panel built at Kendwadih Colliery for implementation of the technique was inspected by the General Manager of the Colliery in February 1987 when deterioration in the parting between the top and the bottom section within the test panel was noticed. The test panel was not safe and suitable. By and large efforts at induction of new technologies were not satisfactory.

5.6 Mining Project :

(i) The Moonidih underground mining project was sanctioned by the Government in November 1965. Capital outlay was Rs. 16.09 crores for output of 2.1 million tonnes per annum of coking coal production by 1973. The estimate of outlay was revised to Rs. 132.07 crores which was approved by the Government in February 1983 with an output of 2.1 Million tonnes per annum to be achieved by March 1985. The six powered longwall support faces were installed and 0.66 Million tonnes of coal was produced in 1991-92. Coal India derated the capacity to 1.5 Million tonnes per annum as the performance of powered support longwall equipment was not as per expectation. There were serious ventilation problems and coal evacuation capacity was inadequate. The expenditure incurred on the project upto March 1992 was Rs. 179.81 crores. The Company expects to achieve the capacity of 1.5 Million tonnes per annum by March 1993.

The Ministry stated (December 1991) that though geological information available was adequate for project planning, operational difficulties such as local geological disturbances came to light. Though the Company built six longwall faces, adequate facilities for coal evacuation and ventilation to match the longwall faces were not created. The technology in the world changed after the construction of mine was well under way. The Project also suffered because of poor quality of equipment purchased, mismatch, poor design etc. The Audit Board was informed by the Ministry that production of 1.2 Million tonne of coal per annum was expected by 1993-94 against estimate of 1.5 Million expected by the company.

(ii) Open Cast Project Block-II :

The Project for Block-II Opencast Mine was sanctioned by the Government of India in June 1982 for a production of 2.5 million tonnes of coal per annum by 1986-87 at a cost of Rs. 103.15 crores. The cost was raised to Rs. 173.82 crores and expenditure incurred upto March 1992 was Rs. 150.75 crores. Production of 0.61 million tonnes was achieved in 1991-92. The project is expected to be completed by March 1993 against the original completion schedule of 1986-87.

(iii) Katras Project :

The Project at Katras was sanctioned by the Government in October 1979 for investment of Rs. 26.04 crores and output of 0.9 Million tonnes per annum to be achieved by 1983-84. In May 1987, for Blasting Gallery method of mining in East Katras, investment of Rs. 7.50 crores was sanctioned by Bharat Coking Coal Limited. The Coal seam to be extracted was thick and sub-level caving method was proposed to be adopted. The implementation of the project was delayed and cost estimates for Rs. 33.54 crores were revised to Rs. 91.81 crores. Expenditure of Rs. 85.57 crores was incurred upto March 1992. The project is expected to be completed by March 1993.

The Ministry stated that the major reasons for cost over-run were price rise, change in scope, additions made etc.

(iv) North Amlabad Project :

The Project at North Amlabad was sanctioned by Government in October 1980 for investment of Rs. 26.18 crores and output of 0.72 million tonnes per year to be achieved by 1984-85. There was a delay of 6 years in commissioning the degassification plant. The project cost was revised to Rs. 69.48 crores against original sanctioned cost of Rs. 26.18 crores and the capacity was reduced from 0.72 Million tonnes to 0.57 Million tonnes because of adverse geomining conditions.

The Ministry stated (December 1991) that the increase in project cost was attributable to price rise, change of scope and

additions. Expenditure upto March 1992 was Rs. 65.63 crores and the project is expected to be completed by March 1994.

A Coal Handling Plant, linked with the project, built at a cost of Rs. 211.91 lakhs, is lying idle.

The Ministry stated (December 1991) that the plant will be fully operational only after the proposed modifications of the existing siding by the Railways. The Railways are still to start the work.

v) Moolidih 20/21 Pit Project :

This Project for production of 0.504 Million tonnes of coal per year with capital outlay of Rs. 18.27 crores was sanctioned by the Government of India in December 1982 and the Project was to be completed in 1986-87. During the execution of the project, dykes were met with in top gate of long wall panels. Seismic survey was conducted by a foreign agency and three disturbances in panel under development and one disturbance in next panel were noticed. Accordingly the company decided to drop Longwall mining and adopt board and pillar method in the project. Longwall equipment valuing over Rs. 10 crores procured for the project were diverted to Moonidih Project. A Road Header procured at a cost of Rs. 0.81 crore stopped working due to roof collapse. The Road Header remained underground till August 1990 when it was lifted to the surface. The Company incurred expenditure of Rs. 11.94 crores (provisional) upto March 1992 against the sanctioned capital outlay of Rs. 18.27 crores. The project is still to be completed.

The Ministry stated (December 1991) that original Project Report with longwall face was dropped due to unfavourable geological condition. A Revised Project for production of 0.57 million tonnes per annum with a capital outlay of Rs. 19.59 crores was sanctioned in May 1987.

(vi) Bhalgora Project :

This Project for production of 1.20 million tonnes per annum with capital outlay of Rs. 46.21 crores was sanctioned by the Government of India in October 1980 and was to be completed in 1984-85. There was delay in implementation and dispute with the contractor. The project is now expected to be completed by March 1997. Expenditure incurred upto March 1992 was Rs. 32.10 crores (provisional).

(vii) Pootkee Balihari Project :

This Project for production of 3 million tonnes per annum was sanctioned by the Government of India in December 1983 at a capital cost of Rs. 199.87 crores for completion by 1993-94. Advance expenditure of Rs. 12.50 crores was approved by the Government of India in January 1979. Expenditure of Rs. 142.49 crores (provisional) has been incurred upto March 1992 and there was delay in sinking pit on account of delay in repair and fitting, delay in supply of design documents and delay in fabrication shaft sinking equipment.

The Company stated (April 1988) that it had to deploy old equipment for shaft sinking purposes which had to be reactivated major sinking undertaken departmentally and the persons were inexperienced. The World Bank in its appraisal of the project activities found that the project would not be economically viable and therefore it decided to cancel the loan for the project from October 1989. The project is now expected to be completed by March 1996 and is being fully financed by Government of India without any loan from World Bank.

(viii) Jharia Projects :

Fires in Jharia Coal Field resulted in colossal loss of coking coal. They also affected the mineability of coal, polluted the environment, endangered surface structures, vitiated underground workings and affected persons residing nearby.

The company took up 22 projects to control fire with capital investment of Rs. 114.57 crores. Only one project had been completed till March 1992 and expenditure incurred was Rs. 70.63 crores. Delay in the implementation was due to delay in receipt of equipment, poor availability and utilisation of equipment and resource constraints.

According to the report of the Central Mine Planning and Design Institute Limited the fires result in loss of coal valued at Rs. 7.5 lakhs per day. Due to delay in the implementation of the project, substantial loss of coking coal is taking place daily.

5.7 Development of Washeries :

BCCL estimated, around 1984, that capacity for washed prime coking coal needed by the Steel Plants was likely to fall short by 10.21 Million tonnes by the year 1994-95. It proposed to set up 8 coal washing plants with raw coal input capacity of over 9.08 million tonnes per annum. 6 more washeries were envisaged to come up as part of reconstruction of mining blocks in Jharia coal fields, each having a capacity of 2 Million tonnes per annum of raw coal input.

The Ministry stated (December 1991) that the demand for indigenous washed prime coking coal in 94-95 was now estimated at 11.38 Million tonnes for steel plants only. The undermentioned washeries were considered adequate to meet the demand.

Dugda -I	existing
Dugda -II	-do-
Bhojudih	-do-

Patherdih	-do-
Lodna	Newly commissioned
Sudamdih	-do-
Moonidih	Newly commissioned
Madhuband	Under construction
Pootkee	To be taken up.

For medium coking coal washeries at Baropa and Mahuda with an input capacity of 1.05 Million tonnes per annum were constructed and commissioned.

The following avoidable wastage and low productivity of investment were noticed in audit.

(i) Washery at Hurriladih : A pilot coal washery plant with 40 tonnes per hour capacity was installed in 1959 by BCCL at the premises of Central Fuel Research Institute at a cost of Rs. 12 lakhs. It was to be shifted to Hurriladih for facility of commercial operation. The Ministry did not agree to the shift. Engineers India Limited claimed payment for the jobs carried for the shift and claim was under arbitration. The award given by the Arbitrator has been referred to Court by Engineers India Limited. The washery is being used for testing and training purposes.

(ii) Washery at Moonidih : A washery at Moonidih was completed in December, 1982 and accepted by BCCL in May, 1983. Commercial operation started from April, 1984. Expenditure on the project was Rs. 26.53 crores upto 31st March, 1991 against the original sanctioned cost of Rs. 16.39 crores.

Actual input to the washery was 25% to 53% of the designed input and the recovery during the year was between 45% and 70% against norm of 70% of input. The Ministry stated (December, 1991) that low capacity utilisation was due to shortage of raw coal.

The Plant was kept idle for 42% to 59% of the available working hours. The Ministry stated (December, 1991) that the reasons were power failures and raw coal shortage. The consumption of magnetite was not to exceed one kg.per tonne of raw coal but the washery consumed Rs.95.68 lakhs worth of magnetite in excess of norms between 1983-84 to 1991-92.

The company stated (April, 1988) that consumption was more due to feeding of coal other than Moonidih mines coal and pending.stabilisation of washery.

(iii) Washery at Barora : The construction of the washery at Barora was completed in September, 1982 and commercial operation started from April, 1983. The actual cost of project upto March, 1987 was Rs. 6.22 crores against the original estimate of Rs. 2.77 crores.

Production Performance :

The following table indicate the input and output yield from 1983-84 to 1991-92.

(Figures in lakh tonne)

Year +	Raw Coal	Percentage of designed input	Output		Yield	
			Clean Coal	Middlings	Clean Coal	Middlings.
Project Report	4.20	100%	2.1	1.53	47	34
1983-84	2.88	68.57	0.80	1.26	27.75	43.75
1984-85	2.08	49.52	0.45	0.90	21.63	46.27
1985-86	1.56	37.14	0.30	0.62	21.79	39.74
1986-87	2.00	47.62	0.55	0.94	27.50	46.00
1987-88	2.13	50.71	0.93	0.81	43.66	38.09
1988-89	2.17	51.67	0.99	0.74	45.66	34.10
1989-90	2.18	51.90	0.75	0.91	34.40	41.74
1990-91	1.29	30.71	0.47	0.55	36.43	42.64
1991-92	2.20	52.38	0.90	0.77	40.91	35.00

The input of the plant was far below the rated capacity of 4.2 lakh tonnes ranging between 31 to 69 percent. The yield of clean coal and middlings varied between 22 to 46 percent and 34 to 46 percent of the input against norm of 47 and 34 percent respectively. The Company stated (April 1988) that power failure and electrical and mechanical breakdown were the main causes.

(iv) Washery at Mohuda : The construction of Washery at Mohuda was completed in December 1988 and commercial operation started from April 1990. The cost up to March 1992 was Rs. 11.41 crores against revised estimate of Rs. 8.45 crores. The Ministry stated (December 1991) that the Project Report has further been revised to Rs. 12.55 crores as approved by BCCL. Delay in completion of the Project led to escalation in cost by Rs.8.61 crores over the original estimates of 1977 against revised estimate of Rs. 8.45 crores.

(v) Washery at Madhuband : The total expenditure incurred on project for setting up a washery at Madhuband was Rs. 98.56 crores upto March 1992 against original estimate of Rs. 40.07

crores in 1981. The project is expected to be completed in March 1993. Contract was awarded to an Indian tender at a cost of Rs. 72.50 crores against quotation for Rs. 54.35 crores by a foreign tender.

The Company stated (April 1988) that the delay was due to delay in finalisation of equipment specification by Mining and Allied Machinery Corporation, the Indian tenderer whose execution of project was also slow.

The Ministry in reply stated that Project Report of the washery was revised to Rs. 165.67 crores of which Rs. 68.75 crores was due to cost escalation, Rs. 16.83 crores on account of addition to scope and Rs. 7.33 crores on account of change in the specification.

To sum up, the delay in construction and commissioning of washery led to cost overrun of Rs. 80.69 crores in Moonidih, Barora, Mohuda and Madhuband Washeries.

Capacity utilisation was poor resulting in increase in cost of washing raw coal. A washing plant procured at a cost of Rs. 12 lakhs is lying idle since 1976.

CHAPTER 6

PERFORMANCE :

6.1 Financial Performance:The table below shows the financial performance of the company in recent years.

(Rs. in. lakhs)

<u>Head</u>	1988-89	1989-90	1990-91	1991-92
<u>Liabilities:</u>				
a) Paid up capital	81503	95000	104763	112200
b) Reserve & Surplus	-	2313	1324	
c) <u>Borrowings</u>				
i) From Coal India Limited	153987	159736	173578	182937
ii) From foreign Govt. (deferred credit)	81	61	61	52
iii) From bank (secured & unsecured)	1518	1794	3104	1936
iv) Trade dues and other current liabilities and provisions.	50907	51398	57936	65831
	287996	310302	340766	362956
<u>Assets.</u>				
a) Net Fixed Assets	75717	83880	91117	96417
b) Capital Work-in-progress.	35157	42269	44565	51166
c) Capital stores in Stock.	5240	3591	4258	4958
d) Investment	-	-	-	
e) Current Assets, Loans and Advances.	72244	85979	96646	99752
f) Miscellaneous Expenditure.	331	410	380	2050
g) Accumulated loss	99306	94173	103800	108613
	287996	310302	340766	362956

The accumulated losses have almost wiped off the paid-up capital and the company is managing with loans from Govt.

Since its formation, the company has been making losses excepting in 1982-83 and 1989-90 when it made profits of Rs. 4.23 crores and Rs. 19.78 crores respectively. The accumulated loss as at 31.3.92 stood at Rs. 1086 crores. The loss/profit made during the last 6 years are tabulated below:-

(Rs. in crores)

	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
Sales	724	851	1097	1059	966	1089.70
Loss	233.03	283.79	251.66	289.98	352.93	380.10
Subsidy received under coal price regulation act.	128.98	171.76	251.06	309.76	236.74	331.97
<u>Netloss/</u> <u>(Profit)</u>	104.05	112.03	0.60	(19.78)	116.19	48.13

The size of losses compared to sales clearly indicates that the sales are not being made at remunerative price. Despite the subsidy, which the company received under the statute, if the sales were not made at higher prices which the market could take, then the operations of the company cannot be looked upon as uneconomical.

6.2 Delivery Performance :

While the despatches of raw coal by the other subsidiaries of Coal India have gone up over the years, despatches by Bharat Coking coal Limited had reached a plateau. The production of BCCL includes both coking coal and non-coking coal.

(In million tonnes)

Years	Despatch by CIL as a Whole	Despatch by BCCL
1979-80	87.3	15.48
1980-81	93.0	15.49
1981-82	103.3	17.91
1982-83	108.5	18.55
1983-84	114.6	15.73
1984-85	119.10	10.36
1985-86	131.30	11.82
1986-87	133.5	12.67
1987-88	146.1	14.78
1988-89	157.4	16.45
1989-90	166.2	14.45
1990-91	183.15	14.81
1991-92	194.38	16.23

The demands from the Steel Plants for coking coal and despatches made by the Company are given below :

(in Million tonne)

Year	Demand of Steel Plants	Despatch to Steel Plants
1982-83	15.50	9.15
1983-84	16.80	8.90
1984-85	16.86	8.17
1985-86	15.23	9.11
1986-87	10.74	9.05
1987-88	11.64	9.37
1988-89	11.64	9.97
1989-90	11.95	9.12
1990-91	13.32	8.63
1991-92	12.83	9.99

have not achieved
targeted production

a. Target (lakh tonne)	128.27	99.43	100.27	165.160	175.120	151.60
b. Achievement (lakh tonne)	114.73	89.79	94.73	138.942	138.823	126.36

The number of mines which have not achieved full capacity was more than the mines which achieved full capacity during the years. In many cases the targets fixed were below the assessed capacities as seen from the table given on next page.

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91
1. Daily average request made by BCCL.	2180	2376	2868	2973	2468	2197	2367	2652	2700	2573	2738
2. Daily average allotment by Railways.	1610	1814	2593	2533	2374	2141	2103	2260	2473	2361	2319
3. Daily average loading by the Company.	1371	1527	2236	2196	2060	1938	2086	2242	2375	2225	2141
4. No. of empties drawn by Rail. (daily average).	37	22	36	61	37	26	15	10	8	13	12
5. Daily average detention.	326	274	395	499	306	349	398	330	360	629	619

It was further observed that the assessment of capacity for a year was made long after the commencement of the year. The Company stated (April 1988) that the system was being streamlined to enable timely assessment of capacity.

The Ministry stated (December 1991) that the capacity assessed by CMPDIL is a broad indication of production potential under ideal conditions. The capacity of Damoda as assessed by the CMPDIL was pitched lower because of non availability of Dumpers.

The overall picture on the capacity of the mines assessed by Central Mine Planning and Design Institute Limited, the targets for production, actual production and accumulation of stocks at pit head are given below :

(In million tonnes)

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
1. Capacity of the Mines fixed by CMPDIL	27.88	27.06	24.58	27.12	26.36	28.92	31.63	32.68	35.38	32.87
2. Target of Production										
Original	23.75	24.50	24.50	25.00	24.00	25.10	26.10	27.5	27.8	28.00
Revised	23.50	24.50	23.50	23.00	24.00	-	-	-	-	-
3. Actual production	24.00	21.63	21.84	21.08	24.01	25.11	26.30	26.61	26.70	27.01
4. Pit head stock as on 31st March.	6.66	3.71	4.48	4.93	5.81	6.7	6.3	7.96	13.61	12.68

The Management stated (June 1987) that the reasons for failure in achieving the target from 1983-84 to 1985-86 were power failure, break-down of plant and machinery, late commissioning of projects, absenteeism and poor industrial relations. Analysis of reasons for some of these shortfalls in production of coal in recent years are given below :

(In lakh tonnes)

Year	Power Failure	Machine Break Down	Labour Trouble	Late Commissioning of Project	Absenteeism
1986-87	7.39	1.60	0.96	0.08	3.13
1987-88	4.55	2.19	0.54	0.78	0.91
1988-89	3.56	1.86	1.51	-	0.67
1989-90	6.24	2.00	1.49	4.47	4.20
1990-91	12.80	2.77	0.31	NA	2.81
1991-92	8.00	5.60	0.54	NA	4.34

The Management stated (April 1988) that breakdown will be reduced by regular and planned maintenance.

On accumulation of pit-head stocks despite shortfall in achievement in production the company stated (April 1988) that "holding of a sizeable pit-head stock cannot be taken in isolation in fixation of targets".

6.4 Underground vis-a-vis Open Cast Production

The production from underground, manual open cast and mechanised open cast mines during the last 16 years is given below :

(In Million tonnes)

Year	Under Ground	Manual O.C.	Mechanised O.C.	Total Production
1976-77	18.15	2.10	0.43	20.68
1977-78	17.48	1.96	0.77	20.21
1978-79	16.09	2.49	1.14	19.72
1979-80	15.26	2.56	2.26	20.08
1980-81	15.16	2.60	3.57	21.33
1981-82	15.72	2.59	4.71	23.02
1982-83	15.01	2.44	6.55	24.00
1983-84	14.05	1.27	6.31	21.63
1984-85	13.34	1.12	7.38	21.84
1985-86	12.92	0.84	7.32	21.08
1986-87	13.76	0.55	9.70	24.01
1987-88	13.81	0.43	10.87	25.11
1988-89	14.35	0.30	11.65	26.30
1989-90	13.29	0.28	13.04	26.61
1990-91	12.29	0.26	14.15	26.70
<u>1991-92</u>	<u>12.08</u>	<u>0.27</u>	<u>14.66</u>	<u>27.01</u>

It would be seen that production from underground mines has been declining. But prime coking coal of superior grade is mostly in underground pillars awaiting extraction. Further, the coking

coal reserves lie in the deeper layers below the existing mines. But to achieve targetted production, BCCL had to go in for extraction of coal through open cast mining bringing production from underground mining to 12.29 million tonnes in 1990-91 from 18.15 million tonnes in 1976-77.

According to Management (June 1987) the reasons for decline in underground production was as follows :

- a. Adverse mining condition due to existence of fire, water, shortage of stowing materials etc.
- b. Gradual decline in miners/loaders strength and efficiency of miners/loaders.
- c. Replacement of underground mines with mechanised open cast mines to compensate for drop in production from underground mines.

The Ministry endorsed (December 1991) the views of the management.

6.5 Production of coking coal vis-a-vis non-coking coal.

The Company's primary objective is to produce Coking Coal for steel industry. But proportion of coking coal in the total production has declined over the years.

(Figures in million tonne)

<u>Year</u>	<u>Coking Coal (Prime Coking and medium Coking combined)</u>	<u>Non-coking coal</u>
1982-83	15.17	8.83
1983-84	13.59	8.04
1984-85	13.45	8.39
1985-86	12.24	8.84
1986-87	14.07	9.94
1987-88	14.29	10.82
1988-89	14.80	11.50
1989-90	13.90	12.71
1990-91	9.17	17.53
1991-92	9.62	17.38

To achieve the targets set for production, more of non-coking coal from new Open Cast projects was produced. The quality of coal from open cast mines is inferior to that from underground mines. The demand from Steel Industry for prime coking coal was not met fully, needing resort to imports.

The Ministry stated (December 1991) that demand for coking coal had been stagnant for a number of years, but this was not to say that production of coking coal was satisfactory.

Production of unwanted coal in excess of target :

The production, despatches, own consumption and closing stock of coal in the years 1979-80 to 1991-92 are given below :

(Figures in lakh tonne)

Year	Opening Stock (Raw Coal)	Production (Raw Coal)	Despatches (Raw Coal)	own consumption	Closing stock (Raw Coal)	Closing stock in terms of weeks Pro- duction
1979-80	25.30	186.24	154.75	28.94	32.32	9.03
1980-81	32.32	210.25	154.95	28.36	55.62	13.77
1981-82	55.62	228.50	179.14	44.02	59.98	13.66
1982-83	59.98	234.15	185.47	48.21	61.86	13.75
1983-84	60.93	205.67	157.34	68.95	31.14	7.86
1984-85	31.54	215.29	103.61	39.96	41.80	10.10
1985-86	42.33	208.36	118.16	87.89	41.75	10.42
1986-87	39.53	233.41	126.68	93.47	54.81	12.21
1987-88	56.87	248.55	147.80	99.57	60.32	12.62
1988-89	61.58	259.76	164.47	94.46	55.49	11.11
1989-90	56.09	261.24	144.50	N.A.	79.81	15.90
1990-91	79.81	267.00	148.11	82.75	100.53	19.60
1991-92	100.53	270.00	170.25	85.70	89.91	17.32

According to norms coal stock should not exceed 3 weeks production. But stocks upto 19 weeks production had accumulated. Heavy accumulation leads to deterioration in quality, washing out in rains, incidence of spontaneous fire and pilferage. Provision for Rs. 12.12 crores was made in the

accounts of the Company up to 1991-92 towards loss due to deterioration in quality. One of the reasons for accumulation was inferior grade produced in excess of targets.

(Fig. in lakh tonne)

Name of the Mines	Grade	Prodn. Prog.	Opening stock	Actual production	Closing stock
Damoda	NLW-IV	5.90	3.13	6.19	2.83
Akashkinaree	NLW-IV	2.93	0.53	3.11	3.47
KOCP	W-IV	3.72	3.48	4.01	1.58
Kustore	SLV	1.84	3.10	1.79	2.55
ENA	SLV	1.35	3.88	1.73	3.65
Bera	D	1.51	0.74	1.42	0.81
Gonudih	NLW III/W	1.46	0.56	1.46	0.61
Tisra (N)	NLW,	1.58	0.57	0.82	0.57

The stock of SLV coal and non linked washery Grade IV coal which are not suitable for steel plants had increased substantially.

The Ministry stated (December 1991) that it is a fact that the stock of coal has increased beyond norms.

6.6 Shortage of Coal :

The shortages in stock of coal as per production records and figures of measured stock of coal arose mainly due to :

- less coal accounted for in the colliery books.
- admixture of stone and rejects in the coal raised from opencast mines.
- errors in reporting production.

- compressed stock carpet coal not taken into account at the time of measurement.

Upto 5% discrepancy in booked production and measurement figures is considered reasonable.

(Figure in lakh tonne)

AS ON	Book Stock	Measured Stock	Shortage	Shortage to book stock (%)	Shortage in excess of 5%
31.03.1984	54.25	37.09	17.16	31.63	10.26
31.03.1985	48.72	44.82	3.90	8.00	1.55
31.03.1986	56.76	43.74	13.02	22.94	7.49
31.03.1987	64.83	60.62	4.21	6.49	1.21
31.03.1988	103.40	62.22	41.18	39.82	4.35
31.03.1989	99.04	77.17	21.87	22.08	8.07
31.03.1990	118.18	113.05	4.33	3.56	4.28
31.03.1991	146.88	136.13	10.75	7.32	3.59
31.03.1992	162.68	126.85	35.83	22.02	34.14

6.7 Sand Stowing

Stowing (generally sand) into the mines is done for conservation and safety, particularly in thick seams or where a number of seams occur in close succession. Huge quantity of reserves of coking coal (above 1000 Million tonnes) are standing on pillars which have now to be extracted and so stowing is necessary. River sand is most suitable for stowing. Departmental Ropeways are used to transport sand. Some supplies are received from Contractors also.

The table below indicated the targets for raising coal and sand stowing and the actual performance.

Year	Coal to be raised by sand stowing (Lakh Tonne)	Sand to be stowed (Lakh Tonne)	Actual Coal raised (Lakh Tonne)	Sand actually stowed (Lakh Tonne)
1982-83	35.00	66.00	29.25	54.57
1983-84	31.00	60.00	25.82	46.70
1984-85	27.00	52.00	22.12	37.12
1985-86	32.00	61.00	24.10	37.42
1986-87	27.93	52.95	24.10	43.10
1987-88	28.98	53.18	23.11	42.41
1988-89	29.81	50.80	24.07	39.03
1989-90	37.10	67.90	26.44	42.50
1990-91	39.40	52.00	22.50	21.30
1991-92	34.70	46.60	22.10	21.60

Both sand stowing and coal raised fell short of targets. The Company stated (April 1988) that shortfall in coal production and shortfall in stowing were due to the fact that the targetted coal production could not be achieved mostly due to difficult geomining conditions. Stowing was done commensurate with the void created by extraction of coal.

Ropeways were installed for extracting and transporting sand from Damodar River to the Collieries for stowing. They were designed for winching and transporting 4.5 million tonnes of sand annually. One of the Ropeways. Breco Ropeways was designed to transport 1.5 million tonnes per year. It was commissioned in

December 1965. Another Ropeway viz. 'F' Ropeways was engineered by Interstate Ropeways and was designed for transporting 3.0 million tonnes per year. It was commissioned in March 1969. To allow for low bulk density of Damodar Sand and other local factors the capacities of ropeways were derated to 1.2 million tonnes per year, and 2.4 million tonnes per year respectively.

The Ministry stated (December 1991) that the capacity of the two Ropeways was 36 lakh tonne per annum on the condition that two high capacity Dredgers will be procured for 'F' Ropeways. Since the high capacity Dredgers have not been procured the capacity of the two Ropeways was only 12 lakh tonnes per annum. However, the CMPDIL while preparing a Project Report in 1982 assumed the capacity of Ropeways at 36 lakh tonnes without any condition.

A feasibility report to enhance the capacity of the Ropeways was prepared by the company in December 1977 with a proposed capital investment of Rs. 347.96 lakhs which was approved by the Coal India Limited in July 1978. The Company stated (April 1988) that 2 Dredgers provided for in a feasibility report prepared in 1977 were not procured. The year-wise transportation by Ropeways is given below :

<u>Year</u>	<u>Transportation</u> <u>(Lakh tonnes)</u>
1982-83	8.67
1983-84	4.57
1984-85	10.25
1985-86	8.29
1986-87	9.17
1987-88	10.50
1988-89	11.51
1989-90	6.24
1990-91	6.70
1991-92	8.32

The Ropeways did not achieve the capacity of even 12 lakhs tonnes in any year.

With a view to improving capacity utilisation of the Ropeways Government approved a capital investment of Rs. 21.32 crores in January 1987 out of which only Rs.4.37 crores could be spent upto March, 1991. The scheme though originally scheduled to be completed by March 1990 is now expected to be completed by March, 1994 because of Non-procurement of high capacity dredgers and Non-availability of major spares. The Company procured sand through private contractors and expenditure incurred thereon during the last 5 years ending 31st March 1992 was as follows :

Payment to Contractors
for sand supply

1987-88	Rs. 13.2 crores
1988-89	Rs. 12.69 crores
1989-90	Rs. 13.81 crores
1990-91	Rs. 8.84 crores
1991-92	Rs. 9.88 crores

The ropeway machinery remained idle during 1991-92 for a large part of the time

Idle time of Ropeways (1991-92)

	<u>Normal Season</u>		<u>Rainy Season</u>	
	<u>% Considered allowable</u>	<u>% of Actual Idle time</u>	<u>% Considered allowable-</u>	<u>% of Actual Idle time</u>
Pontoon	30%	77%	70%	89%
Winch	22%	65%	50%	83%
Monocable	22%	67%	50%	85%
Bicable	25%	-	50%	-

Idle time was attributed to plant and machinery having outlived their normal lives and not getting replaced as well as to depletion of sand reserve.

6.8 Coal Handling Plants :

In order to ensure complete satisfaction to customers, quality of supply and quick loading i.e. reduction in loading time, the Company raised handling capacity to 6.85 million tonnes per annum by 31.03.1992 against capacity of half a million tonnes before nationalisation. Details of the projects sanctioned are given in Appendix I.

Coal Handling Plants

Appendix I

Name of the Coal Handling Plant	Date of Sanction	Sanctioned annual capacity (Million tonne)	Estimated cost (Rs. in lakhs)	Scheduled Date of Completion as per Project Report	Actual date of Completion	Delay	Revised cost (Rs. in lakhs)	Actual cost upto Mar '91 (Rs. in lakhs)	Cost Escalation (9-4) (Rs. in lakhs)
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Golukdih (Truck Loading)	Jan.'77	0.72	50.00	Jan.'80	Work stopped since Oct.'85	5 years (Abandoned Half done)	206.51	177.65	127.65
2. Kusunda (Wagon Loading)	Oct.'78	0.50	67.10	Aug.'82	Work stopped since April '86	4 years (Abandoned)	93.00	71.05	3.95
3. Dhansar (Wagon Loading)	Oct.'78	0.50	60.00	Oct.'79	Sept., 1983	4 years	141.27	126.13	66.13
4. Junkundar (Wagon Loading)	May.'77	0.36	57.14	Nov.'82	April, 1987	5 years 5 months	57.14	48.34	
5. Keshalpur (Truck Loading)	July '80	0.50	17.83	May '82	Dec., 1987	5 years 7 months	106.00	109.62	91.79
6. Katras (Wagon Loading)	Oct.'79	0.90	99.53	Sept.'81	July, 1989	7 years 9 months	211.47	202.62	103.09

economically viable. It was decided (in April 1986) to abandon the Coal Handling Plant at Kusunda. The company suffered a loss of Rs. 63.33 lakhs due to poor management in choice of contractors.

(b) Golukdih Coal Handling Plant :

Construction of the Coal Handling Plant at Golukdih with capacity of 0.72 million tonnes per year was started in November 1981 at a cost of Rs. 50 lakhs. But cost went upto Rs. 206.51 lakhs due to delay in procurement of land. After a sum of Rs. 239.53 lakhs was spent, the management decided to stop further construction. Delay in construction, had reduced balance reserves to 6.35 million tonnes as compared to 11.52 million tonnes on which original Project Report was based. Company decided to use the Washery at Patherdih to wash coal from Golukdih as hitherto 19.115 lakhs tonnes of coking coal locked under the Coal Handling Plant at Golukdih valued at Rs. 25.62 crores would become available. The Company sustained a loss of Rs. 1.44 crores on the incomplete project.

The Company stated (April 1988) that part of Golukdih Coal Handling Plant would be used and the loss reduced.

(iii) 3 Feeder Breakers procured for use in Coal Handling Plants at a total cost of Rs. 0.80 crores were lying idle at Dhansar since procurement in February 1984.

The Company stated (April 1988) that installation of Feeder Breaker was delayed due to delay in construction of Coal Handling Plants. The 3 Feeder Breakers had since been installed at Junkundar, Katri and Nichitpur. But the Coal Handling Plant at Nichitpur is not working, and performance of the Plants at Junkundar and Katri were poor.

Name of the Equipment effective from Standard	Standard as per Mishra Committee	1987-88		<u>1988-89</u>		<u>1989-90</u>		<u>1990-91</u>		<u>1991-92</u>		
		Standard	% Avail.	% Util.	% Avail.	% Util.	% Avail.	% Util.	% Avail.	% Util.	% Avail.	% Util.
Availability Utilisation												
Shovel	80	58	65.2	32.0	68.3	33.1	70.3	33.8	71.1	32.8	61.1	33.6
Dumper	67	50	54.5	20.6	64.3	24.1	64.7	24.7	63.0	22.9	56.3	23.8
Dozer	70.	45	51.7	21.2	61.6	27.0	60.0	26.6	60.2	25.6	51.6	26.4
Drill	78	50	55.3	14.8	63.5	18.0	63.8	18.9	58.2	15.8	52.3	16.9

Note : (1) Availabilility and utilisation were calculated as a percentage of shift hours

(2) Standard availability/utilisation was taken from review committee report (1975) and Shri R.N. Mishra Committee reports.

(3) Weighted average has been considered in arriving at standard availability and standard utilisation in respect of shovel

Appendix III

Achievable Output vis-a-vis actual output shovels on roll.

	<u>1982-83</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>	<u>1988-89</u>	<u>1989-90</u>	<u>1990-91</u>	<u>1991-92</u>
1. No. of Shovel on Roll	56	64	73	93	114	121	121	128	139	154
2. Total achievable output as per norms fixed by Central Mine Planning & Design Institute (CMPDIL) Limited in MM3)	26.17	31.47	36.77	43.59	54.53	65.09	65.55	69.05	73.5	82.89
3. Actual Output in cubic metres.	15.05	16.25	20.00	22.22	27.99	29.92	34.29	37.06	38.18	41.47
4. Percentage of actual output to total achievable output	57.51	51.63	54.39	50.97	51.32	45.96	52.31	53.67	51.95	50.03

Availability in some cases was higher than the standard, but utilisation was much below the standard in all cases, indicating that idle hours and down time on the machines were excessive.

The Management stated (March 1987) that steps were taken to improve utilisation and reduce idle time. Shift supervision had been strengthened. Operational staff were motivated towards higher production by welfare schemes and blasting efficiency had been improved. Efforts were being made to shift houses and bastis falling the quarriable areas. But steps taken by the Company did not yield any results nor improvement in utilisation.

The Ministry acknowledged the low percentage utilisation of Heavy Moving Machinery and stated (December 1991) that steps were being taken to improve the utilisation.

For shovel on roll achievable output declined from 57.51 per cent in 1982-83 to 50.03 per cent in 1991-92. The

For shovel on roll achievable output declined from 57.51 per cent in 1982-83 to 50.03 per cent in 1991-92. The Ministry stated (December 1991) that they have been computing on the basis of assessed capacity based on local conditions of mining like fire, underground working and serious restriction of blasting etc. and not the norms fixed by the C.M.P.D.I.L. But in Appendix II the norms of CMPDIL were adjusted after taking into account various factors mentioned by the Ministry.

The analysis of downtime of Heavy Earth Moving Machines are given in Appendix IV.

Appendix IV

Analysis of downtime of Heavy Earth Moving Machines

Year	Total Available hours M/c. Hrs. worked (hours)	Actual time	Down time	Percentage of down time to total	Breakup of down time as given by Management	
					Available Breakdown time	Idle time
<u>Shoval</u>						
1982-83	195334	90634	104700	53.60	61920	42780
1983-84	199015	61984	137031	68.85	54530	82501
1984-85	274902	123486	151416	55.00	80821	70595
1985-86	343378	119582	223796	67.10	112971	110825
1986-87	519358	209497	309861	59.66	187287	122574
1987-88	755927	241836	514091	68.0	262864	251227
1988-89	809027	267905	541122	66.89	256361	284761
1989-90	799318	270502	528816	66.16	237086	291730
1990-91	902952	296081	606871	67.21	370847	236024
1991-92	951064	319737	631327	66.38	370183	261144
<u>Dumper</u>						
1982-83	739889	301134	438755	59.30	198290	240465
1983-84	828487	208396	620091	74.85	266773	353318

1984-85	1499219	517299	981930	65.49	541185	440645
1985-86	1708924	395623	1313301	76.85	622048	691253
1986-87	2037704	544631	1493073	73.27	1009154	483919
1987-88	2905044	598103	2306941	79.41	1322667	984274
1988-89	2700567	652274	2018293	75.84	963624	1084669
1989-90	2750400	679060	2071340	75.31	969245	1102095
1990-91	2960140	677700	2282440	77.10	1434017	848423
1991-92	3112730	741257	2371473	76.19	1359087	1012386

Dozer

1982-83	182060	80288	101772	55.90	57166	44606
1983-84	219584	60857	158727	72.28	68949	89778
1984-85	380428	149950	230478	60.58	126302	104176
1985-86	351303	106133	245170	69.79	129268	115902
1986-87	587515	178354	409161	69.64	288772	120389
1987-88	878694	186270	692424	78.84	24074	268350
1988-89	719060	194148	524912	72.99	276017	248835
1989-90	705580	187862	517718	73.37	282234	235484
1990-91	748315	192028	556287	74.34	374808	181479

1991-92	765920	201870	564050	73.64	370752	193298
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Drill

1982-83	115622	32489	83133	71.90	38964	44169
1983-84	121662	20519	101144	83.13	40878	60266
1984-85	294403	46880	147529	75.90	66682	80847
1985-86	249436	39952	209484	84.00	97529	111955
1986-87	289352	47893	241459	83.44	133836	107623
1987-88	351763	52029	299734	85.20	157205	142529
1988-89	337704	60843	276861	81.98	123314	153547
1989-90	323412	61143	262269	81.10	117033	145236
1990-91	307315	48701	258614	84.15	150154	108460
1991-92	299458	50549	248909	83.12	142932	105977

In respect of Heavy Machines the down time to total shift hours ranged between 53.60% and 85.20%. Idling of machines due to break down in each year was very high and accounted for nearly 50% of the total down time. Due to excessive breakdown of the machines in underground and open cast mines, the Company incurred loss of production of coal of 6.63 million tonnes from 1976-77 to 1991-92.

The Ministry stated (December 1991) that separate record for machines was being kept from April 1990 and the breakdown hours are more than the norms fixed.

Records for machines used for open cast mining, are maintained but not in respect of underground equipments.

Production is achieved through different coal mining equipment like Coal cutting machines, Coal Drills, Shearers and road headers. Norms of production to be achieved by different Coal winning equipment deployed in underground mines were not fixed by the Company. Records of actual hours worked and analysis of idle hours for ventilation fan, winder, haulage, pump etc. was discontinued from February 1985. Number of machines on roll and number of machines available for production in the form of a statistical return was introduced as per directives of Coal India Ltd. But reasons for non-availability of machines and extent of shortfall in production due to non-utilisation of such machines was not recorded.

The Ministry stated (December 1991) that production of coal from the underground mines is an integrated operation of equipment like coal drill, haulages, winders etc. Coal production individually by these machines has not been compiled. Wherever production using individual machines such as SDL, LHD & Road Headers can be recorded the same is being done. No norms of production by individual machines like Coal Drills, Haulages and Winders have been fixed. Interaction with Central Mine Planning & Design Institute Limited is on for fixing norms for production using other production equipment, to the extent possible."

CHAPTER 7

MARKETING :

7.1 The marketing division of the holding company is responsible for overall policy on coal distribution, linkage of customers to coalfields, and liason with major consumers. Government Consumers account for 85.1% of the sales of Bharat Coking Coal Limited. The Company has still to enter into firm agreements with two major consumers, namely Railways and Steel Plants. Coal is supplied on credit in the absence of specific contracts. Agreements with Steel Plants cover washed coal supplied only. However, specific contracts have been entered into with most of the Power Houses, Coal is supplied on credit to them also. Recent directives of Department of Coal require Power houses be asked to deposit value of Coal in advance.

The Ministry stated (December 1991) that there was an agreement between the Railways and Coal India but this agreement expired. A fresh agreement was drafted, but was not signed.

The agreements entered into with the Power Houses stipulate that "the coal companies shall despatch coal in full rake load to Power Station on freight to pay basis and freight will be charged by Railways on rake loads. Concessional rate of freight is allowed by Railways if 1400 tonnes (25 wagons) or more of coal is loaded on 3 consecutive days and Railways endorse it as "Train Load".

But Company did not take benefit of the concession and paid higher freight of Rs. 1.20 crores in the seven years ended 31.3.92 as Power Houses refused to pay the differential freight.

The Company stated (April 1988) that by and large, presently formalities for availing concessions are compiled with. The Ministry in reply stated (April 1991) that inadequate Wagon Loading Capacity on some sidings led to rakes being split. In these cases Railways disallowed the concessions.

Railways charge freight on the basis of carrying capacity of wagons and not on the basis of actual coal loaded, when the wagon is underloaded, company has to pay the customers the amount equal to the freight for the under loaded quantity of coal. Such expenditure was significant

Year	Excess freight due to under loading (Rs. in laksh)
1983-84	348.79
1984-85	302.71
1985-86	455.94
1986-87	427.81
1987-88	440.23
1988-89	497.99
1989-90	* 755.47
1990-91	361.04
1991-92	840.79

* including overloading costs.

The Company stated (April 1988) that, reimbursement of freight due to underloading was a drain. In a situation where wagons are weighed at Railway Yards only after they leave the siding the underloading is regularly monitored and in a number of cases disciplinary action was taken". The Ministry stated (December 1991) that efforts are continuously made by strict supervision at the loading point to reduce the loss by underloading.

7.2. Transportation of Coal :

The proportion of coal transported by Rail and by road during the years 1983-84 to 1991-92 are given below :

Year	Total despatch of BCCL.	Despatch by Rail	Despatch by Road (including conveyors & Rope-ways.	Percentage of despatch by Rail to total despatch	% of Road despatch to total despatch
(1)	(2)	(3)	(4)	(5)	(6)
1983-84	256.55	189.50	67.05	73.86	26.13
1984-85	229.20	177.21	51.99	77.32	22.68
1985-86	172.18	117.67	54.51	68.34	31.66
1986-87	182.37	129.10	53.27	70.79	29.21
1987-88	207.00	143.95	63.05	69.54	30.46
1988-89	220.50	152.40	68.10	69.12	30.88
1989-90	206.30	141.40	64.90	68.54	31.46
1990-91	277.90	180.90	97.00	65.09	34.90
1991-92	251.98	150.40	101.58	59.72	40.31

The despatch by road has been going up.

The request for allotment of number of wagons allotted

by the Railways, and number loaded by the Company are given on next page.

Name of	1988-89			1989-90			1990-91			1991-92		
	Capacity assessed by	Target production	Actual production	Capacity assessed by	Target production	Actual production	Capacity assessed by	Target production	Actual production	Capacity assessed by	Target production	Actual production
D.C.P. Mines	CMPDIL			CMPDIL			CMPDIL			CMPDIL		
Damoda	271.0	575.0	598.8	271	550	600.1	558.0	555.0	607.2	551	590	592
Bhowrah (N)	9586.0	285.0	395.8	586	485	419.5	542.0	180.0	125.9	430	180	115.6
Golukdih	1188.0	750.0	886.8	1188	775	1090.9	1554.0	1082.0	818.5	1031	1000	1010.3
Kusunda	855.0	890.0	700.2	855	690	801.8	716.0	765.0	1010.7	601	985	1072.3
New Laikdih	572.0	550.0	500.2	572	500	442.1	857.0	430.0	363.6	1231	370	315.8
Block-II	1348.0	1000.0	1016.9	1908	1530	1215.0	2387.0	2000.0	928.3	1391	1000	613.2
Tasra/Mohulban	331.0	150.0	69.2	331	120	132.4	487.0	120.0	39.3	-	-	-
Total	5151.0	4200.0	4167.9	5711.0	4650.0	4701.8	7101.0	5132.0	3893.5	5235	4125	3719.2
Name of U/G Mines												
Moonidih	1289.0	1200.0	1200.0	1289	1240	681.1	956.3	950.0	600.0	843.10	660	661.1
Tetumari	399.0	285.0	285.0	333	300	324.2	338.1	310.0	313.1	351.9	315	317.7
Bera	183.0	155.0	147.0	186	119	127.7	139.2	158.0	124.7	143.8	190	142.0
Begunia	107.0	70.0	54.2	107	85	47.2	55.1	65.0	54.2	91.8	60	64.8
Aikuse	146.0	135.0	135.7	157	140	116.0	117.8	120.0	68.5	122.4	106	96.7
Cast Katras	325.0	330.0	289.3	316	280	268.7	298.4	143.0	229.5	298.4	173	193.8
Kessurgary	207.0	170.0	129.7	143	100	114.9	153.0	65.0	89.8	-	-	-
Bassuria	144.0	135.0	135.3	169	140	156.5	166.8	150.0	140.2	165.3	128	112.8
Total	2188.0	2490.0	2376.2	2700.0	2404.0	1836.3	2224.7	1661.0	1620.0	1686.10	1376	1363.3
Grand Total	7139.0	6690.0	6544.1	8411.0	7054.0	6538.1	9325.7	7093.0	5513.5	6921.10	5501	5082.5

The Company could not load all the wagons placed by the Railways at their disposal even though the request for wagons by the Company was still higher. As a result wagons were detained as well as empty wagons drawn by Rail. This wastage of transport capacity also results in a part of customers' demand remaining unsatisfied.

The main reasons for detention or empty drawal of wagon were:

- Wrong booking in the declaration Notes/Indents.
- Excess Wagons supplied by Railways.
- Breakdown of pay loader in Colliery.
- Double placement of wagons.
- Non-availability of pay loader in the Colliery.
- Stock of coal getting exhausted in the Colliery.
- Heavy rains.

The Company stated (April 1988) that since the Railways permit only limited time for loading, the wagons which contain excessive dirt are not loaded. But for reasons of breakdown of Pay Loaders, shortage of coal at the siding, excess placement of wagons, coal transportation problems at siding etc. the Collieries take more time than what is permitted under the Railways' Rules.

7.3 Centralised Coal Dumps :

In December 1981 a plan was drawn up for setting up five Centralised Coal Dumps at Katras, West Moonidih East Basuriya, Alakdiha and Ramkanali (Dahibari) by December 1982. The execution was delayed but even after completion at a cost of over Rs. 3 crores, only 70.40 lakh tonnes of coal were despatched from the Central coal Dumps in the 8 years 1985-92 instead of 24.60 lakh tonnes per year. As a result the purpose of eliminating corruption and malpractices in the sale of coal from collieries to ultimate consumer of coal and coke moved by road by parties buying for cash from collieries was not achieved.

The Ministry expressed dissatisfaction and stated that it was a case which showed callous negligence by the management of Bharat Coking Coal Limited in implementing a Project which was conceived as a means of eliminating of corruption and malpractices in the sale of coal from the collieries of Bharat Coking Coal Limited.

The Company stated (April 1988) that time was lost in laying down administrative and operational guidelines. The operation of the dumps was affected, to some extent, by transportation and loading constraints.

The Ministry stated (December 1991) that increase in capacity of dumps could not be achieved because of a court injunction.

7.4 Outstanding Debts :

The table below indicates the outstanding debts of the Company in the area of marketing.

(Figures in Rs. Lakhs)

Year	Sales	Sundry Debtors	Debts outstanding in terms of months Sale	Provision for bad debts.
1980-81	24010.43	3896.81	1.95	244.04
1981-82	36245.48	4614.67	1.53	420.96
1982-83	42929.29	6628.04	1.85	479.90
1983-84	48116.92	12700.83	3.17	438.55
1984-85	52923.98	11155.51	2.53	439.65
1985-86	61086.74	11497.02	2.26	791.69
1986-87	72355.32	8837.67	1.47	1046.61
1987-88	85119.53	13532.22	1.91	1690.31
1988-89	109651.38	23877.59	2.61	2492.10
1989-90	105890.73	31143.69	3.53	2821.10
1990-91	96640.27	30365.64	3.77	3068.70
1991-92	108969.74	31504.04	3.47	3549.96

The large outstandings were mainly due from Power Houses, Steel Plants and Railways.

The Company stated (April 1988) that the outstandings were disputed deductions. A Committee was constituted in October 1986 for settlement of disputes with customers.

The Company pays interest @ 18% per annum on the borrowings but is not charging any interest on overdue amounts from its customers. The Company had preferred bills for Rs. 572.09 lakhs towards interest but has not received payment (March 1991).

7.5 Quality Control :

The Quality Control in Bharat Coking Coal Limited is done in 17 analytical laboratories in various areas for analysis of coal, coke, mine gas, dust etc. In addition, public analysts are appointed by the Company and Coal India Limited. Despite all these measures, the retrenchment from Company's bill by customers on account of quality variation has been increasing. The deductions made by the various customers in 1991-92 was Rs. 46.06 crores when it was only Rs. 12.94 crores in 1981-82.

CHAPTER 8

MATERIALS MANAGEMENT

8.1 The Material management functions of the Company are looked after by the Material Management Division under the over all charge of General Manager (MM).

The company made many advances to suppliers without any security and these advances became doubtful debts for which the company made provision in accounts. Some cases of advances are detailed below :

(A) Rs. 56 lakhs were advanced to a supplier for cement during the year 1983-84. The firm did not supply cement. The company stated (April 1988) that the supply was governed by the terms of release order issued by the Regional Cement Controller. The suppliers factory was closed down and company filed a suit. The Ministry stated (April 1991) that Rs. 54.53 lakhs was outstanding against the firm.

(B) For conversion of 30 lbs billets into rails the company aranged for supply of 1088.200 tonnes of billets of a supplier at a cost of Rs. 20.20 lakhs. Only 86.340 tonnes of rails were delivered and steel costing Rs. 18.44 lakhs remained to be recovered. The company stated (April 1988) that it was taking necessary legal measures for recovery of the material.

(C)

Sl.No.	Party	Amount of advance (Rs. in lakhs)
1.	Indo Japan Steel (P)Limited.	30.64
2.	Bharat Refineries	1.48
3.	Bihar Steel Tube	2.80

Rs. 34.92 lakhs were advanced to 3 suppliers against which Rs. 18.67 lakhs was over due for recovery upto March, 1992.

8.2 (a) The Company imported two coal ploughs at a cost of Rs. 50 lakhs which could not be used and have been lying idle since 1977. Imported spares costing DM 13,51,488 are also lying idle since 1985. Due to delay in releasing the imported spares from the port, the Company had to pay port rent of Rs. 17.48 lakhs.

The Company stated (April 1988) that the expenditure on port rent was higher than normal on account of unusual circumstances of documents being lost.

(b) The Company imported from Japan electrical motors and equipment at a total cost of Rs. 1.62 crores in 1977-78. The equipments were not utilised since the purchases were made without assessing suitability and requirements.

The Company stated (April 1988) that action was being taken to utilise the sleeping motors and other electrical equipment.

(c) Meters and Analysers valued at Rs. 11.47 lakhs imported in September 1978 were lying unused since their procurement.

The company stated (April 1988) that inventory had increased proportionately more than the consumption over 5 years (1980-81 to 1985-86). This has happened mainly because of increased mechanisation and by addition of varieties of equipment and spares.

The Company held stocks of inventory of over 4 months consumption each year from 1980-81 to 1990-91.

The Ministry stated December 1991) that a Committee on Inventory control appointed by the Government in 1983 had suggested the following norms :

1. Timber	2 Months Consumption
2. Cables	4 Months Consumption
3. Explosives	0.5 Months Consumption
4. Steel	4 Months Consumption
5. Wire ropes	6 Months Consumption
6. Cement	2 Months Consumption
7. Spares	
-Indigeneous-	6 Months Consumption
-Imported	12 Months Consumption

Stores and spares declared surplus by the Company have been increasing over the years excepting in the year 1987-88.

The Company stated (April 1988) that due to certain procedural difficulties, disposal of obsolete stores was not taken up. A committee has been constituted for identifying the obsolete items and disposal action will be taken.

By the end of 1990-91 the company had done ABC analysis of 60721 items of stores out of a total 186362 items.

CHAPTER 9

MANPOWER

9.1 At the time of nationalisation, 1.25 lakh workers were producing 14 million tonnes of coal per annum. The increase in manpower and production over the years is given below :

<u>Year</u>	<u>Manpower</u>	<u>Production (million tonne)</u>
1976-77	169435	20.68
1977-78	168434	20.21
1978-79	167090	19.72
1979-80	168835	20.08
1980-81	170673	21.33
1981-82	174040	23.02
1982-83	172008	24.00
1983-84	172334	21.63
1984-85	173287	21.84
1985-86	171671	21.08
1986-87	173589	24.01
1987-88	173034	25.11
1988-89	169806	26.30
1989-90	167469	26.61
1990-91	167423	26.70
1991-92	165652	27.01

The Ministry stated (December 1991) that the reasons for increase in manpower since nationalisation was the takeover of organisation like Coal Board, CCWO, CMLWO, Coal Controller Organisation, recruitment of technical and skilled employees for various new projects and for maintenance of machines and recruitment of para medical staff for hospitals and dispensaries as per norms.

In 1975, surplus manpower was estimated at 7318. The Company removed 808 persons but had to take back 693 persons and Rs. 6.07 lakhs paid to them as back pay and allowances.

The Ministry stated (December 1991) that 808 persons were removed as they were unauthorisely absenting or were suspected to be imposters. But they were removed from service without proper enquiry. After verification, it was found that they were not imposters. They were taken back.

The Ministry informed the Audit Board that Coal India Limited had been asked to study the position of surplus manpower.

9.2 The labour productivity i.e. Output per man shift (OMS) and earning per man shift (EMS) are given below :

Year	OMS in tonnes (under ground)	OMS in tonnes (Open cast)	Over all OMS (in tonnes)	E.M.S. (Rs.)
(1)	(2)	(3)	(4)	(5)
1979-80	0.51	1.04	0.57	44.97
1980-81	0.49	1.14	0.59	50.54
1981-82	0.51	2.03	0.68	58.06
1982-83	0.47	2.09	0.67	59.65
1983-84	0.45	1.52	0.59	79.03
1984-85	0.43	1.33	0.58	88.22
1985-86	0.45	1.62	0.60	98.42
1986-87	0.48	1.59	0.67	104.35
1987-88	0.47	1.80	0.68	112.24
1988-89	0.50	1.92	0.75	132.83
1989-90	0.48	1.86	0.76	143.32
1990-91	0.45	2.17	0.78	152.68
1991-92	0.43	2.16	0.77	166.82

The overall OMS went up to 0.78 tonne in 1990-91 because of higher contribution from Open Cast production on account of mechanisation. Output per manshift in underground mines came down to 0.43 tonne in 1991-92 from 0.51 tonne in 1979-80.

The Ministry stated (December 1991) that reasons for downward productivity in under ground mines were adverse mining conditions due to presence of fires, long distance workings, heat and humidity, ageing of miners and loaders resulting in reduced efficiency, inadequate power supply and frequent interruption of power and inadequate sand supply for stowing mines.

CHAPTER 10

COSTING :

Each colliery prepares a monthly cost sheet. A separate cost sheet is prepared on production of soft coke and hard coke. It indicates the cost of manufacture of coke from raw coal. In view of diversity of factors involved, a standard costing system has not been introduced.

Some of the mines producing coal at high cost are Dharmaband, Laikdeep, and Bhuringia. Cost of production in these mines varied from Rs. 822.77 per tonne to Rs. 2408.27 per tonne of coal in 1991-92. The Company stated (April 1988) that the working of some mines are uneconomic. But these mines are coking coal mines meeting the needs of steel plants and so have to be worked.

CHAPTER 11

INTERNAL AUDIT

Chartered Accountants have been appointed from February 1987 to carry out internal audit of all units of Bharat Coking Coal Ltd. Discrepancies and deficiencies pointed out by the internal auditors have not been submitted to the Board for consideration.

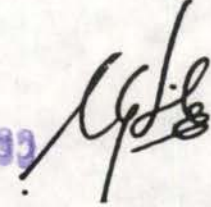
N. Sivasubramanian

New Delhi.
The

(N. SIVASUBRAMANIAN)
Deputy Comptroller and Auditor General
-cum-Chairman, Audit Board.

Countersigned

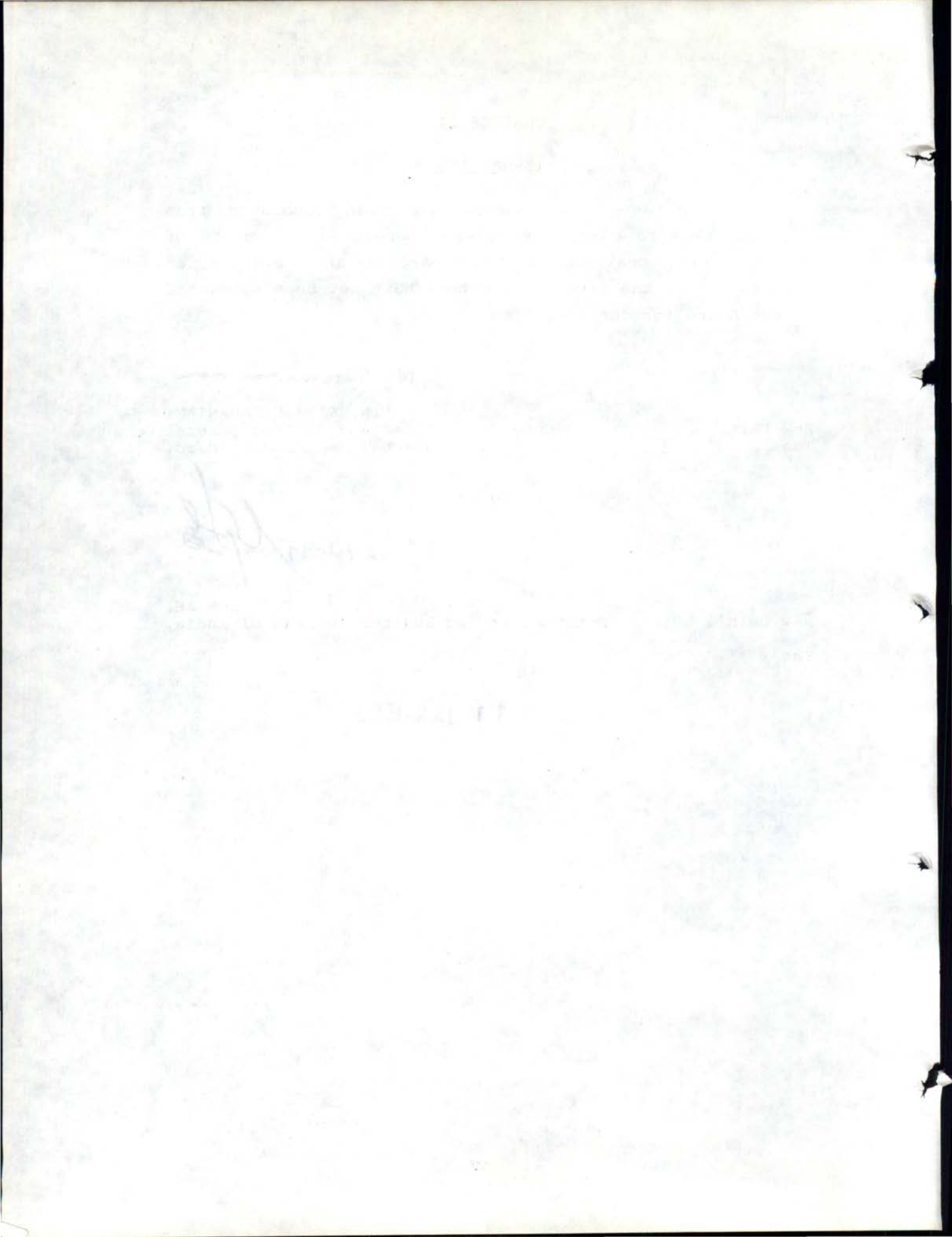
11 JAN 1993



New Delhi.
The

(C.G. SOMIAH)
Comptroller and Auditor General of India.

11 JAN 1993



ERRATA

Sl.No.	Page No.	Reference	For	Read
1.	11	Para-V	Moolidih 20/21	Murlidih 20/21
2.	23	Para 6.3 2ndline	esseses	assesses
3.	23	Para 6.3 3rd line	actua.	actual
4.	25	Table at Page 25	Table at Page 25	Table at Page 55
5.	36	2nd Para 1st line	indicated	indicates
6.	38	1st Para 6th line	Non- procurement	non- procurement
7.	38	7th line	Non- availability	non- availability
8.	45	4th Para last two lines	"For Shovelon roll...50.3 Percent in 1991-92. The"	---
9.	52	Table 2nd Col. 3rd line	Laks.	Lakhs
10.	55	Table	Table at Page 55	Table at Page 25
11.	60	Para 8.1(B) 2nd line	aranged	arranged