

Overview

The Audit Report for the year ending March 2014 is divided into two volumes viz., Volume I and Volume II. Volume I of the Report comprise five chapters containing audit findings related to three departments viz., Traffic – Commercial and Operation; Electrical – Signalling and Telecommunication units; Mechanical – Zonal Headquarters/ Workshops/ Production Units; and Public Sector Undertakings of Indian Railways including the chapter on Introduction. Volume II of the Report contains audit findings related to Engineering department of Indian Railways.

The Engineering department of Indian Railways is responsible for maintenance of all fixed assets of Indian Railways such as Tracks, Bridges, Buildings, Roads, Water supply, in addition to construction of new assets such as new lines, gauge conversion, doubling and other expansion and developmental works. Major policy decisions of the Engineering Department are taken by the Railway Board under supervision of Member Engineering who is assisted by Additional Member (Civil Engineering) and Additional Member (Works) and Advisor (Land & Amenities).

At Zonal level, the Engineering Department is headed by Principal Chief Engineer (PCE) under General Manager of the concerned Zonal Railway. The PCE is assisted by various chief engineers for track, bridge, planning, track machines, general matters etc. In addition, each Zonal Railway has a construction organization headed by a Chief Administrative Officer, Construction who is responsible for major construction works including survey works within concerned Zone.

The total expenditure of the Civil Engineering Department during the year 2013-14 was ₹ 17665.74 crore. During the year, apart from regular audit of vouchers and tenders, 1313 offices of Engineering department including Construction Organization of the Railways were inspected by Audit.

This Report contains the audit findings of significant nature detected during audit in Ministry of Railways (Railway Board) of the Union Government and its field offices for the year ended 31 March 2014. It includes four reviews conducted across Indian Railways and nine paragraphs pertaining to individual zones.

Some of the important findings included in this Report are given below:

Chapter 1 – Review on 'Maintenance of Bridges in Indian Railways'

Across Indian Railway, there were over 1.36 lakh railway bridges, which constitute an essential part of the Railway network. The existence of a large number of very old bridges identified as due for rehabilitation/ reconstruction is a concern for safe train operations. Audit reviewed the procedure adopted in Indian Railways for rehabilitation/ reconstruction of bridges. Test check of 102 bridgeworks pertaining to 150 bridges revealed that in 31 bridgeworks, Railway Board took on an average 43 months to sanction the bridgeworks after its identification for rehabilitation. **Moreover, after sanctioning, bridgeworks were completed with an average delay of 41 months. Delay**

in sanctioning and completion of bridgeworks identified for rehabilitation is a threat to human lives and railway assets during operation of train services on these bridges. Delays in completion of bridgeworks also caused continuation of train operation with speed restriction that led to extra operational cost.

Audit also revealed that out of 147 bridges made of Early Steel/ Crew pile/ Cast Iron, considered to be prone to brittleness and to be phased out by end of 2013, 96 such bridges still exist over five Zonal Railways.

Scrutiny of fund allotted for bridgeworks revealed that Budget Grant provided to Zonal Railways was less (average shortfall ₹213.69 crore per year) than that of Budget demanded by Zonal Railways. Further, against the Budget provided for rehabilitation of bridgeworks, average under utilization of ₹60.95 crore per year was also noticed by Audit.

The objective of conducting bridge inspection is to assess the condition of bridges and take corrective remedial measures such as maintenance, rehabilitation, rebuilding etc. **Review revealed shortfall in adherence to scheduled inspection of bridges by various levels of inspection authority to the extent of 32.19 per cent. This shortfall may result in a serious bridge condition going unnoticed.**

Chapter 2 – Review on 'Procurement and Utilization of Track Machines in Indian Railways'

Indian Railways runs 7000 Passenger trains and 4000 Goods trains per day over 103642 KM of total Broad Gauge (BG) track. Saturated line capacity has posed a challenge to maintain the track fit and safe within the limited maintenance blocks. Moreover, technology advancement of track structure has necessitated switching over from manual maintenance to mechanised maintenance. Track machines of various types are being used for performing activities such as tamping of track (packing of ballast below sleepers) and cleaning of ballast, stabilizing of track, laying and handling of rails/sleepers/points and crossings etc. Maintenance of track was being carried out by 743 track machines available with the Indian Railways as of March 2014. The projection of requirement of track machines in the Master Plan 2010-20 lacked accuracy as it did not take into account the trend of actual growth of track and adoption of tamping cycle as provided in the manual of Indian Railways or based on Track Geometry Index (TGI) criteria. Incorrect assessment of workload in Zonal railways led to excess procurement of 43 tamping machines and 27 Dynamic Track Stabilising machines and short procurement of 91 machines (39 Ballast Cleaning Machines, 8 Shoulder Ballast Cleaning Machines and 34 T-28 machines). Targets fixed by Railway Board for working of track machines were not need based. Targets were fixed either in excess of or less than the requirement. Railway Board failed to frame a comprehensive action plan for indigenous development of track machines as envisaged in vision 2010-20 document.

Chapter 3 – Review on 'Provision and utilization of Direction and General Charges provided in Works estimates of Construction Organization in Indian Railways'

Each estimate of major work/projects carried out in Indian Railways has provision of Direction and General (D&G) charges to cover the cost of staff engaged and office expenses for execution of work/project. The Railway Board has fixed yardsticks for (a) provision of D&G charges in various works estimates as a percentage of estimated cost of work and (b) creation of Gazetted posts indicating the works to be handled by each post holder in monetary terms. These posts are in addition to the permanent and temporary posts sanctioned for the Indian Railway. The yardsticks for creation of Gazetted posts including Higher Administrative Grade (HAG), Senior Administrative Grade (SAG), Junior Administrative Grade (JAG), Senior Scale (SS) and Junior Scale/Group "B" have been prescribed by the Railway Board. The overall expenditure on work charged establishment should be within the prescribed establishment component of D&G charges. It was observed that the Railway Board has prescribed a flexible system linking the creation of posts to provision of funds under ongoing/sanctioned capital works. **Disparity in estimation of cost of staff for creation of work charged posts in Zonal Railways had resulted in understatement of capital expenditure to the tune of ₹ 1327.59 crore during 2011-14, which impacts the availability of funds for execution of works and delay/reduction in scope of work.** Audit noticed that during the period of review (2011-12 to 2013-14) expenditure beyond available provisions in the work estimates were booked to the extent of ₹ 2206.43 crore and ₹ 304.84 crore under various heads of D&G charges leading to reduced fund availability for the work/excess over sanction to that extent.

Chapter 4 – Review on 'Management of vacant land in Indian Railways'

Land is an important and permanent asset of Indian Railways (IR). IR owned owner of 4.59 lakh hectares of land (March 2014). Out of this, 47340 hectare of land had not been put to any use (vacant land- 46409 hectare and encroached land- 931 hectare). IR requires an efficient management to watch safe custody of land available with them and also the land encroached by ensuring clear title, prevention of encroachments and early removal of encroachment of vacant land. This requires maintenance of accurate Land Records. A review of the records of Indian Railways for 2011-14 revealed that out of 16 Zonal Railways, separate Land Management Cells (LMCs) to keep and maintain land records had not been set up in headquarters office of three Zonal Railways and in 37 Divisions of 13 Zonal Railways. Only three Zonal Railways had LMCs in all of their Divisions. Most of the staff posted in LMCs in Divisions was neither trained to deal with land issues nor exclusively deployed on the job resulting in deficient maintenance of land data/ records besides improper monitoring of vacant land. **Four per cent of total land plans were missing and out of available land plans (16 per cent) had not been authenticated by State Authorities and 20 per cent land plans had not been digitised.** Out of 16 Zonal Railways, the records connected with land mutation were available in eight Zonal Railways only and there too, only 48

per cent land plans were mutated. In respect of basic records such as Land Record Register (LRR), Land Boundary Verification Register (LBVR) and Encroachment Inspection Register (EIR) to be maintained at Zonal headquarters/ Railway Divisions/ field units of Railway Divisions, it was observed that LRR were not being maintained in 37 out of 68 Divisions. The maintenance of LBVR and EIR was also not proper over the IR. Construction of boundary walls along vacant land to avoid encroachments was not well assessed and planned. **Details of encroachments were not being maintained, the process for their removal was very slow and efforts made for removing encroachments,** under Public Premises (Eviction of Unauthorised Occupants) Act, 1971 were inadequate as encroachment of Railway land was a continuous process. The monitoring by IR and joint inspections by IR and State Authorities for managing encroachment was not found to be adequate.

Chapter 5 – Paragraphs related to Engineering department of Indian Railways

Paragraph 5.1 - Poor planning in construction of railway quarters led to avoidable lease payment

Consequent upon formation (October 2002) of ECR, Hajipur, RB sanctioned (2003) an amount of ₹78.88 crore for setting up the new zone, including purchase of land for construction of staff/ officers quarters. Audit revealed poor planning/ indecision of ECR Administration in acquiring land and poor contract management in construction of quarters. This resulted in delay in construction of quarters in addition to avoidable extra expenditure of ₹45.26 crore. Audit further revealed that ECR could construct only 217 quarters out of 604 quarters, 10 years after their sanction (2005). Due to delay in construction of quarters, ECR Administration had to bear an expenditure of ₹18.64 crore from 2010-11 to 2014-15 (December 2014) towards payment for leased accommodation to officers/staff posted in ECR. Besides, ECR had to forfeit ₹1.23 crore out of deposit paid to District Land Authority Officer (DLAO), Hajipur due to indecision on their part in the acquisition of land.

Paragraph 5.2 - Unfruitful expenditure on construction of substructure of a Railway bridge

Construction of a new Broad Gauge (BG) railway line (4.84 km) between Canning and Bhangankhali stations (sanctioned cost ₹123.71crore) required acquisition of 18.36 hectares land. To expedite the land acquisition process, Railway Board decided to take up the project as a 'Special Railway project' (March 2010). Railway could not acquire the land (December 2014) due to 191 encroachments. However, Construction Organisation of Eastern Railway (COER) awarded (October 2010) a contract for construction of foundation and sub-structure of a bridge over River Matla along the proposed new line which had been completed in March 2014 (cost- ₹ 46.20 crore). But, the work for construction of the approaches at both the ends could not be taken up due to non-availability of land. The completion of project in near future seems to be uncertain as no efforts for the removal of encroachments/ re-habilitation of land owners had been made. The award of a contract without ensuring site clearance, in violation of Railway Board's extant orders of August 1980 and

April 2010, resulted in an infructuous/ unfruitful expenditure to the extent of ₹46.20 crore. Also, the land could not be acquired though it was a reason to declare the project a Special Railway Project.

Paragraph 5.5 - Deficient planning of SER Administration for procurement of water led to unfruitful expenditure

Due to lack of foresight of the SE Railway Administration in planning the Water Supply Project for the Kharagpur railway settlement the project has been completed only in parts, even 15 years after it was conceptualized. Provision of both raw and filtered water to the users at Kharagpur railway settlement could not be ensured though an amount of ₹15.30 crore (₹ 11.38 crore incurred on Radial Collector Well, pipe line, pumps, etc and ₹3.92 crore on sinking and fitting Deep Tube Well at 28 locations) was spent on the project.

Paragraph 5.6 - Non-utilisation of Water recycling plants (WRPs) and consequent avoidable expenditure on water charges

In order to reduce the dependence on Chennai Metro Water Supply and Sewerage Board (CMWSSB) and to minimize the cost of water charges, it was decided (November 2007) to install WRP at Coach Depots at Basin Bridge and Gopalsamy Nagar of Chennai Division of SR. Audit revealed failure of SR Administration to comply with rules in connection with verification of credentials and financial ability of the contractor leading to subsequent termination of contracts of civil works and delay in completion of project of commissioning of WRPs. As a result, proposed savings in water charges of ₹10.69 crore could not be achieved and investment of ₹2.83 crore for installation of WRPs at the two depots of SR remained unfruitful.

Paragraph 5.8 - Delay and Cost overrun due to award of contract without site clearance and improper planning

A major portion of land along the proposed New Broad Gauge line from Deoghar to Sultanganj (116.48 km) had forest land that required clearance of the Forest department. Although this fact was known to ER Administration since August 2000, they approached Forest department for the required clearance only in August 2004. They had awarded, between September 2002 and April 2003, three small contracts (total contract value ₹12.63 crore) which could not be completed for want of forest land and had to be short-closed (February 2006). For residual work, contract was awarded in June 2007 but without getting clearance from Forest department. Railway finally got the clearance of Forest department in July 2010 i.e. eight years after the award of first contract. Pending clearance from the Forest department COER executed the total work in piecemeal manner by carrying forward the residual work to subsequent tenders that took substantial time in their finalization and also resulted in cost overrun to the extent of ₹ 12.38 crore. Also, the contracts awarded by ER Administration (first between September 2002 and April 2003 and then in June 2007) were prior to clearance of Forest department which was in violation Railway Board orders (1980) to award contract only after ensuring the availability of site for work clear from all obstacles.