

MINISTRY OF COAL

CHAPTER : III

Bharat Coking Coal Limited

Performance of Madhuband Washery

Highlights

The Management set up Madhuband Washery with a washing capacity of 2.5 million tonne at a point when existing capacity was underutilised.

(Para 3.3.1)

The implementation of the project was delayed by 12 years and five months resulting in cost overrun by Rs.125.33 crore with reference to original sanctioned capital outlay.

(Para 3.3.3)

The implementation of the project of railway siding was delayed by seven years resulting in cost overrun of Rs.7.19 crore.

(Para 3.3.4)

The Block-II Open Cast Project (linked mine of Madhuband Washery) did not perform well since it came into operation. Its operation had to be stopped in June 2001 due to failure to obtain physical possession of a patch of land. The Management could not ensure supply of coking coal of suitable quality to the washery either from Block-II OCP or from alternate sources.

(Para 3.3.5)

The average capacity utilisation of the washery was 22.46 per cent and it sustained a loss of Rs.127.03 crore during the last five years ending 31 March 2004. The decision to convert the washery for washing non-coking coal instead of coking coal amounts to wastage of the capacity created for specific purpose.

(Paras 3.4 and 3.3.2)

The finalisation and award of the contract was done without taking into account the commercial considerations. As a result, BCCL had to bear an extra expenditure of Rs. 18.15 crore.

(Para 3.5.1)

The washery had to sustain a loss of Rs.2.67 crore towards under loading and over loading charges due to non-installation of belt-weigher.

(Para 3.5.2)

The washery was put to operation in incomplete shape without adequate load trial run and performance test. This had caused breakdown of certain equipment. The Management rectified some defects at a cost of Rs.91 lakh. However, further deficiencies and imbalances were noticed whose rectification will involve an estimated cost of Rs.2.07

crore. Some equipment/production circuit worth Rs.13.38 crore were either bypassed or could not be put to operation properly.

(Para 3.5.3)

Despite substantial under-utilisation of capacity management paid extra overtime of Rs.4.60 crore for operation of the washery on Sundays/holidays.

(Para 3.6)

3.1 Introduction

Bharat Coking Coal Limited (BCCL) was formed in January 1972. It took over 214 coking coalmines producing 14 million tonne per annum when they were nationalised in May 1972. Later on 182 non-coking coalmines, nationalised in 1973, were also entrusted to this Company. It became a subsidiary of Coal India Limited in 1975. As on 31 March 2004, BCCL was running 49 coking coalmines with a production capacity of 8.77 million tonne as on 1 April 2003 and ten washeries with a capacity to wash 15.13 million tonne raw coal per annum. The washeries are required for beneficiation of coking coal as the coal mined cannot be used in the steel plants without beneficiation.

In order to meet the demand for washed coking coal from steel plants, it was decided to set up Madhuband Washery with raw coking coal input capacity of 2.50 million tonne per annum with average ash content of 29.50 per cent to produce washed coal with average ash content of 17 per cent.

3.2 Scope of the Review

The review covered the formulation, construction, utilisation and other aspects of Madhuband Washery since its inception till March 2004. For this purpose records of Washery Construction Division, Washery Division, Block-II Open Cast Project (OCP) and Estate Department of BCCL were reviewed during the period from October 2003 to January 2004. Some of the aspects relating to implementation of the project, capacity utilisation and lacunae in awarding contract are detailed in the succeeding paragraphs.

3.3 Project implementation Issues

The Project Report of Madhuband Washery as approved in March 1985 envisaged an estimated capital investment of Rs.71.90 crore including Rs.9.29 crore as divertible from mine project (Block- II OCP) with anticipated completion schedule in 1988-89. Due to delay in execution, the total cost of the project was revised to Rs.194.18 crore in October 1993 with a revised schedule for completion by March 1995.

In the course of audit various aspects of project implementation were reviewed and some of the main weaknesses observed are discussed in the succeeding paragraphs.

3.3.1 Excess washing capacity built up

When the proposal for setting up Madhuband Washery was under active consideration (1981-82 to 1985-86) the supply of raw coking coal to the then existing seven washeries was only 7.65 million tonne on an average against their washing capacity of 11.52 million tonne per annum. Despite having idle capacity, the Management proposed in February 1982 to set up Madhuband Washery with 2.5 million tonne washing capacity when their existing washeries could not be utilised fully.

The Management stated (June 2004) that the existing washeries were not designed to wash raw coal mined from open cast mines and were not in a position to meet the demand of steel plants even at their full capacity utilisation.

The Management's contention is not tenable in view of the fact that production of raw coal at Block-II OCP from 1983-84 onwards was supplied to Dugda Washery which was also not designed for washing raw coal mined from open cast mines.

3.3.2 Mid-stream change for production of non-coking coal

One of the main reasons for implementing the Madhuband Washery project was to improve the quality of coking coal so as to make it compliant with the requirement of steel plants.

It was observed that in the meeting of Inter Ministerial Group (February 2002), the Management suggested utilising the washery for washing non-coking coal. The Ministry of Coal viewed that the technology of Madhuband Washery was of latest origin and utilising this for washing non-coking coal would be a waste of the capacity created and against the interest of the nation. But in view of the refusal of Steel Authority of India Limited (SAIL) to accept washed coal of Madhuband Washery due to its inferior coking property and also due to non-availability of raw coking coal for feeding the washery, the Management started washing non-coking coal in June 2003 for supply of 'washed power coal' to power houses. This was done without any change in the basic design of the washery and keeping the option open to wash coking coal when available. The conversion proposal was approved by the Board of Directors of BCCL in August 2003 which envisaged that the yield of 'washed power coal' would be 79 per cent and washery would generate a profit of Rs.1.85 crore per annum at 65 per cent capacity utilisation. However, it was found that the capacity utilisation of the washery by washing non-coking coal was only 23.54 per cent and the washery sustained a loss of Rs.25.10 crore in 2003-04.

Thus, the basic purpose of setting up the washery, of narrowing the gap between demand and supply of coking coal for steel plants from indigenous sources was frustrated.

The Management stated (June 2004) that non-availability of raw coking coal from Block-II OCP due to land acquisition problem could not be foreseen. Decline of coking coal production from other mines of BCCL mainly due to financial crunch of BCCL aggravated the position of availability of indigenous prime coking coal, which necessitated import by SAIL.

The Management's contention is not tenable as the problem of land acquisition of Block-II OCP was known to BCCL at the planning stage of the washery (1982) which could not be resolved till date (October 2004).

3.3.3 Time and cost overrun

The construction of Madhuband Washery started in January 1986 and as per contract washery was to be commissioned in December 1988 at a sanctioned capital outlay of Rs.71.90 crore (March 1985). It was, however, declared complete only in May 2001 at a cost of Rs.197.23 crore. There was thus a time overrun by about 12 years and five months and cost overrun of Rs.125.33 crore in the commissioning of the project.

The Department of Programme Implementation was requested by the Public Investment Board (PIB) in January 1992 to carry out an enquiry into the causes of time and cost

overrun with a view to fixing responsibility and for learning lessons so that such delays might not occur in future.

After examination of views of BCCL, the main contractor executing the project, Mining and Allied Machinery Corporation(MAMC) and Hindustan Steel Works Construction Limited (HSCL-sub-contractor of MAMC), the Department of Programme Implementation identified various causes of time overrun, viz.

- (i) delay of about nine months in entering into contract after sanction,
- (ii) delay of about one year due to controversy over the choice of 'Jigs' raised by MAMC,
- (iii) delay by about four and half years in releasing 'drawings' to HSCL by MAMC,
- (iv) slow construction work by HSCL,
- (v) inability of MAMC in supervision and control,
- (vi) occasional shortage of steel and cement,
- (vii) bad industrial relations and
- (viii) resource constraints.

Audit scrutiny revealed that delay in execution of the work further continued after January 1992 due to various reasons viz.

- (i) delay in releasing payment of bills to MAMC,
- (ii) slow execution of work by MAMC and its sub-contractors despite a number of review meetings between BCCL and MAMC on the progress of work which remained ineffective due to non-fulfillment of assurances given by the implementing agencies and
- (iii) change of original location of Madhuband Washery before awarding the contract keeping in view the constraints in acquisition of forest land. Despite this, the Company took about six years in acquisition of land for construction of raw coal cross-country conveyor, product cross-country conveyor, loading station and railway siding.

The Management stated (June 2004) that though original application for acquiring forest land was made over the period from January 1985 to March 1987, revised application had to be made in May 1991 since the Forest Department was not handing over the land. Forest land was handed over to BCCL in April 1996. The acquisition of a portion of tenanted land was delayed because of confusion over ownership, which was prevailing from November 1987 till January 1996.

The reply of the Management corroborated the fact that there was inordinate delay of about six years in making revised application in respect of forest land and nine years in obtaining clearance over ownership from the Government with regard to tenanted land.

3.3.4 Delay in construction of Railway Siding of Madhuband Washery

The contract for construction of Railway Siding at Madhuband Washery was awarded to RITES Limited in January 1991 at an estimated cost of Rs.12.30 crore plus 12.50 per cent

fee for project management services with the stipulation that the project was to be completed within a period of 24 months from the commencement of work.

It was observed that the work on railway siding commenced in March 1991 and completed in March 2000 at a cost of Rs.19.49 crore. Thus, there was a cost overrun by Rs.7.19 crore and time overrun of seven years in completion of the project. It was further observed that there were no milestones on record for carrying out different activities relating to construction of railway siding.

The Management stated (June 2004) that Letter of Intent (LOI) for preparation of Detailed Project Report (DPR) for rail infrastructure was issued to RITES Limited (RITES) in September 1984. The DPR was prepared in September 1987, which was approved by South-Eastern Railway in February 1989. RITES made a supplement to DPR in June 1989 and LOI for construction of railway siding was issued to RITES in January 1990.

The Management while accepting the facts (June 2004) explained the delay in awarding the contract for construction of railway siding. It confirmed that there were no milestones for carrying out different activities relating to construction of railway siding, based on which slippage could be analysed.

3.3.5 Poor performance of linked coal mine (Block-II Open Cast Project)

The Madhuband Washery project envisaged the smooth flow of raw coal from a mine to washery. Accordingly it was decided to utilise the good quality coking coal from Block-II OCP mine. No action plan was drawn up for provision of coking coal from alternate sources in the event of contingencies.

In the course of scrutiny in audit it was observed that the linked mine which came into operation in 1983-84 stopped production in June 2001. This was due to failure to obtain physical possession of 112.61 acres of land in the Kessurgarh Mouza. All major equipment were shifted to neighbouring open cast projects producing mainly non-coking coal. In view of stoppage of production from Block-II OCP and non-availability of coking coal from alternate sources, non-coking coal to the extent of 95 per cent of total feed to the washery was provided from neighbouring open cast mines in the year 2003-04. As a consequence the very purpose of receiving good quality of raw coal from a dedicated source was defeated.

The Management stated (June 2004) that augmentation of coking coal from alternate sources could not be made due to severe financial crunch of BCCL.

It is evident from the reply of the Management that the linkage of dedicated mine with the washery was not synchronized with the requirement of the washery and this resulted in the washery having to utilise non-coking coal instead of coking coal, which undermined the purpose of coal beneficiation for steel plants.

3.4 Performance particulars

The review of Madhuband Washery in terms of certain key performance parameters during the last five years ending 31 March 2004 is detailed as under:

Particulars	As per Project Report	1999-00	2000-01	2001-02	2002-03	2003-04 (Prov.)
Production performance						
Raw Coal Feed (in MTs)	25,00,000	3,02,500	4,31,800	6,81,500	6,51,800	5,88,600
Ash percentage in Raw Coal	29.50	34.40	37.70	46.28	45.24	43.81
Capacity Utilisation percentage	-	18.15	17.27	27.26	26.07	23.54
Washed Coal Production (in MTs)	11,30,000	1,14,985	1,35,529	1,37,130	1,47,365	15,839*
Ash percentage. in Washed Coal	17.00	19.70	19.97	19.90	20.05	20.23
Yield percentage	45.20	38.01	31.39	20.12	22.61	2.69
Financial Performance	(Rs. in crore)					
Cost of production	-	39.88	57.85	55.92	55.18	79.49
Sale Value	-	22.68	22.90	29.65	31.38	54.40
Loss (after prior period adjustments)	-	17.21	34.84	26.27	23.61	25.10

The scrutiny of data on performance of the washery reveals that the washery was making losses continuously since inception. It sustained a loss of Rs.17.21 crore in 1999-00, Rs.34.84 crore in 2000-01, Rs.26.27 crore in 2001-02, Rs.23.61 crore in 2002-03 and Rs.25.10 crore in 2003-04. The average capacity utilisation during the last five years ending 31 March 2004 in terms of raw coal throughput was only 22.46 per cent. The average ash content in raw coal was as high as 46.28 per cent in 2001-02 and 43.81 per cent in 2003-04 as against the projected level of 29.50 per cent and ash percentage in washed coal ranged from 19.70 per cent to 20.23 per cent during 1999-00 to 2003-04 as against of 17 per cent projected. Further, actual yield of washed coal also declined from 38.01 per cent in 1999-00 to 22.61 per cent in 2002-03 as against 45.20 per cent envisaged in the Project Report. Due to non-availability of raw coking coal for feeding the washery, the Management started washing non-coking coal from June 2003 onwards.

Reasons for such poor performance were:

* the washery ceased production of washed coking coal from May 2003

- (i) failure to ensure supply of quality coal to the washery in required quantity and
- (ii) existence of many deficiencies and bypassing of equipment in different sections of production process.

The Management (June 2004), while admitting the above facts, stated that bypassing of operation of certain equipment was necessary as per characteristics of present raw coal feed.

3.5 *Infirmities in selection of contractor*

Injudicious choice for construction of washery

3.5.1 As per accepted commercial practices, while taking a decision on finalisation of tender process any commercial undertaking should satisfy itself about various aspects of credibility of the bidders. Among others these include technical competence, past experience and performance, financial soundness of the bidders and the competitiveness of the bids.

In the course of scrutiny it was observed that the Company decided, after evaluation of global tender invited in 1982 for selection of contractor for construction of the washery, to award the turnkey project to the lowest bidder, a Consortium of Voest Alpine AG, Triveni Structurals Limited and Industrial Consulting Bureau at a cost of Rs.54.35 crore. At this stage, the Secretary (Department of Heavy Industries) strongly recommended (March 1984) awarding the contract to Mining and Allied Machinery Corporation Limited (MAMC), the fourth lowest bidder. Finally, the contract was awarded (December 1985) to MAMC at a higher price of Rs.72.50 crore excluding taxes, duties and escalation. The project was scheduled to be completed by December 1988.

The following deficiencies were observed in the process of award of contract to MAMC:

- (i) The contract was not awarded to the lowest bidder. As a result, BCCL had to bear an extra expenditure of Rs.18.15 crore being the difference between the lowest bidder and MAMC.
- (ii) Past performance of MAMC in washery construction was not found suitable. In the case of construction of Moonidih Washery of BCCL and Rajrappa Washery of Central Coalfields Limited constructed by MAMC there was considerable time and cost overrun.
- (iii) Sufficient basic data of raw coal characteristics, which would decide the selection of process equipment, were not provided, as coal samples from the linked Block-II OCP were not used. The design of the process and equipment was worked out based on quality of coal samples obtained from other mines namely Benedih and Madhuband collieries.
- (iv) While the Department of Heavy Industries was to monitor the activities of MAMC for setting up the washery in time the delayed implementation reflected absence of monitoring by that Department.

The failure of management to adhere to standard commercial principles in awarding the contract led to an injudicious choice of contractor. This resulted in delay of 12 years and five months in project implementation besides a cost overrun of Rs.125.33 crore in the project.

The Management stated (June 2004) that sufficient basic data of raw coal characteristics was provided in Notice Inviting Tender (NIT) except screen analysis, as Block-II OCP did not start production at the time of preparation of Notice Inviting Tender in February 1982.

The screen analysis plays an important role in selection of the type, size and capacity of the washing equipment. As negotiation was going on with the contractor on various issues till May 1985 and the orders for imported and indigenous equipment were issued in March 1987, the screen analysis of coal produced at Block-II OCP could have been made available to the contractor through an addendum to NIT in 1983-84 itself when production in Block II OCP started.

3.5.2 Avoidable expenditure due to delay in installation of weighbridge

As part of project report the railway siding at Madhuband Washery was to have a weighbridge for the purpose of final weighment of loaded wagons. The contract for installation of weighbridge was awarded to Avery India Limited (sub-contractor) by RITES in December 1999 at a cost of Rs.21.12 lakh. The weighbridge was scheduled to be installed by February 2000.

RITES completed the work of installation of 'Electronic In-motion weighbridge' worth Rs.21.12 lakh in March 2000. The belt weighers worth Rs.5.73 lakh were to be installed on loading belts to assess the correct quantity loaded into wagons so that underloading and overloading could be avoided on final weighment of wagons at the weighbridge. The belt weighers supplied by MAMC in February 1990 had to be subsequently replaced in July 2001 due to obsolescence. The weighbridge was finally commissioned in March 2004. The delay in commissioning was due to delay in stamping of weighbridge by Weights & Measures Department of the State Government, delay in obtaining approval of the system from Research Designs & Standards Organisation, delay in rectification of damaged cables and delay in testing of weighbridge with loaded wagons. The weighbridge, though commissioned, was not in operation till date (October 2004).

It was observed that in the absence of belt-weighers and weighbridge, the washery started loading wagons on eye-estimation basis and weighing the wagons at another weighbridge (Khanudih) from October 2000 onwards, As a result, the washery had to sustain an avoidable expenditure of Rs.2.67 crore towards underloading and overloading charges during the period October 2000 to March 2004.

The Management stated (June 2004) that loading was done from October 2000 onwards only on approximate basis and eye estimation due to absence of weighing instrument and presence of inexperienced manpower. So, underloading and overloading could not be avoided. Further, for technical reasons, underloading/overloading could not be totally eliminated in spite of operation of belt weighers.

The reply is not tenable as scrutiny of records revealed that the technical reasons were mainly (i) mal-functioning of the weightometer, (ii) uneven loading belt and (iii) inconsistent flow rate of products on belt. Thus, the basic purpose of avoiding underloading/overloading of wagons, for which the belt-weighers and weighbridge were commissioned in close proximity, was defeated due to malfunctioning of the belt-weighers and non-operation of the weighbridge.

3.5.3 Failure to implement contractual clauses

Provisions of clause 30 of the contract inter alia provided that MAMC would conduct, formally, 'load trial run' and 'performance test' of the plant to start commercial production by December 1988. MAMC was required to inform the management that the plant was ready for 'trial run on load' after completion of no-load trial of the equipment and plant section and to arrange utilities and feed coal of quality required for 'load trial run' two weeks in advance.

In the course of audit it transpired that there were number of deficiencies in operationalising Madhuband Washery. The main points are discussed in the succeeding paragraphs:

- (i) The load trial run of equipment and plant should have been done by MAMC. However, the washery was put to 'load trial run' in February 1998 by the Management with facilities to the extent built-up by MAMC. The representatives of MAMC were not involved in the 'load trial run' initiated by the Management;
- (ii) When the 'load trial run' was conducted, the product loading conveyor, loading complex, railway siding and one out of two 'Jigs' were yet to be completed/commissioned. Besides, a number of works remained either incomplete or not completed properly;
- (iii) In the course of 'load trial run', various defects were observed. The Management rectified some of these defects at a cost of Rs.91 lakh between January 1998 and March 2001 in order to continue the operation of the washery. Further deficiencies in equipment were observed the removal of which entailed an additional estimated expenditure of Rs.2.07 crore. Besides this, some equipment (jig, froth floatation plant dedusters, heavy media cyclone circuit and centrifuges) worth Rs.13.38 crore, which were selected on preconceived ash parameters of raw coking coal, were later found not suitable. These equipment have been lying idle from between 1998 and 2001 till date;
- (iv) The Management tried to run the washery without adequate performance test and arrangement of desired quality of raw coking coal in required quantity. This led to interrupted operation of the washery and consequent failure to achieve the designated performance of the washery;
- (v) The washery developed a number of technical snags during the course of operation, which were partly rectified by the Management at 'the risk and cost' of MAMC. The Company raised a claim of Rs.6.09 crore on MAMC in September 2002 which was revised upward to Rs.6.17 crore in February 2004 for recovery of cost incurred on removal of some deficiencies in the plant and also for recovery of house rent, electricity charges, unadjusted mobilisation advance and materials supplied to MAMC. Further, a claim of Rs.3.63 crore was raised against MAMC in March 2004 towards liquidated damages for late delivery of the plant and non-attainment of performance guarantee. However, the recovery of these claims was doubtful, as MAMC had gone under liquidation in July 2003;
- (vi) The project was declared complete in May 2001 on the premise that the washery could achieve 80 per cent of its daily rated production on the basis of another 'load trial run' conducted on a particular day on 24 March 2001 of the

main washery plant only. The 'trial run' was conducted in terms of raw coal throughput only, without taking into account 'trial run' of integrated circuit. The project completion report prepared based on this 'trial run' was approved by the Board of Directors of BCCL in July 2001 and was submitted to the Government for approval in December 2001, which was yet to be approved.

The Management stated (June 2004) that it was the responsibility of MAMC to start and carry out load trial run with their engineers as per terms of the contract but MAMC withdrew their engineers gradually. In these circumstances, BCCL had to continue 'load trial run' further in the national interest so that the plant with huge investment did not remain idle. The efforts made by BCCL to get the rectification works done by MAMC were in vain. The situation was unavoidable and could not be foreseen. The desired quality of raw coal could not be fed to the washery from the mineable front of Block-II OCP. The interrupted operation of the washery was beyond the control of BCCL as MAMC failed to rectify the defects observed during 'load trial run'. Further, they stated that MAMC was responsible for the various failures due to poor workmanship of the equipment supplied by them.

The reply of the Management confirms the contention of Audit that the selection process of the contractor was flawed.

3.6 Wasteful expenditure on overtime

A monthly normative budget is prepared based on monthly target of production. Monthly actual expenditure is compared with monthly budgeted expenditure. Cost controls are accordingly exercised. There was no provision in the Project Report to operate the washery on overtime and on Sundays/holidays/alternate rest-days even at its designed capacity to wash raw coking coal of 2.5 million tonne per annum.

It was observed that extra expenditure of Rs.4.60 crore was incurred for operation of washery on overtime and on Sundays/holidays/alternate rest-days during the period from 1999-00 to 2003-04. These operations attracted payment to the workers at double the normal rate and, in some cases at normal rate, with alternate rest-day while utilisation of capacity ranged from merely 18 per cent to 24 per cent during this period.

The Management stated (June 2004) that deployment of manpower on overtime and Sundays/holidays was necessary for receipt of raw coal and despatch of washery products as wagons were supplied on Sundays etc. to take care of absenteeism and also for maintenance and emergent nature of work.

But records revealed that there was still three-shift operation of the washery including one shift meant for maintenance. In view of substantial under utilisation of capacity, the Management should have avoided the operation of the washery on overtime in order to reduce losses.

3.7 Conclusions

As a result of faulty planning at the conceptual stage, failure to properly evaluate the feasibility of the project, unrealistic assessment of the source and supply position of coking coal and inadequate care at the time of implementation of the project, Madhuband Washery did not serve the desired purpose. Further, the choice of the contractor was flawed, leading to delay by more than 12 years and a cost overrun of Rs.125.33 crore. Many equipment and processes were by-passed or could not be put to operation properly.

The capacity remained grossly underutilised and supply of the final product to steel plants stopped, this defeating the purpose for which it was set up.

3.8 Recommendations

- (a) The Company needs to carefully review its project implementational abilities so as to ensure that the envisaged targets are met;
- (b) The Company needs to review its policies with regard to selection of bidders so that its interests are protected;
- (c) Efforts at more efficient utilisation of the washery are necessary together with a review of the overtime policy of the Company.

The review was issued to the Ministry in October 2004; its reply was awaited (March 2005).

CHAPTER : IV

Western Coalfields Limited

Information Technology Audit of Asset Accounting System

Highlights

The Asset Accounting System (AAS) in the Western Coalfields Limited (WCL) was not an independent system in itself. Though AAS was only a module forming part of Financial Accounting System (FAS), it was not linked to FAS for data uploading.

(Para 4.5.1)

The system allowed for direct data entry in the field of "opening depreciation till date" instead of calculating it by using the date of capitalization and the rate of depreciation. Accordingly, depreciation of Rs.2.47 crore was overcharged. In absence of application logs, it was not possible to trace when and who made the data entry. There were no access controls for making changes in entries in Asset Register or for changing the source code.

(Para 4.6.1)

WCL changed the accounting policy towards amortization of Prospecting, Boring and Development (PB&D) expenditure in 2001-02. But the changes were not incorporated in the application with the result that each Area charged this expenditure at a rate that they understood to be correct. This showed that WCL had no established Change Management Protocol, rendering the application vulnerable to misuse.

(Para 4.7.1)

At Umrer Area of WCL, PB&D expenditure was being written off in a manner which neither conformed to the old nor to the new policy, due to which, depreciation to the tune of Rs.39.95 lakh was undercharged during the year 2002-03.

(Para 4.7.2)

At Nagpur Area of WCL, the application calculated the depreciation such that when an asset was added after 15th of a month, no depreciation was charged. Accordingly, depreciation was undercharged to the extent of Rs.29.17 lakh during three years 2000-01 to 2002-03.

(Para 4.7.3)

4.1. Introduction

4.1.1 The Western Coalfields Limited, Nagpur (Company) is one of eight subsidiaries of the Coal India Limited (CIL). The Company is engaged in extraction and sale of coal from 80 mines situated in Maharashtra and Madhya Pradesh. As on 31 March 2003, the Company had 10 Areas at various places in these two states.

4.1.2 The production and sale of coal during the last five years were as follows:

	1998-99	1999-2000	2000-01	2001-02	2002-03
Production (in million tonnes)	31.75	33.86	36.20	37.01	37.82

Sales (Rs. in crore)	2435.72	2600.55	2685.37	3015.84	3199.76
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4.2. Organisational set-up

The Company has a System Department headed by the Chief General Manager (Systems), who is assisted by Chief Managers, Managers and other executives at headquarters and different Areas. The System Department looks after the work of system design and programming, routine Information Technology (IT) operations, data input, database administration, initiation of purchase indents, maintenance of hardware and software and other related matters.

4.3 IT Assets

4.3.1 The Company procured computers and peripherals on hire basis. Expenditure incurred on hiring of computers and peripherals during the three years ended March 2003 was Rs.1.29 crore, Rs.1.42 crore and Rs.1.50 crore respectively. The Company also owned IT assets valuing Rs. 77.20 lakh as on 31 March 2003.

4.3.2 The table below indicates the details of the infrastructure available with the Company:

S.No.	Server	Date of installation	Place	Purpose
1	Rise (1)	September 2002	Headquarters	Payroll, Employees information
2	Intel (6)	May to September 2000	Headquarters and five Areas	Sales Accounting
3	Intel (18)	September 1999 to January 2000	Headquarters, six Areas, 10 Regional Stores, Central Store	On line Material Management System and routine

The Company had following application systems in use:

- (i) Payroll System
- (ii) Sales Management System
- (iii) Financial Accounting System
- (iv) On line Material Management System

The operating system available was UNIX with RDBMS¹ ORACLE 7 and 8 and the programming languages in use were PL/SQL, FOXPRO and COBOL.

4.4. Scope of Audit

4.4.1 For assets accounting, the Company has a computerized Asset Accounting System in COBOL/ORACLE at its headquarters and 10 Areas². An Information Technology audit of the Asset Accounting System was conducted during the month of August 2003 in seven Areas (Chandrapur, Ballarpur, Wani, Pench, Kanhan, Umrer and Nagpur) and the headquarters of the Company.

4.4.2 The scope of audit was to examine whether the system had been designed to maintain data integrity and to evaluate the reliability and effectiveness of the system.

¹ Relational Data Base Management System

² Chandrapur, Ballarpur, Wani, Pench, Kanhan, Umrer, Nagpur, Majri, Wani North and Pathakheda

Further, the operational performance of the system software was checked by feeding dummy data into the system and comparing the output with manually calculated results.

4.4.3 The findings of Audit are discussed in succeeding paragraphs:

4.5. *Not linked to Financial Accounting System*

The Asset Accounting System (AAS) was not an independent, self-contained system in itself. Though AAS was only a module forming part of Financial Accounting System (FAS), it was not linked to FAS for data uploading. It had been developed as a stand-alone program except in one Area (Nagpur) which was connected with Local Area Network (LAN), and put to the limited purpose of calculating annual depreciation and printing Asset Register. The transactions relating to assets acquisition, transfer, disposal, etc. were being carried out on batch processing mode. For receipts, issues and transfers, etc. of assets, a journal voucher was prepared which acted as an interface and involved duplication of work. The Ministry stated (January 2005) that the system was being modified to avoid duplication of work.

4.6. *Deficient access control and absence of audit trail*

4.6.1 The Company provided depreciation at the rates specified in Schedule XIV of the Companies Act 1956 on straightline method. It was seen that an expenditure of Rs. 8.20 crore was capitalized on 10 June 1997. As per the Company's accounting policy, total depreciation till the year 2002-03 worked out to Rs.2.46 crore at a rate of five per cent per annum whereas the application showed a sum of Rs.4.93 crore as depreciation. Audit analysis revealed that the system allowed for direct data entry in the field of "opening depreciation till date" instead of calculating it by using the date of capitalization and the rate of depreciation. In absence of application logs, it was not possible to trace when and who made this data entry. It was found that there were no access controls for making changes in entries in Asset Register or for changing the source code. There was no system password and the application password was also not kept secret. Thus, depreciation of Rs.2.47 crore was charged in excess and profit and tax liabilities were accordingly understated.

4.6.2 The Management/Ministry stated (September 2003/January 2005) that it was due to adjustment made with regard to negative assets at the time of transfer of assets from Nagpur Area in 1995. The reply was not relevant in view of the fact that the Umrer Area was separated from Nagpur Area in 1995 and assets under reference were capitalized only in the year 1997-98. The Ministry added that the Company was in the process of removing the deficiencies in respect of access to application programme.

4.7 *Deficient change management procedures*

4.7.1 In 2001-02, the Company changed the accounting policy towards amortization of Prospecting, Boring and Development (PB&D) expenditure. But the changes were not incorporated in the application with the result that each Area charged this expenditure at a rate that they understood to be correct and there was no uniformity. Nagpur and Pathakheda Areas of the Company were still following the old policy. This showed that the Company had no established Change Management Protocol, rendering the application vulnerable to misuse.

4.7.2 Audit also observed that at Umrer Area, the PB&D expenditure was being written off in a manner which neither conformed to the old nor to the new policy. Due to this,

depreciation to the tune of Rs.39.95 lakh was undercharged during the year 2002-03. While accepting the lack of uniformity in amortising PB&D expenditure, the Management stated (September 2004) that all the Areas started implementing the uniform method from the year 2003-04. The Ministry added (January 2005) that a standard Oracle based system was being implemented, which would ensure the uniformity of the computation and procedure.

4.7.3 If an asset is added/disposed of during the year, the depreciation is provided on monthly pro-rata basis with reference to the month of addition/disposal. At Nagpur Area, the application calculated the depreciation such that when an asset was added in a month on or before 15th day of a month, depreciation for the whole month was charged and if the asset was added after 15th of a month, no depreciation was charged. This resulted in undercharging of depreciation to the extent of Rs.29.17 lakh during three years 2000-01 to 2002-03. The Management stated (August 2003) that at the time of introduction of ORACLE in the year 2000-01, this aspect of accounting was missed inadvertently. The Ministry added (January 2005) that necessary changes have been made in the system and rectification made in the accounts for the year 2003-04.

4.8 Conclusions and Recommendations

4.8.1 The Asset Accounting System served the limited purpose of calculation of depreciation and generation of asset register. It was not a complete system in itself and not linked to the Financial Accounting System. It was running in different languages at different units with end-users having unlimited authority to effect changes in module and alter entries in asset register. Further, no built-in checks were developed in the system to ensure data integrity and compliance of accounting principles. This resulted in overcharging and undercharging of depreciation to the extent of Rs.3.16 crore, vitiating the financial statements of the Company.

4.8.2 There is a need to integrate the Asset Accounting System with Financial Accounting System in all the Areas. The Company also needs to make necessary access controls to avoid unauthorised changes in Assets Register or the source code, and to ensure uniformity in computation.