

**MINISTRY OF COAL**

**CHAPTER II**

**Eastern Coalfields Limited**

**System of transportation of coal**

*Highlights*

Due to transportation of coal by longer routes, the Company incurred extra expenditure of Rs.2.80 crore during the period from 2003-04 to 2006-07.

*(Para 2.7.1)*

Coal produced in the collieries was not transported directly to coal handling plants and railway sidings located within a radius of one km<sup>1</sup> by departmental transport. These were stocked in nearby depots and subsequently transported by transport contractors which involved additional loading, unloading and transportation cost amounting to Rs.49.05 crore.

*(Para 2.7.2)*

In Sonapur Bazari area open tenders were invited for transportation of coal and the rates received were lower than the 'Schedule of Rates' (SOR) resulting in saving of Rs.2.27 crore during 2007-08 indicating that the existing SOR rates were higher than the prevailing rates.

*(Para 2.7.3)*

Due to non-installation of electronic-in-motion rail weighbridge and suspension of static weighbridge in the Kenda area, coal had to be transported over long distances for being weighed. This resulted in an increase in the quantum of underloading and penalty thereon of Rs.8.98 lakh besides shortages of Rs.32.59 lakh.

*( Para 2.7.4.1)*

Due to detention of Railway wagons beyond stipulated time, the Company paid Rs.10.19 crore towards demurrage charges during 2003-04 to 2006-07.

*(Para 2.7.5.1)*

Quantity of underloading of coal increased by 100 *per cent* though the quantity dispatched was almost the same during the period. As a result, the Company paid Rs.38.64 crore as underloading charges during the period from 2003-04 to 2005-06.

*(Para 2.7.5.2)*

The Company did not impose penalty of Rs.11.27 crore on the transport contractors for unexecuted quantity of coal transportation as per the contract.

*(Para 2.7.5.3)*

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<sup>1</sup> kilometre

### *Summary of recommendations*

1. *The Management should adopt the shortest route to transport coal. For this purpose nearest operational siding should be utilised by adjusting the rakes linkage. Railway sidings that can be put to use with minor modifications should be operationalised.*
2. *Rehandling of coal should be avoided as far as practicable. Utilisation of departmental dumpers should be augmented to avoid rehandling of coal and the possibility of extension of conveyor belt at CHP Badula should be properly considered.*
3. *The Management should explore the possibility of open tendering for transport contracts wherever coal handling was above the level set by the Management.*
4. *Electronic weighbridges should be installed at both loading and unloading points so that shortage of coal during transportation could be ascertained and recoveries effected from the transporters. Regular arrangement for annual maintenance contracts and their implementation should be ensured.*
5. *The Management should take all measures to ensure that wagons are requisitioned as per requirement. Penalty for detention of wagons beyond stipulated time where attributable to transport contractors and in respect of unexecuted quantities should be recovered from the defaulting contractors. The cases of increase in underloading of wagons should be investigated and analysed by the Management.*

### *2.1 Introduction*

Eastern Coalfields Limited (Company), a subsidiary of Coal India Limited (CIL), presently operates 76 underground mines, nine open cast mines and four mixed mines in West Bengal and seven underground mines, six open cast mines and one mixed mine in Jharkhand in 14 areas. The Company has estimated coal reserves of 44.49 billion MT. The Company produces around 30 million MT of coal *per annum* and caters primarily to the power sector. The Company was declared a sick company by the Board for Industrial & Financial Reconstruction (BIFR) in February 2001. The rehabilitation scheme was sanctioned in November 2004 by BIFR. The scheme was revised and approved by the Government in October 2006.

The coal after extraction from the mines is brought to the pit head/depot by departmental dumpers and is further transported by contractors to railway siding situated at a distance of 0.5 km to 40 km. The cost of transportation up to three km is borne by the Company. In case of transportation of coal beyond three km, the Company is entitled to recover transport cost from the purchaser at the rate of Rs.30 *per* MT for a distance between 3 kms to 10 kms, Rs.50 *per* MT for a distance exceeding 10 kms but up to 20 kms, and actual expenditure for a distance exceeding 20 kms. However, it was noticed that the expenditure on transportation cost was higher than the amount recovered. During a period of five years ending 2006-07, against the expenditure of Rs.283.01 crore incurred, only a

sum of Rs.186.90 crore was recovered leaving a gap of Rs.96.11crore. The transportation cost comprised of 14 *per cent* of the total variable operating cost<sup>2</sup> during this period.

## **2.2 Scope of audit**

The records of 11<sup>3</sup> of total 14 areas of the Company apart from the records at Headquarters, were analysed in audit covering a period of five years ending March 2007.

## **2.3 Audit objectives**

Performance audit on the issues relating to transportation of coal was conducted with a view to assess:

- the system of selection and awarding of transport work;
- the system for fixation of rate of transportation of coal by the contractors ;
- the economy in selection and measurement of routes ;
- the efficiency and economy of rehandling of coal ;
- the adequacy of weighment system at loading and unloading points;
- the adequacy of the mechanism for imposing penalty; and
- the adequacy of the monitoring system with regard to compliance with statutory obligations.

## **2.4 Audit criteria**

During the examination of records of the Company, the effectiveness of various activities was assessed with reference to:

- route measurement reports and transport contractor agreements;
- schedule of rates<sup>4</sup> (SOR); and
- terms and conditions governing the agreements.

## **2.5 Audit methodology**

The performance audit was conducted by examining records kept at Head quarters, area offices, collieries, depots, weighbridges, sidings and other associated units. An entry conference was held with the Management in January 2007 to understand and discuss the issues relating to transportation of coal. With a view to draw effective conclusions and have corollary evidences, as a sample three coal transportation routes were measured by audit team in association with Industrial Engineering Department (IED) of the Company to check whether shortest routes were in use. Further, sidings and stockyards were physically visited to examine the system of loading and transportation. The exit

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<sup>2</sup> *Variable operating cost includes --- Consumption of stores and spares, social overhead, power and fuel, repairs, contractual expenses (transportation expenditure) and, cost of removal of over-burden.*

<sup>3</sup> *Sonepur Bazari, Pandaveswar, Kunustoria, Bankola, Rajmahal, Salanpur, Sodepur, S.P. Mines, Satgram, Kajor and, Kenda.*

<sup>4</sup> *S.O.R. consists of guidelines with regard to measurement of route distances, rates of transportation, award of work, system of reconciliation of payment, penalty for shortage/demurrage and responsibility of contractors.*

conference to discuss the findings was held in November 2007. The Management's reply received in November 2007 was considered while preparing the report.

## **2.6 Acknowledgement**

Audit takes this opportunity to thank the Management and staff of the Company for the co-operation and assistance extended by them during this performance audit.

## **2.7 Audit findings**

### **2.7.1 Failure to use shorter routes**

Schedule of rates (SOR), as approved by the Board of Directors, is valid for two years. SOR prescribes that coal should be transported on the shortest route to the destination. Measurement of distances for the routes from colliery pit head/depot to railway siding is approved by the Chief General Manager/General Manager of the concerned area on the basis of recommendation of the committee constituted for the purpose. As per SOR, the distance of all the routes for transportation is required to be re-measured after every three years. It was noticed in audit that the length of the routes used by the contractors for transportation of coal were being certified by the Management without ensuring that the route selected was the shortest. As a result, it was noticed in audit that the contractors were allowed to transport coal on longer routes and the Company incurred avoidable expenditure of Rs.2.80 crore during the years 2003-04 to 2006-07. These cases are discussed below:

**2.7.1.1** The Company closed the railway siding at Amritnagar colliery situated at a distance of 0.5 km, in June 2000 due to insufficient production load. The coal extracted from this colliery was thereafter transported to Belbaid railway siding at a distance of 11-12 km. However, an audit scrutiny of production data revealed that the annual production was sufficient to accommodate an average 45 rakes in a year. Therefore, transporting the coal to a distant siding was not justified. Moreover, the required linkage of 58 N box wagons could have been rearranged through the linkage committee so as to meet the requirement of Amritnagar colliery instead of sending the coal to a distant colliery. The avoidable additional expenditure on transportation incurred by using a longer route was Rs.2.14 crore during the period from 2003-04 to 2006-07.

**2.7.1.2** Coal was transported from Tilaboni, Kumardihi "A" and Shyamsunderpur to Perushottampur II (POCP-II) railway siding for a distance between 5 and 11 km. Scrutiny of records revealed that Bankola No. 2 siding, situated at a distance of 3-7 km was proposed (September 2005) to be reorganised (mainly the strengthening of the platform) so as to accommodate 58 N box wagons to handle coal received from Tilaboni, Kumardihi "A" and Shyamsunderpur collieries at an estimated cost of Rs.51.70 lakh. The proposal was sent to the Company's Head Quarters in August 2006 and was pending for want of some clarifications from the area (September 2006). In the meantime the Company on an average was incurring a recurring expenditure of Rs.1.35 crore *per annum* towards transportation of coal on the longer route. In case, the siding is reorganised even now, it would save an amount of Rs.48.78 lakh *per annum*<sup>5</sup> after considering the expenditure to be incurred on transportation of coal to Bankola No. 2 siding.

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<sup>5</sup> Worked out on the basis of differential average annual expenditure incurred on transportation of coal to POCP II siding instead of Bankola no.2 siding.

**2.7.1.3** In Salanpur area the measurement of routes' distance for transportation of coal from the coal face to Bonjemehari siding was conducted in February 2002 and February 2003. It was noticed that in the measurement taken in February 2003, there was reduction in distance of most of the routes by one to two km as compared to earlier measurement. The reduction of distance was not due to change in the location of pit head. The payment, however, continued to be made on the original measurement. As a consequence, the Company incurred an extra expenditure of Rs.14.17 lakh during the year 2002-03 at five collieries<sup>6</sup> in the Salanpur area.

The Management in its reply stated the reduction in route measurement was due to change in measurement modalities. The reply is not tenable since not only the route distance should not change with different measurement modalities but also the payment should be made on the basis of shortest measured distance.

**2.7.1.4** Coal of Mouthdih colliery was transported through 3A and 9/10 pit railway siding at a distance between three and four km and five and six km respectively. Though the distance to 3A pit railway siding was shorter, the work order for transportation of coal was issued simultaneously to 3A pit and 9/10 railway siding. The quantity of coal transported to 9/10 pit siding gradually increased and became double the quantity transported through 3A pit railway siding during 2005-06 and 2006-07. As a result, the Company incurred extra transportation cost of Rs.2.98 lakh which was avoidable.

The Management stated that the cost of transportation for the longer distance was recovered from the consumers. The reply of the Management was not acceptable as recovery of the extra transportation cost from the power generation companies and ultimately, the consumers was not an appropriate justification for using the longer route. Further, use of longer route increases the risk of pilferage of coal *en route*.

***Recommendation No. 2.1***

***The Management should ensure after appropriate consideration, that***

- (i) the shortest route to transport coal is used and in case of exception, it is justified on record;***
- (ii) the nearest operational siding is utilised by adjusting the rakes linkage; and***
- (iii) railway sidings that can be put to use with minor modifications are operationalised.***

**2.7.2 Rehandling of coal**

In open cast mines coal is brought to pit head or depot by departmental dumpers and is transported from pit head/depot to the railway siding or coal handling plant (CHP) by the contractors. The scrutiny of records relating to eight collieries<sup>7</sup> revealed that the coal produced in the collieries was not transported directly to CHPs by departmental transport and the same was stocked in a nearby depot. This involved avoidable loading and unloading apart from transportation charges aggregating to Rs.49.05 crore during the period 2003-04 to 2006-07. The instances noticed in audit are discussed below:

<sup>6</sup> *Gaurandi, Dabor, Sangramghar, Monoharbahal and Chkballavpur.*

<sup>7</sup> *Pandaveswar, Sonapur Bazari, Rajmahal, Sidhuli, JKUnit, New Kenda 2 pit, Chora 7 and 9 pit and Lower Kenda.*

**2.7.2.1** The distance between the coal stockyards to CHP was up to one km only at Sonapur Bazari, Pandaveswar and Rajmahal areas. However, coal was not transported directly by departmental dumpers to CHP and was stocked in an adjacent depot requiring the coal to be transported further to CHP by transport contractors who were paid loading charges for loading coal into tippers at depots and transportation charges for carrying the coal to mini CHP. This led to re-handling at an avoidable expenditure of Rs.11.27 crore during the period 2003-04 to 2005-06 in Sonapur Bazari and Pandaveswar areas and Rs.36.32 crore during the period 2003-04 to 2006-07 in Rajmahal area.

The Management stated that direct unloading of raw coal to feeder breaker of CHP at Sonapur Bazari by high capacity haul pack dumpers *i.e.*, 50 and 120 tonnes was not possible with the existing infrastructure of the CHP unless major modification of the CHP was undertaken. As regards Pandaveswar, it was stated that the capacity of the hopper of the mini CHP was low and if dumping was done by the dumpers directly it would delay the dumpers' movement and ultimately affect the availability of the dumpers for production. As regards Rajmahal area, it was stated that in order to increase production, the coal from the face of the mine was dumped (departmentally) midway wherefrom it was contractually transported to CHP due to longer lead and ageing of dumpers.

The reply is not acceptable since the Management had not conducted any cost-benefit analysis of undertaking modification of the feeder breaker at Sonapur Bazari to accommodate direct unloading by 50/120 Tonne Dumpers considering the high cost of rehandling. In Pandaveswar area, 35 tonne dumpers could unload the coal into the hopper of CHP by strengthening the existing platform. The situation also needed special attention considering that the dumper utilisation in this area never exceeded 25 to 40 *per cent* of available hours; therefore reply was not based on facts. In the Rajmahal area the utilisation of dumpers was never more than 50 *per cent* of available hours and there was still scope of utilisation of departmental transport as was the practice till 2002-03.

**2.7.2.2** The distance between pit head at Siduli and J.K. Unit and the Bahula siding was about one km. Therefore, the coal from the pitheads could have been transported directly to Bahula siding by departmental dumpers instead of stocking it in between and then transporting it to the siding, as was the practice. As such an amount of Rs.40.17 lakh incurred on this additional movement between 2002-03 and 2006-07 was avoidable. Further, the distance between the CHP at Bahula and the siding was only 50 metres. During the period 2003-04, 9.46 lakh MT coal was transported from the CHP to Bahula siding through contractor at a cost of Rs.1.06 crore. Such movement could be done by extending the existing conveyor belt as the distance between the CHP and the Bahula siding was less than 50 metres.

The Management stated that transportation of coal to the siding from CHP through conveyor was uneconomical considering the cost of infrastructure and its maintenance. However, the Management had not explored this option which would generate a recurring benefit to the Company.

**Recommendation No. 2.2**

**The Management should ensure that**

- (i) rehandling is avoided as far as practicable;**
- (ii) utilisation of departmental dumpers is augmented; and**
- (iii) possibility of extension of conveyor belt at CHP Bahula is considered for implementation.**

**2.7.3 Rates for transportation**

Rates of transportation of coal are guided by a duly approved and the Management's issued Schedule of Rates (SOR). Different base rates are applied for different distances and are subject to escalation and de-escalation. Work is allocated among the registered contractors who accept the approved rates.

It was observed in audit during examination of records that Sonapur Bazari area opted for open tendering for transport contracts as per the directives of Vigilance Department of Coal India Limited. Notice Inviting Tender (NIT) was issued in August 2006. The work was allotted to L<sub>1</sub> bidder for loading of coal into tipper at surface stockyard, its transportation and unloading at CHP and transportation of crushed coal to railway siding. A comparative statement of SOR rate vis-à-vis open tender rate revealed that while open tender rate for carrying coal to CHP and carrying crushed coal to the railway siding was Rs.11.6 and Rs.35 per MT, respectively, the SOR rate was Rs.14.02 and Rs.39.07 per MT. Award of work at open tender rates resulted in savings to the tune of Rs.2.27 crore for transportation of 35 lakh MT coal during 2007-08. This indicated that existing SOR rates were higher than the prevailing market rates.

The Management accepted the audit finding and stated that open tendering has been resorted to where coal availability was substantial.

**Recommendation No. 2.3**

**The Management should explore the possibility of open tendering wherever coal handling was above the level set by the Management.**

**2.7.4 Weighment of coal**

**2.7.4.1** Out of 107 collieries, weighbridges were not installed at the loading points of 64 collieries. In Pandaveswar area it was noticed that there was no weighbridge at any of the loading point in any of the collieries. As such, no weighment was being done at loading points *i.e.*, pit head and coal was being transported by road up to Dalurband and South Samla Railway siding and was being weighed there. Under this practice there was scope for pilferage of coal *en-route* which could not be determined in the absence of weighing facility at loading points.

It was noticed in audit that one 'Pitless Electronic in-motion rail weighbridge' was procured (April 1990) for Kenda area at a cost of Rs.12.46 lakh. The weighbridge was not installed in the area sidings and had been lying in the store since April 1990. No specific reasons were found on record indicating the reasons for not installing it. After suspension of static weighbridges, coal from Kenda area was weighed either at Sonachora railway siding at a distances of six kms or at Andal railway weighbridge 14 kms away. As a consequence the quantum of underloading increased from 51.91 MT to

321.01 MT *per rake* in Bahula and 154.19 MT to 262.19 MT *per rake* in New Kenda sidings. The area sustained loss of Rs.32.59 lakh on account of shortages and paid excess underloading charges of Rs.8.98 lakh during the period from September 2006 to March 2007 while the weighbridge remained uninstalled and also blocked a sum of Rs.12.46 lakh for over 18 years.

The Management stated that 'Pitless electronic in-motion rail weighbridge' was in the process of installation at Kenda Area.

**2.7.4.2** Eastern Railway granted (October 1988) a rebate of 20/30 paise *per MT* of bulk coal weighed on electronic weighbridge. It was observed that in some areas there was abnormal delay in installation of weighbridges and frequent breakdown of weighing machines in spite of annual maintenance contracts being signed. At Sonepur Bazari the duration of breakdown of the weigh bridge was to the extent of seven to ten months during 2004-05 to 2006-07. As a result, Sonepur Bazari areas could not weigh coal at Pure Sitalpur siding and coal was transported to Andal Railway siding at a distance of three to four km where it was weighed as 17.43 lakh MT coal from 2002-03 to 2006-07. As a result, the Company could not avail rebate of Rs.5.23 lakh besides leaving scope of pilferage of coal *en-route*.

***Recommendation No. 2.4***

***The Management should ensure that***

- (i) electronic weighbridges are installed at both loading and unloading points so that shortage of coal during transportation could be ascertained and recoveries made from the transporters; and***
- (ii) arrangement for annual maintenance contracts of weighbridges are monitored for timeliness of contracting and their implementation.***

**2.7.5 Incidence of demurrage**

Railways charge demurrage in case loading of rake is not done within the stipulated time period. As per clause 1.9.1 of SOR, pertaining to penalty for demurrage, there should be no detention of wagon at the railway siding due to failure of transportation of sufficient quantity of coal to the siding and in case of such failure, the contractor shall be held responsible and demurrage, if any, paid by the Company shall be recovered from the contractor's bill/dues/security deposit.

**2.7.5.1** Scrutiny of records pertaining to payment of demurrage charges revealed that the Company had been paying demurrage to Railway authorities for detention of wagons beyond permissible limit. The Company paid Rs.10.19 crore to Railways towards demurrage charges from 2003-04 to 2006-07. Detailed scrutiny of records revealed that demurrage charges in respect of Bankola area rose substantially from Rs.11.43 lakh to Rs.83.86 lakh; Rs.10.37 lakh to Rs.43.93 lakh for Kenda area, Rs.38.73 lakh to Rs.74.83 lakh for Kunustoria area; and Rs.17.81 lakh to Rs.56.33 lakh for Pandeveswar area over a period of four years ending 2006-07. However, no amount was recovered from the contractors on this account.

The Management attributed the delay mainly to:

- i) supply of wagons/rakes more than the requirement of the areas;
- ii) law and order as well as industrial relation problems in the areas;



- iii) strike/bandh called by the political parties;
- iv) heavy rainfall affecting coal production and disrupting coal transportation at the siding; and
- v) removal of shale/band/stone and other materials towards quality loading of coal.

However, besides above, the other important reasons noticed in audit were:

- i) failure of the contractors to load covered wagons supplied by Railways within stipulated time;
- ii) non-availability of loaders, and
- iii) inadequate quantity of sized/quality coal.

The Management stated that demurrage charges could not be recovered from transporters' bill since the delay in loading was not attributed to contractors' failure.

The Management, however, did not analyse the causes so as to control those that were within its power to do so and those that could be attributed to the contractor to minimise delays and recover costs.

2.7.5.2 Clause 1.9.2 of the SOR provided that the contractor engaged in loading the railway wagon shall ensure under the supervision of the colliery Management, that wagons were loaded as per their capacity and no overloading and underloading was done. Audit noticed that underloading charges amounting to Rs.38.64 crore were paid to Railways from 2003-04 to 2005-06.

The Management stated that the major compelling reasons for overloading/underloading were:

- i) frequent and unilateral revision of minimum permissible carrying capacity of different types of wagons by the Railways,
- ii) failure to load Raniganj coal of Grade A and Grade B, being lighter in weight, in wagons to the extent of minimum permissible carrying capacity, and
- iii) lack of facilities at different railway yards available to adjust underload quantity at the weighbridges except at Rajmahal area.

The reply of the Management reflected lack of co-ordination between the Company and the Railway authorities. As mentioned earlier, there was lack of arrangement for pre-weighted loading by installing electronic weighbridges. Furthermore, test check of records of Pandaveswar, Kunustoria, Sonapur Bazari and Bankola areas revealed that during 2004-05 to 2006-07 the quantity of underloading increased by about 100 *per cent* whereas quantity of dispatch was almost the same.

2.7.5.3 As per clause 1.9.4 of Part-III of SOR, the contractor has to ensure the required progress of work as stipulated by the Company. In case of failure on the part of the contractor, penalty to the extent of 25 *per cent* of the unexecuted quantity assessed on weekly basis at the awarded rate would be imposed and deducted from the contractor's bills/dues/security deposit.

Audit scrutiny revealed that the contractors transported lesser quantity of coal than required under the contract in Kunustoria, Pandaveswar and Rajmahal areas. The recoverable amount worked out to Rs.11.27 crore during the period 2003-04 to 2005-06.

However, the Company did not recover any amount by deducting the same from the contractors' bills/dues/security deposit.

The Management stated that since the coal produced and available for transportation was fully transported to the siding by the contractors, the question of imposition of penalty on the contractor did not arise.

The reply is not based on the facts since the production of coal had been always more than the quantity awarded as per work orders but the contractors failed to lift the agreed quantities. Over a period of three years ending 2005-06, against the production of coal of 394.72 lakh MT in Rajmahal, 72.78 lakh MT in Padaveswar and 52.03 lakh MT in Kunustoria the quantities executed were 241.87 lakh MT, 34.59 lakh MT and 37.69 lakh MT, respectively. The unexecuted quantities were to the extent of 50.97 lakh MT, 7.59 lakh MT, and 11.38 lakh MT, respectively.

***Recommendation No. 2.5***

***The Management should take all measures to ensure that***

- (i) wagons are requisitioned as per requirement;***
- (ii) recovery of penalty for detention of wagons beyond stipulated time where attributable to transport contractors is enforced;***
- (iii) penalty in respect of unexecuted quantities is recovered from the defaulting contractors; and***
- (iv) the Management should investigate and analyse the reasons and causes for increase in underloading of wagons.***

**2.8 Conclusion**

Eastern Coalfields Limited had been suffering losses and transportation costs constituted 14 *per cent* of the total variable cost. Audit assessed the issues relating to transportation of coal. Audit review revealed deficiencies in the use of shorter routes; minimising rehandling of coal; availability of the weighing facilities at loading points at collieries and sidings; high incidence of demurrage; and underloading of wagons. The review revealed that the Company failed to ensure accuracy of weighing by installing weighbridges at the loading and the unloading points in a large number of collieries. This led to uncertainty in weight of coal transported and consequent leakages, losses and penalties. Shorter routes were not availed for transportation of coal leading to higher costs. High demurrage charges were paid each year for delayed loading of rakes. The Company also failed to verify whether adequate stocks were transported to the sidings to ensure that the contracted quantities were lifted by the contractors. There was a 100 *per cent* increase in underloading of wagons.

The matter was reported to the Ministry in January 2008; reply was awaited.