Report of the Comptroller and Auditor General of India

for the year ended March 2007

Laid in Lok Sabha/ Rajya Sabha on _____

Union Government (Railways)

No.PA 8 of 2008

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PREFACE

The Report for the year ended 31 March 2007 has been prepared in three volumes for submission to the President under Article 151 (1) of the Constitution of India.

This volume (PA 8 of Performance Audit) contains results of the following reviews:

(i)	Disaster Management in Indian Railways	(Chapter 1)
(ii)	Land Management in Indian Railways	(Chapter 2)
(iii)	Scrap Management in Indian Railways	(Chapter 3)
(iv)	Construction, Operation and Maintenance of 'Project Railway'	(Chapter 4)
(v)	Working of Matunga Workshop	(Chapter 5)

The observations included in this Report have been based on the findings of the test-audit conducted during 2006-07 as well as the results of audit conducted in earlier years, which could not be included in the previous Reports.

Abbreviations used in the Report

CR	Central Railway
ER	Eastern Railway
ECR	East Central Railway
ECoR	East Coast Railway
NR	Northern Railway
NCR	North Central Railway
NER	North Eastern Railway
NFR	Northeast Frontier Railway
NWR	North Western Railway
SR	Southern Railway
SCR	South Central Railway
SER	South Eastern Railway
SECR	South East Central Railway
SWR	South Western Railway
WR	Western Railway
WCR	West Central Railway
PRCL	Pipavav Railway Corporation Private Limited

OVERVIEW

Chapter 1 – Disaster Management in Indian Railways

This chapter contains the results of Performance Audit on Disaster Management in the Indian Railways. The disaster management plans devised by the zonal railways and the divisions did not comprehensively address all aspects of disaster management. The disaster management plan lacked uniformity and did not adhere to the provisions of the Disaster Management Act, 2005. **(Para 1.10.1)** The infrastructure provided in terms of provision of rescue and relief equipments on the railway network, facilities in hospitals for the deceased and in trains were inadequate and the communication facilities were weak. Moreover, speed restrictions and non-placement of relief equipments strategically in all the divisions impeded speedy response to disasters and the entire mechanism reflecting the state of preparedness was not geared up to envisaged levels **(Para 1.10.2).** Coordination arrangements with State Governments/District authorities as well as other agencies were weak and Railways were unable to harness their infrastructure while responding to disasters **(1.10.3).** Training - a vital tool to hone the skills of staff- did not receive requisite importance. Even basic training in First Aid and disaster management were not imparted to most of the frontline staff **(1.10.4).** Railways were neither able to rapidly access the disaster sites nor provide organised rescue and relief during the 'Golden hour'- the first hour after the accident. Delayed arrival of relief equipments at the disaster sites also led to delayed restoration of rail traffic causing diversions and cancellation of trains **(1.11.1 to 1.11.3).** Assets were not renewed or rehabilitated in a timely manner. Safety aids were not provided and the safety measures initiated for prevention and mitigation of disasters were inadequate **(1.12.1).** Surveillance mechanisms in railway stations were inadequate and the Railway Protection Force was ineffective in preventing unauthorised entry into station premises **(1.12.2).**

Chapter 2 – Land Management in Indian Railways

This chapter contains the results of the performance audit on Land Management in the Indian Railways. Separate land management cells were not in existence in most of the zones and divisions **(Para 2.9).** Mutation of land acquired was not done with the respective revenue authorities. In some cases, the land acquired for the projects were not handed over to the user departments **(Para 2.10).** Inconsistencies prevailed in reporting facts and figures on various basic data pertaining to land holdings, vacant land, encroachments, land plans, verification of records with the State Revenue Authorities **(Para 2.11.5).** Instances of title disputes/forged sale of land by the private parties were noticed in some zones **(Para 2.11.7).** There was shortfall in construction of boundary wall in the various divisions of the zones **(Para 2.11.8).** Though an assurance was given in the Parliament during 1999 that there will be no fresh encroachments, as many as 16109 new encroachments crept in. Encroachments observed in 46 locations during joint inspection conducted by Audit and Railways were not shown/less shown in

the railway's records by the concerned SSEs/SEs. There were 27,408 nos. encroachments in the safety zone at the beginning of the year 2006-07 **(Para 2.11.9)**. The policy of charging of license fee for the land given to CONCOR on the basis of TEUs handled instead of linking it with the market value of land resulted in considerable loss of revenue to the extent of Rs.551.26 crore during the period 2004-07 **(Para 2.12.3)**. There were delays in renewal/execution of license agreements ranging from three to five years in 90 cases, 5 to 10 years in 2427 cases and beyond 10 years in 16588 cases. A comparison of the land value arrived at based on 1985 valuation (duly updated by the prescribed percentages) and the current market value in 55 cases in six zones (NEFR, NR, NWR, SCR, SER, SR) and Metro Railway indicated that in 42 cases, the license fee fixed based on land value in 1 January 1985 with prescribed escalation of 10 or 7 per cent per annum was lower than the current market value resulting in loss of revenue of Rs.15.69 crore during the period under review **(Para 2.12.6).** There was no uniformity in levy of various charges among the zones and within the divisions in a zone. Railway Board has not issued any guidelines for uniformity in recovery of way leave charges **(Para 2.12.7).**

Chapter 3 - Scrap Management in Indian Railways

This chapter contains the results of Performance Audit of the Scrap Management on Railways. Collection of Scrap was less than the target by 3,61,070 MT (value Rs.539.80 crore) on some Railways with reference to the targets fixed during the years 2002-03 to 2006-07 **(Para 3.8.1.1).** A shortage of 10909 MT of engineering and 5025 MT of Mechanical scrap was recorded in the Advice Notes indicating loss of Rs.9.84 crore (**Para 3.8.1.3**). There was a difference of 4600.32 MT of Scrap between the total quantities of the lots placed for auction and quantity actually auctioned representing a shortage valuing Rs.4.79 Crore **(Para 3.8.4.2).** There was loss of revenue to the extent of Rs.2.91 crore (Rs.1.65 crore in Southern Railway) due to the sale of scrap at prices lesser than the reserve price fixed over seven Zonal Railways **(Para 3.8.4.5).** Despite increasing trends in the 'Wholesale Price Index' for 'Iron and Steel', Railway sold the rails as scrap material at lower rates. Audit noticed large variations in the rates for the sale of same scrap item in a year over Zonal Railways as well as between the minimum and maximum rates in the same year resulting in lesser realisation of sale value **(Para 3.8.4.6).**

Chapter 4-Construction, Operation and Maintenance of 'Project Railway'

This chapter contains the results of performance audit of Construction, operation and maintenance of 'Project railway'- gauge conversion of Surendranagar -Mahuva with extension up to Pipavav of Western Railway. Even after completion and commissioning of the work in March 2003, the completion report has not been prepared so far. In the absence of this, the Railway was not able to recover an amount of Rs.17.88 crore from PRCL on account of Rs.0.89 crore required for removal of deficiencies, Rs.0.96 crore for pending contractual liabilities, Rs.7.74 crore as cost of material and Rs.8.29 crore on account of Departmental and General charges **(Paras 4.8.1 and 4.8.2.1 to 4.8.2.4).** Railway's action to enter into agreement allowing the

procurement of track and S&T material by PRCL has resulted in extra expenditure of Rs.28.36 crore **(Para 4.8.3)**. Underestimation of cost of existing assets of Railways leased to PRCL has resulted in loss of lease rental of Rs.15.24 crore. There would be a recurring loss of Rs.3.81 crore per annum for the entire lease period if corrective action is not taken **(Para 4.8.5).** The Railway was yet to receive Rs.22.79 crore on account of operation and maintenance charges for the year 2003-04 and 2004-05 due in the year 2005-06. Moreover, the amount on account of fixed cost of material for the year 2004-05 is yet to be assessed **(Para 4.8.6.1).** Despite specific provision in the agreement for recovery of compensation for the shortfall in guaranteed traffic, no action was taken by the Railway for recovery of compensation of Rs.66.17 crore from PRCL **(Para 8.6.2).**

Chapter 5 - Review on the working of Matunga Workshop

This chapter deals with the performance audit of the working of Matunga Workshop with specific emphasis on repair/maintenance of BG Coaches.Target for outturn of Matunga Workshop is fixed on the basis of arisings of coaches for POH. The availability of manpower, machinery etc. is not taken into calculation at all. The method of fixing the target appears to be unscientific **(Para 5.8.1).** Coaches booked by base stations for POH at Matunga workshop are received without the list of missing items prepared jointly by Security, Mechanical and Electrical department. During the period from 2004-05 to 2006-07 fittings valuing Rs.0.87 crore were found missing **(Para 5.8.2).** Matunga workshop has taken more than the prescribed time for POH of coaches. Railway suffered loss of Rs.11.82 crore on account of detention to coaches during 2006-07 alone **(Para 5.8.4).** Rejection of periodically overhauled coaches by Neutral Control Wing as well as coaches marked sick within 100 days after they were periodically overhauled indicates poor workmanship. Railways suffered loss of Rs.3.56 crore on account of detention to rejected coaches **(Para 5.8.7 and 5.8.8)**. The expenditure of Rs.12.15 crore incurred on augmentation of POH capacity of the workshop remained unproductive for the last two to three years resulting in non-achievement of projected saving in time taken for POH and consequential loss of Rs.54.28 crore on account of excessive detention to coaches **(Para 5.8.9).**

Chapter 1
Disaster Management in Indian Railways

1.1 Highlights

- Disaster management plans of the zonal railways and the divisions were not comprehensive, lacked uniformity and did not adhere to the provisions of the Disaster Management Act, 2005 and the recommendations of the High Level Committee constituted by Ministry of Railways.

(Para 1.10.1)

- Provision of rescue and relief equipments – Self Propelled Accident Relief Trains (SPARTs), Accident Relief Trains (ARTs), Accident Relief Medical Vans (ARMVs), Breakdown Cranes etc was inadequate and maintenance was deficient. Speed restrictions and non-placement of relief equipments strategically in the divisions curtailed speedy response to disasters. The state of preparedness was not geared up to envisaged levels.

(Paras 1.10.2.1 to 1.10.2.3)

- Facilities in hospitals for the deceased and in trains were inadequate and the communication facilities from trains and disaster sites were weak.

(Paras 1.10.2.4 to 1.10.2.6)

- Coordination arrangements with State Governments/District authorities as well as other agencies were weak and Railways were unable to harness their infrastructure while responding to disasters.

(Para 1.10.3)

- Training - a vital tool to hone the skills of staff- did not receive requisite importance. Even basic training in First Aid and disaster management were not imparted to most of the frontline staff. Specialised training programmes were cancelled due to poor participation. Setting up of a Railway Disaster Management Institute at Bangalore was in a nascent stage and crack team of rail rescue experts has not been formed.

(Para 1.10.4)

- Railways were neither able to rapidly access the disaster sites nor provide organised rescue and relief during the 'Golden hour'- the first hour after the accident. Delayed arrival of relief equipments at the disaster sites also led to delayed restoration of rail traffic causing diversions and cancellation of trains. Railways also lacked the expertise to deal with water related disasters.

(Para 1.11.1 to 1.11.3)

- Assets were not renewed or rehabilitated in a timely manner. Safety aids were not provided and the safety measures initiated for prevention and mitigation of disasters were inadequate.

(Para 1.12.1)

- **Surveillance mechanisms in railway stations were inadequate and the RPF was ineffective in preventing unauthorised entry into station premises.**

(Para 1.12.2)

1.2 Gist of recommendations

- Railways need to formulate an integrated disaster management plan to facilitate a cohesive approach to comprehensively address all aspects of disaster management. The zonal and the divisional disaster management plans need to be revised on priority basis to eliminate existing shortcomings.
- Railways should augment its infrastructure of relief equipments, facilities in hospitals and in trains to the envisaged scale and initiate effective measures to maintain the relief equipments fully equipped and in a state of operational readiness.
- Railways should on priority, address the issues of operational constraints imposing speed restrictions, positioning the relief trains/medical vans, cranes etc in a manner that optimises the response time, which is the essence of any response mechanism.
- Railways should quickly provide communication system in trains and in relief trains for transmission of real time information from the disaster site, which is essential in assessing the gravity of the disaster and in organising rescue and relief.
- Railways should enter into formal coordination arrangements with the State Governments/District authorities, civil/private hospitals and other agencies so as to effectively leverage their infrastructure while responding to disasters.
- Railways need to constitute dedicated teams and initiate tangible measures to quicken the pace of providing specialised training in order to develop a trained team to handle any disaster. Railways should also effectively harness the services of private contractors on board the trains to augment its preparedness
- Railways need to improve the response time in order to provide effective post incidence response to disasters. Railways also need to effectively monitor the movement of relief equipments so as to ensure their timely availability at the disaster sites. Railways need to enhance their state of preparedness in handling disasters involving water bodies.
- Railways need to ensure that assets are promptly replaced and rehabilitated, safety aids are adequately provided and manpower and other infrastructure are effectively monitored to enhance safety of trains.
- Railways need to enhance the surveillance mechanism in the railway stations and institute an effective mechanism to prevent unauthorised entry into station premises.

1.3 Introduction

In India, the railways are the most preferred mode of transport both for the movement of people and goods consignments in bulk. Indian Railways is spread over a vast geographical area over 63000 route kilometers. Unlike in other countries where the role of Railways, in the event of a disaster, is restricted to clearing and restoring the traffic, in our country Indian Railways handles the rescue and relief operations. The 'Citizen Charter' of the Indian Railways also spells out the railways' commitment in providing safe and dependable train services to passengers.

The Indian Railways were managing disasters relating to train accidents in accordance with the rules and procedures contained in the Accident Manual 1992. Increasing traffic density, longer length of trains with a large number of passengers on board, higher operational speeds of trains, emerging technologies etc., called for a paradigm shift from the existing level of preparedness and readiness to combat any disastrous situation to a much higher level of an effective 'Disaster Management System'. Consequently, Ministry of Railways constituted (September 2002) a High Level Committee (HLC) to review the disaster management system over the Indian Railways related to train accidents and natural calamities and to identify additional technological and managerial inputs required to quicken the pace of rescue, relief and restoration of operations. The Committee recommended additional inputs to be in place within a period ranging from three to 36 months and all of its 111 recommendations were accepted (April 2003) by the Railway Board. Since the HLC did not address disasters such as earthquakes, floods, cyclones, fires, industrial accidents, accidents involving trains carrying explosives/ inflammable/ hazardous material, Ministry of Railways constituted (January 2004) another Committee to address these disasters. This Committee is yet to

Major recommendations of HLC

- Detailed disaster management plans should be devised at the zonal and divisional levels.
- Relief trains and medical vans should be adequately provided, strategically located, upgraded to operate at higher speed and equipped with modern equipments.
- Rescue ambulances and other infrastructure should be provided including facilities in hospitals. Communication facilities should be upgraded.
- MoUs should be entered into with State Governments, public/private agencies, Armed forces etc to improve the response time during disasters.
- Crack rescue teams should be formulated. Specialised training in rescue, extrication, relief and restoration techniques should be provided to staff.

Salient features of the Corporate Safety Plan

- Extensive use of Anti Collision Device (ACD) to prevent collisions.
- Replacement of overaged tracks bridges, Signal & Telecommunication gears and rolling stock to reduce derailments.
- Manning of unmanned level crossings and use of Train Actuated Warning Device and ACD to reduce level crossing accidents.
- Introduction of modern bridge inspection and management system.
- Filling up of safety category posts.

finalise its recommendations.

The Ministry of Railways also formulated (August 2003) a Corporate Safety Plan as a means to realise the vision of an accident free and casualty free Indian Railway system. Apart from addressing the safety concerns, in its Corporate Safety Plan, Ministry of Railways reiterated its focus on modernisation of Disaster Management. While the Corporate Safety Plan addressed the causes that lead to disasters and was preventive in nature, HLC's focus was on effective management of disasters.

Further, the Central Government promulgated (December 2005) a Disaster Management Act 2005. Prior to formal promulgation of the Act, Ministry of Railways had nominated (January 2003) Additional Member (Mechanical) as a member of the National Disaster Management Authority (NDMA) to represent Ministry of Railways. Since the HLC was already constituted to review and upgrade the disaster management system in Indian Railways, Ministry of Railways issued instructions from time to time to zonal railways to ensure compliance on specific issues.

> ***Disaster Management Act 2005***
> The Disaster Management Act, 2005 stipulates that Ministries of Government of India shall be responsible for taking measures necessary for prevention, mitigation, capacity building and to respond effectively to any threatening disaster situation or a disaster in accordance with the guidelines of the National Disaster Management

1.4 Organisational structure

A number of Directorates in the Railway Board are involved in addressing disaster management and related safety concerns of which the main ones responsible for issue of policy guidelines are the Safety, Mechanical, Health, Traffic, Commercial and Security directorates. The overall implementation rests with the respective departments of zonal railways, with the Safety Department being the nodal department to handle all disaster management related issues.

1.5 Audit objectives

The Performance Audit on Disaster Management in the Indian Railways was carried out with a view to assess whether the:

- emergency preparedness of the Railways for handling disasters was adequate;
- post incidence (post disaster) response of the Railways was adequate and effective; and
- safety and security issues, which contribute to prevention of accidents and disasters, were adequately addressed.

1.6 Audit scope, criteria and methodology

Disasters on the railway network are a consequence of human and equipment failures, natural calamities and acts of sabotage and comprise collisions and derailments of trains, accidents at level crossings, fires on trains; floods, cyclones, earthquakes, bomb blasts, terror attacks and other destructive/disruptive activities. This report is confined to management of

disasters as a consequence of train accidents, natural calamities and acts of sabotage that impact train operations on the rail network.

The Disaster Management Act 2005, the report of the High Level Committee, Corporate Safety Plan of Railways and the instructions issued by Railway Board from time to time were used as audit criteria.

The policy decisions taken by Railway Board in respect of disaster management were studied and records relating to their implementation in various zonal railways during the past four years i.e., 2003-04 to 2006-07 were reviewed. Joint inspections with railway authorities were also carried out on a selected sample of trains, divisional hospitals, relief trains, medical vans and stations to capture the prevailing ground condition.

1.7 Sample selection

A sample of 31 divisions over the sixteen zonal railways and Metro Railway Kolkata were selected for review of the implementation of certain specific directives on disaster management, while provision of major infrastructure was analysed over all the 67 divisions and Metro Railway Kolkata over Indian Railways. Further, a sample of 95 trains, 50 divisional hospitals, 90 relief trains and 67 medical vans were selected for conducting joint inspections. Indian Railways categorise stations on the basis of earnings, which broadly reflects the number of passengers using a station. A sample of 138 stations from various categories was also selected to review the safety and security measures in place. Details of the selected sample are given in **Annexure –I**.

1.8 Acknowledgement

The audit objectives, scope and methodology were discussed by the Principal Directors of Audit in the zones with the respective General Managers and concerned departmental heads in entry and exit conferences. The input provided on various aspects including suggestions for sample selection and support provided by railway officials while conducting joint inspections in the field is acknowledged with thanks. The co-operation extended by Railway Board during the course of audit is also appreciated.

1.9 Audit findings

Performance Audit of disaster management in the Indian Railways was undertaken against the above background and the results of audit are given in the following three sections:

- Emergency preparedness
- Post incidence response and
- Safety and security issues

1.10 Emergency preparedness

Disaster management is 'a continuous and integrated process of planning, organising, coordinating and implementing measures necessary for prevention of danger or threat of any disaster, mitigation or reducing the risk of any disaster or its severity or consequences, capacity building, preparedness to deal with any disaster, prompt response to any threatening disaster situation or

disaster, assessing the severity or magnitude of effects of any disaster, evacuation, rescue and relief, rehabilitation and reconstruction'[1]. Capacity building for emergency preparedness was therefore an integral part of disaster management.

Audit observations in respect of emergency preparedness are as follows:

- The Committee formed in January 2004 was to provide recommendations for Railways' response in all types of disasters such as earthquake, floods, cyclones, fires, industrial accidents, accidents involving trains carrying explosives/ inflammable/ hazardous materials and the training needs for keeping the system in a state of alertness and to evolve a professional crisis management all over Indian Railways (IR). The Committee's recommendations were to be dovetailed with the National Disaster Management Authority's Global Disaster Management Plan for the country. Even after a lapse of three years, the Committee was yet to submit its report and in the absence of any other specific plan of action to deal with these issues, the emergency preparedness of the Indian Railways was certainly compromised to that extent.
- A review of emergency preparedness across IR revealed inadequacies in the disaster management plans, inadequate provision and maintenance of infrastructure – Self Propelled Accident Relief Trains, Accident Relief Trains and Accident Relief Medical Vans, other rescue and relief equipments, facilities in hospitals, facilities in trains and communication facilities, poor coordination arrangements, inadequacy of trained manpower and inadequate monitoring mechanism as brought out in paragraphs 1.10.1 to 1.10.5.

1.10.1 Inadequacies in disaster management plans

The Disaster Management Act 2005, stipulates that every Ministry should prepare a disaster management plan specifying among others (i) the measures to be taken for prevention and mitigation of disasters, (ii) its roles and responsibilities in relation to preparedness and capacity building, promptly and effectively responding to disasters (iii) present status of preparedness and the measures required to be taken to perform its roles and responsibilities. The plans so drawn are to be reviewed and updated annually. The HLC also recommended that all zonal railways and divisions must devise their disaster management plan taking into account the details of the local resources available with them, their neighbouring divisions/ zonal railways, civil authorities and armed force bases and dovetail the same with the District/State disaster management plans respectively. Scrutiny of the various disaster management plans prepared by zonal railways and divisions revealed the following deficiencies:

- While accidents were defined as 'any occurrence which does or may affect the safety of the Railways, its engines, rolling stock, permanent way, works, passengers, railway servants, others or which does or may cause delays to trains or loss to the railway', IR did not adopt a comprehensive

[1] As per the Disaster Management Act, 2005

definition of disaster for uniform applicability over the entire IR network. The definition of "disaster" adopted by the various zonal railways varied widely. Most of the definitions did not incorporate any quantifiable and objective parameter to assess disasters. While WR and CR reckoned an accident involving injuries to more than 50 persons and a long duration of interruption of traffic as disaster, NER considered an accident as a disaster only when the number of casualties exceeded 75 and ECR reckoned an accident involving more than 100 injuries as a disaster. Even in these four zonal railways, the duration of interruption of traffic was not expressed in terms of number of hours.

Further, while a majority of the zonal railways considered various cases of human/equipment failures, natural calamities and acts of sabotage that could cause disasters, the disaster management plans of four zonal railways (ER, NR, NFR and NWR) were restricted only to train accidents such as derailments, collisions, fires and explosions in trains and level crossing accidents. Acts of sabotage were not considered by SER as disasters.

Under the existing mechanism, the gravity of a disaster would, therefore, be comprehended differently by the various zonal railways and the entire approach thereby lacked cohesiveness.

- Lack of a concerted effort from Railway Board to ensure cohesiveness contributed to the various deficiencies in the zonal and divisional disaster management plans. The zonal disaster management plans of 10 (WR, SR, CR, ER, NR, SCR, NER, ECR, ECoR and NCR) of the 16 zonal railways and Metro Railway Kolkata were deficient since they did not provide for the measures taken either for prevention or for mitigation of disasters as required by the Disaster Management Act 2005.
- While the roles and responsibilities were provided for in all the zonal plans, the present status of preparedness was not mentioned in two zonal plans (SR and SCR).
- In spite of the Railway Board's detailed instructions of July 2004, 13 zonal railways (except SECR, NWR and WCR and Metro Railway Kolkata) did not dovetail its zonal plans with the plans of the respective State Governments. In SR SCR and SWR, the zonal railways were not even in possession of the State plan and in WR dovetailing could not be completed since the zonal railway was yet to identify the areas where assistance from the State/District authorities was required. In SCR, action was not even initiated to finalise the standing arrangements with State/District Authorities, Armed Forces etc., to ensure proper coordination and mutual cooperation in the hour of need and the Railway Board's instructions largely remained ineffective.
- The zonal disaster management plans of eight zonal railways (SR, CR, SCR, SWR, SER, SECR, NWR and ECR) and Metro Kolkata did not provide for the details of the organisations having infrastructural facilities

useful in disaster management and the resources available with civil authorities as recommended by the HLC.

- While seven zonal railways (SR, NR, SER, NER, NWR, SECR and NCR) did not update the zonal plans since their preparation, the zonal plan of WCR was not updated annually and was last updated in March 2005.
- Railway Board advised (December 2004) that electronic forms of all zonal and divisional disaster management plans be loaded on the Railnet server/ website of zonal railways so that all railway authorities concerned could make use of such information. The disaster management plans of seven zonal railways (ER, NR, SCR, SWR, NFR, SECR and ECR) and Metro Kolkata were not available on the website of the respective zonal railway. In SR, even though electronic forms of the disaster management plans were put on the website, expeditious search of required information was not facilitated, defeating the very purpose of making the plans available on the website.
- Two zonal railways (ECR and NCR) did not issue the pocket booklet of Do's and Dont's to all officials. In SECR, the provision of issue of booklet was not incorporated in the divisional plans of two (Nagpur and Bilaspur) out of the three divisions.
- Similar deficiencies existed in a number of the divisional disaster management plans. Twenty two[2] out of the 67 divisions had not updated the disaster management plans since their preparation. Sixteen[3] divisional plans did not lay down the methodology of seeking coordination from the State Governments.
- Nanded Division of SCR was yet to formulate a disaster management plan.
- Further, the divisional plans of SR, SCR, SWR, ECR, Rangiya Division of NFR, Nagpur and Bilaspur Divisions of SECR were not even dovetailed with their respective zonal plans.
- Even though IR had sections in its network, which had a lot of tunnels, the divisional plans did not have any action plan to tackle disasters in tunnels as provided in the disaster management plan of Konkan Railway Corporation Limited.
- Railway Board directed (December 2004) that to ensure uniformity, the divisional plans should contain a detailed inventory of railway and non-railway resources as envisaged by HLC and that information common to all divisions should be provided in the zonal plan and replicated in all the divisional plans. The detailed inventory of resources was not provided for in the plans of eight[4] divisions and the common infrastructure of the

[2] Chennai, Palghat, Tiruchchirapalli, Trivandrum, Bhusawal, Delhi, Ferozepur, Lucknow, Izatnagar, Varanasi, Ranchi, Ajmer, Bikaner, Nagpur, Sambalpur, Bhopal, Jabalpur, Kota, Hubli, Jhansi, Allahabad and Agra.

[3] Bhavnagar, Chennai, Palghat, Madurai, Tiruchchirapalli, Trivandrum, Ferozepur, Secunderabad, Hyderabad, Vijayawada, Guntur, Guntakal, Bangalore, Mysore, Hubli and Lumding.

[4] Secunderabad, Hyderabad, Vijayawada, Guntur, Guntakal, Mysore, Bangalore and Lumding.

respective zonal railway was not replicated in the disaster management plans of 22[5] divisions.

- None of the disaster management systems were ISO certified.

Thus, most of the zonal and the divisional plans were not comprehensive, lacked uniformity and also did not adhere to the provisions of the Disaster Management Act 2005 and the recommendations of HLC.

Recommendations

IR needs to formulate an integrated disaster management plan to facilitate a cohesive approach to comprehensively address all aspects of disaster management. The zonal and the divisional disaster management plans need to be revised on priority basis to eliminate existing shortcomings.

1.10.2 Inadequate provision and maintenance of infrastructure

The HLC recognised that the strategy for setting up of an effective disaster management system in the Indian Railways had to be based on stronger and appropriate infrastructure, backed by a well trained team of disciplined and dedicated staff. The HLC recommended provision of infrastructure in terms of rescue and relief equipments such as relief trains, medical vans, breakdown cranes, rescue ambulances etc to reach the site quickly and to carry out rescue and relief operations, adequate facilities in railway hospitals to take care of the victims and facilities in coaches of trains to assist rescue and relief. Review of the infrastructure provided in all the 67 divisions and in a sample of 50 divisional hospitals and 95 trains across IR disclosed the following:

1.10.2.1 Self Propelled Accident Relief Trains

The HLC recommended, in April 2003, provision of a three coach Self Propelled Accident Relief Train (SPART) in each division within a period of three years. The SPARTs were also to be upgraded to run at a speed of 140 kilometers per hour. The HLC had recommended provision of various tools equipments relevant for rescue and relief operations. A review, however, revealed the following deficiencies:

- Even after a lapse of four years, as against the target of provision of 67 three coach SPARTs only six SPARTs were provided (Chennai and Palghat in SR, Chakradharpur in SER, Khurda Road, Sambalpur and Waltair in ECoR) in the entire railway network. The two coach SPARTs available in 12 other divisions across nine zonal railways[6].have not been converted into three coach SPARTs.
- None of the existing SPARTs were fit to run at the designated speed of 140 kilometers per hour.

[5] Ratlam, Chennai, Palghat, Madurai, Tiruchchirapalli, Trivandrum, Ferozepur, Secunderabad, Hyderabad, Vijayawada, Guntur, Guntakal, Bangalore, Mysore, Hubli, Lumding, Rangiya, Nagpur, Sonepur, Jhansi, Allahabad and Agra.

[6] Mumbai Central, Vadodara, Howrah, Sealdah, Ambala, Secunderabad, Vijayawada, Varanasi, Lumding, Bikaner, Bhopal and Jhansi.

- A joint inspection of 12 SPARTs across nine zonal railways further revealed that:
  - Some of the vital tools and equipments required for rescue and relief operations such as self contained breathing apparatus and inflatable tents were not available in most of the SPARTs. Only one SPART (placed in Vijayawada) was provided with the prescribed number of four sets of self contained breathing apparatus.
  - Equipment useful in maintaining communications such as WLL exchange and PC with high speed satellite modem were provided only in four and one SPARTs respectively. Even out of these, the WLL exchange was not commissioned in two SPARTs. Similarly, four SPARTs were found to have lesser number of walkie talkie sets than the prescribed scale of 30 sets.
  - In five SPARTs, the prescribed number of emergency inflatable lighting towers for effective general illumination was not provided. Further, the staff of the SPART at Khurda Division was neither trained nor was any demonstration organised to familiarise the staff with the operations of the device. Thus, the staff could not operate the device.
  - The stock register of SPART at Chennai Division of SR revealed disposal of various items as 'rat damaged'. Rusty surgical equipments requiring replacement were available and the expiry dates of medicines were incorrectly exhibited.
  - The medical van of the SPART of Chakradharpur Division of SER did not have any item other than some injections and basic medicines like Analgin, Paracetamol and pre-sterilised disposable dressings.

- Further, on two occasions of major accidents, the SPART located at Chennai Division of SR, which was self propelled, had to be hauled with the assistance of a locomotive. Similarly, during a trial run, the SPART at Palghat Division of SR could not be moved due to an error in its engine, indicating that the SPARTs were not maintained in good fettle.

The SPART at Chennai Division

- The SPART at Jharsuguda in Chakradharpur Division of SER was placed at a crippled siding and was being hauled from its base to the railway station with the service of one shunting engine as there was no earmarked driver at the siding to get the SPART to Jharsuguda station, where the driver and other accident relief staff boarded the SPART. It usually took 10 to 30 minutes to get the SPART to the station on each occasion, which increased the response time and defeated the very purpose of having a

specialised self propelled vehicle to quickly respond to an emergency situation.

1.10.2.2 Accident Relief Trains and Accident Relief Medical Vans

The HLC recommended provision of Accident Relief Trains (ARTs) and Accident Relief Medical Vans (ARMVs) with various tools and equipments required for aiding rescue and relief operations. A review, however, revealed the following deficiencies.

- To improve the response time, HLC recommended that ARMVs could be stationed at intervals not exceeding 100 kilometers each. ARMVs in 26 out of 60 divisions across IR were less than the assessed requirements. The assessed requirements of the remaining seven divisions and Metro Railway Kolkata were not available. The provision of ARMVs was, therefore, inadequate and inevitably curtailed speedy response to emergency situations.
- HLC did not prescribe any scale for provision of ARTs. However, it recommended that the speed of the ARTs be upgraded to 100 kilometers per hour. Audit observed that 61 ARTs out of a total of 168 ARTs available across IR were not upgraded to run at the speed of 100 kilometers per hour.
- Some cases were noticed where even though the ARTs were upgraded, various operational restrictions effectively limited the speed of the ARTs and the up gradation of the ARTs did not serve the intended purpose. In ER, the loop lines served by the ARTs /ARMVs located at Rampurhat station had a track speed capacity of 90 kilometers per hour, which was limiting the running capacity of the ART. Further, the ART at Asansol in ER consisted of three coaches and two wagons. While the coaches were upgraded to operate at a speed of 100 kilometers per hour, the wagons could only operate at a speed of 65 kilometers per hour, which effectively restricted the overall running speed of the ART. Similar position prevailed in SCR, where all the wagons of the ART were only fit to run at a speed of 75 kilometers per hour. In WCR, the operational speed of the two ARTs in Kota Division was restricted by the break down cranes, which were kept separately in another line, and the crane composition had a speed of only 75 and 60 kilometers per hour.
- Though HLC recommended that the location of the ARTs and ARMVs should be reviewed, rationalised and relocated wherever necessary after addressing the unreasonable clusters or long gaps in the existing placement of ARTs, the ARTs were either not strategically located or conveniently placed in all the divisions, which delayed the availability of ARTs at the disaster sites as shown below.

Zonal Railway	Division	Number of SPARTs and ARTs	Location of SPARTs and ARTs	Observation
SR	Chennai	1 SPART and three ARTs	SPART- Chennai Two ARTs at Tondiarpet and Basin Bridge	SPART and two ARTs located at a distance of 8 kms of each other
ER	Sealdah	1 SPART and two ARTs	SPART and one ART- Beleghata near Sealdah One ART- Ranaghat	SPART and the two ARTs placed at a distance of 74 kms of each other
CR	Mumbai	3 ARTs	One ART at Kurla and one ART at Kalyan	Two of the three ARTs were located at a distance of 16 Kms and 54 kms from Mumbai.

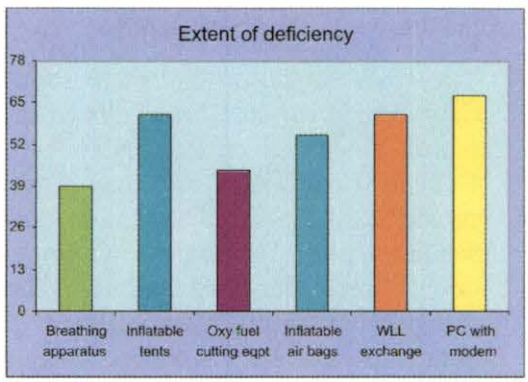
- Further, in SCR, the ARTs in Vijayawada and Hyderabad Divisions were located at Rajahmundry and Nizamabad respectively, where availability of diesel locos to haul the ARTs was a constraint, while the SPARTs, which do not require a locomotive, were placed at Vijayawada and Secunderabad respectively which had diesel locomotives within their vicinity.

Pathway of ART blocked by a goods train at Talcher Station

In ECoR, the ART placed at Talcher siding could move only in the forward direction and had to take a route, which was invariably occupied by goods trains blocking the exit point of the ART. In ECR, an ARMV was placed at Jhanjharpur and all the staff deployed on this ARMV was stationed at Railway Hospital, Darbhanga. In the event of an emergency, the staff had to travel a distance of 39 kilometers, which included 19 kilometers to be covered by road with the ongoing gauge conversion, to take charge of the ARMV. While HLC had mentioned that feasibility of entering into a tie up with private/ civil hospitals could be explored so that additional ARMVs could be located even in places where railway medical infrastructure was not available, no tie up was entered into with any private or civil hospital to handle the ARMV at Jhanjharpur, while responding to a disaster.

- The Workshops, which received the ART/ARMV coaches for periodical overhaul, were not returning the same coaches to the divisions after overhaul and the divisions, on many occasions, received another coach in place of the one sent for periodical overhaul. Due to this systemic weakness, apart from the details of the previous overhauls, recorded evidence of the persistent problems of the coaches were not traceable for a substantial number of coaches, thereby preventing specific attention to coaches in subsequent overhauls.

- In Samastipur Division of ECR, 24 out of the 31 coaches available were long over due (due dates were from 2002-03 to 2006-07) for periodical overhaul. Of these, 23 coaches are overaged for periods ranging from one year to 15 years. Even in NFR, 10 out of the 74 coaches available in Katihar and Lumding Divisions were over due for periodical overhaul, indicating that the ART coaches were poorly maintained and raised questions on their reliability during an emergency.
- A joint inspection of 78 ARTs and 67 ARMVs across IR further revealed that:
  - Equipment such as self contained breathing apparatus, inflatable tents, oxy fuel cutting equipment and inflatable air bags were not available in 39, 61, 44 and 55 ARTs respectively.



  - Equipment facilitating maintenance of communications such as WLL exchange and PC with high speed satellite modem was not available in 61 and 67 ARTs respectively. Further, the WLL exchange was not commissioned in four ARTs and the PC was without the modem in two ARTs.
  - Automatic spring loaded measuring gauges used for measurement of track and rolling stock parameters were not provided in 25 ARTs.
  - In 18 ARTs, the emergency inflatable lighting towers available were fewer than the prescribed scale of four sets
  - Out of the six oxygen cylinders available in one ART in ECoR, three were found empty and no refilling was done.
  - Augmented First Aid boxes, wrist bands to identify the injured and the dead, emergency inflatable lighting towers were not available in 15, 12 and 13 ARMVs. Similarly, digital video/still cameras were not available in 27 ARMVs and luminous jackets to be worn by the rescue workers were found to be less than the prescribed scale of 30 jackets in 15 ARMVs. Even basic facilities such as coffins and body bags were not available in six ARMVs.
  - Most of the medicines and injections prescribed were not available in the ARMVs in Secunderabad and Vijayawada Divisions in SCR. Further, the physical verification of items in ARTs/ARMVs was also not being carried out regularly by SCR and SR.
- Further, delays were noticed in conversion of coaching stock into ARTs, which affected the availability of ARTs for managing disasters. As per the Rolling Stock Programme for the year 2006-07, Parel Workshop of CR had to convert 20 coaches into ARTs /ARMVs. Out of these, one coach was still lying in Dadar yard. NR had also provided eight coaches in

November 2002 to Divisional Mechanical Engineer, Jammu (DME/JAT) and these were not yet converted into ART. In the absence of an ART at Jammu, the disasters/emergency situations had to be managed with Lukas Jacks available with DME/JAT. In NWR, two coaches converted into an ART were lying idle for two years since the zonal railway was unable to decide on the location to place the ART.

1.10.2.3 Other rescue and relief equipments

The other rescue and relief equipments required to be provided for management of disasters comprised 140 tonnes break down cranes, rescue ambulances, emergency rail cum road vehicles and diesel locomotives. A review of the provision of these rescue and relief equipments across IR revealed the following deficiencies.

- The HLC suggested that there should be at least one 140 tonnes break down crane in each broad gauge division. Even though four years had lapsed since the recommendations of the HLC were accepted by the Railway Board, only 56 break down cranes of 140 tonne capacity were provided so far in all the zonal railways as against an initially planned requirement of 73 break down cranes. Additional locations for locating the cranes were identified and the requirement was revised to 84 cranes. Considering that the manufacture of 12 cranes was in progress in Jamalpur Workshop, there was still a shortage of 16 cranes. The shortage was more striking when cranes were taken off for scheduled periodical overhaul, since the area of coverage of the nearest available crane was enhanced to cover the area serviced by the crane sent for periodical overhaul.
- Instances of cranes placed at inconvenient locations leading to delays in dispatch on rescue operations also came to notice. The crane in Chennai Division was placed at Tondiarpet Diesel Shed, which had a one way exit, while the ART was placed at Tondiarpet Marshalling yard. This inevitably delayed dispatch of the ART with the crane to the accident site. A proposal to construct a platform cum roof to locate the crane along with the ART was mooted in September 2006 but there has been no progress since then. Similarly, movement of the breakdown crane at Ludhiana in Ferozepur Division of NR was restricted to one side only since the other end was used as a cycle stand. Further a covered shed constructed, in September 2006, for housing the crane was not yet operational (August 2007).
- The 140 tonne Gotwald crane was not very versatile and suffered from various operational constraints. The Chief Mechanical and Planning Engineer, CR pointed out that the crane was not suitable for use in electrified sections and that diagonal pulling, which was invariably required for removing entangled wagons/coaches, was not possible.
- Even though the steam cranes were to be phased out and replaced with 75 tonne MG cranes convertible to BG cranes of equal capacity with least inputs, the four ARTs of Samastipur Division of ECR were mounted with a steam crane of 35 tonne capacity and no action was initiated to upgrade the cranes.

- A platform that could be hooked to the crane was to be provided to assist the rescuers in their effort to extricate victims from the coaches. Hookable platforms were not provided in the cranes available in 17 divisions.[7]
- Nylon slings of 70 ton capacity were to be provided for the break down cranes for speeding up rescue operations. Although, the technical specifications for the nylon slings was finalised by RDSO in October 2003 itself and NR was advised by Railway Board (November 2003) to procure a sample set of nylon slings as per specifications to gain actual user experience, the exercise was still not complete and the nylon slings were not provided, thereby hampering preparedness for rescue operations.
- HLC had also recommended synthetic packing to be provided in ARTs for the cranes in lieu of the wooden packing. However, synthetic packing was not provided in 72 out of the 78 ARTs that were jointly verified.
- Divisions, where the road network was good, were required to procure a rescue ambulance and base it at the divisional hospitals, though initially one such ambulance was planned to be introduced in each zone. Feasibility of introducing an emergency rail cum road vehicle was also to be explored. Neither rescue ambulances nor emergency rail cum road vehicles were provided in any zonal railway. In its bid to minimise the cost and to incorporate rescue features in the rescue ambulance, the Ministry of Railways took two years to finalise its design. Even after the specifications for a rescue ambulance with rescue capabilities were finalised in September 2005, Central Organisation for Modernisation of Workshops (COFMOW) was yet to procure a rescue ambulance according to these specifications. As regards the rail cum road vehicle, the Ministry of Railways was still contemplating the design and the features that need to be provided in the vehicle.
- Diesel locomotives were to be provided in electrified routes, within a vicinity of 25 to 75 kilometers, to haul the relief trains in case of damage to the overhead electricity or failure of power supply. Six (CR, SCR, SER, SECR, ECR and NCR) out of the 14 zonal railways (except NWR and NFR) having electrified routes did not have a plan to locate diesel locomotives within a vicinity of 25 to 75 kilometers of each other. In ECoR, a plan was available only for Khurda Road Division only. Similarly in NR, the plan was not available for Delhi Division and in WR, the power plan was yet to be finalised for Mumbai Division to ensure availability of diesel locomotives. As such, the preparedness for haulage of relief trains in case of damage to overhead electricity or failure of power was restricted.

1.10.2.4 Facilities in hospitals for the deceased

Facilities in terms of collapsible coffins, air conditioned mortuaries and embalming gums and chemicals for preservation of the dead bodies for a reasonable time were to be provided in all the railway divisional hospitals. A

[7] Ratlam, Mumbai, Chennai, Dhanbad, Danapur, Mughalsarai, Sonepur, Samastipur, Tinsukia, Alipurduar, Lumding, Katihar, Rangiya, Chakradharpur, Kharagpur, Adra and Ranchi.

review of the facilities available at the divisional hospitals revealed the following deficiencies.

- Nineteen out of the 50 divisional hospitals across IR did not have collapsible coffins while the number of collapsible coffins in nine hospitals was less than the prescribed scale of 20 coffins.
- Embalming gums and chemicals were not available in 19 out of the 50 hospitals, while only the chemicals were available in three other hospitals. In the hospitals at Chennai and Palghat in SR, Varanasi in NER and Kharagapur in SER though the embalming gums were available there was no trained staff to operate the mechanism. Traditional gravitation methods and injections were used in the absence of embalming gums.
- Eighteen out of 50 hospitals across IR did not have Air Conditioned (AC) mortuaries to preserve the dead bodies and the overall preparedness for taking care of the deceased was primitive. Further, the Air Conditioned mortuaries purchased by NWR for the divisional hospitals at Jaipur and Jodhpur were not installed and were lying idle. Similarly the AC mortuary purchased by SR for divisional hospital at Arakkonam in Chennai Division was also not installed.

1.10.2.5 Facilities in trains

The HLC suggested display of guidelines in every coach to educate the passengers about the precautionary measures to be taken at the time of accidents. Further, modifications in the coach design were suggested with two roof hatches and one under floor hatch to be provided in each coach for evacuating and extricating the trapped passengers. Provisions for emergency lights were to be made in every coach. A joint inspection of trains revealed the following deficiencies.

- Roof and under floor hatches provided in two rakes of Prayagraj express were not useful as the roof exits had leakage problem while the floor exits had security and theft problems. Railway Board had since abandoned the idea of providing hatches in coaches and instead decided to have four emergency exits in coaches as against the existing two.
- Emergency automatic lights were not provided in any coach of the 87 trains out of the 95 trains checked. Even out of the eight trains, which had coaches provided with emergency automatic lights, in five trains the emergency automatic lights were provided only in nine out of the 29 coaches checked.

Customer Safety facilities in AMTRAK, USA

Customer Safety facilities during emergencies in trains run by AMTRAK, USA include:

- In the event of power failure battery power illuminates floor markings
- Chemical 'snaplights' are provided at the end of each car with instructions for operation.
- Emergency communication station is provided in the vestibule with instructions for operation.
- Instructions for using emergency provisions and exiting the trains are displayed.

- The guidelines to educate the passengers about the precautionary measures to be taken at the time of accidents were not displayed in any of the coaches in 34 trains out of the 95 trains, while in 28 trains the guidelines were displayed only in some coaches. Further in SWR, the guidelines to passengers were made out as posters, which were prone to damages/peeling off. Moreover, these were placed in inconspicuous locations in trains.

1.10.2.6 Communication facilities

The HLC recommended provision of video conferencing facility from the disaster site to Railway Board and zonal railway headquarters to assist in assessment of damage, relief and assistance required at the site. Communication facility in the trains is also essential in effective real time transmission of information. A review of the communication facilities revealed the following deficiencies:

- Video conferencing mechanism was not established in any zonal railway. The Department of Telecommunications did not accord permission to use the RBGAN satellite modem to the Railways. A video conferencing facility was procured in February 2005 and commissioned in November 2005, in Mumbai Division of WR, without fully comprehending the requisite formalities and as such the system was not operational in the absence of clearance from Department of Telecommunications. As an alternative, the Ministry of Railways decided (September 2006) to provide internet facility and data communication from the site through Railways' own V-SAT hub and small V-SAT terminals in all the divisional ARTs. This facility was, however, not provided in any divisional ART (November 2007).

- The HLC also recommended a gradual upgradation of control rooms to become multi disaster resistant and fully equipped with back up systems for communication, power, drinking water etc. sustain for a week. An upgraded multi resistant disaster control room was not available in any zonal railway. Further, in 13[8] out of the 31 control rooms checked in the divisions the back up facilities of communication, water or power were either not available or at least one of these facilities could only last up to two days. Further, various other deficiencies were observed in the zonal disaster control room of SCR. The satellite phone, whose antenna had to be out in the open sky for signal reception, was actually kept in a closed room. The satellite phone was fully discharged and was not being checked weekly. The zonal control room did

> ***Communication systems- French Railways***
> Centre National Des Operations – a railway traffic management center monitors passenger, freight, operations and infrastructure over the entire country and coordinates with French Railway (SNCF).
> The center communicates with customers through the national media. It controls the role of operations and responds to emergencies.

[8] Mumbai, Nagpur, Howrah, Sealdah, Asansol, Malda, Bangalore, Chakradharpur, Ranchi, Khurda Road, Bilaspur, Danapur and Samastipur.

not have vital inputs of the resources available in the adjacent zonal railways, civil authorities and other organisations, drawings of approach roads to stations etc. indicating that the preparedness was deficient.

- Radio communication in the trains was not provided in 86 out of the 95 trains checked. In some of the other trains it was seen that VHF sets were provided to communicate with the nearest station. Therefore, first hand and real time information of a disaster, which was vital in assessing the gravity of the disaster as well as to organise rescue and relief operations, could not be transmitted from the trains.

Thus, even after four years of acceptance of the recommendations of the HLC, the infrastructure provided in terms of rescue and relief equipments on the railway network, facilities in hospitals for the deceased and in trains were inadequate and the communication facilities were weak. Maintenance of the rescue and relief equipments was also deficient. The relief equipments were not strategically placed in all the divisions impeding speedy response and the entire mechanism reflecting the state of preparedness of IR was not geared up to envisaged levels.

Recommendations

- *IR should augment its infrastructure of relief equipments- SPARTs, ARTs, ARMVs, break down cranes and rescue ambulances etc, facilities in hospitals and in trains to the envisaged scale.*
- *IR should initiate effective measures in maintaining the relief equipments, especially the SPARTs, ARTs and ARMVs, fully equipped and in a state of operational readiness at all times.*
- *IR should quickly provide communication system in trains and in relief trains for transmission of real time information from the disaster site, which is essential in assessing the gravity of the disaster and in organising rescue and relief. The facilities in the control rooms need to be enhanced.*
- *IR should on priority, address the issues of operational constraints imposing speed restrictions, positioning the relief trains/medical vans, cranes etc in a manner that optimises the response time, which is the essence of any response mechanism.*

1.10.3 Poor coordination arrangements

The HLC recommended entering into a Memorandum of Understanding (MoU) with the state governments so that the Railway administration could join hands for mutual assistance in case of railway or non-railway disasters. The HLC also suggested entering into MoUs with the civil and private hospitals to improve the response time, with the Armed Forces and private air operators for air support to access the disaster sites. Review, however, revealed the following deficiencies.

- Railway Board advised (August 2004) zonal railways that verbal MoUs with State Governments/ Private hospitals etc. would be adequate and that written MoUs need not be insisted upon. Consequently, divisions were not effectively pursuing the matter of entering into MoUs with the various agencies as recommended by the HLC as shown in the succeeding paragraphs. The absence of written MoUs hampered the post incidence response of IR, which has been brought out separately in para 1.11.1.2. The rationale behind Railway Board's instructions was not clear, since a written framework always has better enforceability than a loose verbal arrangement. A proper framework of eliciting co-ordination from the State Governments/Private hospitals etc is essential since IR's vast network of 63,000 route kilometers makes it impossible for IR to reach a disaster site anywhere on its network in a reasonable time without external assistance.
- Only 10[9] out of the 67 divisions entered into a MoU with their respective State Governments/District Authorities and the zonal headquarters of SWR had entered into a MoU for the zone as a whole. In Mumbai Division of CR, the state government officials assured (August 2003) that it would provide all assistance in case of a disaster.
- Similarly only SWR and 15[10] divisions of other zones entered into MoUs with civil and private hospitals.
- Only 5[11] out of the 67 divisions finalised an MoU with the Armed Forces/ Airport Authority or private air operators for air support.
- Further, only six out of the 67 divisions entered into a written arrangement with St. John Ambulance /Red Cross for providing the ambulance services and only three divisions (Rajkot of WR, Jabalpur of WCR and Jhansi of NCR) concluded an MoU with NGOs.

Thus, by and large, IR was unable to harness the infrastructure of the State Governments/District authorities as well as other agencies in responding to disasters and preferred to have loose co-ordination arrangements.

Recommendation

IR should enter into formal coordination arrangements with the State Governments/District authorities, civil/private hospitals and other agencies so as to effectively leverage their infrastructure while responding to disasters.

1.10.4 Inadequacy of trained manpower

The HLC recognised that the strategy for setting up of an effective Disaster Management System depended on a well trained team of disciplined and dedicated staff. The HLC recommended periodic training for frontline staff, basic training in search and rescue for Group A officers and training ART staff to handle fire related accidents apart from the training in First Aid, which was

[9] Ratlam, Rajkot, Firozpur, Ajmer, Bikaner, Jaipur, Jodhpur, Bhopal, Jabalpur and Kota.
[10] Ratlam, Rajkot, Nagpur, Solapur, Izatnagar, Ajmer, Bikaner, Jaipur, Jodhpur, Bilaspur, Nagpur, Kota, Jhansi, Allahabad and Agra.
[11] Ratlam, Rajkot, Katihar, Bikaner and Jodhpur.

mandatory. A manual on post accident rescue and relief operations was also to be prepared. Review revealed that:

- Crack teams of rail rescue experts who can be rushed to any site of accident at short notice to assist the divisional efforts at the site, recommended by the HLC were not constituted. Even after four years, process of formation of crack teams had only commenced and a tender for engaging a consultant to harness global expertise was under evaluation in the Ministry of Railways.
- Similarly, the setting up of a Railway Disaster Management Institute with special focus on rescue, extrication, medical relief and restoration techniques and 'Disaster Management' modules at Bangalore in SWR, were also in the nascent stage, since a tender for engaging consultants was under evaluation.
- In most of the divisions less than 25 per cent of the frontline staff[12] - the first to respond in case of a disaster were trained in disaster management during the period 2004-05 to 2006-07. In NR, training programmes on disaster management were not conducted at all. While no person was trained in Bilaspur Division of SECR, in SWR, less than one per cent of the frontline staff was trained in disaster management. Moreover, the frontline staff was not properly identified in Rajkot Division of WR, while in Bhusawal Division of CR only staff of the security department was identified as frontline staff. In Pune Division of CR, frontline staff yet to be trained was not identified. Divisional hospitals of Izatnagar and Varanasi Divisions of NER could not organise training courses for front line staff of various departments as trainees were not spared for training.
- The training programmes were poorly attended. In NFR, 21 programmes on Disaster Management were cancelled due to poor participation. Three out of the eight programmes organised by the Supervisors Training Center, Bangalore in SWR, during the two years 2005-06 and 2006-07 were similarly cancelled. Two programmes were cancelled during 2004 in SCR and no one participated in the only programme organised by ECR in 2006-07. In SR, 158 out of the 600 RPF personnel nominated to undergo training at Training College, Kimber Garden, Tiruchchirapalli during 2003-04 did not attend the training.
- Even basic training in First Aid was imparted to less than 25 per cent of the frontline staff in most of the divisions. In SER, training in First Aid was given to only six persons during the three years 2004-05 to 2006-07.
- Refresher courses were also not monitored properly. In SER, the staff nominated to refresher courses were not imparted the initial training itself.
- Training of the ART staff in fire related disasters was not very comprehensive. The ART staff in some divisions was not trained in handling fire related disasters.

[12] Front line staff include the Travelling Ticket Examiner, TXR, staff of Railway Protection Force (RPF), AC attendants, Permanent Way Inspectors, Safaiwalas, Guards, Drivers / Asst.Drivers, Gangmen, gatemen etc.

- Films on disaster management covering various types of accidents/disasters were not prepared and given to all the divisions.
- Basic training in search and rescue to the specialised teams of Group A officers in consultation with NDMA did not commence since the teams were yet to be constituted by the NDMA.
- Joint inspection of running trains across IR revealed that:
  - Only 150 out of the 1349 frontline staff were found to have the booklet containing Dos and Don'ts in case of a disaster.
  - The pantry car staff and AC coach attendants of the private contractors in the trains inspected on WR, CR and SR were not trained in first-aid and were not aware of the procedure of handling disasters. Even though HLC had recommended that private operators connected with frontline services should certify that their onboard staff is trained in First aid and is conversant with other medical techniques, no such condition was incorporated in the contracts entered into by SWR.
  - The First Aid boxes in 2622 Tamilnadu express did not contain medicines and those verified in the trains over SCR did not contain the adhesive bandages. Similarly, in SCR augmented First Aid boxes were not available in the long distance trains (Venkatadri, Rajkot and Hussain Sagar express trains).

Thus, training- a vital tool to hone the skills of staff- did not receive requisite importance in IR. The pace at which the frontline staff was trained and poor participation in specialised training programmes suggested that IR were not serious about developing the skills of staff to deal with medical and other emergencies that arise in disasters.

Recommendations

IR needs to constitute dedicated teams and initiate tangible measures to quicken the pace of providing specialised training in order to develop a trained team to handle any disaster. IR should also effectively harness the services of private contractors on board the trains to augment its preparedness.

1.10.5 Inadequate monitoring mechanism

Monitoring the system is a vital mechanism for ascertaining the actual functioning of the system and to rectify the aberrations if any. The HLC recommended that each division should conduct one full scale disaster management exercise in a year. A review of records regarding the full scale disaster management exercise and mock drills for the previous two years 2005-06 and 2006-07 revealed the following deficiencies.

- Only Metro Railway Kolkata and 17[13] out of the 67 divisions across IR carried out the full scale disaster management exercise in both the years,

[13] Bhavnagar, Chennai, Palghat, Tiruchchirapalli, Madurai, Trivandrum, Solapur, Bangalore, Lucknow, Izatnagar, Adra, Bikaner, Raipur, Nagpur, Bhopal, Jhansi, Allahabad and Metro Railway Kolkata.

while another 11 divisions carried out the exercise once in the two year period.

- The deficiencies observed were mainly related to delayed departure of the ART/ARMV and SPART. In some cases, the response of staff was sloppy. The lack of seriousness was evident when one full scale drill carried out on 24th June 2006 with ART Madurai between Tirupparamkundram and Tirumangalam sections of SR, was not treated as a mock drill by the Chief Safety Officer commenting that the exercise was not sufficient to check the alertness of all staff involved in disaster management.
- In WR, the manual operation of point at Udhana led to regular delays ranging from 5 minutes to 45 minutes in departure of ART for site of accident. This deficiency was brought out in trail runs but no remedial action was taken. In SCR also the various deficiencies observed in the mock drills conducted earlier in Vijayawada, Kazipet, Rajahmundry and Bitragunta such as non provision of double entry for the ART/ARMV siding, breakdown staff not allotted residential quarters at one place etc., were not yet rectified.

Thus, IR was lax in not ensuring that the full scale disaster management exercise was scrupulously conducted and deficiencies noticed in the mock drill rectified by all divisions.

Recommendation

IR needs to actively promote the practice of conducting the full scale disaster management exercise periodically as a means of obtaining a realistic appraisal of its preparedness to counter any disaster.

1.11 Post incidence response

Post incidence response encompasses provision of immediate relief and rescue, minimising dislocation and early restoration of rail traffic. The effectiveness of capacity building and emergency preparedness is, therefore, borne out by the quality of the post incidence response.

The HLC termed the first hour after an accident as the 'Golden Hour' recognising that (i) most of the trauma patients could be saved if bleeding was effectively stopped and blood pressure restored within one hour (ii) victims remaining in a state of shock for long duration would die and therefore surgical intervention in the first hour was crucial for increasing the patients' chances of survival. The HLC laid down five basic steps for quick and effective rescue and relief operations

(i) Rapid access to the site of the accident
(ii) Quick extrication of victims and effective on-site medical management
(iii) Stabilisation of condition
(iv) Expeditious extraction and shifting of rescue vehicles and
(v) Speedy transportation to hospital.

IR handles all disasters affecting trains as per the Accident Manual, which, among others, laid down the norms for departure of the relief trains to the

disaster sites. Review of 205 accidents that occurred over the previous five years across IR revealed that response to disasters within the golden hour was ineffective, preparedness and expertise was lacking apart from other deficiencies as brought out in paragraphs 1.11.1 to 1.11.3.

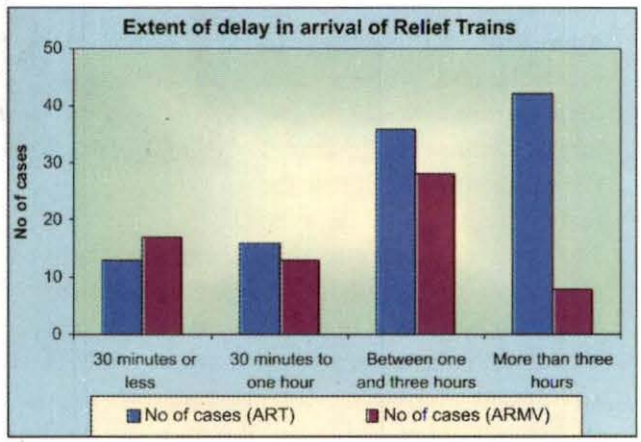
1.11.1 Ineffective response within golden hour

Rapid access to the accident site was the fundamental step in providing quick and effective rescue and relief operations within the golden hour. IR was not only unable to rapidly access the disaster sites for providing effective rescue and relief, but the coordination arrangements with the civic authorities/ private hospitals etc., also were very weak as shown below:

1.11.1.1 Delayed arrival of rescue and relief equipments

The Accident Manual stipulates that ARMVs and ARTs should depart for the accident site within 30 minutes and 45 minutes of ordering (60 minutes during night time) respectively. A review revealed that:

- The time required for ordering and movement of the ARTs/ARMVs together with the requisite time to travel the distance to the disaster site invariably took the response time beyond the golden hour. Out of the 138 incidents that warranted either an ART or an ARMV for rescue and relief, in 124 cases the ART/ARMV the site after the golden hour. The assistance provided by IR during the golden hour was thus more by default than by design. For instance, in an accident involving a truck and train no 9304 Bhopal–Indore Intercity express at Ujjain station in Ratlam Division of WR on 27 June 2004, the ART ordered at 20:30 hours, departed only at 21:54 hours and took 48 minutes to reach the site, which was only six and a half kilometers away. Even during the bomb blasts in seven local trains that took place on 11 July 2006, in Mumbai suburban section of Mumbai Central Division of WR the ARMVs located at Mumbai Central, Valsad and Udhana were ordered but before arrival of the ARMVs, the victims at all the locations had already been shifted to nearby hospitals by the volunteers from amongst the passengers and medical relief was not required to be done by the ARMVs. Due to non-availability of diesel locomotive in the vicinity of 75 Kilometers on Mumbai Division, ARMV capable of running at a speed of 100 Kilometers per hour had to be hauled with WDS 4 locomotive with a speed capacity of 45 Kilometers per hour only.



- In 14 out of the 138 incidents, the ordering of the ART/ARMV itself was delayed. In ECR, when the train no 619 collided with a goods train on 9 November 2005, the Accident Relief Medical Equipment (ARME) was called for almost an hour after the collision. The Commissioner of Railway Safety (CRS) observed that ARME should be immediately ordered in case of passenger train accidents. Similarly in NR, ART/ARMV was not called in an accident involving train no 5273, Satyagraha express, which collided with loader of JCV machine at Jahanighera halt station on 10 April 2006.

- Delay in arrival of relief trains and equipments also delayed restoration work in 78 out of the 109 incidents that required restoration. For instance, after a mob wrecked the 2124 Deccan Queen express and two other suburban trains on 30 November 2006 in CR, the diesel light engine, that was requisitioned, took one hour and ten minutes to reach the site, while a slow local train would have taken 12 minutes to travel the distance. As a result the rescue work was delayed and in the meantime 133 suburban trains and two mail trains were cancelled. In another case of derailment of Marusagar express on 8 November 2003 in CR, an ARMV was sent back as no injuries were incurred, without realising that the ARMV was carrying the rerailing equipment required for restoration work. A separate ART was subsequently called for and the rerailing work that could have commenced by 11:00 hours, actually commenced at 16:00 hours leading to cancellation of nine trains, diversion of six trains and rescheduling of four trains.

ART Kurla carrying hydraulic rerailing equipment

1.11.1.2 Poor coordination arrangements

Lack of proper co-ordination was evident in the post incidence response to various disasters as Railways could not harness the infrastructure and support of the civic/ private agencies in 46 out of the 94 incidents that required external support. Some of the instances are detailed below.

- In the absence of an MoU, the private hospitals refused medical help in the bomb blasts that took place on 11 July 2006 in the Mumbai suburban section and consequently WR was left to face court cases, claims and criticism.

- In a major accident where 2301 Rajdhani express derailed and fell on river bank on 9 September 2002 in ER, the injured were taken to Howrah by train. Enquiring into the incident the CRS observed that the Railways could have hired helicopters/planes to move them to hospitals.

- In SCR, when the Delta Fast Passenger derailed on 29 October 2005 and fell into a water body flowing underneath the bridge, the assistance of an

Air Force helicopter, naval divers, army battalion, boats and trained personnel were sought for. While the Air Force helicopter reached the site six hours after it was requisitioned, the boats and trained personnel reached after five hours by which time all the victims were extricated and those surviving were sent to nearby hospitals. The naval divers from Visakhapatnam arrived at 14:30 hours the next day (34 hours after the disaster).

- Even when train no 2124 Deccan Queen express and two other suburban trains were wrecked by a violent mob on 30 November 2006 at 10:22 hours in CR, fire extinguishers were called at 11:30 hours and two fire tenders reached only by 13:00 hours, by which time most of the coaches were gutted by the fire. Even though the damages to railway property were Rs.2.29 crore, the CRS did not conduct an enquiry even though a statutory enquiry was obligatory in all cases where the loss exceeded Rs.25 lakh.

Thus, IR was neither able to rapidly access the disaster sites nor could they provide organised rescue and relief through effective co-ordinated arrangements with civil /other agencies. Providing rescue and relief during the 'Golden hour' was the exception rather than the rule. Delayed arrival of relief equipments at the disaster sites also led to delayed restoration of rail traffic, causing diversions and cancellation of trains.

Recommendations

IR needs to improve their response time in order to provide effective post incidence response to disasters. Co-ordination with private agencies/NGOs and harnessing the infrastructure of the district authorities are vital in promptly responding to disasters. IR also needs to effectively monitor the movement of relief equipments so as to ensure their timely availability at the disaster sites.

1.11.2 Lack of preparedness and expertise

Preparedness to handle any type of disaster is essential for providing an effective post incidence response. Railways' lack of preparedness and expertise in handling water related disasters was apparent in the IRs post incidence response. Out of the four disasters where trains were either stranded in floods or capsized in water bodies, IR was unable to provide timely rescue and relief. Some of the instances as detailed below:

- During the floods that hit Vadodara Division of WR in June 2005 air/ boat support was not provided. The passengers of Shanti Express train were stranded and the train was detained for 48 hours leading to complaints of inadequate arrangements for eatables, water, medicines and communication facilities to stranded passengers at stations and in trains.
- During the floods that engulfed Mumbai and its suburban areas on 26 July 2005, passengers were marooned in trains in the suburban section of CR. No relief was provided to the passengers until the next day when the first train service started between Mumbai CST station and Dadar at 12.45 hrs. Additionally, the floods damaged railway property worth Rs.72.92 crore. The CRS did not conduct the mandatory enquiry. As such, there was no

scope for addressing the weaknesses in the system in handling such disasters.

- In the derailment of train no 415 Delta Fast Passenger at 04:22 hours on 29 October 2005 between block stations Ramannapet -Valigonda at a bridge on SCR, where the train fell into a water flowing underneath the bridge, the rescue team could not maneuver the velocity of the flowing water and though the ARMV from Secunderabad reached the site by 6:50 hours, the rescue work could commence only at 09:30 hours, after the water level receded, with the assistance of the local villagers. The passengers from other coaches helped those in the affected coaches to come out.

The capsized Delta fast passenger train in Valigonda

Thus, IR lacked the preparedness and the expertise in dealing with water related disasters.

Recommendation

IR needs to enhance their state of preparedness in handling disasters involving water bodies.

1.11.3 Other deficiencies

Various other deficiencies in the rescue and relief operations came to the fore, which are as follows:

- Neither diesel nor electric locomotives were kept on call for ARMVs or ARTs and in the event of an accident; ART/ARMVs were hauled using the nearest running train.
- The performance of SPARTs, while responding to accidents was not very encouraging. In two accidents (i) collision of a tipper lorry with train no 3351 Dhanbad/Tata –Alleppey express on 27 April 2007 between Attipattu Pudunagar – Ennore stations in SR and (ii) Unmanned level crossing accident on 16 April 2007 between Kanchipuram and Thirumalpur in SR, the SPART located at Chennai was hauled with a locomotive since the self propelling mechanism was not functioning, defeating the very purpose of providing such specialised equipments.
- Poor communication system and faulty communication equipment hampered rescue work and effective transmission of information. The information about an accident was communicated by the Guard of the train to the nearest station master using the mobile phone of a passenger. Similarly, the Guard of train no 5273 Satyagraha express could not use the portable communication phone provided to him, when the train collided with a loader of a JCV machine on 10 April 2006 at Jahanighera station on NR.

- Timely recovery of the affected coaches/wagons from the disaster site is essential for considering possible reuse of these coaches/wagons after carrying out necessary repairs. A test check revealed that on ECR alone there were 85 wagons and one passenger coach lying at the accident sites as at the end of the year 2006-07, out of which 47 wagons and one passenger coach were lying for more than six months.
- As many as 233 compensation claims were pending in three zonal railways (ER, NR and ECR) out of which 219 cases pertained to NR. All these cases were pending in the Railway Claims Tribunals at Delhi, Ghaziabad, Chandigarh and Lucknow due to non completion of departmental enquiries/investigations. The pending claims even related to accidents that occurred as far back as December 1999.
- Railway Board was yet to prepare a comprehensive accident claim compensation booklet, which was recommended by the HLC to be given on complimentary basis to the victims. Zonal publications were available in only six (ER, NR, SR, SWR, ECR and NCR) out of 16 zonal railways.

Thus, poor and inadequate infrastructure coupled with delays in the various facets of post incidence response restricted the IR's capability to effectively handle disasters.

Recommendations

IR should ensure that appropriate infrastructure was available and maintained in good fettle. Recovery of the coaches/wagons affected by disasters and settling compensation claims of victims should be carried out in a specified time frame.

1.12 Safety and security issues

Safety and security measures are all pervasive in the functioning of IR. Increasing traffic density, large number of passengers on board and the higher operational speeds of trains pose an attendant risk of accidents/disasters to its customers. Prevention and mitigation of disasters depend to a large extent on the safety and security measures in place. It is thus imperative that Railways accord importance to the safety and security issues. Audit assessed the safety and security initiatives of IR and the findings are given in the following two sections.

- Safety issues
- Security issues

1.12.1 Safety issues

In its Corporate Safety plan formulated in August 2003 IR identified that most of the accidents with disastrous consequences occur due to collisions,

Railway Strategic Safety Plan in Britain

The Railway Strategic Safety Plan (2007-2009) for Britain's mainline rail network is based on a Safety Risk Model that predicts the risk of total fatalities per year. Key risk areas to the passengers, workforce and the public – road users at level crossings are accordingly identified based on which commitments are made and targets are projected.

The aim is to move towards developing a Strategic Safety Plan that would project percentage reduction in risk that is expected from each set of actions in each key risk area.

derailments, fire accidents, accidents at level crossings and distressed bridges. Corporate Safety plan envisaged renewal and replacement of overaged assets-tracks, rolling stock and bridges, modernisation of signal and telecommunication and monitoring the human element to enhance safety. Audit, however, observed that timely renewals and replacements of assets were not carried out, provision of safety aids and monitoring of other infrastructure was inadequate compromising on safety as brought out below:

1.12.1.1 Delayed renewal and replacement of assets

Assets comprise railway tracks (Permanent Way), rolling stock (coaches, wagons, diesel and electric locomotives) and bridges. Audit observed that track renewals, replacement of rolling stock and rehabilitation of distressed bridges were not carried out in a timely manner.

- Special Railway Safety Fund (SRSF) was set up in 2001-02 with a corpus of Rs.17,000 crore to wipe out the arrears of replacements and renewals of overaged railway assets within a fixed time frame of six years. Inspite of Railways utilising Rs.14,920.88 crore as at the end of March 2007 and planning works of Rs.1,882 crore out of this fund during 2007-08 arrears of track renewal works, rehabilitation of bridges and overaged locomotives continued to exist as shown in the succeeding paragraphs.

- While in service, the track is subjected to fatigue, wear and tear. For continued ability of the track to withstand the expected traffic, it is required to be renewed periodically. Track renewals involve replacement of existing rails and/or the sleepers. However, as pointed out previously in Chapter 3 of the Report of the Comptroller and Auditor General of India (Union Government Railways) 2007 (Report No. 6-Performance Audit), while only 56 per cent of track renewal works projected by the zonal railways were finally sanctioned by Railway Board, even the works sanctioned were not completed within the stipulated time. As many as 1,416 works, comprising 556 works under SRSF,[14] were outstanding out of which 569 works, comprising 258 works under SRSF, [15] were taken up more than five years ago.

- One of the aims of the Corporate Safety Plan was to replace the existing system of assessment of bridges with a modernised inspection and assessment system for evaluation of the strength and residual life of the bridges. As on date, out of 1,27,768 bridges, while 42 per cent of the bridges were stated to be more than 100 years old and 62 per cent of the bridges were more than 80 years old. However, even after a lapse of four years of formulation of the Corporate Safety plan, Railways have only awarded contracts for pilot projects to carry out (i) Under Water Inspection of bridges (ii) Capacity assessment and condition monitoring of bridges (iii) Fatigue testing and residual life analyses (iv) Non destructive testing of bridges etc. In the meantime, freight loading in excess of the carrying

[14] 556 works under SRSF (Green book 2006-07) and 860 works under DRF (Pink Book 2005-06)
[15] 258 works under SRSF and 311 works under DRF.

capacity was permitted on some selected routes, which meant that the capacities of the bridges need to be strengthened on priority.

- Twenty four bridges out of the 136 bridges that were declared as distressed by Railways up to 2004-05 were not even planned for repair/rehabilitation. Out of the 110 bridges that were planned for rehabilitation during 2005-06 and 2006-07, works on as many as 39 bridges were not completed (November 2007).
- Modern bridge testing laboratories with some non-destructive testing equipment, which were to be provided in all the zonal railways have not been provided in any zonal railway.
- The rolling stock comprising of coaches, diesel and electric locomotives was overaged. As many as 321 out of the 4,500 diesel locomotives, 61 out of the 3,197 electric locomotives and 1,229 of 42,160 coaches had outlived their stipulated lives requiring replacement. Diesel and electric locomotives and coaches were overaged to the tune of 216 months, 108 months and 588 months respectively.

1.12.1.2 Inadequate provision of safety aids

Safety aids play a crucial role in prevention of disasters such as collisions and accidents at level crossings. Corporate Safety Plan envisaged installation of modern devices and warning systems to prevent collisions, modernisation of signalling system and maintenance of signalling equipment. Audit observed that safety aids were yet to be comprehensively provided as brought out below:

- The Corporate Safety Plan envisaged provision of Anti Collision Device (ACD) for comprehensive safety coverage to eliminate collisions and consequent fatalities. This device provided in the trains, stations and level crossing gates assists in detecting train partings and provides audible and visual warnings at level crossing gates when trains approach them. Even after four years of finalisation of the Corporate Safety Plan, IR was yet to implement the ACD. The pilot project is still in progress in NFR (November 2007).
- Track circuiting is one of the most important safety aids to be provided at all stations to reduce collisions in station area. Track circuiting eliminates the chance of reception of trains on the occupied lines at stations. Full track circuiting was not implemented in as many as 1,784 out of 6,211 signalling stations in 67 divisions across IR.
- Axle counters are electronic devices employed for detecting the presence of a vehicle on a block section i.e., the section of a track between two adjacent stations. This is a critical device that detects presence of parted load (bogies and wagons) that get disconnected from the running trains and remain dangerously on the track. Tracks used even for 'A' class routes, on which super fast trains are operated, did not have the facility of block proving (process of proving that there are no vehicles in the entire block section) by axle counters.

- Train Actuated Warning Devices (TAWDs) are provided at unmanned level crossings to warn about an approaching train and to prevent accidents at unmanned level crossings. There were as many as 18,976 unmanned level crossings in all the 67 divisions; and even though accidents at level crossings were identified as a serious concern, only 43 unmanned level crossings in seven divisions[16] were provided with TAWDs.
- Modernisation of points and signals through Panel Interlocking (PI), Route Relay Interlocking (RRI), and Solid State Interlocking (SSI) were not completed. Out of 6,211 signalling stations only 2,959, 288 and 164 stations respectively were provided with PI, RRI and SSI.
- Numerous instances of signal gear failures were noticed across all zonal railways. For the year 2006-07 alone 2,08,966 failures in signal gears were reported across IR, with Bilaspur Division of SECR, Howrah Division of ER, Lucknow, Delhi and Moradabad Divisions of NR accounting for the maximum with 19,357, 12,705, 12,051, 10,778 and 10,003 failures respectively.
- Auxiliary Warning System (AWS) eliminates human error in passing signals at danger. Even though AWS was working satisfactorily in the Mumbai suburban sections of CR and WR, the system was not implemented in any route across IR.

1.12.1.3 Inadequate monitoring of other infrastructure

Railways were not monitoring the other infrastructure directly related to safety as brought out below:

- Excessive use of line capacity of the track has its adverse impact on safe operation of trains. A test check on some zonal railways indicated that in 91 sections over five zonal railways (WR, ER, SCR, SWR and NFR) the line utilization was far beyond its chartered capacity and the sections were oversaturated. In SCR, 49 sections over five divisions were oversaturated with the actual line utilisation up to 173 per cent of the chartered capacity. Over utilisation results in non-availability of time for effective maintenance and thus constitutes a safety hazard.
- Monitoring of human element was also deficient. A large number of vacancies existed in the cadre of drivers/motormen in most of the divisions. Except for three divisions (Bhavnagar of WR, Guntur of SCR and Rangiya of NFR) which had manpower slightly in excess of the sanctioned strength, as many as 8,493 vacancies existed in the driver/motormen cadre in 62 out of the 67 divisions across IR as at the end of March 2007. This inevitably led to a situation where the drivers increasingly performed overtime duties beyond their prescribed duty of ten hours and were prone to fatigue and neglect, which is not in the interest of safety.

[16] Vadodara (1), Tiruchchirapalli (4), Delhi (14), Hyderabad (10), Bangalore (4), Bikaner (8) and Jodhpur (2).

- The Corporate Safety Plan envisaged induction of fire proof coaches and introduction of technological inputs to prevent and minimise fire accidents and its fatalities. The fire proof coaches have not yet been manufactured by the Integral Coach Factory, Perambur. Even though the use of fire retardant materials was planned for coach flooring, roof ceiling, seats and berths, seat upholstery and curtains in the coaches, fire retardant materials such as compreg boards and asbestos free limpet sheets were used only for coach flooring and roof ceiling, which was inadequate in mitigating the consequences of fire.
- The Disaster Management Act, 2005 stipulates that every ministry and department should allocate funds for measures for prevention of disaster, capacity building and preparedness. However, Railways did not allocate a separate head of account for booking the expenditure incurred on disaster management. Zonal railways allotted funds through regular budget plan and booked the expenditure to concerned revenue / capital heads. Several departments were incurring expenditure on various aspects of disaster management and all the zonal railways differed in their approach of booking the expenditure on disaster management. Consequently, the total expenditure on disaster management was a diffused entity, which could not be tracked.
- After a serious accident in CR and based on recommendation of CRS the facility of artificial ventilation with exhaust/jet fans was installed in tunnel number 25C in Karjat-Lonavla section at a cost of Rs.1.79 crore. The system remained non- functional for long periods of time from January 2004 and May 2005 and from August 2006 till date (November 2007), indicating that the infrastructure specifically provided for prevention and mitigation of disasters was not properly maintained.

Thus, assets were not renewed or rehabilitated in a timely manner. Safety aids were not provided and safety related infrastructure including manpower was not effectively monitored. The safety measures initiated for prevention and mitigation of disasters were inadequate.

Recommendation

IR needs to ensure that assets are promptly replaced and rehabilitated, safety aids are adequately provided and manpower and other infrastructure are effectively monitored to enhance safety of trains.

1.12.2 Security issues

Protection of railway assets and property was the responsibility of the personnel of the Railway Protection Force. The Commercial staff also man the entry points in stations to prevent unauthorised entry into the station premises. As already pointed out in Chapter-II of the Report of the Comptroller and Auditor General of India (Union Government Railways) Report no 6 (Performance Audit) of 2007, overcrowding in station premises was an aspect of major concern and it is imperative that IR assess the threat perception at all stations and initiate measures towards enhancing security at stations. A joint inspection of the security mechanism at 138 stations across IR revealed that

the infrastructure was inadequate and the surveillance at stations was not very effective as brought out below:

- CCTVs were not available in 87 out of the 128 stations belonging to the 'A' 'B' and 'C' category stations, which handle the maximum amount of the passenger traffic.
- In 10 out of the 24 'A' category stations, some units of the CCTV mechanism were not functioning, which included major 'A' category stations such as Chennai Central, Kalyan, Secunderabad, Guwahati and Patna Junction. In Patna, only 10 out of the 53 CCTV units were functional. In addition, in Mumbai CST station - an important 'A' category station, the RPF personnel were unaware of the CCTV operations. In Nagpur, even though walkie talkie instruments were provided to facilitate communication between the RPF personnel monitoring the CCTV and other RPF staff deployed in the station premises, none of the 16 walkie talkie instruments provided were functioning, limiting the utility of CCTVs. In Vijayawada, no RPF personnel were posted to monitor the CCTVs, defeating the very purpose of their provision.
- Only four stations (Jammu Tawi, Samastipur, Darbhanga and Patna) out of the 62 'A' category stations were equipped with scanning machines. Even out of these, the scanning machines provided at Samastipur, Darbhanga and Patna were not functional. Similarly only two stations (Moradabad and Bareily) out of the 50 'B' category stations inspected were provided with scanning machines and the scanning machine provided in Bareily was not in working order.
- Hand held metal detectors or door frame metal detectors were provided in only 47 out of the 62 'A' category stations and in 25 out the 50 'B' category stations. Even out of these, some of the hand held metal detectors or door frame metal detectors provided in 15 'A' category and seven 'B' category stations were non-functional.
- The security mechanism in smaller stations was inadequate. None of the five 'D' category stations jointly were equipped with any surveillance mechanism.
- Bomb detection and disposal squad was available only in Chennai. In Secunderabad a bomb detection set was available but none of the staff was trained to operate the equipment.
- A majority of the stations had multi entry/exit points, which were either not manned or monitored regularly. The RPF was therefore not effective in preventing unauthorized entry into station premises.

An unmonitored entry/exit point at Bangarapet station

Thus, surveillance mechanisms were inadequate and the RPF was ineffective in preventing unauthorized entry into station premises.

Recommendation

IR needs to enhance the surveillance mechanism in the stations and institute an effective mechanism to prevent unauthorised entry into station premises.

1.13 Conclusion

Indian Railways had recognised that the state of preparedness required an upgradation to that of a Disaster Management System to effectively deal with disasters. Indian Railways were however, not prepared to deal with all kinds of disasters, the zonal and divisional disaster management plans lacked cohesiveness and were not comprehensive. The infrastructure was not only insufficient but was also poorly located and not maintained adequately at many places. This was borne out by the post incidence response of the Indian Railways to various disasters. Indian Railways were neither able to rapidly access the disaster sites with its rescue and relief equipments nor leverage the infrastructure of the civic/ private agencies through effective co-ordination agreements. Organised assistance provided within the golden hour was the exception than the rule. The response time of Indian Railways warranted significant improvement. The provision of safety aids and maintenance of infrastructure to enhance safety of the travelling passengers was inadequate and the measures adopted to enhance security at stations for prevention and mitigation of disasters were not commensurate with the number of passengers handled.

Chapter 2
Land Management in Indian Railways

2.1 Highlights

- Separate land management cells were not in existence in most of the zones and the divisions. Even in the zones/ divisions where such cells existed, the officials were entrusted with other duties. In some zones/divisions, no training was imparted to officials posted in these cells. Officials nominated as Estate Officers to decide the cases of encroachments under PPE Act were not given proper training.

(Para 2.9)

- Delays in acquisition of land had an adverse impact on railway projects. Mutation of land acquired was not done with the respective revenue authorities. In some cases, the land acquired for the projects were not handed over to the user departments. Forty one cases of land acquisition processed as far back as five to ten years were still not finalised.

(Para 2.10)

- Land records registers were not being maintained at zonal, divisional and field levels as per codal provisions and instructions issued by Railway Board. As such, the land holding position reported at various levels by different authorities was not susceptible to verification. Land boundary verification and encroachment inspection registers were not being maintained by 97 out of 212 SSEs offices checked.

(Paras 2.11.2 to 2.11.4)

- Inconsistencies prevailed in reporting facts and figures on various basic data pertaining to land holdings, vacant land, encroachments, land plans, verification of records with the State Revenue Authorities, construction of boundary walls etc at various levels of the zones. Instances of title disputes/forged sale of land by the private parties were noticed in some zones. In one case in WR, railway administration failed to take back timely possession of land measuring 159.91 hectares from the State government 32 years after closure of the narrow gauge line on Ujjain-Agar section as it could not prove its ownership.

(Para 2.11.5)

- There was shortfall in construction of boundary wall in various divisions of the zones. Shortfall in construction of boundary wall was attributed to shortage of funds, non-finalisation of estimates, non-finalisation of tenders, failure of contractors and non-availability of material.

(Para 2.11.8)

- There were 220152 encroachment cases as on 1 April 2004. Though an assurance was given in the Parliament during 1999 that there will be

no fresh encroachments, as many as 16109 new encroachments crept in. Encroachments observed in 46 locations during joint inspection conducted by the Audit and the Railway were not shown/ shown inaccurately in the railways records by the concerned SSEs/SEs. There were 26,108 encroachments in the safety zone at the end of the year 2006-07 out of which 1249 were new encroachments.

(Para 2.11.9)

- 45581 cases were pending under the PPE Act. Pendency of cases was attributed to non-production of required documents i.e. Khasra of land, Land plan & Title deed of land etc. In 21654 cases decided by the Estate Officers, orders to evict encroachers from the land were not implemented.

(Para 2.11.10)

- The policy of charging of license fee for the land given to CONCOR on the basis of TEUs handled instead of linking it with the market value of land resulted in loss of revenue to the extent of Rs.551.26 crore during the period 2004-07.

(Para 2.12.3)

- Out of 33504 cases under licensing, agreement is yet to be executed in respect of 14305 cases. There were delays in renewal/execution of license agreements ranging from 3 to 5 years in 90 cases, 5 to 10 years in 2427 cases and beyond 10 years in 16588 cases. A comparison of the land value based on 1985 valuation and the current market value in 55 cases in six zones and Metro Railway indicated that in 42 cases, the license fee fixed was lower than the current market value resulting in loss of revenue of Rs.15.69 crore during the period under review.

(Para 2.12.6.)

- There was no uniformity in levy of various charges among the zones and within the divisions in a zone. Railway Board has not issued any guidelines ensuring uniformity in recovery of way leave charges.

(Para 2.12.7)

2.2 Gist of Recommendations

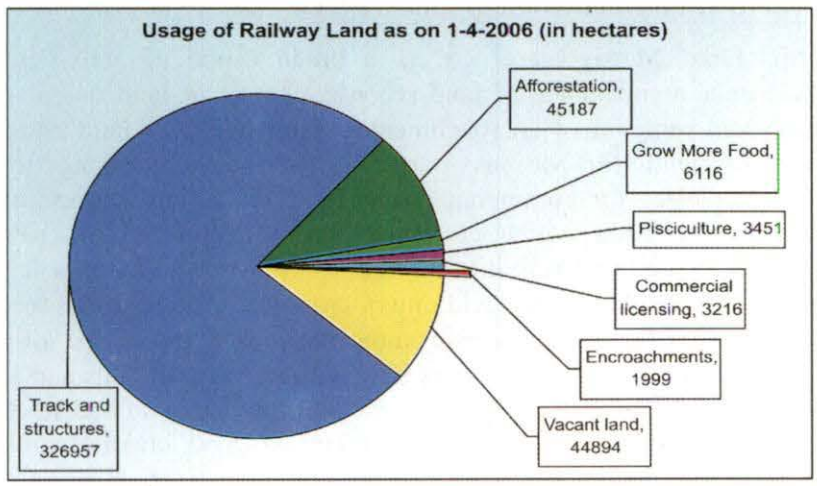
- IR needs to strengthen its land management organisation by paying greater attention to staffing and training related issues.
- Cases of delays in land acquisition should be dealt with through constant liaison with state revenue authorities etc in view of their adverse impact on projects. The procedure for mutation and handing over of land to the construction department should be streamlined in order to minimise delays.
- IR needs to address the issues of inconsistencies in data, deficiencies in maintenance of different registers and documents and differences vis-à-vis the records of state revenue authorities on priority basis.

- IR should make sustained efforts to settle the disputes related to title of land. Further, a review of all such cases should be done and dealt with on a fast track basis.
- Priority should be accorded to construction of boundary walls to prevent encroachment.
- The removal of existing as well as fresh encroachments, especially in the safety zone should be taken up on war footing. Systemic mechanisms such as regular inspection to prevent encroachment, joint inspection by SEs/SSEs at the time of handing over charge and coordination with RPF need to be strengthened.
- The issues of pendency and delays in the settlement of encroachment cases, non-implementation of orders, record keeping and training in the implementation of the PPE Act deserve special attention. The amendment of the PPE Act should also be expedited.
- IR should accord priority to the resumption of land licensed under Grow More Food scheme from state governments and others. The license fee should be determined in a scientific manner. The entire system of maintenance of records should be reviewed and deficiencies thereof be addressed.
- The practice of linking license fee to turnover in respect of depots leased before August 2005 should be dispensed with, especially in the context of the fact that IR is no longer the sole owner of CONCOR. Actual requirement of land for container operations should be assessed in a systematic manner before entering into lease agreements.
- The mechanism of levying license fee from Central Warehousing Corporation should be revisited to ensure a steady and market linked source of income for IR.
- Agreements should be executed before handing over of sites to IRCTC and sites identified should be handed over without any delay. The payment of license fee should be pursued with IRCTC.
- The issues of under recovery and non-recovery of license fee, non-revision of license fee and failure to execute agreements need to be monitored at Board level. Revision of decisions pertaining to rate of license fee should be minimised to avoid administrative complications.
- Railway Board should ensure uniformity in the levy of other charges related to way leave facilities and regular revision of these charges. Outstanding charges should be recovered from defaulters.
- Handing over of the balance sites identified should be completed early.

2.3 Introduction

Railway land has been defined under the Railway (Amendment) Act 2005 as "any land in which a Government Railway has any right, title or interest". Indian Railways (IR) owned 4.32 lakh hectares of land as on 01 April 2006. IR

is the second largest owner of land in the country after the defence forces. 75.71 per cent of the land is used for operational and service infrastructure and the balance is licensed for various purposes such as afforestation, pisciculture, grow more food scheme etc. Land is also licensed for commercial purposes. A significant quantum of land (approximately 10.4 per cent) is vacant and thus not put to any use. The area of land under encroachments is considerable (1999 hectares). The need for effective acquisition, custody, utilisation and disposal of land is therefore essential in view of the implications for IRs operations, safeguarding of one of its most valuable assets and the potential for revenue generation. The break-up of the usage of railway land as on 1 April 2006 is as given below:



Given the vast expanse, location and value of railway land, it is imperative that IR manages both the custody of land and its utilisation to its best advantage.

2.4 Organisational Structure

Land management at the level of the Railway Board is the responsibility of the Land Management and Amenities Directorate, which works under the overall direction of the Member (Engineering). The primary responsibility of the Directorate is to lay down the policy in regard to land management and ensure/monitor its implementation at the Zones/Divisional level by calling for various reports. At the zonal level, the Principal Chief Engineer under the General Manager is the implementing and coordinating authority for the various policies/orders issued by the Railway Board. He is assisted by Chief General Engineer and Deputy Chief Engineer/Land Controlling Officer. The Sr. Divisional Engineer at the divisional level is responsible for execution of various instructions for regulating usage of land, prevention and removal of encroachments, execution of agreements for commercial licensing etc. In the field, the Assistant Engineer/Senior Section Engineer (Works/Permanent Way) is responsible for maintaining land records, demarcation of land boundaries and detection and prevention of encroachment etc. Commercial exploitation of Railway land from January 2007 is being pursued with the help of a newly formed organisation, the Rail Land Development Authority (RLDA).

2.5 Audit objectives

The performance audit of Land management in IR was undertaken with a view to assess:

- Whether the mechanism for acquisition of land was effective in facilitating the completion of projects for which land was to be acquired.
- Whether adequate safeguards were in place to prevent loss of land.
- Whether IR took prudent and effective measures for utilizing the available land (other than the land required for operational purpose) and ensuring optimum revenue generation from the same.

2.6 Audit scope, methodology and criteria

The term 'Land Management' covers a broad scope of activities which includes proper maintenance of land records, control of land use, detection, prevention and removal of encroachments, maintenance of land boundaries, utilisation of land for various purposes by licensing/leasing to other organisations/parties for commercial/ other uses including afforestation etc. The performance audit which covers a period of three years (2004-07) attempts to evaluate these activities through examination of records at various levels (Board, Zone, Division, Field units), cross verification of the records of IR with those of the state revenue authorities, joint inspection of certain aspects like encroachments and vacant land with railway officials and analysis and comparison of data collected. The relevant provisions of Indian Railway Act 1989, Land Acquisition Act, Public Premises (eviction of Unauthorized Occupation) Act 1971, Railway Protection Force Act 1957, Railways Amendment Act 2005, rules and provisions contained in the Indian Railway Code for Engineering Department, Indian Railway Works Manual (IRWM) and the guidelines and instructions issued by the Railway Board from time to time were used as criteria.

2.7 Sample selection

At the macro level the data was collected for all the divisions, zonal headquarters and Metro Railway/ Kolkata. However, for review of specific issues viz. land holdings, land boundaries, encroachments, commercial licensing, way leave cases etc, a sample of one or two important divisions of the zones were selected. Within these selected divisions, 25 per cent of the Assistant Engineers (AENs) were selected for detailed review. Hundred per cent Senior Section Engineers (Sr.SEs/SEs) under these selected AENs were reviewed. The methodology of sample selection and zone wise details of divisions selected are given in **Annexure II.**

2.8 Acknowledgement

The audit plan including the audit objectives were discussed by Principal Directors of Zonal Audit Offices in meetings with the respective General Managers/ Chief Engineers/Financial Adviser and Chief Accounts Officer (FA&CAO) in entry and exit conferences. The co-operation of the Ministry of Railways as well as Zones during the meetings and in the course of audit is

acknowledged. Audit recommendations were discussed in January 2008 with Member (Engineering) after issue of the Report to the Ministry of Railways in December 2007.

2.9 Land Management Organisation

Land management is one of the important functions of the Engineering department. An Expert Committee on Commercial Exploitation of Railway Land (ECCEL), established in 1992, recommended (September 1995) setting up of a separate Land Management Organisation for preventing encroachments into railway land. Accordingly, Railway Board decided to set up a separate Land Management Organisation as Pilot Projects in Mumbai Division of Central and Western Railways. Encouraged by the satisfactory performance of the pilot projects, Railway Board decided to strengthen the land management organisation at Divisional and Zonal levels in the Chief Engineers' conference held in December 2000. Zones were requested to send their views in this regard. Based on the views of Zones, Director (Land Management) submitted a proposal for creation of Land Management Organisations at Zonal and Divisional levels. However, Advisor (Land and Amenities) opined (September 2001) that the Divisional Engineers with the assistance of Law Assistants and Draftsmen were effective in prevention and removal of encroachments, updating of land plans etc and suggested that the Zones adopt an organisation which they consider practical and appropriate as per prevailing situation. It was also stated that the posts of Chief General Engineers (CGEs) were already created in Zonal Headquarters. Audit observed that the decision to drop the proposal for setting up of a separate Land Management Organisation was not taken with the approval of Board (Member Engineering) which was the appropriate authority to do so. A review in audit revealed the following:

- In eight out of 16 zones (ER, SCR, NEFR, WCR, CR, NR, NER and WR), a separate land management cell exists at the zone level. There is no such separate cell in eight zones (SR, ECoR, SWR, SECR, NWR, SER, ECR and NCR).
- There was a separate land management cell in 23 divisions (eight zones) out of 67 divisions. In 44 divisions in 13 zones, such cells did not exist. In SCR, NEFR and ECR, such cells were created in all the divisions whereas in NR, NWR, ER, WCR and CR, such cells were created in some of the divisions[17]. Audit however observed that even in cases where such cells existed, the officials were entrusted with other duties.
- Though surplus staff bank exists in five zones (SR, ER, NEFR, SECR and WR) and one division each in WCR (Kota), NWR (Bikaner) and redeployment was done only in one division in WCR (Kota).
- Despite suggestions from zones for the creation of exclusive legal cells to deal with land related cases, such cells were not created at zonal and

[17] Two (Ambala, Lucknow) out of five in NR, Two (Jaipur, Ajmer) out of four in NWR, One (Sealdah) out of four in ER, One (Kota) out of three in WCR, One (Mumbai) out of five in CR

divisional levels in any of the zones except in one division in NR (Ambala).

- Despite Railway Board's instructions to examine the feasibility of taking some Kanoongos/ Patwaris on deputation from the State governments, there were no tangible results in this direction.
- Training was imparted to officials posted in land management cells in 11 zones (SR, SWR, NCR, SER, SCR, NEFR, SECR, WR, NER, ECoR and CR). In three zones (WCR, NWR, NR) training was imparted in some of the divisions[18]. In some cases training was imparted only to officers (four zones-SR, NCR, SECR and WR and two divisions in WCR (Jabalpur, Bhopal). In ER and ECR, no training was imparted to the officials posted in land management cells.
- No training was given to Estate officers (EOs) in five zones (SR, ER, ECR, SECR, NCR) and in some of the divisions in WR, NR and CR[19].
- Previously, a compendium of instructions regarding land matters was issued by the Railway Board to zones. After introduction of Railnet, this practice was discontinued. Audit observed that there was no set procedure in the zones for downloading these instructions. In SCR and NR, there was no mechanism to watch the receipt of circulars and maintain the codes and manuals up to date for reference at Divisional and field levels.

These weaknesses in the Land management organisation resulted in several deficiencies in the management of land which have been brought out in paragraphs 2.10 to 2.13.

Railways has stated that it will direct the zones to review and strengthen the land management organisation and also give emphasis to impart training to the officers and staff involved in land management.

Recommendation

IR needs to strengthen its land management organisation by paying greater attention to staffing and training related issues.

2.10 Land Acquisition

Railways acquire land for their requirements through the State Governments. Acquisition of land on Railways is regulated under Land Acquisition Act 1894. Notification, award enquiry, passing final award, disbursement of payments etc. are done by the District Collector/Special Land Acquisition Officer. In the process, approximate land acquisition cost including solatium and interest etc. as per statutory provisions is deposited in advance with the State Government by Railways. As per Para 807 (f) of IRWM, in case of construction projects involving land acquisition, it is the responsibility of the

[18] Jabalpur,Bhopal divisions in WCR, Bikaner and Jodhpur divisions in NWR, Lucknow, Moradabad and Ambala divisions in NR.

[19] Vadodara, Ratlam, Ahmedabad, Rajkot, Bhavanagar (WR), Firozpur (NR), Bhusawal, Mumbai and Nagpur (CR).

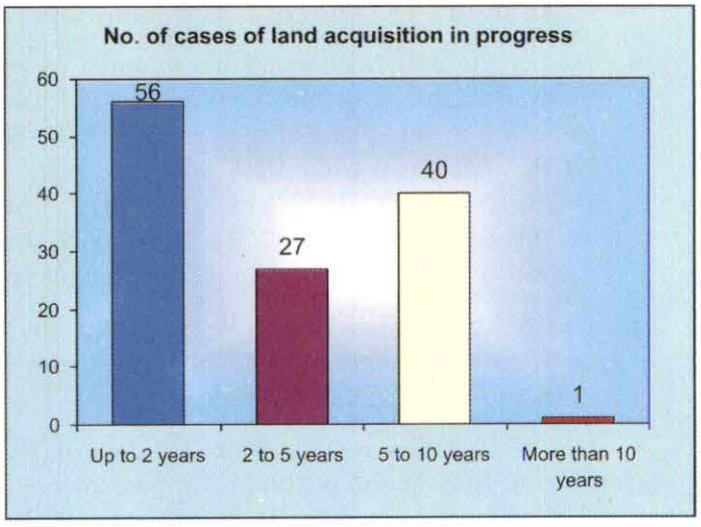
construction organisation to hand over the land acquired free of all encroachment and along with all specified records to the open line engineers. These records include Land record register duly filled in and original papers viz. Notification, awards, certificates of handing over and taking over of land, final land plan and schedule signed by the collector etc.

Completed cases

Audit review of 129 cases of land acquisition (completed cases) in 13 zones and Metro Railway revealed the following:

- There were delays of more than two years in 71 out of 129 cases of land acquisition.
- Delay in acquisition of land was attributed mainly to delayed submission of the estimate by State Governments, delay in obtaining sanction from Railway Board for payment of additional amount, non-cooperation from State Governments, delay in approval of the Ministry of Forest and Environment, removal of encroachment including religious structures, court cases and non-clearance from transport department etc.
- Out of 129 cases, in 60 cases, mutation of land was not done with the respective state revenue authorities. In 48 cases, mutation work was in process. In seven cases (SCR-6 and SER-1), status of mutation was not available. Mutation was done in 14 cases only.
- In 44 cases, the acquired land was not handed over to the construction department/open line. In seven cases, the status of handing over the land was not known. In two cases, handing over was in process.

Cases in progress



During review of 124 cases in progress in 14 zones and Metro Railway, it was observed that 56 cases were up to two years old, 27 cases were two to five years old and 41 cases were more than five years old. The main reasons for delay were court cases, delay on the part of state government, encroachments, commercial rate demanded by state governments, non disbursement of amount etc. **(Annexure III).**

Railways has stated that the delays are mainly on account of sanctions/clearances from local bodies/central government (MOE&F) and that a Railway (Amendment) ordinance 2008 has been promulgated to expedite the

process of land acquisition. It has also stated that details of cases where mutation of land has not been done and reasons thereof will be sought from the zones.

Recommendation

Cases of delays in land acquisition should be dealt with through constant liaison with state revenue authorities etc in view of their adverse impact on projects. The procedure for mutation and handing over of land to the construction department should be streamlined in order to minimise delays.

2.11 Land Records

Basic land records such as Land Records Register, Land Boundary Verification Register and Encroachment Inspection Registers are required to be maintained in accordance with instructions contained in Para 850 of Indian Railways Code for Engineering Department and also as per Paras 806, 807 and 812 of Indian Railways Works Manual. The maintenance of these registers was also reiterated in the Joint Procedure Order (JPO) issued by Chief General Engineer/Zones during the year 2001 and 2002 as per instructions issued by the Railway Board in September 2001. Audit observations in respect of the maintenance of land records are detailed below:

2.11.1 Land Plans

In terms of Para 850 of Engineering code, a complete series of land plans for the whole line should be kept in the office of the Chief Engineer of Railways. Divisional/Executive Engineers shall be responsible to ensure that records are carefully preserved and kept up to date by noting all changes on the copies of the authorized land plans in their possession. Review of the availability, certification, mutation, scanning/digitations of land plans in various zones by audit {**Annexure-IV (a)**} revealed the following:

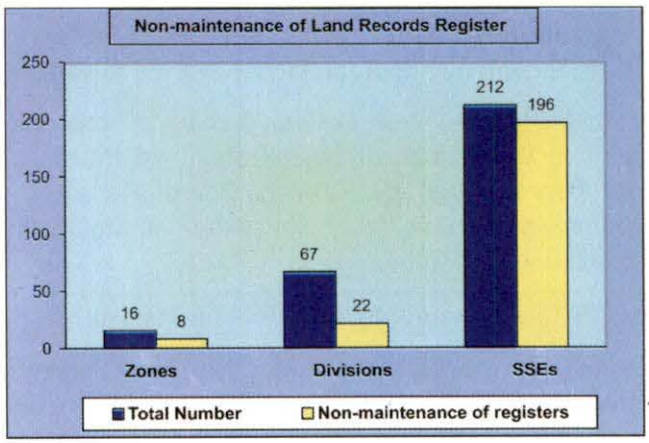
- As per the data made available to audit, as on 31-3-2007, the total land plans available with the zones were 45533 nos. However, area was not indicated in land plans of nine zones (WCR, WR, NER, SCR, ECoR, ER, NCR, SER and ECR). 1038 nos. land plans were missing in 11 zones (ECR, NCR, ECoR, NEFR, ER, NER, SCR, NWR, SWR, WCR, WR).WCR (298), ECR (222), NCR (115) and CR (105) accounted for more than 50 per cent of the missing land plans.
- Out of the available land plans, 37896 nos. land plans were verified/ certified by the state revenue authorities with 100 per cent verification in NER and SER.
- Out of 16 zones, mutation was not done in five zones (SWR, NER, NR, SR and SECR) and position of mutation was not available in four zones (ER, WR, ECoR and NCR). In six zones (SER, NWR, WCR, SCR, NEFR, ECR), 8912 out of total available 18236 land plans were mutated with the state revenue authorities.
- Out of the total land plans available in 16 zones, only 63 per cent land plans (28726 nos.) were scanned/ digitised. Status of scanning of land

plans in SER and SECR was 100 per cent whereas in ER, no scanning was done. In two zones-WCR and NEFR, the progress of scanning was between 21 to 31 per cent only.

Detailed study of land plans revealed deficiencies such as non-retrieving of the missing land plans, railways being unaware of the missing land plans, non-availability of the land plans for the land acquired, plan numbers assigned by the revenue authorities not available in the land plans, non-preserving of the land plans in the form of micro films, non-availability of the land plans with the SSE/AEN levels etc. Details are given in **Annexure IV (b)**. In March 2007, the Railway Board, in their Action Taken Note on Audit Para No. 5.1 of C&AG of India's Report for the year 1997-98, admitted that effective pursuing and monitoring of certification of Land Plans was hampered as sufficient staff could not be provided.

2.11.2 Land Records Register

Land records Register should contain details of land plans, area, kilometrage, cost, description, reference to correspondence, government resolutions and date of sanctioning the transfer of land, etc. This register has to be maintained in Headquarters/Chief Engineer's office as well as in Divisional/Executive Engineers' office. As per the model JPO of September 2001, a register of total railway land with up to date entries shall be maintained by the Section Engineers (Works) of the Engineering Department. A review in audit revealed the following:



- Land Records Register was not being maintained in 8 out of 16 zonal headquarters (SR, SWR, ER, NR, WCR, ECR, NWR and NCR) and in CLW. In cases where these registers were maintained (NER, WR, SECR, SCR, CR and NEFR), defects such as failure to adhere to the prescribed format (WR, SECR), incomplete data (WR, SECR, SCR and NEFR), entries/information not authenticated by the competent authority etc (WR, SCR, CR and NEFR) were observed. Position of maintenance of this register in ECoR and SER was not available. On CR, no entries were found in the register after 1996, the reason being non-availability of particulars of land acquisition from the construction department. Information filled in had not been authenticated by the competent authority.

- Out of 26 divisions test checked, in 22 divisions on 14 zones (NER, ER, SR, SWR, NR, WR, SER, SCR, ECoR, CR, NEFR, ECR, NWR and

NCR), these registers were not maintained. Of the balance, in four divisions on four zones (NR, WR, SECR and WCR), they were not in prescribed format (WR), data was incomplete (NR, WR and SECR) and entries/information were not authenticated by the competent authority (NR and WR).

- Out of 212 SSEs test checked, these registers were not maintained by 196 SSEs. Though these registers were maintained by 15 SSEs, deficiencies such as non-maintenance in the prescribed format (5 SSEs), incomplete data (7 SSEs), and entries/information not authenticated by the competent authority (8 SSEs) were observed. In ER, all the SSEs/SEs (Works) did not maintain these registers. In NER, no land was under possession of one SSE.

- Eastern Railway Administration, in its reply to the questionnaire issued by the Standing Committee on Railways for examination of the subject "Land Management", claimed (October, 2004) that Land Registers were being maintained in all divisions and monitored in terms of the provisions as laid down in IRWM. In response to the questionnaire issued by audit, the Principal Chief Engineer stated that the subject register was being maintained by the Divisional/Executive Engineers who, in turn, stated that the registers were being maintained at the sub-divisional level. Detailed review of all the SSE/SE (Works) and all AENs of two selected divisions revealed that no such records were being maintained at the sub-divisional level also. It appears that either the Zonal as well as the Divisional authorities were not aware that these registers were not being maintained, or, though aware of the fact, they tried to shift responsibility.

From the above, it is evident that Land Records Registers were not being maintained at zonal, divisional and field levels as per codal provisions and instructions issued by Railway Board. As such, the land holding position reported at various levels by different authorities was not susceptible to verification.

2.11.3 Land Boundary Verification Register

As per the various provisions, all lands, permanently occupied for the purposes of Railway, shall have their boundaries demarcated in such a manner as to enable such boundaries to be readily ascertained and identified. For this purpose, the boundary of the railway land has to be defined by a continuous wall, fence or ditch or by detached marks, posts or pillars. Guidelines for demarcation of land boundaries, laying of boundary stones, boundary walls, fencing etc as enumerated in Paras 808 to 813 IRWM should also be followed. Land Boundary Verification Register should contain the details of Boundary stones available along the railway boundary on both right and left side of the track with location thereof, for the land under their control. A review in audit revealed that

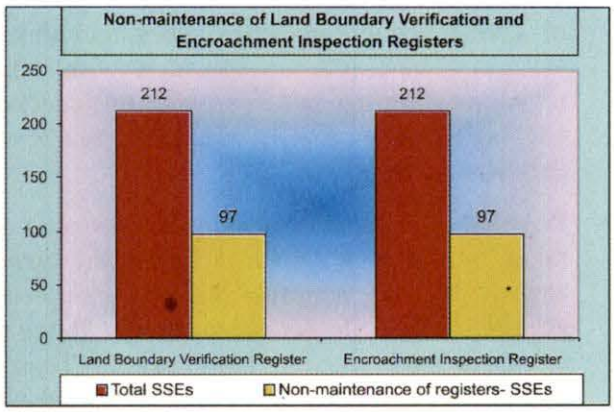
- This register was not being maintained by 97 out of 212 SSEs offices checked. Out of 114 who maintained the register, 13 SSEs did not maintain it in a complete manner. Details furnished in the register were not

authenticated by 26 AENs/ DENs/Sr.DENs. In NER, no land was under possession of one SSE.

- In respect of SSE/KRBA/SECR, register was never verified by the competent authority. In respect of registers maintained by the SSEs/SEs test checked on BRC division (WR), authentication by respective ADENs (except register maintained by Sr.SE (W) PRTN, GDA and BH) and DEN for 2006-07 was due (except register maintained by Sr.SE (W) PRTN).
- Register maintained by SSE/Valsad/WR was stated as sent to division office for authentication in 2003 and not received back thereafter. The register was not verified since 2003.
- Further, a scrutiny of this register available with the SSEs revealed that in 6 SSEs of SR, out of 2358 boundary stones required to be maintained, 1025 boundary stones (constituting 43 per cent) were missing. Details of corrective action taken were not recorded.

2.11.4 Encroachment Inspection Register

In terms of Para 814(e) of IRWM, a register showing the encroachments on Railway land noticed during inspections by various officials has to be maintained by each SSE duly furnishing the location, name of the encroacher, area encroached, type of encroachment (commercial/residential/cultivation), date of commencement of unauthorized occupation, date on which the encroachment came to notice for the first time, action taken and date of removal of encroachment. The encroachment plan (to scale) shall also be pasted on the right side of the register. A review in Audit revealed that out of 212 SSEs, in 97 SSE offices on 11 zones (NWR, SECR, SER, CR, SCR, WR, NEFR, SR, SWR, NCR and ECR) this register was not being maintained. Though these registers were maintained in 114 SSEs, they were not prepared in prescribed format, data therein was incomplete and entries/information were not authenticated by the competent authority.



Thus, in spite of clear instructions for the maintenance of the above basic records in Engineering Code as well as in the IRWM and reiteration of the same in the JPO issued by the zones, these registers were not being maintained/maintained properly. Deficiencies in maintenance of these records resulted in non-availability of basic land particulars which are essential for effective monitoring.

2.11.5 Inconsistencies in reporting of data

A large number of discrepancies were noticed in the data provided which belied the authenticity of the information maintained at different levels of the Railway Administration. Inconsistencies prevailed in reporting facts and figures on basic data pertaining to land holdings, vacant land, encroachments, land plans, verification of records with the State Revenue Authorities, earnings, construction of boundary walls etc at various levels of the zones. **Annexure V** gives the details. In five zones out of 16 (ER, NR, SCR, ECR and SR), data of total land holdings and vacant lands were not available with all the SSEs. In SER and WR, this data was being maintained only by some SSEs. Therefore, the authenticity of the information furnished at higher levels could not be verified.

2.11.6 Comparison of records of Railway administration with that of the State Revenue department

A review conducted by audit to verify whether the extent of land as exhibited in the land plans available with railway administration tallies with that of the records of the respective State Revenue authorities revealed the following:

- Out of 458 surveys test checked in 16 zones, CLW and Metro Railway, the land area in respect of 43 surveys was greater by 26.985 acres in the records of state revenue authorities. The land area as indicated in the records of state revenue authorities was found short by 1046.5273 acres in 141 surveys. There was no variation with respect to the records of state revenue authorities in 227 surveys test checked. In 47 surveys (ER, ECoR, CR, NEFR, SER, SWR, WR, ECR, SECR and Metro Railway) complete data was not available.

> In 184 out of 458 surveys test checked, there were variations in land area to the extent of 1073 acres vis-à-vis the records of the state revenue authorities.

- Detailed comparison of land plans revealed deficiencies such as no action taken by the railways for changing the ownership of the railways in the revenue records, non availability of complete details of land holding/land plans with the SSEs for comparison with the respective revenue authorities etc. Details are given in **Annexure VI**. Thus, failure of the Administration to ensure consistency of the records with those of Revenue Authorities had an adverse impact on the railway administration's rights over their land.

Railways has stated that the zones will be directed to take up the work of reconciliation, certification and computerisation of land plans in a time bound manner. The reply is silent on other deficiencies pointed in respect of various registers. The issue of inconsistency between its records and the records of the state government has also not been addressed.

Recommendation

IR needs to address the issues of inconsistencies in data, deficiencies in maintenance of different registers and documents and differences vis-à-vis

the records of state revenue authorities on priority basis. Computerisation of the registers should be taken up.

2.11.7 Disputes in title/forged sale of railway land

As per para 1004 and 1008 of the Engineering code, it is the duty of railway administration to preserve unimpaired title to all land in its occupation. Audit noticed the following cases of forged sale of railway land, title dispute etc:

- In NEFR, railway land (ditches/pond) measuring 33.3 bighas (480008 sqft) in Alipurduar division, was licensed to a fisherman cooperative society in March 1995 for pisciculture. However, the said society unscrupulously grabbed 12.06 bighas (173666 sqft) railway land (in December 1999) through an ex-parte decree issued by a Civil Judge on production of fraudulent records and also got the ownership changed in his name in the records of Director of Land Records and Survey. Railway administration after noticing this, cancelled the license in September 2001. Despite advice from the Standing counsel for filing an application for setting aside the ex-parte decree (June 2003), no case was filed in the Court of Law to retrieve the land and re-establish the right over the land.
- In NEFR, railway land measuring 735.44 sqm was unauthorisedly occupied by a private party since November 2005. The encroacher constructed a permanent boundary wall on the strength of a sale deed from State Revenue authority of Assam. Though the Railway Administration made efforts to evict the encroacher, it could not succeed due to non-cooperation by the State Administration.
- In WR, Railway Administration failed to take back timely possession of land measuring 159.91 hectares from the State government 32 years after closure of the narrow gauge line on Ujjain-Agar section as it could not prove its ownership. Failure to effectively maintain its records and establish the title of the land resulted in non-exploitation of an asset valuing Rs.85.47 crore.
- In SR, an area of 30 cents of land in Kanjicode, Kerala was encroached by an individual with bogus records obtained with the help of village officers. The report from the State authorities indicated that the property changed hands and the present occupier is the third person. No action has been taken for cancellation of the illegally registered document and repossession of the Railway land.
- In ER, railway land in Mouza Jagdishpur near Dankuni station was being sold by private parties illegally. On investigation, the Railway Administration discovered that they did not have the original Possession Certificate, without which the land could not be mutated in their favour. The original Possession Certificate of land at Jagdishpur and Baigachi

Due to failure to take back possession of 159.91 hectares of land from the state government 32 years after closure of a narrow guage line, WR could not establish its title to the land. Despite SWR making full payment for acquisition of 3.28 acres of land valued at Rs.21.4 crore in Bangalore, land was still in possession of private parties.

supplied by CAO/Construction was misplaced and was also not available in the State Government Office. Searching of records in the Land Revenue Office revealed that seven deeds were registered (before April 2001) in connection with sale of Railway land at Jagdishpur Mouza. Although the BL & LRO office was approached several times for mutation, nothing has been done till date and no action could be initiated against the illegal sellers. It was repeatedly reported by the local people that at Baigachi, Jaipurbil, and Chamrail Mouzas, the previous owners were selling the railway land illegally taking advantage of the Railways' inability to legalise the ownership through mutation.

- In SWR, land measuring 3.28 acres in front of the station building acquired in Bangalore for yard expansion was not included in the new station plan. Review of records revealed that after the land was acquired by the Railways, the same land had changed hands six times in different parties' names. The acquired land was still in the possession of private parties, despite railway having paid the full amount for acquisition of this land. The value of the land so lost due failure to take follow up action after the acquisition was assessed at Rs.21.4 crore at present market value.

Recommendation

IR should make sustained efforts to settle the disputes related to title of land. Further, a review of all such cases should be done and dealt with on a fast track basis.

Railways has stated that the details in respect of specific cases are being collected by the zones. However, the recommendation has been noted and zonal railways shall be directed to implement the same in a time bound manner.

2.11.8 Land boundaries

Proper maintenance of land boundary is the first and effective step towards prevention of encroachment. Guidelines for demarcation of land boundaries, laying of boundary stones, boundary walls, fencing etc have been explicitly enumerated in paras 808 to 813 IRWM. All land permanently occupied for the purposes of Railway, should have its boundaries demarcated in such a manner as to enable such boundaries to be readily ascertained and identified. For this purpose, the boundary of the railway land has to be defined by a continuous wall, fence or ditch or by detached marks, posts or pillars. Railway Board stated (July 2002) that the boundary walls needed at approaches to stations in all major cities should be assessed, prioritized, programmed and constructed under revenue expenditure and progress should be monitored. Further, repairs of the boundary walls should be a regular exercise and implementation should be watched by the headquarters. Due to unsatisfactory progress of the construction/maintenance of land boundary, Railway Board in May 2004 ordered that railways should sanction works for construction of boundary walls in the areas vulnerable to encroachment at GMs level and complete the work expeditiously.

Review of the programmed and actual construction of boundary wall in the various divisions of the zones revealed that there was shortfall in construction of boundary as per table given below. **{Annexure VII (a)}**

Year	No. of zones	No. of divisions	Shortfall up to 50 per cent	Shortfall between 50 and 80 per cent	Shortfall between 80 and 99 per cent
2004-05	14	28	13	10	5
2005-06	14	30	12	8	10
2006-07	14	25	10	3	12

Shortfall in construction of boundary wall was attributed to shortage of funds, non-finalisation of estimates, non-finalisation of tenders, failure of contractors and non-availability of material. In some cases, the reasons for shortfall were not on record. Audit also observed deficiencies such as non-availability of records related with the identification of land boundaries in the divisions, non-assessment of requirement of land boundaries at the field levels, construction of land boundaries in excess of the assessed requirements, non demarcation of railway land etc. Details are given in **Annexure VII (b)**.

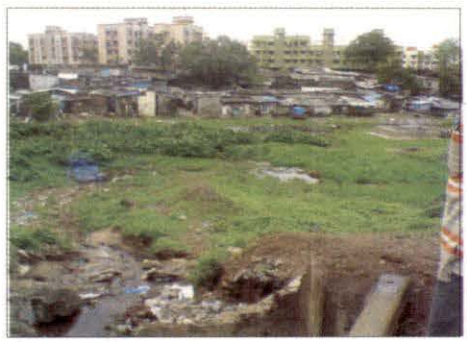
As per Para 1048 of the Indian Railways Code for Engineering Department, the zone is responsible for the demarcation and periodic verification of the boundaries. In terms of Para 813 and 814 of IRWM, periodical verification of land boundaries is to be done by the concerned Sr. Section Engineer/Section Engineer (SSE/SE) and a certificate to that effect in the prescribed proforma should be recorded in the relevant register once in a year which is to be verified and countersigned by the respective Assistant Engineer, DEN/Sr.DEN. Audit scrutiny in the selected divisions revealed that periodical verification was not conducted at any level (SSE/AEN/DEN) in five zones (ECOR, ER, NEFR, SER and SWR) and Delhi division of NR.

Recommendation

Priority should be accorded to construction of boundary walls to prevent encroachment.

2.11.9 Encroachments

Railway Board has, from time to time, issued detailed instructions to the Zones regarding the steps to be taken to prevent encroachments and remove existing encroachments on Railway Land. As per the Joint Procedure Orders issued by the railways and also as per Para 813 (d) of IRWM, each Section Engineer should have a list of encroachments, location-wise, and copy of the same is to be furnished to the local police station and also the concerned GRP station. This list should be updated as of 1st April every year and circulated. The responsibility for prevention/reporting of



Encroachment on Railway land at Virar , Mumbai in Western Railway

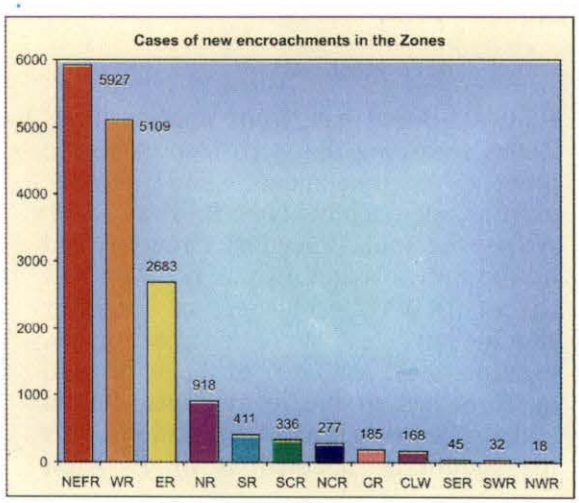
new encroachments lies jointly with the concerned SSE/SE and the RPF officials in that area. Cases of encroachments should be brought to the notice of divisional authorities/local police/civil authorities. If necessary, an FIR under Section 147 of Railway Act 1989 should be lodged by the Engineering department with the police. Trespassing and soft encroachments should be removed without recourse to the PPE Act. In case of hard encroachments, SSE/SEs, should file cases in the court of Estate officers (EOs) against the encroachers. A joint field check on the existing encroachments is mandatory on the part of the SSE/SE (Permanent way/Works) while handing over/taking over during their transfer. This should be followed by a joint signing at the end of the encroachment register on the number of the encroachments in the jurisdiction duly bringing out the steps taken so far.

Encroachment in Railway colony, Mazgaon, Mumbai in Central Railway

Action can be initiated against an SSE who does not report new encroachments to the AEN concerned. Monthly progress regarding additions and removal of encroachments, filing of eviction cases and their progress in the courts of EOs, in Civil Courts etc. should be submitted by divisions to headquarters. Further, encroachment plans to scale shall be made for every encroachment. These encroachment plans along with details of encroachment should be checked and signed by SSE/SE (Works)/AENs and a copy of such encroachment plans should be available with divisional authorities. A review in audit revealed that:

Railway Board in it's Action Taken Note on "Land Management on Indian Railways for the year 1997-98" stated that it had taken remedial action (March 2007) to detect/prevent/remove encroachments. However these measures proved inadequate to prevent new encroachments including encroachments in the safety zone.

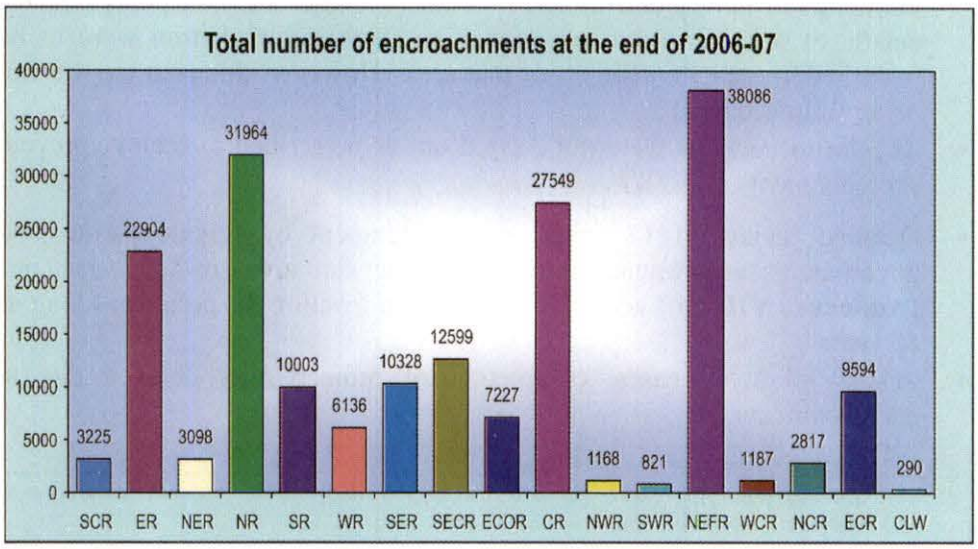
- There were 220152 encroachment cases[20] as on 1 April 2004. Though an assurance was given in the Parliament during 1999 that there will be no fresh encroachments, as many as 16109 new encroachments crept in during the period 2004-05 to 2006-07 in the zones and CLW{**Annexure (VIII(a)**}.



[20] Excluding the data of encroachments of Alipurdwar division/NEFR for 2004-05

- Though 54984 cases of encroachments were removed during the period under review, a large number of cases of encroachments i.e. 188996 cases (involving land area of 1594 hectares approx.) existed at the end of the year 2006-07. More than 50 per cent of these encroachments were accounted for by four zones (NEFR, NR, CR and ER).

> NEFR, WR and ER accounted for about 85 per cent of the new encroachments which crept in during 2004-05 to 2006-07.



- The range for the period of encroachments was between one year (minimum) and 68 years (maximum). The encroachment cases aging more than ten years at the end of year 2006-07 were in the following divisions:

Range (Years)	No. of divisions	Name of divisions/Railway
10-20	10	Moradabad (NR), Delhi (NR), Ahmedabad (WR), Bhavnagar (WR), Sambhalpur (ECoR), Jabalpur (WCR), Bhopal (WCR), Bangalore (SWR), Mysore (SWR), Hubli (SWR)
20-30	9	Chennai (SR), Palghat (SR),Trichy (SR) Madurai (SR) Khurda Road (ECoR), Sealdah (ER), Howrah (ER), Bilaspur (SECR), Allahabad (NCR)
30-40	3	Ambala (NR), Raipur (SECR), Waltair (ECOR)
40-50	2	Nagpur (SECR), Mumbai Central (WR)
50-60	1	Kota (WCR)
More than 60	3	Asansol (ER), Firozpur (NR) and Jhansi (NCR)

- Encroachments observed in 46 locations (30 locations-CLW, 5 locations-WR, 3 locations-ECoR, 4 locations-NEFR and 4 locations-SER) during joint inspection conducted by Audit and Railway were not shown/less shown in the railway's records by the concerned SSEs/SEs.

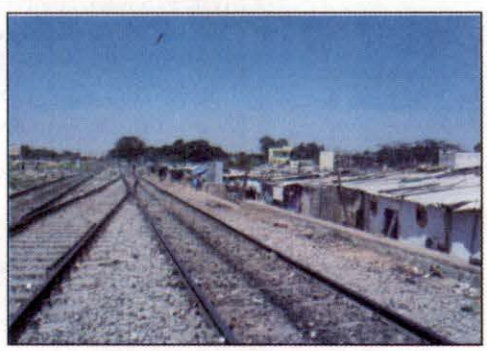
- It was observed during joint inspections that the encroachments were mostly in the form of residences with both soft and hard types (i.e. pucca - RCC buildings), commercial use etc. In some of the encroachments, basic

amenities like, water, street light, Panchayat roads, electricity connections were provided and in one area even public transport buses were plying (SR, SCR,SWR,CR, WR).

- The JPO specifies that while handing over the charge in the case of transfer of SSEs/SEs, a joint inspection is to be conducted and a specific mention of the existing encroachments are to be indicated in the handing over/taking over notes of the respective officials. Audit observed that these instructions were not being adhered to. (SR)
- As the responsibility for prevention/reporting of new encroachments lies jointly with the SE and the RPF officials, copies of land plans and the details of the encroachments prevailing in their jurisdiction were to be furnished to the RPF officials of that area. However, this practice was not being followed.(SR)
- Regular inspections were not carried out as prescribed to remove/prevent encroachments. (NEFR)
- Detailed review of 17 cases of encroachment by private parties and government departments accounting for an area of 197 hectares **{Annexure VIII (b)}** across zones revealed inaction for periods as long as 55 years.
- In the following cases, completion of projects was delayed due to encroachments:

Zone	Work	Impact
WR	Quadrupling of line between Borivali and Vasai road	Loss of earnings of Rs.66 crore and cost escalation of Rs. 35.13 crore
ER	Extension of Goods Wharf at Barasat	Against the target date of completion by August 2006, only 65 per cent of the work was completed till March 2007.
SR	Construction of third line between Attipattu and Korukkupet	Railway bridge could not be extended and the formation work of the targeted third line could not be taken up, resulting in blocking of capital of Rs.61.33 crore
SR	Yard remodeling work in Coimbatore Junction	Work could not taken up and is pending for the past 2 years

- Railway Board instructed (August 2002) all Zones to take immediate steps to remove encroachments within Safety Zone, i.e., land within 15 meters from the center line of the nearest track. A quarterly return regarding progress of removal of encroachment was to be sent to Railway Board. Review of encroachments in safety zone across zones revealed that at the beginning of 2006-07, there were 27408 nos. encroachments in the safety zone in 15 zones. During the year, 1249 new encroachments were observed and 2549 encroachments were removed leaving a balance of



Encroachment in the Safety Zone at Yeshwanthpur Station Yard, Bangalore, South Western Railway

26108 at the end of the year. These new encroachments were noticed in ER only. **{Annexure- VIII (c)}**. The new encroachments in safety zone were, however, not reported to the Railway Board by the zone. Review of position in zones revealed the following:

Zone	Observations
ECoR	The monthly reports (month of March) for 2004-05 to 2006-07 sent by the zonal Headquarters to the Railway Board indicated that ECoR was free from encroachments in the safety zone. Audit check of the records maintained in Khurda Road Division revealed that there were 285 encroachments in the safety zone at the Bhubaneswar station area involving an area of 0.4912 hectare. Further, during joint inspection in safety zone in Waltair Division, three stretches of encroachments in safety zone were noticed. On a verification of records available in Waltair division, it was seen that these three cases of encroachments were not recorded in the list of encroachments maintained by the division.
NEFR	During joint inspection at certain locations in Greater Guwahati agglomeration area, encroachments were noticed in the safety zone. The railway land was being used as residential, commercials shops, shopping complex, schools and clubs etc by 161 encroachers. It also came to notice that in Guwahati–Kamakhya section, a large number of encroachers were occupying Railway Land for years together. Though the Railway Administration initiated action for removal of encroachments at the vulnerable locations and concrete pillars/fencing were constructed to stop re-encroachment, the fencing was broken and land was re-encroached by unauthorized occupants.
SCR	There were 85 encroachments including 56 under safety zone in Ramavarappadu gate area with all civic amenities, shops and other establishments including temples with pucca structures. Form A and B were issued under PPE Act but the Railway administration failed to evict the encroachers.

In spite of the availability of sufficient codal provisions and reiteration of the same in the JPO issued during January 2002, railway administration could not detect and prevent encroachment which is a clear indication of system failure in the management of land.

Railways has stated that encroachment of land is a socio-economic issue due to large scale migration and urbanization. All possible efforts are made for expeditious removal of encroachments. In this process they are dependent on the assistance of state governments. Zones have been directed to remove encroachments in safety zones on priority basis. The reply does not address the issue of failure on the part of Railways to comply with the assurance given to Parliament regarding non occurrence of fresh encroachments, the procedural lapses such as failure to record all the encroachments, failure to carry out joint inspections at the time of handing/taking over of charge, non-intimation of encroachment details to RPF and the adverse impact of encroachments on completion of projects.

Recommendation

The removal of existing as well as fresh encroachments, especially in the safety zone should be taken up on war footing. Systemic mechanisms such as regular inspection to prevent encroachment, joint inspection by SEs/SSEs at the time of handing over charge and coordination with RPF need to be strengthened.

2.11.10 Ineffective pursuance of action under PPE Act

The provisions of Section 147 of the Railway Act 1989 require that new encroachments should be removed promptly. Similarly, under the provisions of the Public Premises (Eviction of Unauthorized Occupants) Act, 1971 action should be taken for removal for old encroachments where parties are not amenable to persuasion. When this is not possible, encroachments may be removed with the assistance of local civil authorities. Para 815 (h) of IRWM stipulates that whenever encroachments are taken up under PPE Act, the concerned officials from the engineering branch would act as the presenting officer, and pro actively help expeditious finalisation of the proceedings. Adequate training may be provided by IRICEN, Pune, to make them fully conversant with the provisions of the PPE Act, 1971.

- Position of removal of cases under PPE Act during the year 2006-07 across the zones {**Annexure-VIII (d)**} revealed that 48442 cases were pending at the beginning of the year. During the year, 2611 new cases were filed and 5472 cases decided by the EOs leaving a balance of 45581 cases pending at the end of the year. Pendency of cases for long periods was attributed to non-production of required documents i.e. Khasra of land, Land plan & Title deed of land etc as desired by Estate Officer, improper monitoring of the cases, non-posting of separate EO, non-assistance from police, political interference, non-availability of exclusive post of Chief Law Assistant, non-cooperation from State Government officials to provide Magistrate & Police Force, opposition from encroachers, stay order from courts etc.
- In as many as 21654 cases decided by the EOs, orders to evict encroachers from the land were not implemented. In 1058 cases, the parties moved the civil courts against the decision of EOs.
- In SR, none of the divisions as well as Chief Engineers office were maintaining the correct position of the number of cases pending under PPE Act. In NEFR and SR, though Form "A" has been issued, no action has been taken to issue Form "B" and finally evict the encroachers.
- In NR, in Firozpur division, 70 cases filed during 1990-91 under PPE Act were decided by the EO after a period of 10 years (in 2001). Despite issue of eviction orders, the railway administration could not remove the encroachments on these lands. Another 157 cases of encroachments which took place during the period 1941 to 1996, were lying undecided with the EO due to delay in demarcating the land by the respective revenue authorities, non-production of required documents and non-availability of time with the EO. In another 121 cases, railway administration failed to initiate eviction proceedings after expiry of more than 5 years.
- Railway Board, in their reply to the Standing Committee on Railways (2006-07) stated that under the PPE Act, 1971, the EO, a quasi-judicial authority, is not vested with adequate powers to deal with encroachment cases effectively. The orders of eviction passed by him under the Act do not have the sanctity of a decree of a court of law. At times, in the absence of any assistance from the State Government, the Railways are unable to

execute the orders of the EO. A suggestion to amend the PPE Act to vest more powers in the EO was made to the Ministry of Urban Development in the year 2003, but a final reply is still awaited.

In their monthly PCDOs, Zonal Authorities furnished the position relating to cases under the PPE Act through Annexure 26 to Railway Board. This practice was discontinued from 2005-06. Since then, record keeping in this respect also stopped.

Recommendation

The issues of pendency and delays in the settlement of cases, non-implementation of orders, record keeping and training in the implementation of the PPE Act deserve special attention. The amendment of the PPE Act should also be expedited.

2.12 Licensing of land

Land which is not in active use is licensed for several purposes such as Grow More Food scheme, Pisciculture, for commercial use to oil companies, steel yards etc and for welfare purposes. Land has also been licensed to PSUs such as Container Corporation of India (CONCOR), Indian Railway Catering and Tourism Corporation (IRCTC), Central Warehousing Corporation (CWC) etc. Audit observations in respect of leasing and licensing are detailed in the following paragraphs.

2.12.1 Grow More Food scheme

In the context of acute shortage of food in the country, a decision was taken to license vacant railway land in the station yards to Railway employees and State Government for growing food crops under Grow More Food (GMF) scheme. Due to problems such as non- payment of dues, large quantum of work involved in licensing, retrieval of land etc, Railway Board decided in 1984 to stop licensing of Railway land for cultivation and take back the land except from those belonging to SC/STs and weaker sections. The matter was re-considered by Railway Board in March 2000 and it was decided to revive the licensing of railway land to railway employees in identified urban areas as an anti-encroachment measure and revenue earning measure. Review of position of licensing of land under GMF revealed the following:

Excess railway land given under GMF scheme not retrieved from farmers at Rayanapadu SCR

- Land measuring 6963.9326 hectares was under GMF in the Zones and CLW as on 31-1-2000. Out of this, about 5151.459 hectares land was to be taken back from State governments and private parties/railway employees other than SC/ST and weaker sections as per decision of 1984. It was observed that only 1612.715 hectares of land was taken back by the railways upto 31-1-2000 from the licensees leaving a balance of 3538.744

hectares to be taken back. In the Action Taken Note dated March 2007, the Railway Board admitted that it was vigorously pursuing the matter with the state governments. During 1-2-2000 to 31-3-2007 about 1221.22 hectares of land was licensed afresh to the railway employees. Thus, as on 31-3-2007, area under the GMF scheme was 6572.4397 hectares. **(Annexure-IX)**

- Railway Board in their letter of March 2000 stated that while the main purpose of this licensing is to protect a valuable resource, i.e., Railway land in a hostile urban environment, a quantum of return should be ensured. In respect of lands licensed to state governments, 95 per cent of revenue earned was to be recovered and in the case of employees, the license fee was to be fixed by the DRM with the concurrence of Accounts every year on the basis of the potential for revenue generation of the land at a level of $1/4^{th}$ to $1/3^{rd}$ of the annual revenue expected to be earned by the employee. Audit observed that there was no mechanism to assess the revenue generating potential of the land before fixing the license fee. Thus, license fee could not be fixed in a scientific manner. In ER, the rate of license fee was not revised and kept very much on the lower side.

- Records pertaining to land licensed under GMF scheme to various parties/state governments were not maintained properly in NR, SCR, CR NER and WR. There were inconsistencies in respect of data on land under this scheme in NR, WR and NER. In NR, as per GM's Annual Narrative Report for the year 2004-05, there were 12.24 hectares of land under GMF whereas in Firozpur division, land measuring 1047.84 hectares was licensed to outsiders (620.36 hectares) and railway employees (427.48 hectares) under GMF scheme. In WR, 66.44 hectare land of Ransipur-Vijapur section of Rajkot Division (under Ahmedabad Division after re-organisation of zones) which was licensed to Gujarat State Government in 1960 was not shown in the total land under GMF. Sr. DEN admitted that this land was erroneously left out while reporting to Dy. CE, which would be rectified in the next report. In NER, in the quarterly PCDO sent to Railway Board as on 31.03.07, land under GMF Scheme was shown as 151.58 hectares. However, Varanasi division reported only 6.07 hectares area of land under this scheme and the other 2 divisions (Lucknow and Izzatnagar) reported NIL position. In view of these deficiencies the amount of license fee reported to be due across the zones (Rs.3.32 crore) could not be considered reliable.

- Instances of non recovery of license fee from the licensees were noticed. In SCR, the parties (farmers) stopped the payment of license fee since 1998-99. In WR, land was licensed to state governments in 1960 but no recovery has been made so far.

Railways has stated that since the main purpose of licensing is to protect valuable lands from encroachment, the license fee is based on the revenue generating potential of land. The reply does not address observations on early resumption of lands from state governments and parties other than its own Group 'C' and 'D' employees, evolving an objective mechanism for assessing

revenue earning potential and inconsistencies in respect of land licensed under GMF.

Recommendation

IR should accord priority to the resumption of land from state governments and others. The license fee should be determined in a scientific manner. The entire system of maintenance of records should be reviewed and deficiencies thereof be addressed.

2.12.2 Licensing of land for Pisciculture

Under this scheme, Railways could license burrow pits/tanks for Pisciculture to co-operative societies formed by Railway employees and registered fishermen co-operative societies on the basis of limited tenders, public auction/open tenders in the same order of priority. In the case of cooperative societies, the license fee was to be fixed on the merits of each case in consultation with the FA & CAO. While doing so financial return commensurate with the prevailing market situation as well as Railway's overall situation were to be factored in. Annual earning during the year under this scheme was Rs.0.64 crore. Audit observed the following during review of licensing under this scheme in the zones, Metro Railway and CLW

- In NER and ER, maintenance of records was poor. In NER, there were variations in the data pertaining to licensing of land under the scheme. The land licensed under this scheme as per zone records was 14.366 hectares whereas as per divisional records, only 2.186 hectares land was licensed under the scheme. In ER, 253.289 hectares of Railway land was under pisciculture as on 1 April 2006. However, the data such as number of tanks/borrow pits identified for pisciculture, numbers so licensed and earnings there from were not available at the zone and division levels.
- In CR, ER and NEFR, the potential for revenue generation was not fully exploited. In CR, five water reservoirs were under the control of Mumbai Division viz. Ambarnath Dam, Palasdhari Dam, Bushi Dam, Igatpuri dam and Digha dam but the earning from licensing of fishing rights was Nil. In ER, Howrah division, with the largest number of tanks/borrow pits licensed (98) could not furnish the figures for earnings on this score. In NEFR, as per zone records, 429.518 hectares land was under use for pisciculture. As per divisional records, only 16.2098 hectares land was licensed under this scheme. This indicates that only four per cent of the available in the divisions in NEFR was utilized for revenue generation.
- During the year 2006-27, 2358.71 hectares of land was licensed under this scheme to 320 licensees. Out of 320 cases, in 39 cases in four railways (ECR-10, NEFR-21 and NCR- 6, ER-2), agreements were not entered into with the licensees.
- In SER, in Kharagpur division, it was noticed that although in all cases co-operative societies, approved by the State Government, were given licenses at license fee of Rs.775 per hectare for every half yearly period, in one case under SSE/SRC an area of 1.1 hectares of water body was given to one railway staff under the name of "Fishery Club" at a nominal license

fee of Rs.20 per annum. Reasons for this allotment could not be obtained, either from divisional level or SSE's level.

Recommendation

Maintenance of records, utilisation of land earmarked for this scheme, execution of agreements and tendering system need to be strengthened.

2.12.3 Licensing of land to CONCOR

Indian Railways licenses railway land to Container Corporation of India (CONCOR) for setting up Inland Container Depots. In May 1990, the Railway Board formulated policy guidelines for allotment of Railway land to CONCOR and instructed all Zones to fix the License Fee at the rate of six per cent of the book value of the land per annum. In September 1991, the license fee was revised to three per cent of the market value of land instead of book value of land. In 1994, the matter of fixation of license fee was again reviewed and the Railway Board instructed all Zones that the charges of land leased out to CONCOR would be linked with the turnover (no. of containers (TEUs) handled) of CONCOR in various depots, instead of being linked with the value of the land, so as to give CONCOR an incentive to achieve a higher turnover. In December 2001, the Railway Board appointed a Committee comprising of three officers from Railway Board and one from CONCOR to examine the issues such as land requirement for container handled, remaining area of land under possession, additional land reserved for future use and levying of license fee etc. The Committee recommended (in February 2002) that land given to CONCOR in the future should be charged at 6 per cent of market value of land or as per extant rate or TEUs basis, whichever is higher and land given for existing depots should be charged on TEUs basis. Review of the position of licensing of land to CONCOR, revealed the following:

- Railway Board adopted two sets of rates for recovery of license fee i.e. for existing depots on the basis of TEUs and for the new depots (commissioned after 24.8.2005) at 6 per cent of market value of land or on TEUs basis whichever is higher. Audit observed that the decision to introduce the practice of charging license fee on the basis of market rate was delayed by 41 months.
- The policy of charging license fee on the basis of TEUs handled resulted in considerable loss of revenue to IR **(Annexure-X)**. Table below gives the details of the incremental revenue that would have been earned if license fee had been linked to market value of land rather than TEUs.

> The policy of charging of license fee for the land given to CONCOR on the basis of TEUs handled instead of linking it with the market value of land resulted in considerable loss of revenue to the extent of Rs.551.26 crore during the period 2004-07.

Year	License fee to be realised on TEUs basis (Rs. in crore)	License fee to be realised on 6 per cent of market value of land (Rs. in crore)	Difference (Rs. in crore)
2004-05	35.16	195.61	160.45
2005-06	35.81	222.68	186.87
2006-07	37.49	241.43	203.94
Total	108.46	659.72	551.26

- Further, the license fee is being calculated based on the number of TEUs handled as advised by CONCOR and there is no mechanism in IR to verify the figures independently. A review by the railway administration as to the number of TEUs handled by CONCOR as per their website and that furnished to Southern Railway for the purpose of calculation of land license fee revealed that there is understatement of the figures furnished to Railway administration from the year 1998, which has resulted in short realisation of license fee to the extent of Rs.3.69 crore for the period from 1998-99 to 2005-06.

- The linking of license fee to the number of TEUs handled carried the risk of license fee not being leviable on certain occasions. In respect of land leased out at Wadibunder in Mumbai division/CR, it was seen that no payments were made by CONCOR towards license fee since March 2004 on the grounds that there were no loading and unloading operations. The land is still retained by CONCOR. Cases have also been noticed where land has been given to CONCOR (July 2003), but CONCOR has not paid license fee on the ground that no TEU was handled. In respect of ICD/Guntur (SCR) also, no license fee was paid for the year 2006-07 on the ground that no TEU was handled during the period. Thus for the period between handing over the land to commissioning of depot, no license fee was recoverable from CONCOR.

- As per extant instructions, no land should be given by the railways without signing an agreement. In four zones (WR, CR, SR and NCR), 38 hectares of land was licensed to CONCOR at six locations between March 1997 and May 2003, but no agreement was signed by the railways as yet. Year of licensing of land in three locations on WR (Sabarmati, Ankleshwar and Gandhidham) was not available.

- There was no system of assessing the actual requirement of land for setting up CONCOR Depots. Railway land was given to CONCOR liberally without assessment of actual requirement and this led to unauthorized use of land by CONCOR even for purposes such as construction of residential quarters on Railway Land e.g. Tughlakabad (NR) and Whitefield/ Bangalore (SWR).

Railways has stated that the requirement of land for depots is examined at various levels of division and zone headquarters. It has also stated that the issue of linking license fee to turnover in respect of existing depots is under consideration. The reply is silent on audit's specific observations regarding the use of depot land for residential purposes and not having an independent mechanism for verifying the actual quantum of TEUs handled.

Recommendation

The practice of linking license fee to turnover in respect of depots leased before August 2005 should be dispensed with, especially in the context of the fact that IR is no longer the sole owner of CONCOR. Actual requirement of land should be assessed in a systematic manner before entering into lease agreements.

2.12.4 Licensing of land for Central Warehousing Corporation (CWC)

In December 2003, Ministry of Railways entered into a Memorandum of Understanding (MoU) with CWC for development of warehousing facilities on railway land. Indian Railways and CWC jointly identified 22 complexes at different locations in nine zones. As per the MoU, CWC was to construct, develop and maintain the warehousing complexes at their own cost on leased railway land. So far, land at 12 locations in six zones (NR-4, WR-1, CR-3, SR-1, WCR-1 and SWR-2) have been handed over to CWC during October 2004 to January 2007. Out of these, the work has started in 4 locations and in the remaining locations, warehouses are under construction/have not commenced operations.

- As per the MoU, the Railway Administration was to charge a nominal lease rent at the rate of Re.1 per sqm per annum for the lands leased to CWC. Lease rentals were to be paid by CWC for the warehousing structures as well as any open areas around the built up warehousing structures used for commercial purposes. From the third year onwards or from the date of operation of the warehousing complex, whichever is earlier, CWC, in addition to the payment of lease rental, was to pay 5 per cent of the gross receipts from all the warehousing operations conducted in railway premises, subject to a minimum 6 per cent of the market value of the land leased to CWC. The option of charging the land license fee at the rate of six per cent was dropped from the clauses of MoU in February 2005. The delinking of license fee from market rate would deny IR a steady source of income.
- The MoU was silent on creating a mechanism to assess the gross receipts of the CWC for correct realisation of lease charges from CWC.
- In four locations, one location each in NR (Shakurbasti), WCR (Nishatpura), and two locations in SWR (Satellite Goods Terminal, Whitefield-Phase I and Phase-II), where the warehousing operations were started, CWC made payment of Rs.0.37 crore only towards license fee (computed as percentage of Gross receipts of CWC) whereas as per the original decision (linking it with land value) the license fee would have worked out to Rs.3.56 crore. Thus, delinking the license fee from the value of land resulted in loss of revenue of Rs.3.19 crore in four cases alone.

Railways has replied that the primary objective of the MoU was to capture additional traffic and not exploit land commercially. Audit observed that the pace of implementation of this MoU was sluggish. Out of 22 sites identified in 2003, only 12 have been handed over and operations have commenced only

in 4. Further, CWC is not a PSU under the Ministry of Railways and hence the MoU should have been drawn up on an "Arms length" principle.

Recommendation

The mechanism of levying license fee should be revisited to ensure a steady and market linked source of income for IR.

2.12.5 Licensing of land to Indian Railway Catering and Tourism Corporation Limited (IRCTC)

As per MoU signed between Ministry of Railways and IRCTC, Railway land and buildings may be leased to IRCTC on nominal license fee/lease charges for setting up budget hotels, food plazas etc. The license fee payable by IRCTC to IR (November 2005) included nominal annual land license fee at the rate of Rs.5 per sqm per annum and share of revenue to the extent of 40 per cent of total revenue subject to minimum of 2.5 per cent of the market value of land. License fee for establishment of Rail Neer plant initially fixed at the rate of 7.5 per cent of the market value of land was also reduced to 2.5 per cent of market value of land. Review of fixation of license fee and position of recovery of license fee for land licensed for food plazas and budget hotels in the zones revealed the following:

- Review of Railway Board files revealed that despite having set up about 40 food plazas (upto February 2004), IRCTC was not paying any license fee/lease charges to the railways. It has also observed that a number of plots of railway land have already been occupied by IRCTC or at their instance by a third party without entering into formal and legal agreement with railways.
- Review of records in selected divisions[21] revealed the following:

Zone	Audit observations
SR	Railway Board (October 2006) identified 18 places for setting up Budget Hotels. Out of this, sites were identified only in respect of 8 places. However the proposals are yet to be finalised. Potential loss of revenue on account of license fee in four locations alone amounted to Rs.0.61 crore.
SECR	No record was available in connection with licensing of Railway land to IRCTC with Engineering as well as Commercial Departments of Bilaspur Division. However, the Commercial Department intimated that a plot having area of 0.2925 hectare at Bilaspur was given to IRCTC on license basis by Railway Board and no particulars regarding agreements, market value, license fee etc. were available.
NR	Land for Rail Neer project has been allotted at Nangloi, but no record in this regard is available with the division. As per Divisional authorities, the matter is being dealt with by the Zonal Headquarters office with Railway Board level. The Headquarters office also could not make available any record in respect of licensing of land to IRCTC.
CR	Land has been handed over to IRCTC at Pune and Nagpur divisions for setting up food plazas. Records did not indicate whether any separate agreements have been entered into with IRCTC. In Nagpur division, an amount of Rs.21.06 lakh was outstanding towards license fee for the structures handed over to IRCTC including food plaza. In Pune

[21] No data regarding lands given to IRCTC for food plazas and budget hotels was available in the selected divisions of ER, NR, SE and SCR.

	division, an amount of Rs.17.93 lakh was outstanding towards license fee from November 2005 to March 2006 for setting up catering units at various stations. Office accommodation was allotted IRCTC in the railway building. Based on the market value of land, the rates were revised in 2006 and the arrears worked out to Rs.1.55 crore. IRCTC refused to pay the amount stating that Western Railway had not increased the rates for MRVC and RITES offices situated in their premises. The rent payable for the year 2006-07 is also outstanding.
ECR, SWR and NCR	Five sites were handed over to IRCTC without executing any agreements.

Railways has replied that all the dues have been recovered from IRCTC in respect of food plazas for the period upto September 2007 and efforts are being made to expedite the execution of agreements. However, it did not furnish documentary proof of having received the dues from IRCTC.

Recommendation

Agreements should be executed before handing over of sites and sites identified should be handed over without any delay. The payment of license fee should be pursued with IRCTC.

2.12.6 Licensing of Railway land for commercial purposes

Leasing of land for commercial purposes is not permitted except in cases where the Railway Board specifically approves it. Land for the purpose of commercial use should be given on licensing basis only. Railway Board in February 2005 issued, in supersession of the earlier policy directives, a Master Circular enunciating the comprehensive policy guidelines for licensing of land to various users. Temporary licensing of Railway land to private individuals, for setting up shops, commercial offices, vending stalls etc. not connected with railways' working, was stopped by the Railway Board (June 1984). While continuing this ban, in exceptional cases, where such licensing may have to be done, the same was to be permitted with prior approval of the Railway Board and the license fee was to be fixed by resorting to public auction/open tender for getting maximum revenue. Licensing of ordinary commercial plots connected with railway working was to be done with the personal approval of the General Manager in consultation with FA&CAO. The Master Circular specified the rates of license fee for different types of plots. For fixation of land value, the rates prevailing as on 1 January 1985 as determined by the local revenue authorities was to be taken into account and the land value had be increased every year on the 1 of April starting from 1986 at the rate of 10 per cent over the previous year's land value and seven per cent from 1 April 2004. For fresh cases of licensing after 1 April 2004, the prevailing market value of land shall be taken for arriving at the license fee to be recovered. The minimum license fee should be fixed at Rs.1000 per annum for 100 sqm land. Review of cases of licensing of land for commercial purposes during the year 2006-07 **{Annexure- XI (a)}** revealed the following deficiencies:

- As on 31 March 2007, an amount of Rs.328.16 crore was pending recovery due to various reasons such as dispute in the area of land, court case, non-payment etc.
- Out of 33504 cases under licensing, agreement is yet to be executed in respect of 14305 cases. There were delays in renewal/execution of license agreements ranging from three to five years in 90 cases, five to ten years in 2427 cases and beyond 10 years in 16588 cases.
- A comparison of the land value arrived at based on 1985 valuation (duly updated by the prescribed percentages) and the current market value in 55 cases in six zones (NEFR, NR, NWR, SCR, SER, SR) and Metro Railway indicated that in 42 cases, the license fee fixed based on land value in 1 January 1985 with prescribed escalation of ten or seven per cent per annum was lower than the current market value resulting in loss of revenue of Rs.15.69 crore during the period under review.
- Detailed review of records revealed under recovery of license fee to the extent of Rs.167.52 crore in respect of 132 cases.{ Annexure-XI (b)}
- Railway Board in August 1995 issued revised instructions for commercial licensing of railway land. As per this instruction, the market value of land was to be updated at 10 per cent over the previous years land value (with base land value as on 1 January 1985) and minimum license fee of Rs.1000 per annum. The rates of licensing of land for different categories of plots were reduced. These orders were brought into force with retrospective effect from 1 April 1986. Railway Board also clarified that in the event of a downward revision of fees and where a large amount has already been deposited by the licensee, the excess amount with the railway shall be adjusted against fee accruals of subsequent years. In 2004, a decision was taken to make the instruction prospective with effect from 1995-96. Audit noticed the following cases of non-recovery/adjustment of license fee cases in the zones:
    - In Palghat Division of SR, an amount of Rs.1.54 crore refunded to certain parties based on August 1995 order became recoverable and Rs.0.43 crore was to be paid to certain other parties. The amounts payable were yet to be adjusted and the amounts due had not been recovered nor any intimation given to the respective parties.
    - In Mysore Divison of SWR, non-recovery of Rs.1.54 crore towards the refund made to various parties due to implementation of 1995 orders was highlighted in Audit Report No. 6 of 2006. The railway administration has not taken action to recover the amount refunded.
- Audit of records pertaining to lease of land to the Defence department revealed that dues of Rs.36.49 crore were pending recovery in respect of 107.12 acres of land (94.30 acres at Kanchrapara and 12.82 acres at Bagzola & Digla Mouza of Dum Dum Cantonment) area in ER.

Railways has stated that the issue of realization of arrears of license fee is being pursued with the zonal railways on a priority basis. Annual target for wiping out pending agreements has been fixed and the position thereof is being monitored.

Recommendation

The issues of under recovery and non-recovery of license fee, non-revision of license fee and failure to execute agreements need to be monitored at Board level. Revision of decisions pertaining to rate of license fee should be minimised to avoid administrative complications.

2.12.7 Way leave facilities/Easement rights

Sections 16 and 17 of the Railways Act 1989 enjoin upon the Railways to make and maintain specified works for the accommodation of the owners and occupiers of lands adjoining the Railway, for the purpose of making good any interruption caused by the Railway to the use of the land through which the Railway is made. Such works include crossings, passages, drains etc. Apart from these, requests are often received for provision of way leave/easement on railway land in the form of passage/access to private houses and establishments, underground pipelines for water supply and sewage, electrical and telecommunication lines and Optic Fiber Cables, Cable TV lines etc. Railway Board issued detailed guidelines (November 2001) for granting way leave facilities/easement rights and fixed the rates to be levied for way leave facilities/easement rights on railway land for different purposes in genuine and unavoidable cases.

- The position of recovery of way leave charges showed that there is no uniformity in charges being recovered by the different Zones and within the divisions of the zone. Railway Board has not issued any guidelines in this regard to Zones as yet and the matter in still under consideration at Railway Board. Some of the differences noticed were as follows:

  There was no uniformity in levy of various charges among the zones and within the divisions in a zone. Railway Board has not issued any guidelines for uniformity in recovery of way leave charges.

  - In ECoR, 'other charges' are not being recovered from the parties availing way leave facilities on Railway land.
  - In NEFR, review of records of CGE/MLG revealed that no joint procedure order in compliance with the orders issued by the Railway Board from time to time was issued till 31 March 2007 for recovery of various charges such as supervision charges, departmental charges, centage charges, maintenance charges over and above the way leave charges recovered from the parties.
  - In SWR, plan charges were being recovered at the rate of Rs.80 per case instead of two per cent of the estimated cost in violation of the codal provisions. In the absence of estimated cost, exact amount of short recovery could not be assessed. Instead of recovering departmental charges at the rate of 6.25 per cent of the total cost of the work, one day staff cost towards supervision charges was being recovered. The

recovery of maintenance charges on deposit works was not uniform within the zone. In Bangalore Division, the percentage being adopted was 2.5 per cent per annum whereas Mysore Division has been adopting 4.5 per cent per annum.

- In CR, no JPO was issued regarding recovery of various charges in cases of way leave permission. Thus, there is no uniform practice of levying of charges viz. Special Supervision charges, Misc. charges, Departmental charges etc.

- The total amount of way leave charges outstanding was Rs 6.36 crore which accounted for 64.47 per cent of the total amount due. Division-wise data of earnings and amount outstanding from various users under different categories viz Water pipe line crossings, Electric line crossings, Road Over Bridges (ROBs)/ Road Under Bridges (RUBs), under ground/OHE crossings, erection of dish antenna and cable network including under ground/over ground crossings of cables by cable operators, laying of OFC cables crossings under railway tracks etc in the zones during the year 2006-07 is given in the table below:-

(Figures in Rs.)

Division	Way leave charges due	Way leave charges collected	Way leave charges outstanding	Way leave charges outstanding (in percentage terms)
Jhansi (NCR)	358438	40350	318088	88.74
Khurda Road (ECOR)	1361889	540600	821289	60.31
Bhopal (WCR)	200000	100000	100000	50.00
All divisions (NEFR)	3443835	2738566	705269	20.48
Jodhpur,Ajmer (NWR)	20717975	18586158	2131817	10.29
Vijayawada, Hyderabad (SCR)	5097213	2298226	2798987	54.91
Raipur, Nagpur, Bilaspur (SECR)	1213087	974361	238726	19.68
Trivandrum, Palghat (SR)	18671497	1406545	17264952	92.47
Rajkot,Vadodara, Ahmedabad (WR)	47549439	8364115	39185324	82.41
Chittaranjan Locomotives Works	22512	0	22512	100.00

- In CLW, 1.733 acres of Railway land at Chittaranjan was licensed to M/s Indian Oil Company Limited by CLW based on occupancy of a 10' wide street for laying out pipe line in the year 1964. CLW Administration could not produce the agreement between IOC and CLW to audit. No revision of the license fee was made as per Railway Board's order dated 29.8.1995 to fix the license fee at the rate of 6 per cent of the land cost as on 1 January 1985 to be determined by the Revenue Authority.

- As per Railway Board's letter dated 13 November 2001, overground laying of cables either across or parallel to tracks should not be permitted to cable T.V. operators. Further, in terms of Railway Board's letter dated 11 December 2001 the length of cable parallel to track should not exceed

500 metres in case of way leave facilities for underground laying of cables of Cable T.V. Review of the records of Sr.DEN/MLG/NEFR revealed that one private Cable T.V. operator, M/s Biswa Darshan, Pandu, Guwahati was permitted (21 July 2006) way leave facilities for drawal of T.V. cable line of 1340 metres by the side of the footpath in contravention of the Railway Board's orders.

- In SCR, it was observed that a private residential complex was constructed by private builders near the General Managers' bungalow and was surrounded by Railway land on all sides. Review of the records revealed that the builders have applied for Way leave facilities for laying under ground electrical cable which is under process. Audit observed that the builders have already laid the underground cables, water and sewage pipes on the Railway land for a length of 120 mts without obtaining the permission of Railway Administration. Secondly, as per Board's guidelines, the way leave facilities can be permitted by DRM with the concurrence of Divisional Associate Finance up to a length of 100 mts only and beyond 100 mts by the General Manager in consultation with FA&CAO. In the instant case, the way leave proposal for underground electric cables was processed taking the length as 85 mts at Divisional level instead of the actual length of 120 mts in contravention of the rules.

- Detailed review of records pertaining to 275 cases in the zones revealed short levy of way leave charges to the extent of Rs.4.28 crore. **(Annexure-XII)**

Railways has stated that there is a uniform policy for charges to be levied and that the position is monitored by the Board on a monthly basis. Audit's observations regarding lack of uniformity in levy of other charges related with way leave facilities, contravention of rules/orders and short levy of charges have not been addressed.

Recommendation

Railway Board should ensure uniformity in the levy of other charges related to way leave facilities and regular revision of these charges. Outstanding charges should be recovered from defaulters.

2.13 Property Development

The Railways have a large number of sites where commercial use of land and air space is feasible. In March 2001, zones were asked to identify vacant sites with high revenue earning potential for providing commercial facilities to passengers and public in the form of shopping complexes, offices, parking and other associated facilities. Ministry of Railways constituted (January 2007) a separate authority Rail Land Development Authority (RLDA) to undertake identification of potential sites of railway land for commercial utilization and development, carry out market survey to assess the potential and work out the best mode of commercial development from the angle of revenue returns and accordingly proceed with the bidding process etc. During 2005-06 and 2006-07, 107 locations (sites above 1000 sqm) and 114 locations (smaller sites below 1000 sqm) were identified by the ten zones and Metro Railway for

commercial development. Out of these identified locations, 35 locations (sites having land area above 1000 sqm) and 14 locations (sites having land area below 1000 sqm) have been handed over by the railways to RLDA/licensed to the parties. The balance 172 identified locations were yet to be handed over to RLDA/licensed to parties.

Railways has stated that 108 sites have been handed over as on date.

Recommendation

Handing over of the balance sites identified should be completed early.

2.14 Conclusion

IR has not created a robust and effective land management organisation. Acquisition of land was plagued by delays. The activities of acquisition, mutation and handing over of land were not synchronised with the execution of projects. Inconsistencies in data at various levels, poor maintenance of records and failure to attain the target for construction of boundary walls which serve as a deterrent against encroachment, inability to prevent fresh encroachments, laxity in removal of existing encroachments, ineffective pursuance under the PPE Act, disputes in title etc are symptomatic of poor performance in safeguarding of assets. The schemes for licensing of land under "Grow more food" and "Pisciculture" schemes were fraught with administrative deficiencies such as poor maintenance of records, failure to resume land after closure of the scheme etc. The mechanism for recovery of license fee from CONCOR and CWC was not to IR's advantage since it did not result in a steady flow of income at market related rates. Implementation of the MoU with IRCTC was slack. The system of levy of way-leave charges was not efficient as is evident from the lack of uniformity across zones. The system of commercial licensing was beset with deficiencies such as under/non recovery of license fee, non-revision of license fee and failure to execute agreements. IR has thus failed to harness its considerable land resources through quick and result oriented development of its properties.

Chapter 3
Scrap Management in Indian Railways

3.1 Highlights

- **Collection of Scrap was less than the target by 3,61,070 MT (value Rs.539.80 crore) on some Railways with reference to the targets fixed during the years 2002-03 to 2006-07.**

  (Para 3.8.1.1)

- **A shortage of 10909 MT of engineering and mechanical scrap was recorded in the Advice Notes indicating loss of Rs.9.84 crore.**

  (Para 3.8.1.3)

- **There was a difference of 4600 MT of Scrap between the total quantities of the lots placed for auction and quantity actually auctioned representing a shortage valuing Rs.4.79 Crore.**

  (Para 3.8.2.2)

- **There was loss of revenue to the extent of Rs.2.91 crore (Rs.1.65 crore in Southern Railway) due to the sale of scrap at prices lesser than the reserve price fixed over seven Zonal Railways.**

  (Para 3.8.2.5)

- **Despite increasing trends in the 'Wholesale Price Index' for 'Iron and Steel', Railway sold the rails as scrap material at lower rates. Audit noticed large variations in the rates for the sale of same scrap item in a year over Zonal Railways as well as between the minimum and maximum rates in the same year resulting in lesser realisation of sale value.**

  (Para 3.8.2.6)

3.2 Recommendations

In order to ensure proper accountal of scrap and obviate the possibility of leakage of revenue Railway should take immediate measure to:

- Introduce a system whereby each material dispatched by field offices to stores depots for arranging auction is weighed and accounted for by store depots before formation of lots.
- In order to ensure that Railways realise the best price from the auction, the reserve price should be fixed in such a manner that it is not less than the price obtained previously and there should be no relaxation for acceptance of lower price. Inter zonal Railway comparison of prices obtained in auction of similar material may be done before the actual auction so that the best price is obtained.

3.3 Introduction

Indian Railways sells approximately ten lakh tonnes of metallic scrap valued at Rs.1500 crore every year. Scrap disposal is one of the thrust areas for intensive scrutiny in order to prevent possible leakage of revenue. The sale of

scrap gathers more importance in view of the fact that scrap generation has been enhanced by the unigauge policy and gauge conversion projects undertaken in the last fifteen years. Scrap disposal has been identified as one of the high priority areas in the recent years for generating internal resources for supplementing the Railway finances. The major sources of scrap are from the Engineering and Mechanical departments. Various scrap materials like melting scrap, released track material including rails, condemned Rolling stock, released materials from redundant sidings etc., generated on the Railways are collected at convenient locations and disposed off through auction / tender sales.

3.4 Organisation and functions

Policy making decision in respect of policy and procedure for disposal of scrap rests with Stores Directorate of Railway Board. At Zonal Railways level, the Stores department headed by Controller of Stores (COS) is responsible for regular collection of all items of scrap at convenient places for sale from the consuming departments i.e., Engineering, Mechanical, Signal etc. FA&CAO at Zonal Railway level is responsible for watching proper disposal and accountal of scrap.

3.5 Audit objectives

The audit objective for the performance audit was to assess whether the systems in Railways ensure that:

- Released materials are properly identified and classified as scrap ensuring minimum delay and deterioration.
- Disposal of scrap is done at the earliest in a transparent manner ensuring that the best possible price is fetched.
- Accountal of scrap generated is done properly.
- Theft and pilferage is avoided by maintaining proper custody of scrap.

3.6 Audit criteria

The rules and provisions contained in Indian Railway Codes for Engineering, Mechanical and Stores Departments, Indian Railway Permanent Way Manual (IRPWM) and the guidelines and instructions issued by Railway Board from time to time besides SAG Committee recommendations and Railway Board's decisions thereon on Scrap Management, Joint Procedure Orders and Procedure Orders issued from time to time were used as criteria to assess the performance of Indian Railways on Scrap Management.

3.7 Scope and area of coverage

The review covers arising, accountal and disposal of scrap including Rails, C I scrap, Coaches and wagons for the period from 2002–03 to 2006–07.

3.8 Audit findings

3.8.1 Scrap identification, generation and collection

In terms of para 2403 of the Indian Railway Code for the Stores Department, except for those items of scrap which the consuming departments have been authorized to dispose of, Stores Department should arrange for collection of all items of scrap and disposal thereof. Audit scrutiny of records of stores Department revealed as under.

3.8.1.1 Shortfall in collection of scrap

The position of target set for collection of the scrap and its achievement during the year 2002-03 to 2006-07 was reviewed and it was noticed that though the overall position of collection was more than the targets yet there was a total shortfall of 3,61,070 MT valuing Rs.539.80 crore on Central , East Central, South Central, Southern, North Eastern, North Western, South Western, South Eastern, Southeast Central, Northern, Eastern, Northeast Frontier, Western, and West Central Railways in some years.

The reasons for short collection were attributed to slow progress of Gauge Conversion, Track renewal works either carried out partially or not taken up etc.

3.8.1.2. Shortfall in actual release of rail scrap as compared to the estimated quantity

A test-check of 36 Complete Track Renewal, Through Rail Renewal and Gauge Conversion works revealed that as against the estimated quantity of 423437 MT of P. Way material scrap, the actual quantities realised was 350051 MT resulting in shortage of 14367 MT (value Rs.22.75 crore). This indicates Railway's inadequate planning for physical recovery of all the released material.

3.8.1.3 Difference in weights indicated in Advice Notes sent by the custodian and accepted by the Scrap collection depot

In terms of provisions of Indian Railway Code for the Stores Department, all material including scrap transferred to other depots should be sent with Advice Note in which particulars of PL No. and class, description, quantity dispatched, quantity received etc. of the stores are entered. A test check of 135 SSE/PW offices from all Zonal Railways and 46 SSE/PW offices of Construction Organisation revealed that a quantity of 506.10 MT of rails and 5377.43 MT of CI Scrap valued Rs.3.16 crore was acknowledged short in 80 P. Way depots and five Construction depots. The shortages ranged between 0.11 per cent and 46.61 per cent during 2002–03, 0.99 per cent and 100 per cent during 2003–04, 0.04 per cent and 39.13 per cent during 2004–05, 0.17 per cent and 14.75 per cent during 2005–06 and 0.01 per cent and 40.11 per cent during 2006–07. Cases of more than 10 per cent shortages involving sizeable money value were noticed in Southern Railway (46.83 per cent), Eastern Railway (30.47 per cent), West Central Railway (46.61 per cent), North Central Railway (100 per cent) and North Eastern Railway (40.11 per

cent). The reasons for the shortages furnished by the Administration viz., heavy corrosion, wear and tear and preparation of Advice Notes under sample weighment. The reasons are not tenable because in order to ensure proper accountal of material, all the material sent should be weighed/ linear weight assessed for rails scrap by the sender as well as by the recipient.

Similar check of eleven Mechanical depots on Southern (2), Central (2), North Eastern (1), South East Central (2), South Eastern (2), West Central (1) and Eastern (1) Railways revealed that Ferrous and wagons scrap measuring 5025.12 MT valued at Rs.6.68 crore was acknowledged short by the recipient. Heavy shortages were noticed over South East Central Railway (Rs.1.74 crore), South Eastern Railway (Rs.3.17 crore), Southern Railway (Rs.0.86 crore) and Central Railway (Rs.0.82 crore). The reasons for shortages were not recorded except in South East Central Railway where the shortage was attributed to non-availability of 'weighing machine' in the depot.

3.8.2 Shortcomings in disposal of Scrap

In terms of Para 2410 of the Indian Railway Code for the Stores Department, all scrap material accumulated for the purpose of auction sale should be separated into convenient lots of a size that would suit the bidders at auctions. The particulars of each lot be entered in a survey sheet to be submitted to a Survey Committee for inspection of lots and recording their recommendations. Audit scrutiny of records of Stores Department revealed as under.

3.8.2.1 Disposal of scrap and realisation thereof

As per records maintained in the office of COS, the year-wise realisation from the sale of scrap is given below:

Year	Money value of scrap sold		
	P.Way scrap	Rolling stock	Total
2002-03	491.80	120.93	612.73
2003-04	486.79	145.05	631.84
2004-05	368.64	207.41	576.05
2005-06	339.49	163.06	502.55
2006-07	661.38	200.50	861.88
Total	**2348.10**	**836.95**	**3185.05**

It was observed that as on 31 March 2007, 185661 MT tonne of engineering scrap comprising of rails, ferrous and non-ferrous scrap and 472 Wagons and 165 Coaches (total value Rs.298.05 crore) was awaiting disposal.

3.8.2.2 Differences between the original lot quantities and auctioned quantities

Lots of scrap material are formed only after following well laid down codal provisions and, therefore, there should not be any significant difference between the lot quantity and the quantity auctioned. Before conducting auction and effecting deliveries, Railway should ensure that there is no variation in the quantity indicated in the register of lots and quantity mentioned in the auction catalogue.

During the period under review, 2956 auctions involving sale of 73696 lots

were held wherein a large difference (4600 MT scrap value Rs.4.79crore) between the lot quantity and auctioned quantity was noticed on ten Zonal Railways. Six[22] Zonal Railways did not make available the records for review.

Railway Administration stated that variations were due to heavy corrosion, wear and tear and preparation of Advice Notes under sample weighment. This reply is not acceptable because measurement of lots on sample weighment may lead to pilferage and misappropriation of material.

3.8.2.3 Refunds due to short delivery of scrap

Weight of a lot should be a sum of weights shown in all the Advice Notes already accepted by the Depot officials or the weight arrived at on linear basis in case of rails. Normally there should not be any case of refund due to delivery of lesser quantity of scrap during sale. However, a test-check of 545 cases of refunds made on all Zonal Railways revealed that Railway Administration refunded a sum of Rs.6.69 core as cost of 7344 MT scrap found short at the time of deliveries during the period covered under review. This indicates lacunae in the procedure for forming of lots.

In order to ensure proper accountal of all scrap and obviating the possibility of leakage of revenue, Railways should arrange for proper weightment of all scrap material and there should be no scope of discrepancy at the time of delivery.

Six[23] Zonal Railways did not make available to Audit the documents relating such refunds.

3.8.2.4 Blocking up of capital due to non-disposal of unusable materials

In terms of provisions of Indian Railway Code for Stores Department, items not issued during the past 24 months and which are not likely to be used on any Railway system in the next two years may be surveyed and declared as 'dead surplus'. Such stores may be surveyed, re-classified and disposed promptly. A test-check of SSE/P.Way offices on all Zonal Railways except West Central Railway revealed that there were 94 items of Class I materials valuing Rs.9.20 Crore (approx) lying in 31 P.Way depots for a long period without any use or disposal. Thus non declaration of these items as dead surplus and non-disposal thereof has resulted in blocking up of capital amounting to Rs.9.20 crore.

3.8.2.5 Sale of scrap at lower than the fixed reserve price

As per Para 2411 (2) of Indian Railway Code for the Stores Department read with Railway Board letter No. 74/709/37/RS(S) dated 25.02.1983, Reserve Prices for each lot earmarked for auction should be fixed on the basis of best bids obtained in the past auctions and information like published market rate of similar materials, rates of similar material in depots situated nearby etc. so that an item of scrap put for auction sale may be withdrawn from the sale, if the bids are found unsatisfactory. Bids lower than the reserve prices may

[22] ECOR, ECR, ER, NCR, NER and SECR
[23] ECOR, NCR, SECR, SER, ER and CR

however, be accepted by the Depot Officer where found expedient provided the Depot Officer records his reasons in writing. As per the procedure communicated by Railway Board in their letter No.86/RS(S)/709/14 dated 14 April 1987, whenever disposal of scrap is not progressing at a satisfactory level, the auction supervising officer may be authorized to accept a price below the reserve price up to a certain limit (say 10 per cent) to be fixed by the Controller of Stores in consultation with FA & CAO by recording reasons therefor.

Audit observed that Railways have quite often sold the scrap below the reserve price. The total financial loss due to sale of scraps at the rates lower than the reserved price over seven Railways was Rs.2.91 crore (maximum of Rs.1.65 crore in Southern Railway) during the review period. The loss in other nine[24] Zonal Railways could not be assessed due to the non-production of records to Audit by the respective Railway Administrations on the pretext of confidentiality. In most of the cases the reasons for accepting prices lower than the reserve price were not recorded.

3.8.2.6 Scrap materials sold at lower than the previous year's rate

Though the rates for the supply of rails by Steel Authority of India had been on the increase as also the Index of wholesale prices for 'Iron and Steel' published periodically by Reserve Bank of India, Railways have sold the scrap materials at much lower rates than the previous year's rates as detailed in the table below:

Year	SAIL's rate for 60 kg rail as	RBI index for Iron and Steel	Sold rate of Rail Scrap		CI Scrap		Other Scrap	
			Minimum (Rs. Per MT)	Maximum (Rs. Per MT)	Minimum (Rs. Per MT)	Maximum (Rs. Per MT)	Minimum (Rs. Per MT)	Maximum (Rs. Per MT)
2002 – 03	24959	150.2	7050 (SR)	13176 (WR)	5696(WR)	11600(SR)	3610(NR)	18250(NER)
2003 – 04	25099	201.6	8100 (NFR)	19400 (WCR)	7000(WR)	19310(ER)	5180(WR)	21000(NER)
2004 – 05	27837	232.6	11400(NER)	23000 (NER)	10637(SR)	20300(NER)	10000(NR)	25100(NR)
2005 – 06	35635	249.6	15900 (ER)	17000 (ER)	7338(SR)	21699(NCR)	6850(NR)	29800(NWR)
2006 – 07	NA	255.0	12000 (NFR)	21651 (NWR)	8424(SR)	21327(SR)	6850(NR)	31100(NWR)

It could be seen from the above table that even though there was increase in the Iron and Steel prices, wide variations were noticed between the minimum and maximum rate in the same year and between the minimum rates obtained in the subsequent years for the same scrap material as compared with the maximum rates obtained during the previous year fetching much lower value. In this connection following observations are made:

- In respect of scrap rails, the minimum rates obtained during 2002–03 was Rs.7050 per MT on Southern Railway whereas the rate obtained in Western Railway was Rs.13176 per MT. Thus the rates accepted by Southern Railway were lower by 86.89 per cent than the rates of

[24] CR, SWR, ER, NCR, NEFR, NR, SER, WCR and ECR

Western Railway.

- In respect of C I scrap, rate of Rs.5696 per MT accepted by Western Railway was 103.65 per cent lower than Southern Railway rate of Rs.11600 during 2002–03.
- In respect of 'other scrap' also the rate of Rs.3610 per MT accepted by Northern Railway was lower by 405.54 per cent than the rate of Rs.18250 per MT accepted by North Eastern Railway during 2002–03.

In respect of wagons, the variation of rates per wagon between different Railways was abnormally high in the same year as noted below:

Year	Railway	Rate per unit Minimum (Rs.)	Railway	Rate per unit Maximum (Rs.)	Percentage lower
2002 - 0 3	NFR	52300	SCR	292857	459.96
2003 – 04	NFR	58307	WCR	338200	480.03
2004 – 05	ECR	86000	ER	490000	469.77
2005 – 06	SCR	83750	ER	504000	501.79
2006 – 07	NFR	63833	ER	400000	526.64

In respect of both BG and MG coaches, the variation of rates per BG / MG coach between different Railways in the same year was also abnormally high as noted below:

Year	Railway	Rate per No. Min. (Rs.)	Railway	Rate per No. Max. (Rs.)	Percentage lower
2002 - 0 3 BG	NER	104000	SR	266667	156.41
MG	SR	80100	NWR	181670	126.80
2003 – 04 BG	ECR	110000	SR	460000	318.18
MG	NER	88011	SWR	324950	269.22
2004 – 05 BG	NER	140000	NR	460700	229.07
MG	ECR	85000	NWR	352000	314.12
2005 – 06 BG	NFR	140250	SR	486000	246.52
MG	NFR	95000	NER	256000	169.47
2006 – 07 BG	NFR	150000	NCR	493750	229.17
MG	NFR	80000	NWR	312000	290.00

The documents relating to coaches and wagons in respect of Central Railway, East Coast Railway, East Central Railway, South East Central Railway, North Central Railway, South Eastern Railway, West Central Railway, Western Railway and South Western Railway were not available.

3.8.3 Accounting Issues

Para 2927-S [sales (capital 7140 and 7150)] provides that during cash sales, auction sales or sales by tender, where the value of material sold by the Railway is recovered in advance of actual issue of stores, the credit to this account will appear earlier than the debit. The credit will be by debit to "cash". In other cases, i.e. direct or tender sales to other Railways or Government departments, the debit will appear first by credit to "stores" for the value of

stores at the sale rates. The credit will be received through transfer certificates or exchange Accounts by debit to the "Transfer Railways". Further transactions in the suspense heads are held temporarily pending clearance by payment or recovery or adjustment to the final head of account and no item becomes inefficient merely due to non-availability of detailed particulars as per provisions in Para 601 A –I. Audit observed the following deficiencies in accounting procedures.

3.8.3.1 Non-clearance of debit/credit balances from Scrap Sales Suspense Account for more than three years.

A review of Suspense balances under Scrap Sales Account as on 31.03.2007 revealed that 3580 debit items amounting to Rs.30.24 crore and 6578 credit items amounting to Rs.69.59 crore were lying for more than three years (from 1991-92 to 2003-04 on Southern Railway and from 2001-02 to 2003-04 on other Zonal Railways) without clearance. Debit balances represent non-accountal of Sale Issue Notes, credit not received from concerned accounts units and credit booked to wrong allocation, besides unlinked debits with corresponding credits. Credits represent the unadjusted advance amount deposited by the purchasers of scrap. These balances should have been cleared either by connecting the issue notes for sale of scrap or by refunding the amount to the purchasers.

3.8.3.2 Non-reconciliation of credits afforded by Stores department with the value of scrap materials handed over to stores depot by Divisions

As per codal provisions (Para 1514–E), credit for released materials constitutes a reduction of expenditure in accounts reflecting the effect of the resources generated by the realisation of credits for released materials. The resource allocation made for framing the works programme takes into account the additional resources that would accrue by the realisation of credits indicated by the Railway Administration and hence it is necessary that a watch is kept on the actual credit. Further, as per Railway Board's decision (September 2002), all cases of credit not afforded should be taken up with the Depot Officer and the Stores Accounts Officer as per Paragraphs 1607 and 1628–S. A review of records maintained in Divisional Offices/Construction units of Indian Railways revealed that the Railways had not followed the above procedure and not maintained a Register of Advice Notes.

Railways handed over as much as 821785 MT of Rails and 895734 MT of CI Scrap to Stores department during the period 2002-03 to 2006-07 for auction sales. Out of this, Stores Department sold 624567 MT of rails and 828637 MT of CI scrap for Rs.1703.25 Crore. However, Divisions could link the value of credit afforded by Stores Department only for Rs.958.11crore leaving a balance of Rs.745.14 crore in the suspense.

3.8.3 3 Write back adjustment for condemned rolling stock

As per codal provisions, when a reduction in the authorized stock is sanctioned, an estimate should be prepared writing down the original cost of

such stock from Capital. Capital is credited with the cost-at-debit of Capital of the condemned rolling stock abandoned or disposed off without being replaced. A review of the condemned Coaches and Wagons on all Zonal Railways for the period 2002-03 to 2006-07 revealed that there were delays ranging from one to 120 months in writing down the original cost from Capital resulting in avoidable payment of dividend of Rs.37.59 Crore to General Revenues. A further detailed check on Southern Railway revealed that although Mechanical department of Zonal Headquarters had communicated the condemnation of rolling stock and their original costs to the Accounts department, reconciliation between the original costs advised and the actual amounts written back from Capital had not been carried out.

3.9 Conclusion

The performance audit indicates that actual collection of scrap fell short of the targets fixed either due to non-identification of the scrap material or due to non-sending of scrap from custodian to the Depots responsible for disposal. Moreover, subsequent quantities of scrap material were not disposed for a considerable period due to an unnecessary ban on sale resulting in non-realisation of a large revenue for the related period. Management was also not sufficiently efficient and effective in disposing the scrap material resulting in non-realisation/delayed realisation of sale value. Revenue realised was also not as per the price projected.

Chapter 4
Construction, Operation and Maintenance of 'Project Railway'

4.1 Highlights

- **Even after completion of the work in March 2003, the completion report has not been prepared so far. In the absence of this the Railway was not able to recover an amount of Rs.17.88 crore from PRCL on account of Rs.0.89 crore required for removal of deficiencies, Rs.0.96 crore for pending contractual liabilities, Rs.7.74 crore as cost of material and Rs.8.29 crore on account of Departmental and General charges.**

  (Paras 4.8.1 & 4.8.2.1 to 4.8.2.4)

- **Railway's action to enter into agreement allowing the procurement of track and S&T material by PRCL has resulted in extra expenditure of Rs.28.36 crore.**

  (Para 4.8.3)

- **Underestimation of cost of existing assets of Railways leased to PRCL has resulted in loss of lease rental of Rs.15.24 crore. There would be a recurring loss of Rs.3.81 crore per annum for the entire lease period if corrective action is not taken.**

  (Para 4.8.5)

- **The Railway was yet to receive Rs.22.79 crore on account of operation and maintenance charges for the year 2003-04 and 2004-05 due in the year 2005-06. Moreover, the amount on account of fixed cost of material for the year 2004-05 is yet to be assessed.**

  (Para 4.8.6.1)

- **Despite specific provision in the agreement for recovery of compensation for the shortfall in guaranteed traffic, no action was taken by the Railway for recovery of compensation of Rs.66.17 crore from PRCL.**

  (Para 4.8.6.2)

4.2 Recommendations

- Western Railway carried out the construction of 'Project Railway' as deposit work, therefore, they should follow rules strictly and obtain requisite funds in advance to avoid spending from their own resources.
- The Railway should either recover the agreed compensation cost from PRCL or take action for breach of agreement against PRCL as the guaranteed traffic has not been offered by them even after four years of commissioning the project.
- The Railway should follow the codal provisions for contract management and assessment of the cost of existing assets so that their interests are not compromised.

4.3 Introduction

The work of Gauge conversion of Meter Gauge section from Surendranagar-Bhavnagar- Dhola-Dhasa- Mahua with extension up to Pipavav was initially included in the Works Programme for the year 1996-97 at an estimated cost of Rs.1.00 crore chargeable to Railway's Capital. Accordingly, sub estimate of Rs.66.51 crore for civil portion of the works was sanctioned in February 1999 and works commenced. Subsequently Gujarat Pipavav Port Limited (GPPL) approached Railway with a proposal to convert the MG section into BG through a joint veture. Accordingly Railway Board and GPPL signed (Janurary 2000) a Memorandum of Understanding (MOU) for formation of a Special Purpose Vehicle (SPV) for the gauge conversion of Surendranagar - Pipavav line. The project was to be funded through Equity Share Holding to the extent of 66.67 per cent of the total cost of project. Railway and GPPL were to contribute 50 per cent each in a company namely Pipavav Railway Corporation Private Limited (PRCL). As provided in the MOU the Western Railway was to construct, operate and maintain the 'Project Railway' as provided in 'concession', construction, lease, operation and maintenance agreements entered between Western Railway and PRCL.

4.4 Audit objectives

Keeping in view that the Western Railway was responsible for construction, maintenance and operations of the 'Project Railways' the following audit objectives were set to carry out the review:

- Whether the construction activities were carried out in accordance with the 'construction agreement' and whether the expenditure incurred by Railway was recovered from PRCL.
- Whether the existing assets required to be leased to PRCL were evaluated as per codal provisions and lease charges recovered accordingly.
- Whether the safeguards provided in the 'transportation and traffic guarantee' agreement were followed.

4.5 Scope of Audit

To study and evaluate the performance of Western Railway who carried out the work on 'deposit terms' during the period 1999-2000 to 2006-07 in detail concentrating on areas of planning, contract management, execution of the project and operation and maintenance of the Broad Gauge line.

4.6 Audit Criteria

The rules and provisions contained in the various codes applicable over Indian Railways as also relevant agreements and the guidelines and instructions issued by the Railway Board from time to time were taken as criteria for assessing the performance of the Western Railway in achievement of goals of the project.

4.7 Audit Methodology

Files and records in the office of Chief Project Manager and his field offices and in the office of Divisional Railway Manager, Bhavnagar were examined and information was collected through comparison of data, analysis, interaction with personnel and through questionnaires. Various agreements executed with PRCL were also examined critically. Records relating to Civil engineering, signal and electrical branches were taken up for review. Records of traffic handled by the project railway were also examined.

4.8 Audit Findings

PRCL appointed Western Railway as the Engineering, Procurement and Construction agency for carrying out the construction works and commissioning of the 'Project Railway' as a special Deposit work. During Audit of the records the following deficiencies were noticed.

4.8.1 Non-preparation of completion Report of Project

Entire Meter Gauge section was divided into ten sections, out of which six sections from Surendranagar to Pipavav were to be executed under SPV and remaining four section were to be executed with Railway's own funds as Non-SPV project. The Railway Board, in September 2000 sanctioned detailed estimates at a cost of Rs.423.63 Crore of which Rs.294 Crore was to be borne by PRCL for SPV portion and the balance cost Rs.129.63 crore was to be borne by Railway being non-SPV portion. The Project work was completed in March 2003 and opened to goods traffic on 27 April 2003. Subsequently in September 2003, the Project estimate was revised to Rs.528.49 crore and the cost of SPV portion was assessed at Rs.339.43 crore. Audit observed that the completion report of the project has not been prepared by Western Railway Construction Organisation even after four and half years of commissioning. As a result of this it could not be ensured whether the Railway has recovered the entire expenditure incurred on the construction of the project.

4.8.2 Non-recovery of expenditure incurred/required to be incurred

In terms of para 11 of the 'construction agreement' Western Railway was to submit a statement specifying requirement of funds for the next month and PRCL was to deposit the same in advance. Similarly in terms of Para 4 of the said agreement WR was to procure all material required for construction work except the material to be supplied free by PRCL. The free material was to be handed over to WR at the site of work. In case of delay in supply of free material causing delay in construction, the resultant cost was to be borne by PRCL. Audit scrutiny of records revealed the following:

4.8.2.1 Non-removal of deficiencies in the track

A joint inspection carried out prior to handing over of the newly converted section to open line had revealed deficiencies in the work such as shortage of ballast, cess repair and earth work, toe wall etc. As per estimate funds of Rs.1.09 were required for rectification of these deficiencies. Open Line has already incurred expenditure of Rs.0.33 crore on removal of deficiencies of

which construction organisation adjusted expenditure of Rs.0.20 crore against SPV work and balance expenditure of Rs.0.13 crore still awaits adjustments for want of deposits from PRCL. Balance works valuing Rs.0.76 crore for removal of deficiencies are still pending to be carried out as PRCL has not deposited the requisite amount with Railways. Thus an amount of Rs.0.89 crore was still recoverable from PRCL.

4.8.2.2 Non clearance of outstanding contractual Liabilities

Contractual liabilities amounting to Rs.0.96 crore were pending for want of requisite funds from PRCL. During the meeting with PRCL officials by the Chief Project Manager, Western Railway, Ahmedabad in May 2007 the pending amount has been accepted by PRCL. The realisation of dues however will materialise only after finalisation of the pending contracts during the year 2007-08. The delay of more than four years in clearance of contractual liabilities indicates that funds requirement was not assessed properly. Non-payment to contractors for such a long period may create unnecessary financial obligations.

4.8.2.3 Non-Recovery of cost of materials supplied by Railway

Though all the Permanent Way material such as rails, sleepers, fittings and the cable etc were to be supplied free by the PRCL, Railway Administration has issued P. Way materials worth Rs.2.79 crore and S& T cable worth Rs.2.72 crore for completion of works. Railway has incurred an expenditure of Rs.1.45 crore on transportation charges of rail panels for laying and linking and Rs.0.78 crore for transportation of surplus P. Way materials. Though Railway has been requesting the PRCL to pay the cost of the material and transportation charges, the amount of Rs.7.74 crore is still not recovered.

4.8.2.4 Loss due to short booking of expenditure under general Charges

As per Para 10.2 of the 'construction agreement' Departmental and General charges were payable to Railway on the basis of actual cost incurred for the project subject to a maximum of six per cent of the cost as per detailed estimate. The construction organization of WR who is engaged in various construction activities simultaneously has not maintained separate records for actual expenditure incurred on the establishment and other related activities. Audit noticed that provision of Rs.17.47 crore at the rate of 6.43 per cent of the cost of SPV portion of the work was made in the revised estimate sanctioned in September 2000. As against this WR has booked an expenditure of Rs.12.08 crore only leaving a shortfall of Rs.5.39 crore. Even if the D&G charges were to be restricted to a maximum of 6 per cent, a sum of Rs.20.37 crore was recoverable from PRCL against which only 12.08 crore had been adjusted. Thus an amount of Rs.8.29 crore has been short recovered.

4.8.3 Loss due to procurement of materials at higher rates

As per para 4 of the 'construction agreement', WR was to procure all materials required for construction works of the project except the rails and fastenings, sleepers and fittings, ballast, turnouts, cables and point machine which were to be supplied by PRCL. A comparison of cost of material procured by PRCL

with that of similar items procured by WR conducted by Deputy FA & CAO(C) Ahmedabad revealed that the rates paid by PRCL in procurement of 53 items were more than the rates paid by Railways. PRCL had incurred a total excess expenditure of Rs.28.36 crore. Since Railway is 50 per partner in the project, it has to bear a loss of Rs.14.18 crore due to procurement of materials at higher rates. This shows lack of proper planning and analysis regarding procurement of materials while framing the agreement.

4.8.4 Loss due to incorrect allocation of credit of released materials

As per clause 10.5 of the 'construction agreement' all the materials released as a result of replacement by new assets would be the property of Railway and credit if any realized out of its disposal would be retained by Railway. It is noticed from the work registers maintained by Accounts that Railway realized credit of released materials to the tune of Rs.0.20 crore up to March, 2003 under capital head and Rs.0.17 crore (up to August 2006) under Deposit head which was passed on to the PRCL. Thus credit of released materials to the tune of Rs.0.37 crore to PRCL is in contravention of the provisions made in the agreement and resulted in loss to the railway. Moreover, a scrutiny of revised estimate for SPV portion of the project sanctioned in September 2003 revealed that WR has made a provision of Rs.32.62 crore on account of credit for released material. Railway is yet to afford the exact credit on this account. It has, therefore, to be ensured that the benefit of cost of released material is not passed to PRCL.

4.8.5 Deficiencies in assessment of cost of assets leased to PRCL

In terms of 'lease agreement' the existing assets of the section as well as land to be acquired afresh was to be leased to PRCL and lease rent equal to prime lending rate prevailing on the date of execution of the agreement applicable for the book value of the assets was to be recovered. Audit observed that as against the book value of Rs.44.18 crore prepared by the Chief Engineer, WR for the existing assets and estimated cost of Rs.4.04 crore for the new land acquired, Railway adopted a cost of Rs.14.06 as value of existing assets and Rs.2.4 crore for the new land for calculation and recovery of lease charges. Thus the underestimation of the cost of existing assets as well as non adoption of exact value of newly acquired land has already resulted in loss of Rs.15.24 crore due to less realisation of leased rent. The Railway would be incurring a loss of Rs.3.81 crore per annum for the lease period of 33 years if the discrepancy is not set right.

4.8.6 Deficiencies in operation, Maintenance and traffic transportation

In terms of Para 2 of the Operation and Maintenance (O&M) agreement, immediately on certification of the section for freight operations, the assets (existing as well as old) were to be deemed to have been taken over by Railway for operation of freight movement and maintenance. Audit scrutiny of the operations and maintenance records revealed as under:

4.8.6.1 Non-recovery of Operation and Maintenance charges

In terms of Para 3 of the 'O&M agreement' PRCL was to pay O&M cost to the Railway for carrying out the operation and maintenance. O&M charges were to be in two parts viz. fixed cost of staff deployed for the operations and maintenance and variable costs. The work on SPV portion of the project was completed and operations were commenced from March 2003.

Railway Board, however, deferred (September 2004) the recovery of O&M charges due for the year 2003-04 and 2004-05 and decided to recover the same from third year onward. In January 2007, Railway Board accepted the proposal of PRCL for deferment of payment of O & M charges for the year 2005-06 to 2007-08 and decided that these charges along with interest at the rate of seven per cent would be recovered in three equal installments beginning from 2008-09. It implies that the O&M charges for the first two years of operation were to be recovered in 2005-06.

Audit scrutiny of records revealed that WR had raised bills for O & M charges of Rs.46.99 crore (up to September 2007). Audit observed that while the bill of Rs.13.36 crore raised for 2003-04 included fixed and variable costs, the bill of Rs.9.43 crore for year 2004-05 was raised only for fixed cost (staff costs excluding material cost) and variable cost. Even this amount of 22.79 crore which should have been recovered in 2005-06 was not paid by PRCL. The amount on account of fixed cost on account of material for the year 2004-05 could not be assessed in audit.

4.8.6.2 Non recovery of compensation for non-achieving targets of traffic

As per para 3.1 of the 'transportation and traffic guarantee agreement' (January 2003), the GPPL guaranteed a minimum annual aggregated quantity of its freight cargo equal to one million tonnes in the first year, two million tonnes in the second year and three million tonnes from the third year onwards till the termination of the concession period. For the purpose of Minimum Guaranteed Quantity (MGQ), both inward and outward freight traffic of the port shall be counted. In terms of para 3.2, GPPL was to compensate the Railway for non-fulfillment of the MGQ. The compensation payable was to be computed by a formula viz. [rate per tonne kilometer x 264(length of the project railway) x shortfall quantity] - the variable costs pertaining to the shortfall quantity.

As can be seen from the table given below the quantity offered by GPPL fell short by 67.12 per cent to 82.62 per cent.

(in Tonnes)

Year	Target (MGQ)	Actual traffic handled			Total	Shortfall	
		Inward	Outward	Container		Quantity	percentage
2003-04	1000000	186636	14501	63210	264347	735653	73.56
2004-05	2000000	0	0	347580	347580	1652420	82.62
2005-06	3000000	0	100919	458700	559619	2440381	81.34
2006-07	3000000	0	518453	467760	986213	2013787	67.12
Total	9000000	186636	633873	1337250	2157759	6842241	76.02

Audit also observed that despite specific provision in the agreement for recovery of compensation for the shortfall, no action was taken by WR for recovery. The compensation due works out to Rs.66.17 crore.

4.9 Conclusion

Despite various management control systems provided in the Code books to monitor and evaluate the implementation, execution and functioning of the various schemes/projects and offices, the viability of the joint venture was not properly assessed by Railways as can be seen from the fact that PRCL failed to provide adequate funds required for completion of the project. They even failed to bear expenditure on account of maintenance of the project railway which is vital for successful operation of any project. It is therefore utmost necessary to critically evaluate the financial capabilities of the associated partner of the joint venture before entering into any commitment with them to avoid any financial crunch in execution and operation & maintenance of the Project Railway in future.

Chapter 5
Working of Matunga Workshop

5.1 Highlights

- **Target for outturn of Matunga Workshop is fixed on the basis of arisings of coaches for POH. The availability of manpower, machinery etc is not taken into calculation at all. The method of fixing the target appears to be unscientific.**

  (Para 5.8.1)

- **Coaches booked by base stations for POH at Matunga workshop are received without the list of missing items prepared jointly by Security, Mechanical and Electrical department. During the period from 2004-05 to 2006-07 fittings valuing Rs.0.87 crore were found missing.**

  (Para 5.8.2)

- **Matunga workshop has taken more than the prescribed time for POH of coaches. Railway suffered loss of Rs.11.82 crore on account of detention to coaches during the 2006-07 alone.**

  (Para 5.8.4)

- **Rejection of periodically overhauled coaches by Neutral Control Wing as well as coaches marked sick within 100 days after they were periodically overhauled indicates the poor workmanship. Railways suffered loss of Rs.3.56 crore on account of detention to rejected coaches.**

  (Paras 5.8.7 and 5.8.8)

- **The expenditure of Rs.12.15 crore incurred on augmentation of POH capacity of the workshop remained unproductive for the last two to three years resulting in non-achievement of projected saving in time taken for POH and consequential loss of Rs.54.28 crore on account of excessive detention to coaches.**

  (Para 5.8.9)

5.2 Recommendations

- The system of fixing of targets needs to be reviewed to bring into place a more scientific system. The targets need to be fixed keeping in view the resources such as manpower and installed capacity etc.

- Railway should follow the instructions contained in the Maintenance Manual regarding listing of deficiencies of fittings in coaches sent to workshop to eliminate possibility of theft of fittings en-route.

- Keeping in view the high percentage of rejection of periodically overhauled coaches by NCW and also the fact that most of the coaches were falling sick within 100 days, the quality of workmanship needs to be improved.

- Stores procurement and management system needs to be sensitized so that must-change items and vital safety items do not go out of stock.
- Railway should take immediate action to utilize the facilities created at Matunga Workshop to augment the POH capacity so that the intended benefits are derived.

5.3 Introduction

5.3.1 General

The Carriage Workshop, Matunga was set up in 1915 to repair broad gauge and narrow gauge coaches and wagons of the erstwhile Great Indian Peninsular (GIP) Railway. The workshop covers a triangular piece of land of 35 hectares, including a covered area of about 11 hectares, skirted by the Central Railway suburban corridor on the east and the Western Railway corridor on the west. At present the workshop carries out Periodical Overhauling (POH) of all type of coaches including EMU Coaches of the Mumbai suburban section of Central Railway.

Matunga workshop is being certified as ISO 9001:2000 for Quality Management System by Bureau of Indian Standard through audits of documents and work practices since July 2001. Stage wise process and product quality control and acceptance criteria had been defined and regular monitoring of trends in process capability and product quality is being done. The workshop is also the first workshop and fourth unit of Indian Railway to be certified as ISO 14001:1996 being an establishment that had accepted international specification for an environmental management system with effect from June 2002.

5.3.2 Organisation

The workshop is headed by Chief Workshop Manager. He is assisted by three officers viz., Deputy Chief Mechanical Engineer [Dy. CME(R)], Deputy Chief Electrical Engineer [Dy. CEE (G)], and Deputy Chief Electrical Engineer [Dy. CEE (EMU)). Dy. CMM (CWE) is in-charge of Matunga Stores Depot and he is assisted by Sr. Materials Manager and Assistant Materials Manager. The Total sanctioned strength of Matunga Workshop as on March 2007 was 8,854 comprising 730 Supervisors, 6,529 Artisan, 1,592 Un-skilled employees against which 610 Supervisors, 6,231 Artisan, 1,477 Un-skilled were on roll.

5.3.3 Budget and Expenditure

An amount of Rs.245.63 crore was sanctioned as the Final grant for the year 2006-07 as against previous year's actual expenditure of Rs.224.63 crore. The actual expenditure of the Workshop at the end of financial year was Rs.239 crore.

5.3.4 Rolling Stock Holdings

As at the end of April 2006 Central Railway's holding was 383 AC coaches, and 3739 Non-AC coaches. The normal life of steel bodied coaches (including dining/Pantry cars) is 25 years, IRS coaches 30 years and light utilisation

categories coaches 40 years. During the Year 2006-07, 313 AC coaches, and 1877 Non AC coaches were given periodical overhauling by the Matunga Workshop.

5.4 Scope of Audit

The performance audit covers maintenance of mainline BG coaches (POH & Heavy Repairs) and all related works done at Carriage Workshop Matunga as per Rolling Stock Programme. The review covers the period from 2004-05 to 2006-07.

5.5 Audit Objectives

The main audit objective was to assess the extent to which working of Matunga Workshop is efficient, effective and economical especially with respect to repairs and maintenance of BG coaches. This was further divided into following sub-objectives:

- Whether the planning for POH is done efficiently and as per laid down procedure.
- Whether POH activity, from receipt of a coach to finally dispatch after POH, is done efficiently, effectively and economically.
- Whether effective internal control mechanism is in place at the Workshop.
- Whether all the performance indicators are monitored at appropriate level and timely remedial action taken wherever necessary.
- Whether effective security arrangement is in place to safeguard Railway's assets.

5.6 Audit Criteria

Rules and provisions stipulated in Indian Railway Code for the Mechanical Department (Workshops), instructions issued by Railway Board and Railway Administration from time to time, ISO 9001 & ISO 14001 Reports, Costing Manual & other manuals for the working of workshop were adopted as criteria for assessment of performance of the workshop.

5.7 Audit Methodology

Records of CWM/MTN, Dy.CMM/MTN, CWE/CSTM, Yard Master/Dadar and RPF/Inspector MTN were examined in connection with Performance Audit of Working of Matunga Workshop with specific emphasis on repair/maintenance of B G. Coaches for the period from 2004-05 to 2006-07.

5.8 Audit Findings

5.8.1 Planning of POH activities

Based on the holding of the various types of rolling stock, Matunga Workshop, in the months of November to January assesses the arising of coaches which are expected to be taken up for POH in the ensuing year and sends the POH programme to Chief Workshop Engineer(CWE) Central

Railway. The CWE sends the same to Railway Board who fixes the targets of coaches to be given periodical overhauling at the Workshop.

The figures of targets for POH fixed for the year 2004-05 to 2006-07 and the actual outturn are given below:

Year	Target	Outturn	Excess/shortfall
2004-05	2160	2195	+35
2005-06	2160	2169	+9
2006-07	2184	2190	+6

Audit noticed that in order to fix the monthly target, the Workshop has assessed the POH capacity as 7.22 coaches per day. The basis for working out per day capacity was not available. Though a large number works for augmentation of POH capacity (discussed in Para 5.8.10) were undertaken and completed during the past six-seven years, the target has remained almost constant indicating that targets were not related to the actual installed capacity with reference to the infrastructure and manpower.

5.8.2 Receipt of coaches for POH at the Workshop without deficiency list

Para-119 of the Maintenance Manual for BG coaches of ICF Design stipulate that before sending a coach to workshops, a joint check should be carried out by representatives of mechanical, electrical and security branches and a deficiency list should be prepared in five copies. One copy of the deficiency list should be pasted inside the carriage on one of the end walls and one copy sent to workshops through RPF escorting the coach or by post if the coach is sent unescorted.

Review of the position obtaining at Matunga workshop revealed that the prescribed procedure was not being followed, as deficiency lists were neither found pasted on the walls of coaches nor received separately. Inspection of coaches by the workshop revealed that fittings valuing Rs.0.87 crore were missing in coaches received for POH at Matunga Workshop during the period from 2004-05 to 2006-07.

The prescribed procedure for joint check coaches and preparation of deficiency lists by the division is invariably not followed. In the absence of deficiency list prepared by divisions, the Railways have no mechanism to determine time/place of theft of fittings.

5.8.3 Deficiencies in POH Schedules

As per Maintenance Manual for BG Coaches of ICF Design periodic overhauling of coaches (POH) should be done at specified periodical intervals as shown below:

S. No.	Type of Coaching & Other Vehicle	Periodicity of POH
1.	**Passenger coaching Vehicles on Mail and Express rakes**	
	(a) Coaches earning less than 2.5 lakh kilometers per annum	12 months
	(b) Coaches earning more than 2.5 lakh kilometers per annum	12 months with intermediate overhauling after 6 months
2.	**Passenger coaching Vehicles on other than Mail and Express rakes**	18 months 12 month for AC coaches
3.	**Other Coaching Vehicles on other than Mail and Express rakes**	24 months
4.	**Rajdhani and Shatabdi Express coaches**	POH in workshops after 4 lakh kilometers or 18 months whichever is earlier IOH in workshops after two lakh kilometers or 9 months whichever is earlier.

During the period of review it was noticed that large number of coaches due for POH were retained in service by divisions to meet seasonal traffic demands by revising the date of POH. Mumbai division revised the POH dates of 211 coaches during 2004-05, 296 coaches during 2005-06 and 277 coaches during 2006-07 and allowed them to run on the line. It was also observed that these POH due coaches were run without even changing the 'must change items' which must be changed after certain period is over as prescribed by RDSO. This compromised the safety of passengers and affected the quality of service provided to the rail users.

5.8.4 Excess time taken for POH

As per provisions of Maintenance Manual and Chief Mechanical Engineer's letter of October 1999, the POH of a non-AC and AC coaches is to be completed within 18 and 28 days respectively. Audit scrutiny of records of Matunga Workshop, however, revealed that the Workshop had taken 12246 days (at an average of 38 days per coach) for POH of 393 non AC coaches and 1809 days (at an average of 36.91 days per coach) for 49 AC Coaches during April 2006 to March 2007. Thus the failure of the Workshop to complete the POH within stipulated period of 18 and 28 days for POH of Non AC and AC coaches respectively has resulted in loss of earning capacity of Rs.11.82 crore on account of excess time of 8038 and 437 days taken for POH of 393 Non AC and 49 AC Coaches respectively.

5.8.5 Comparison of unit cost of POH with other workshops

The cost incurred on a specific activity in a workshop is an indicator of the control over expenditure. Less cost indicates better control in achieving economy. A comparison of cost of periodical overhauling of a BG coach incurred by Matunga Workshop with other workshops engaged in similar activities is given below:

(Rs. in thousand)

Names of the Workshop	2003-04		2004-05		2005-06		2006-07	
	Cost per Coach	Percen-tage at Matunga	Cost	Percen-tage at Matunga	Cost	Percen-tage at Matunga	Cost	Percen-tage at Matunga
Matunga -CR	**495**		**565**		**621**		**637.75**	
Perambur - SR	351	141	359	157	430	144	434	147
Secundrabad - SCR	279	177	243	233	319	195	NA	
Lower Parel -WR	420	118	489	116	528	118	623	102
Gorakhpur - NER	460	108	445	127	403	154	NA	

The above comparison revealed that while the cost of periodical overhauling a BG Coach incurred by Lower Parel Workshop of Western Railway was Rs.420 thousand in the year 2003-04, it was Rs.495 thousand (17 per cent higher) at Matunga Workshop. In the same year it was 77 per cent higher when compared to the cost incurred by Secundrabad of South Central Railway. The trend of incurrence of higher cost has been continuing even in the subsequent years. The exact reasons for this could not be ascertained. However, these can be attributed to not following a foolproof system of maintaining actual records of time allowed and consumed in each activity of POH process.

5.8.6 Deficiencies in the time allowed and booked in various shops engaged in POH

Audit attempted to trace 60 selected coaches (20 coaches per month for the months of December 2004, April 2005 and September 2006) through the POH process. As pointed out in para 5.8.4, the average time taken for POH exceeds the target time fixed. An attempt was therefore made in Audit to determine the points of detention and the reasons thereof to identify the bottlenecks in the POH process. It was found from the records made available to Audit that information regarding detention or the time taken in various shops for a particular coach could not be determined. On a reference made by Audit, workshop authorities stated that it was not possible for them to make available the actual time taken for each particular coach in each shop. The system followed in the workshop is that the total time allowed for all the coaches turned out by a shop during the month and the total time taken by the staff during the month by the shop are used to arrive at the time saved in order to calculate incentive bonus payable. Neither the time taken in any shop on a particular coach nor the time a coach is stabled or the component of a coach lying in the shop awaiting repair is recorded. Time taken as recorded only considers the time the coach/component is actually attended to in the shop. The time lost while awaiting repairs is not recorded anywhere.

Six out of 12 AC coaches and 28 out of 48 Non AC coaches selected for audit trail were detained beyond allowed time as indicated in the table below:

AC-Coaches			NON AC-Coaches	
Month	Total coaches	Detained coaches	Total coaches	Detained coaches
Dec-2004	4	1	16	4
April-2005	4	4	16	12
Sept-2006	4	1	16	12
Total	**12**	**6**	**48**	**28**

It was not possible for Audit to identify the points at which the coaches were detained or the reasons for detention as system in place does not provide for maintenance of records to monitor such detention. The absence of appropriate records also hampers the workshop management from identifying the locations and reasons for detention to coaches and taking effective corrective action.

Audit also worked out the time taken on a proportionate basis with reference to total time allowed and time taken in each shop in a month. Out of 34 coaches detained from among the 60 coaches selected for Audit Trail, a detailed analysis of 13 coaches (as given in the table below) pertaining to September 2006 revealed that though these coaches were detained beyond the prescribed period of POH, the time booked for maintenance of these coaches was shown about 30 per cent less than the time allowed. This indicates that the time actually taken was not recorded correctly as these coaches were actually detained beyond the permitted period.

Sr. No.	Coach no.	Month	Time allowed (Hrs)	Time taken (Hrs)	Time saved (Hrs)	% time saved
1	454	Sept.06	2086	1453	633	30.35
2	732		2384	1659	725	30.41
3	84430		2589	1758	831	32.10
4	95622		3144	2192	952	30.28
5	98114		3404	2348	1056	31.02
6	91316		3179	2208	971	30.54
7	1226		2659	1874	785	29.52
8	98236		2905	2025	880	30.29
9	83420		2303	1598	705	30.61
10	98241	Aug-06	3042	2160	882	28.99
11	3708		2229	1584	645	28.94
12	86459		2679	1903	776	28.97
13	3422		2068	1463	605	29.25
			34671	**24225**	**10446**	**30.13**

Absence of records to identify time taken on each coach, detention to coaches beyond permissible time, payment of incentive bonus even against coaches detained beyond target time and achievement of target outturn despite average time taken per coach being more than that prescribed point to lacunae in the

system which needs to be studied by Railway Administration so that necessary action wherever required may be taken.

5.8.7 High Rejection of periodical overhauled coaches

The system of Neutral control (NC) examination of coaches has been in force at workshop. For this purpose, a cell under the control of Indian Railway Conference Association, New Delhi, headed by Neutral Coach and Wagon Superintendent (NCWS) is functioning in each workshop undertaking POH. The above examination is confined to running gear and certain electrical components of the coaches. Coaches repaired in workshops can be inducted into service only after they are certified fit by NCO. Those having defects are detained for further attention.

Audit scrutiny of Matunga Workshop revealed that about one third of the coaches repaired by Matunga Workshop were rejected by Neutral Control Wing mainly for the reasons such as Air brake not tested, Guard hand brake work incomplete, Commode chutes deficiency, Buffer height excess, Yoke pin rusty , balster clearance deficiency etc. The position of coaches offered for certification and rejected during the period from 2004-05 to 2006-07 is as under-

Year	No. of coaches offered for inspection by NCW	No. of coaches rejected	Percentage of rejection
2004-05	2197	774	35.23
2005-06	2171	860	39.61
2006-07	2155	691	32.06
Total		**2325**	

Though the deficiencies pointed out by NCW were attended and the coaches were declared fit on the next day, the failure of the Workshop to ensure the faultless working caused delay of one day to each coach resulting in loss of earning capacity for 2325 days amounting to Rs.3.56 crore.

5.8.8 Coaches falling sick prematurely

Periodical overhaul of coaches is to be carried out thoroughly so as to enable such coaches to run for the full period until the next overhaul is due. It was seen in audit that over a period of three years from 2004-05 to 2006-07 failure of coaches within 100 days of POH ranged from 17.33% to 22.14%as shown below-

Year	Total coaches periodically overhauled	Number of coaches failed	Percentage of failure
2004-05	2195	486	22.14
2005-06	2169	376	17.33
2006-07	2190	395	18.04

Reasons for failure was stated to be water tank system leaking, Roller bearing defect, Wheel defects, poor furnishing work and other defects such as low wheel grazing, less bolster clearing, screw coupling defective etc.

A further analysis of 146 coaches was done to see the time within which the failure occurred. As can be seen from the facts given below it was noticed that 17 per cent coaches had failed within 10 days, 12 per cent within 11 to 20 days, 30 per cent within 21 to 50 days and 39 per cent within 51 and 100 days.

Total Coaches analyzed	Period with in which the coaches failed/ marked sick			
	Within 10 days	10 to 20 days	20 to 50 days	50 to 100 days
146	26	18	44	58
Percentage of failure with reference to total checked	18	12	30	40

The above facts reflect on the poor workmanship and deficiencies in the identification of defects while inspecting the coaches after completion of periodical overhauling.

5.8.9 Impact of non utilisation of facilities created for augmentation of POH Capacity

The work of augmentation of POH capacity of the Workshop with rationalisation of work flow was included in the Works Programme (Pink Book item No.458) of 1999-2000. The detailed estimate of the work for Rs.12.98 crore was sanctioned by Railway Board in January 2000. The main objective of this work was to achieve reduction in time taken for POH of AC Coaches from 28 days to 22 days and non-AC coaches from 18 days to 12 days. As a result of this the Workshop was expected to achieve a net saving of Rs.3.98 crore per annum. The work was targeted for completion within 36 months. The civil works were commenced in March 2000 and completed in December 2004. The Plants and machinery were also procured and commissioned between November 2001 and September 2005. The total expenditure incurred on augmentation of POH capacity up to March 2007 was Rs.12.15 crore.

In this connection the following audit comments arise:

- Though most of the civil works were completed by September 2004, they were not handed over to open line organisation for operation and maintenance. As a result the entire investment of Rs.12.15 crore (Rs.8.08 crore on civil works and Rs.4.07 crore on plant and machinery) is lying unproductive. As a result of non-utilisation of the tracks a lot of plants and trees have grown up in the alignment which would require further expenditure for making it operational.
- Non-utilisation of the facilities has resulted in non-achievement of the intended benefits. The average number of days taken for POH of AC coaches was 23.76 and 23.59 days during 2005-06 and 2006-07 respectively against the target of 22 days. Similarly, for Non-AC coaches, 22.49 days and 20.19 days were taken for POH as against the target of 12 days. This has resulted in loss of earning capacity of coaches to the tune of Rs.54.28 crore.

- The project was expected to streamline the workflow and reduce shunting/marshalling activities. However, it is observed that shunting hours increased over the years as indicated below:

Year	Shunting hours	Shunting charges paid
2004	24544	6,24,54,665
2005	25207	6,83,13,708
2006	25704	8,03,50,800

5.8.10 Delay in commissioning of Plant and Machinery procured for augmentation of POH Capacity

Matunga Workshop procured one Vertical Turret Lathe under M& P programme 2003-04 on replacement account through COFMOW. Order was placed in June 2004 and the Machinery received on 14.3.2006. Till date (May-2007) it has not been installed/ commissioned because of disagreement regarding the foundation which according to Central Railway should be at least 300 mm above ground level. Thus a machine procured at a cost of Rs.0.92 crore is lying unutilized for more than one and half year. As a result of non-commissioning of the machine, 342 wheels were sent to other workshops for attention resulting in avoidable expenditure on their transportation.

5.8.11 Poor Material Management

As per lists circulated from time to time by RDSO up to October 2006 there were 32 'must change' items, 82 safety related items, 345 other stock items which should be changed during POH of AC coaches. During check of records for the period from January 2005 to December 2006 it was noticed that on an average of 21 per cent "must change" items, 25 per cent of safety items and 26 per cent of stock items remained out of stock. As a result of non-availability of these items, Coaches given periodical overhauling during January 2005 to December 2006 were turned out for traffic operation without changing these items. Besides non-compliance of RDSO's instructions, this has resulted in running of coaches with unsafe conditions.

Besides, Matunga workshop was to complete the 14 works of provision of certain specific items in coaches as stipulated in the RSP-2006-07. However, due to non availability of material the targeted activities could not be completed.

This reflects poor material management. Non completion of this work has denied intended benefits to users of Railway services.

5.8.12 Theft/Pilferage cases in Matunga Workshop

Matunga workshop is surrounded by Road from three sides and the distance of this road is around 3.5kms. The security of the Workshop is deficient as is borne out from the fact that during the period of review there were 15 cases of theft. During the year 2004 one case, in 2005 three cases, in 2006 eight cases and in 2007 three cases were detected by the RPF staff of Matunga workshop. Out of 15 cases in ten cases outsiders entered the Workshop by crossing the

boundary walls through fallen barbed wire or hole in the walls which is under consideration for rebuilding.

5.8.13 Environmental Issues

Matunga Workshop is an establishment that had accepted international specification for an environmental management system and has received ISO 14001:1996 certification with effect from June 2002. As per Maharashtra Pollution Control Board (MPCB), letter dated 2/05/2006 conveying consent to operate under Water and Air (prevention & control of pollution) Acts, hazardous wastes arising in the workshop are to be disposed of through MOEF authorized recyclers.

It was observed that the workshop has awarded a contract on 29 June 2006 to a scrap merchant for removal of waste products from the workshop which included rexine and PVC sheets- items categorized as hazardous substances in MPCB's letter of consent. It is observed that the tender notice did not restrict the bidders to MOEF registered recyclers and the Tender Committee which considered the tenders did not ascertain whether the successful bidder was MOEF registered recycler.

Prescribed procedure has not been followed in the disposal of waste products from the workshop.

It is also observed that effluent and sewage discharge water recycling plant has been approved only during 2007-08 for Matunga workshop costing Rs.29.33 lakh. This is required to be installed urgently.

5.8.14 Payment of Incentive Bonus

Incentive bonus scheme is in vogue from 1960 in Matunga Workshop. Incentive scheme or payment by result was introduced in Indian Railway Workshops to afford financial incentive to workmen who exceeded minimum level of performance. This was to improve productivity and efficient utilization of manpower, machinery and plant based on saving of time by individual employees in performing an activity in lesser time than prescribed. Time is the yardstick for measuring work. The operations involved in workshop were subjected to time study. The "allowed time" was so fixed that a workman of normal ability can earn 33.33 per cent bonus over and above his basic wages.

It was found in Audit that though bonus was paid for the time saved in accordance with the guidelines of the scheme, the bonus paid was not commensurate with the quantum of output achieved. This was because the time saved was not utilized for productive purposes by the Railway Administration. The bonus paid during the period from April 2004 to March 2007 was more to the extent of Rs.4.84 crore when the bonus was worked out with reference to the load lifted.

5.9 Conclusion

As brought out in the above paragraphs, the system of fixation of targets of coaches for periodical overhauling is not based on the manpower and capacity of the Workshop. The high rate of rejection of periodically overhauled coaches by NCW and failure of significant number of coaches within 10 to 20 days reflects on the poor quality as well as non-adherence of standards. Non-utilisation of augmented POH capacity further indicates that there is lack of monitoring of the proper utilisation of plants and machinery. This has deprived the Railways of the intended benefits of saving in time of POH.

(N.R. RAYALU)

New Delhi **Deputy Comptroller and Auditor General**

Dated: 11th April, 2008

Countersigned

(VINOD RAI)

New Delhi **Comptroller and Auditor General of India**

Dated: 11th April, 2008

Annexure-I

Sample selection for the Performance Audit on Disaster Management in Indian Railways

(Para 1.7)

Zonal Railway	Control rooms	Hospitals	Stations					Self Propelled Accident Relief Trains	Accident Relief Trains	Accident Relief Medical Vans	Express / Mail train Nos
			A	B	C	D	Others				
Western	Mumbai BCT Ratlam	Mumbai Ratlam Vadodara Ahmedabad Rajkot Bhavnagar	Mumbai Central Surat Indore	Udhana Nagda Dahod	Churchgate Bandra Andheri Borivali	Nil	Nil	Mumbai BCT	Mumbai BCT-2 Ratlam - 4	Mumbai BCT-3 Ratlam -4	2903 2919 9309 2978 9165 2951
Southern	Chennai Palghat	Chennai Palghat	Chennai Central Mangalore Coimbatore	Ambur Chengalpattu Kankanadi	Tambaram Mambalam Arakkonam Gummidipundi	Nil	Nil	Chennai Palghat	Chennai-3 Palghat-2	Chennai-1 Palghat-2	2622 2695 6628 2639 2663 2656
Central	Mumbai Nagpur	Mumbai Nagpur Bhusawal Pune Solapur	Mumbai CST Kalyan Badlapur Lonavla Kurla Nagpur	Ballarshah Betul	Ambernath Sion	Nil	Nil	Nil	Mumbai -3 Nagpur -3	Mumbai -2 Nagpur -3	2123 2109 1081 1015 2106 2130
Eastern	Howrah Sealdah Asansol Malda	Howrah Sealdah Asansol Malda	Howrah Bardhaman Asansol	Rampurhat Bandel Andal	Chandannagar Adisaptagram	Mankundu Chittaranjan	Nil	Howrah Sealdah	Howrah-4 Asansol-2	Howrah-2 Asansol-1	2303 2327 3017 5658 2339 2313

Northern	Delhi Ambala Ferozepur Lucknow Moradabad	Delhi Ambala Ferozepur Lucknow Moradabad	Delhi Amritsar Shajahanpur JammuTawi Charbag Lucknow Varanasi	Moradabad Hardiwar Dehradun Bareilly Ghaziabad Meerut	Nil	Nil	Nil	Ambala	Delhi-1 Ambala-2 Ferozepur-2 Lucknow-2 Moradabad-2	Delhi-1 Ambala-3 Ferozepur-2 Lucknow-1 Moradabad-2	2055 2926 9223 2229 4231 4646 4056
South Central	Secunderabad Vijayawada	Vijayawada Guntakal Headquarters	Secunderabad Warangal Vijayawada Kakinada Town Gudur	Bhadrachalam Road Tuni	Begumpet Necklace Road	Nidadavolu	Nil	Secunderabad Vijayawada	Secunderabad-3 Vijayawada-2	Secunderabad-2 Vijayawada-3	7256 7058 2702 2797 7018 2706
South Western	Bangalore	BangaloreMysore Hubli	Bangalore	Bangalore CanttYeshwantpurHosurTumkurKrishnarajapuramMalleswaramSatya Sai Prashanti NilayamBangarapet	Nil	Nil	Nil	Nil	Bangalore-1	Bangalore-1	2726 6221 2609 2613 2658 2027
North Eastern	Lucknow	Lucknow Izatnagar Varanasi	Gorakhpur Lucknow Basti Badshahnagar Gonda Rawatpur	Barhni Khalilabad Sitapur Lakhimpur	Nil	Nil	Nil	Nil	Lucknow-5	Lucknow-2	2532 5008 2555 2511 2587 2534
South Eastern	Chakradharpur Ranchi	Chakradharpur	Tatanagar Rourkela Jharsuguda Ranchi	Chakradharpur Hatia	Nil	Nil	Nil	Chakradharpur	Chakradharpur-4 Ranchi-1	Chakradharpur-4 Ranchi-1	8101 2813 2817 8611 8624 8615

North East Frontier	Lumding Katihar	Lumding Katihar	New Jalpaiguri Katihar Kishangunj Guwahati Dimapur Silchar	Nil	Nil	Nil	Nil	Nil	Lumding-4 Katihar-4	Lumding-4 Katihar-3	2505 2508 2516 5636 5646 5653
North Western	Jaipur Jodhpur	Jaipur Jodhpur	Jaipur Alwar Rewari Jodhpur Pali Marwar	Nagaur Jaisalmer Makarana	Nil	Bandikui Phulera	Nil	Bikaner	Jaipur- 3 Jodhpur-2	Jaipur- 3 Jodhpur-3	9771 2967 2980 2462 2479 4864
East Coast	Khurda Road	Khurda Road Waltair Sambalpur	Puri Bhubaneswar Bhadrakh Berhampur Palasa	Khurda Raod Balugaon	Nil	Nil	Nil	Khurda Road	Khurda Road-3	Khurda Road-2	2830 2845 8402 8449 8663
South East Central	Bilaspur	Bilaspur	Bilaspur Raigarh	Champa Shahdol	Nil	Nil	Nil	Nil	Bilaspur-3	Bilaspur-2	3287 8237 2070 2824 8204 8206
West Central	Kota	BhopalJabalpur Kota	KotaSawai MadhopurBharatpur	Gangapur City	Nil	Nil	Nil	Nil	Kota-1	Kota-1	2183 2185 1471 2189 2181 2059

East Central	Danapur Samastipur	Danapur Samastipur Dhanbad Mughalsarai Sonepur	Patna Danapur Darbhanga Samastipur	Jhajha	Nil	Nil	Nil	Nil	Danapur-2 Samastipur-4 Dhanbad-1	Danapur-2 Samastipur-4 Dhanbad-1	2561 2553 2557 2393 2395
North Central	Jhansi	Jhansi	Nil	Jhansi Mau Ranipur Mahoba Manikpur Jn Dhaulpur Banda Lalitpur Datia	DLA Mohasa	Nil		Jhansi	Jhansi-1	Jhansi-2	1124 2178 1108 4163/4113 2417 414
Metro Kolkata	Kolkata	Kolkata	NA	NA	NA	NA	Park Street Rabindra Sadan Tollygunge Central DMI	Nil	Metro-2	Nil	Nil

Annexure-II

Sample selection for Performance Audit on Land Management in Indian Railways

(Reference Para 2.7)

Sl.No.	Zone	Total no. of divisions in the Zone	Name of the divisions	No. of divisions selected (i.e. 4 or >4 divisions =2, <4=1 division)	Name of the divisions selected	Total no. of AENs in selected divisions	Total no. of Sr.SE/SE in selected divisions	Total no. of AENs selected in sample (i.e.25 per cent of the total AENs)	Total no. of Sr.SE/SE selected in sample (i.e.100 per cent)
1	2	3	4	5	6	7	8	9	10
1	CR	5	Mumbai,Bhusawal,Nagpur,Pune,Solapur	2	Mumbai, Bhusawal	19	62	5	17
2	ER	4	Sealdah,Howrah,Asansol,Malda	2	Sealdah,Howrah	16	25	5	9
3	NR	5	Delhi, Firozpur,Lucknow,Moradabad,Ambala	2	Delhi, Firozpur	23	70	6	18
4	NER	3	Lucknow, Izzatnagar,Varanasi	1	Lucknow	8	21	2	6
5	NEFR	5	Katihar,Alipurdwar,Rangia,Lumding,Tinsukia	2	Rangia,Lumding	20	63	6	15
6	SR	5	Chennai, Palghat,Madurai,Tiruchchirapalli,Trivandrum	2	Chennai, Palghat	18	62	4	14
7	SCR	6	Secunderabad,Vijayawada,Hyderabad,Guntakal,Guntur,Nanded	2	Secunderabad,Vijayawada	19	72	6	22
8	SER	4	Kharagpur,Chakradharpur,Adra,Ranchi	2	Kharagpur,Chakradharpur	20	28	6	13
9	WR	6	Mumbai,Vadodara,Ratlam, Ahmedabad, Rajkot,Bhavnagar	2	Mumbai Central, Vadodara	21	46	6	15
10	ECR	5	Danapur, Dhanbad,Mughalsarai, Samastipur,Sonpur	2	Dhanbad,Danapur	20	61	6	19
11	ECoR	3	Waltair,Khurda Road, Sambhalpur	1	Waltair	11	42	3	10
12	NCR	3	Allahabad, Jhansi,Agra	1	Allahabad	12	48	3	15
13	NWR	4	Jaipur, Ajmer, Bikaner, Jodhpur	2	Jodhpur,Jaipur	14	50	4	14
14	SECR	3	Bilaspur,Nagpur, Raipur	1	Bilaspur	11	34	3	9
15	SWR	3	Bangalore,Hubli,Mysore	1	Bangalore	6	21	2	8
16	WCR	3	Jabalpur, Bhopal, Kota	1	Jabalpur	8	30	2	8
	Total	**67**		**26**		**246**	**735**	**69**	**212**

Annexure-III
Deficiencies in respect of Land acquisition
(Reference Para 2.10)

Zone	Details	Audit observations
1	2	3
SWR	Hubli-Ankola New Line project	The project was executed partially without getting the final clearance from the Ministry of Environment and Forests for release of forest land. The Ministry of Environment and Forests turned down the proposal for release of land and the Central Empowered Committee, constituted by the Honourable Supreme Court in response to a Public Interest Litigation ordered the stopping of all the works in the section. Expenditure of Rs.68.92 crore incurred so far was rendered infructuous.
ECR	Setting up of headquarters of East Central Railway at Hajipur	Railway administration requested the Government of Bihar (October 1996) for acquisition of 200 acres of land at Hajipur. The State Government advised (February 1997) the Railway Administration to pay a sum of Rs.1.60 crore towards cost of the proposed land which was further increased (August 1997) to Rs 1.80 crore. An advance payment of Rs. 0.50 crore to the District. Land Acquisition Officer, Vaishali, Hajipur was made in August 1997 without entering into any formal agreement with the State government. In August 1999, State Government demanded Rs 5.28 crore (total estimated cost) towards the cost of land. The Rail Administration referred (September 1999) the matter to the Railway Board for a decision which is still awaited. Land was not acquired so far.
SR	Irugur-Coimbatore doubling project	No land has been acquired so far. Failure of the Railway Administration to pursue the acquisition of land requisitioned under emergency clause of the Land acquisition act resulted in non-completion of the project, leading to detention of stock and loss of earning capacity of Rs.2.13 crore besides blocking of an amount of Rs.5.25 crore deposited with the State Government for land acquisition.
SR	Satellite Goods Terminal for the Coimbatore area at Irugur	The project taken up in 2000-01 could not be completed due to non-acquisition of some portion of land selected for the project. Consequently, investment of Rs.3.61 crore in the project remained unfruitful.
SR	Doubling work of Shoranur-Kuttipuram section	One contract entered in March 2002 was foreclosed due to delay in acquisition of land. The left over work was awarded to another contractor after acquisition of land at an extra expenditure of Rs.0.59 crore.
SCR	Kotipalli-Narsapur New line project	Approval of the Board was communicated for acquisition of 282 acres land at a cost of Rs. 8.80 crore. Acquisition of land of 151.16 acres in Amalapuram Division was completed at a cost of Rs. 2.84 crore but was not handed over to railways. However, no land was acquired in Rajahmundry Division till March 2007. Thus, out of the total deposit of Rs. 8.80 crore, only Rs. 2.84 crore was spent by State Government and the balance amount (Rs.5.96 crore) was lying with state government for the last 5 years. District Collector, Kakinada was intimated (March 2007) to stop the process of land acquisition for new areas and requested to refund the balance amount to Railways since the detailed estimate was not sanctioned by Railway Board. Railway has not planned to use the land acquired so far. The project was still alive and token grant of Rs. 2 crore was allotted for the year 2007-08.
CR	Panvel-Roha Doubling project	Railway administration initiated the process of land acquisition in December 1998. Against 51.96 hectares of land to be acquired, 3.20 hectares land only has been acquired till March 2007. Thus even after 9 years, the process of land acquisition could not be completed.
CR	Kurla-Thane additional pair of line, Phase-I Kurla-Bhandup	The project (approved in 1997-98 at a capital cost Rs.56.79 crore) could not be completed even after 9 years due to delay in acquisition of land. Four contracts valuing Rs.9.40 crore were short closed after the payment of Rs.6.26 crore including Rs.5.54 crore as cost of electrical material.
NCR	GWL-ETW PH-III of Guna-ETW New Line (BG) project	There was abnormal delay in land acquisition. Though the land acquisition process was started in the year 1992, the land (77.2 hectare) required for construction could not be acquired despite making a payment of Rs. 13.23 crore. Project was partially completed (Gwalior–Bhind section) and construction of new line between Bhind to Etawah was pending due to delay in land acquisition.

Annexure- IV (a)
Land Plans (2006-07)
(Reference Para 2.11.1)

Zone	Total Land Plans	Land plans available	Land plans available	Land Plans missing	Land Plans missing	Land plans verified/certified by the State revenue authorities	Land plans verified/certified by the State revenue authorities	Land plans mutated with the state revenue authorities	Land plans mutated with the state revenue authorities	Land plans scanned/digitized (computerized)	Land plans scanned/digitized (computerized)	Land plans scanned/digitized (computerized)	Land plans updated	Land plans updated
		Number	Area (hec)	Number	Area (hec)	Number	Area (hec)	Number	Area (hec)	Number	Percentage	Area (hec)	Number	Area (hec)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CR	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV
SER	NAV	3185	NAV	NAV	NAV	3185	NAV	4	NAV	3185	100.00	NAV	-	-
NWR	2029	1975	23447.27	54	465.89	1748	19542.56	703	8452.24	1549	78.43	16835.91	1405	16639.77
SWR	1736	1700	12918.35	36	NAV	1505	NAV	0	0.00	979	58.00	NAV	0	0.00
WCR	2245	1947	NAV	298	NAV	1629	NAV	1060	NAV	603	30.97	8251.41	606	8259.31
WR	2950	2899	NAV	45	NAV	2370	NAV	NAV	23.00	1227	42.32	NAV	672	NAV
ER	6022	5992	NAV	30	NAV	4742	NAV	NAV	NAV	0	0.00	0.00	0	0.00
NER	1697	1696	NAV	1	NAV	1696	NAV	0	0.00	1247	73.53	NAV	1696	NAV
NR	5232	5232	38864.21	0	0.00	4009	NAV	0	0.00	3238	61.89	NAV	0	0.00
SECR	831	831	24145.22	0	0.00	719	NAV	0	0.00	831	100.00	0.00	0	0.00
SCR	3120	3041	NAV	79	NAV	2528	NAV	2528	NAV	3037	99.87	NAV	NAV	NAV
ECOR	1810	1720	NAV	90	NAV	823	NAV	NAV	NAV	1474	85.70	NAV	NAV	NAV
NEFR	2900	2832	40153.68	68	NAV	2236	24318.77	707	21337.87	582	20.55	9996.74	582	9996.74
NCR	3333	3218	NAV	115	NAV	3138	NAV	NAV	NAV	3171	98.54	NAV	3171	NAV
ECR	5478	5256	NAV	222	NAV	3910	NAV	3910	NAV	3660	69.63	NAV	NAV	NAV
SR	4009	4009	26043.92	0	0.00	3658	NAV	NIL	NIL	3943	98.35	NAV	NAV	NAV
Total	**43392**	**45533**	**165572.65**	**1038**	**465.89**	**37896**	**43861.33**	**8912**	**29813.11**	**28726**	**63.09**	**35084.06**	**8132**	**34895.82**

Note-In CR, there is no uniformity in maintenance of land plans as available in terms of rolls, sets, kilometres and numbers.

Annexure-IV (b)

Deficiencies in maintenance of Land Plans

(Reference Para 2.11.1)

Zone	Audit observations
SWR	◦ No change in the status of missing land plans since April 2004. ◦ In 35 cases, railway administration was not aware of missing land plans. ◦ Land plans were not mutated with the records of state revenue authorities.
SCR	◦ Land Plans including the portion of land acquired for doubling project (WD-KZJ-BPQ) were not available with the Railways though the project was completed long back.
NEFR	◦ 64 land plans were yet to be certified by state revenue authorities. ◦ Though certified land plans were available in some cases in Lumding, Tinsukia and Rangiya divisions, there was no demarcation of railway land showing plot number and area.
ECoR	◦ 90 land plans were missing. Test check revealed that area in the land plan was not mentioned in the cases where the land plans were available.
SER	◦ Certified land plans were not preserved in the form of micro films in Kharagpur, Adra, Chakradharpur and Ranchi divisions.
SECR	◦ Insufficient documentary proof to the title deed resulted in dismissal of petition in Hon'ble High Court, Jabalpur in one case. In two other cases, Railways lost the petition filed before the District Court for want of clear documentary record of the title.
ECR	◦ No updation of the land plans was carried out despite settlement operations taking place time to time resulting in dispute in the ownership of land in Revenue Courts. More than 15 cases of disputed ownership were noticed.
NR	◦ None of the land plans in Lucknow and Ambala divisions were mutated with the records of the state revenue authorities.
CR	◦ The total number of land plans available and those reported to headquarters could not be ascertained as land plans were available in different terms viz rolls in Mumbai division, sets in Solapur division, kms in Nagpur division, nos. in Bhusawal and Pune divisions. ◦ Reasons for missing land plans in Nagpur division were not on record.
ER	◦ None of the 6022 land plans were updated. Railway administration also failed to disclose the area of land therein. ◦ AENs/SSEs, the custodian of the records of land at the field level were not aware of land under their jurisdiction. ◦ No record of number of land plans was available with Asansol division itself.
SR	◦ None of the 4009 land plans were mutated with the state revenue authorities. Of these, 351 were still awaiting certification.
NCR	◦ 115 Land plans were missing. Position of mutation of land plans and the area of land under different categories was not available with the zone.

Annexure-V

(a) Inconsistencies in total land holding and vacant land

(Reference Para 2.11. 5)

(Area in hectare)

Zone	Division	As on	Total land holding			Total vacant land		
			Figure furnished by divisional headquarters	Figure furnished by zone	Variation	Figure furnished by divisional headquarters	Figure furnished by zone	Variation
1	2	3	4	5	6	7	8	9
SECR	Bilaspur	31.3.06	-	-	-	2720.97	2726.49	5.52
SECR	Raipur	31.3.06	5590.35	5590.31	-0.04	430.72	434.71	3.99
CR	All divisions	31.3.06	28396.12	27580.32	-815.80	2306.88	2478.05	171.17
ECOR	All divisions	31.3.06	13145.10	12621.00	-524.10	1832.41	1355.00	-477.41
NCR	All divisions	31.3.06	14254.74	16511.76	2257.02	1312.75	920.81	-391.94
NWR	All divisions	31.3.06	23913.56	23921.77	8.21	397.76	312.50	-85.26
SECR	All divisions	31.3.06	-	-	-	3401.68	3411.18	9.519
SWR	All divisions	31.3.06	13423.74	13422.97	-0.77	-	-	-
SECR	Bilaspur	31.3.07	-	-	-	2714.90	2726.49	11.59
NCR	All divisions	31.3.07	14254.74	16511.76	2257.02	1312.72	920.81	-391.91
SWR	All divisions	31.3.07	13423.74	13422.97	-0.77	-	-	-
SER	All divisions	31.3.06	40689.50	42113.51	1424.01	1807.97	83.95	-1724.00
SER	All divisions	31.3.07	40689.50	42113.51	1424.01	1807.97	83.95	-1724.00
ER	All divisions	31.3.06	19557.81	20764.31	1206.51	1396.48	1547.33	150.85
ER	All divisions	31.3.07	19557.81	20764.31	1206.51	1475.81	1524.62	48.81

(b) Inconsistencies in figures for earnings

(Rs in crore)

Zone	Division	Total earnings			
		Year	As furnished by CE/CCM	As furnished by Accounts Department	Variation
1	2	3	4	5	6
SECR	Bilaspur	31-3-2006	3.04	1.95	-1.09
SECR	Raipur	31-3-2006	0.84	0.18	-0.66
CR	All Divisions	31-3-2006	23.94	20.66	-3.28
ECOR	All Divisions	31-3-2006	10.72	3.44	-7.28
NCR	All Divisions	31-3-2006	8.49	4.94	-3.55
SWR	All Divisions	31-3-2006	10.31	10.94	0.63
SECR	Bilaspur	31-3-2007	2.69	1.30	-1.39
SWR	All Divisions	31-3-2007	11.72	16.51	4.79
WCR	All Divisions	31-3-2007	8.48	2.37	-6.11
SER	All Divisions	31-3-2006	12.25	7.18	-5.07
SER	All Divisions	31-3-2007	11.12	13.98	2.86
SCR	All Divisions	31-3-2006	17.42	16.66	-0.76
SCR	All Divisions	31-3-2007	21.04	25.31	4.27
ER	All Divisions	31-3-2006	8.156	8.20	0.04
ER	All Divisions	31-3-2007	9.87	8.62	-1.24

(c) Inconsistency in data of Total land plans (2006-07)

Zone	As per Zone	As per Divisions	Variation (col.2-col.3)
1	2	3	4
ER	6022	4955	1067
NER	1697	1629	68
NR	5232	5319	-87
SECR	831	826	5
ECoR	1810	2405	-595
WR	2901	2950	-49
SR	4009	4035	-26

(d) Inconsistency in data of land plans available (2006-07)

Zone	As per Zone	As per Divisions	Variation (col.2-col.3)
1	2	3	4
ER	5992	4921	1071
NER	1696	1629	67
NR	5232	5242	-10
SECR	831	826	5
ECoR	1720	2384	-664
WR	2854	2907	-53
SR	4009	4031	-22

(e) Inconsistency in data of land plans missing (2006-07)

Zone	As per Zone	As per Divisions	Variation (col.2-col.3)
1	2	3	4
ER	30	34	-4
NR	0	77	-77
NER	1	0	1
WR	47	43	4
SR	0	4	-4

(f) Inconsistency in data of land plans verified/certified with the State Revenue Authorities (2006-07)

Zone	As per Zone	As per Divisions	Variation (col.2-col.3)
1	2	3	4
ER	4742	4344	398
NER	1696	1599	97
NR	4009	4102	-93
SECR	719	804	-85
ECoR	823	1546	-723
WR	2345	2368	-23
SR	3658	2828	830

(g) Inconsistencies in data of encroachments (including encroachments in safety zone) (2006-07)

Zone	Encroachments at the beginning of the year			New encroachments during the year			Encroachments removed during the year			Encroachments at the end of the year		
	As per divisions	As per zones	variation	As per divisions	As per zones	variation	As per divisions	As per zones	variation	As per divisions	As per zones	variation
1	2	3	4	5	6	7	8	9	10	11	12	13
ER	24854	17801	(-) 7053	0	0	0	2563	4860	2297	22291	12941	(-) 9350
NER	3522	3466	(-)56	0	0	0	424	430	6	3098	3036	(-) 62
NR	32422	32453	31	0	0	0	458	328	(-) 130	31964	32125	161
SR	10639	10535	(-) 104	211	0	(-) 211	847	629	(-) 218	10003	9906	(-) 97
SER	10835	7082	(-) 3753	14	0	(-) 14	521	545	24	10328	6537	(-) 3791
NEFR	40810	15727	(-) 25083	2815	0	(-) 2815	5539	1532	(-) 4007	38046	14195	(-) 23851

(h) Inconsistencies in data on encroachments at the level of SSE/AEN/DEN as on 31 March 2006

Zone	Division	Encroachments as per the selected SSEs (falling under jurisdiction of selected AENs)	Encroachments as per the selected AENs	Encroachments as per DEN/Sr.DEN
1	2	3	4	5
ER	Sealdah	40889	-	10356
NER	Lucknow	423	142	-
SECR	Bilaspur	-	5118	4899
NCR	Allahabad	-	2838	2566

(I) Inconsistencies in data regarding construction of boundary walls

Year	Zone	Boundary wall constructed (in metres)		Variation (in metres)
		As per divisions	As reported by zone to Railway Board	
1	2	3	4	5
2004-05	ER	2280.00	3938.00	1658.00
2004-05	NER	8172.21	5460.00	-2712.21
2005-06	NER	6627.37	6182.00	-445.37
2005-06	NR	26028.00	25728.00	-300.00
2005-06	CR	14116.00	19796.00	5680.00
2006-07	ER	6313.00	5095.00	-1218.00
2006-07	NER	5103.00	6170.00	1067.00
2006-07	NR	20500.00	20909.00	409.00
2006-07	CR	24130.00	25124.00	994.00
2005-06	ER	7657.00	7983.00	326.00

Annexure-VI

Deficiencies observed on comparison of land records with the state revenue department

(Reference Para 2.11.6)

Zone	Audit observations
SWR	• Verification of land holding with records of the state revenue department revealed that majority of the land was still in the name of the original owners.
SCR	• In 101 out of the 180 survey numbers (covered in 37 land plans) cross checked, the ownership in most of the cases was found in the name of private individuals. Out of the remaining 79 numbers, the Railway's record did not tally with state revenue department in 57 survey numbers.
SER	• Railway Administration did not initiate action despite having been advised by the District Revenue Officer to submit land records and get the change affected in the name of railways. Further check of records revealed that 72.13 acres of land is yet to be taken into the records of Indian Railway.
NR	• Due to non-availability of complete details of land holding, details of land plan etc. with SSE/Land of Delhi division comparison with the records of state revenue authorities could not be done.
CR	• Area was not specified in respect of 4 land plans in Mumbai division and 3 land plans in Bhusawal division. Hence understatement/overstatement of land area could not be verified.
ER	• Status and title of Railway land could not be verified from the records of state revenue authorities due to non-availability of complete details of land viz Mouza, Khatian number, Dag number etc.
SR	• Verification of land with reference to state revenue authorities revealed understatement to the extent of 1.0431 acres in respect of 5 survey numbers and overstatement of 0.5066 acres in respect of another 6 survey numbers.
NER	• Land Record Register did not contain the details of land acquired, year and cost of acquisition etc. • Comparison of records with state revenue department revealed understatement of 165.776 acres land in the revenue records in respect of Lucknow and Barabanki District. Similarly, in Sitapur district, around 25 acres of land did not find a mention in the revenue record.
NWR	• Comparison of Railway's record with that of Revenue Authorities in respect of land holding in Jodhpur division and Diesel shed Bhagat-Ki-Kothi revealed variation of (-) 3.2 acres and (+) 11.6 acres of land with reference to the records of state revenue authorities.
WR	• Test check in Mumbai and Vadodara division revealed that the land plan numbers assigned by state revenue authorities were missing, hence land plans could not be cross checked with the records of state revenue authorities.

Annexure VII (a)
Land boundaries
(Reference Para 2.11.8)

Zone	Division	Year	Construction of boundary wall to check encroachments (in meters)				
			Total required	Programmed during the year	Constructed during the year	Shortfall	Shortfall Percentage
1	2	3	4	5	6	7	8
CLW	Chittranjan Locomotive Works	2006-07	0	5300	144	-5156	-97.28
CR	Solapur	2004-05	11250	5000	1690	-3310	-66.20
CR	Mumbai	2004-05	26000	1500	535	-965	-64.33
CR	Pune	2004-05	10340	1500	1200	-300	-20.00
CR	Mumbai	2005-06	25500	12000	540	-11460	-95.50
CR	Solapur	2005-06	11250	5000	3372	-1628	-32.56
CR	Pune	2006-07	7460	1500	60	-1440	-96.00
CR	Mumbai	2006-07	25500	12315	8136	-4179	-33.93
CR	Solapur	2006-07	11250	5000	4660	-340	-6.80
ECOR	Waltair	2004-05	26,800	4,380	2,003	-2377	-54.27
ECOR	Waltair	2005-06	26,300	4,380	935	-3445	-78.65
ECOR	Waltair	2006-07	26,800	4,380	520	-3860	-88.13
ECR	Danapur	2004-05	500	300	118	-182	-60.67
ECR	Danapur	2005-06	600	400	350	-50	-12.50
ECR	Samastipur	2005-06	800	800	700	-100	-12.50
ECR	Samastipur	2006-07	13265	13265	100	-13165	-99.25
ECR	Dhanbad	2006-07	5000	1000	799	-201	-20.10
ECR	Danapur	2006-07	500	300	240	-60	-20.00
NCR	Allahabad	2004-05	5630	5630	3666	-1964	-34.88
NCR	Agra	2005-06	25000	15000	1840	-13160	-87.73
NCR	Jhansi	2005-06	43075	5000	3739	-1261	-25.22
NCR	Jhansi	2006-07	39336	5000	4305	-695	-13.90
NEFR	Katihar	2004-05	12500	4250	2000	-2250	-52.94
NEFR	Katihar	2006-07	10000	350	150	-200	-57.14
NER	Varanasi	2004-05	4000	4000	480	-3520	-88.00
NER	Lucknow	2005-06	4561	2800	557.37	-2242.63	-80.09
NER	Izzatnagar	2005-06	6036	5300	3070	-2230	-42.08
NER	Lucknow	2006-07	4561	2800	1010.00	-1790	-63.93
NER	Varanasi	2006-07	4000	2000	1955	-45	-2.25
NR	Moradabad	2004-05	NAV	1000000	1552	-998448	-99.84
NR	Firozpur	2004-05	13000	10000	3718	-6282	-62.82
NR	Ambala	2004-05	10000	5000	2342	-2658	-53.16
NR	Moradabad	2005-06	NAV	1000000	1882	-998118	-99.81
NR	Ambala	2005-06	10000	5000	2881	-2119	-42.38
NR	Delhi	2005-06	10000	10000	7157	-2843	-28.43
NR	Firozpur	2005-06	10000	10000	7655	-2345	-23.45
NR	Moradabad	2006-07	NAV	1000000	3900	-996100	-99.61
NR	Ambala	2006-07	10000	10000	558	-9442	-94.42
NR	Delhi	2006-07	10000	10000	6750	-3250	-32.50
NR	Lucknow	2006-07	Not Assessed	5000	4280	-720	-14.40
NWR	Ajmer, Bikaner, Jodhpur, Jaipur	2005-06	14500	14500	5069	-9431	-65.04
SCR	Vijayawada	2004-05	20000	5000	4105	-895	-17.90
SCR	Nanded	2004-05	10000	3000	2900	-100	-3.33
SCR	Hyderabad	2005-06	8480	6000	680	-5320	-88.67
SCR	Guntakal	2005-06	8150	8000	6442	-1558	-19.48
SCR	Guntur	2005-06	10000	5000	4600	-400	-8.00
SCR	Guntur	2006-07	5400	4000	730	-3270	-81.75
SECR	Nagpur	2004-05	9365	4500	3515	-985	-21.89
SECR	Nagpur	2005-06	9735	4500	1940	-2560	-56.89
SECR	Nagpur	2006-07	2560	2560	0	-2560	-100.00
SER	Kharagpur	2004-05	2500	1000	675	-325	-32.50
SER	Ranchi	2004-05	2000	1000	730	-270	-27.00
SER	Chakradharpur	2004-05	2000	1000	877	-123	-12.30
SER	Kharagpur	2005-06	1825	1000	350	-650	-65.00
SER	Ranchi	2006-07	1000	1000	700	-300	-30.00
SR	Mdurai	2004-05	7140	5090	360	-4730	-92.93
SR	Trichirappalli	2004-05	9405	7045	2360	-4685	-66.50
SR	Chennai	2004-05	14976	14976	5719	-9257	-61.81
SR	Palghat	2004-05	2610	2015	1325	-690	-34.24
SR	Trivandrum	2005-06	5625	5388	0	-5388	-100.00
SR	Mdurai	2005-06	7140	6780	1050	-5730	-84.51
SR	Trichirappalli	2005-06	11447	6357	1000	-5357	-84.27
SR	Chennai	2005-06	14976	5820	3089	-2731	-46.92
SR	Palghat	2005-06	2610	1285	690	-595	-46.30
SR	Palghat	2006-07	2610	1090	15	-1075	-98.62
SR	Mdurai	2006-07	7140	1240	25	-1215	-97.98
SR	Chennai	2006-07	14976	4750	355	-4395	-92.53
SWR	Hubli	2004-05	18460	18460	2420	-16040	-86.89
SWR	Hubli	2005-06	16040	12740	2578	-10162	-79.76
SWR	Bangalore	2005-06	24800	24800	9720	-15080	-60.81
WCR	Jabalpur	2004-05	15000	7000	1007	-5993	-85.61
WCR	Bhopal	2004-05	17225	5000	1813	-3187	-63.74
WCR	Jabalpur	2005-06	15200	9000	940	-8060	-89.56
WCR	Bhopal	2005-06	15412	5000	1292	-3708	-74.16
WCR	Jabalpur	2006-07	9000	1140	200	-940	-82.46
WCR	Kota	2006-07	7592.2	3000	2772	-228	-7.60
WR	Bhavnagar	2004-05	6000	4500	2500	-2000	-44.44
WR	Mumbai	2004-05	NAV	4000	2250	-1750	-43.75
WR	Rajkot	2004-05	NAV	1000	800	-200	-20.00
WR	Ahmedabad	2004-05	NAV	1500	1240	-260	-17.33
WR	Bhavnagar	2005-06	6000	3000	0	-3000	-100.00
WR	Rajkot	2005-06	NAV	1000	250	-750	-75.00
WR	Bhavnagar	2006-07	1000	3000	1000	-2000	-66.67

Annexure-VII (b)

Deficiencies in construction of land boundaries

(Reference Para 2.11.8)

Zone	Audit observations
CR	Area of land requiring boundaries had been identified in Mumbai and Nagpur divisions. However, records regarding identification of land boundaries were not available in Bhusawal, Solapur and Pune divisions.
ER	The requirement of land boundaries were not assessed either at the sub-divisional or divisional levels. In the absence of any ground level assessment, it was not understood as to how the zonal headquarters computed the figures of requirements.
SER	The construction far exceeded the requirement in respect of Kharagpur division in 2006-07, Chakradharpur division in 2005-06, Adra division in 2004-05 and 2005-06 and Ranchi division in 2005-06. Against the total requirement of 6093 meters, the achievement was 10728 meters exceeding the requirement by 76 per cent.
WR	The information regarding requirement of boundary wall on Mumbai, Ahmedabad, Rajkot and Ratlam divisions for the year 2006-07 was not available in respective divisions. As such, the assessment of requirement was not being done systematically on Western Railway. In Mumbai division, the land demarcation pillar indicating 'W.R.' had not been seen at most of the places from Virar to Surat section and Udhna to Jalgaon section. General Manager/WR during his inspection (March 2007) observed that 'no demarcation was seen between Railway land and Mumbai Municipal Corporation land on the approach from Bandra station side to Bandra Terminus'.
SR	One work of construction of boundary wall of 70000 metre in safety zone and in vulnerable areas was proposed by the SR in 2004-05 at a cost of Rs.4.45 crore, Railway Board dropped the same stating that it may be undertaken under 'Revenue' separately. Though Railway Board's orders were available for seeking separate funds from 'Revenue' for the construction of boundary wall, the inaction of the railway administration in seeking separate budgetary provision for construction of boundary wall under 'Revenue' resulted in shortfall in achieving the programmed works.

Annexure -VIII (a)
Encroachments (2004-05)
(Reference Para 2.11.9)

Zone	Encroachments at the beginning of the year		New encroachments during the year		Encroachments removed during the year		Encroachments at the end of the year	
	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)
WR	18624	111.47	2114	1.9	12335	66.58	8403	46.80
SECR	14307	NAV	0	0.00	537	NAV	13770	NAV
ECOR	7441	31.34	0	0.00	113	0.40	7328	30.94
CR	29311	22.57	0	0.00	248	0.80	29063	21.76
SWR	1150	NAV	32	NAV	0	0.00	1182	NAV
CLW	138	NAV	55	NIL	1	0.00	192	0.00
NEFR	34851	179.59	2151	11.29	3406	15.02	33596	175.85
WCR	1663	7.79	0	0.00	268	1.49	1395	6.30
NCR	3502	56.07	0	0.00	655	8.15	2847	47.92
ECR	11747	37.62	0	0.00	786	6.45	10961	31.17
ER	28767	38.99	1434	0.00	3347	17.62	26854	21.38
NER	4390	45.89	0	0.00	660	7.28	3730	38.61
NR	32932	2304.60	0	0.00	55	0.05	32877	1854.94
SR	11431	62.95	139	0.26	501	1.30	11069	61.91
SER	12975	196.70	0	0.00	1567	4.59	11408	192.11
SCR	5674	35.49	0	0.00	1236	3.07	4438	32.42
NWR	1249	20.60	0	0.00	55	0.32	1194	20.28
Total	**220152**	**3151.67**	**5925**	**13.45**	**25770**	**133.13**	**200307**	**2582.38**

Note - NEFR figures excludes the data pertaining to Alipurdwar Division not made available to audit.

Encroachments (2005-06)

Zone	Encroachments at the beginning of the year		New encroachments during the year		Encroachments removed during the year		Encroachments at the end of the year	
	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)
ER	26854	26854	26854	26854	26854	26854	26854	26854
NER	3730	3730	3730	3730	3730	3730	3730	3730
NR	32877	32877	32877	32877	32877	32877	32877	32877
SR	11069	11069	11069	11069	11069	11069	11069	11069
WR	8403	8403	8403	8403	8403	8403	8403	8403
SER	11408	11408	11408	11408	11408	11408	11408	11408
SECR	13770	13770	13770	13770	13770	13770	13770	13770
ECOR	7328	7328	7328	7328	7328	7328	7328	7328
CR	29063	29063	29063	29063	29063	29063	29063	29063
NWR	1194	1194	1194	1194	1194	1194	1194	1194
SWR	1182	1182	1182	1182	1182	1182	1182	1182
NEFR	41315	41315	41315	41315	41315	41315	41315	41315
WCR	1395	1395	1395	1395	1395	1395	1395	1395
NCR	2847	2847	2847	2847	2847	2847	2847	2847
ECR	10961	10961	10961	10961	10961	10961	10961	10961
SCR	4438	4438	4438	4438	4438	4438	4438	4438
CLW	192	192	192	192	192	192	192	192
Total	**208026**	**208026**	**208026**	**208026**	**208026**	**208026**	**208026**	**208026**

Encroachments (2006-07)

Zone	Encroachments at the beginning of the year		New encroachments during the year		Encroachments removed during the year		Encroachments at the end of the year	
	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)	Number	Area(hec)
SCR	3745	30.63	336	1.20	856	1.90	3225	29.94
ER	24856	10.62	1249	0.00	3201	5.57	22904	5.05
NER	3522	35.04	0	0.00	424	0.56	3098	34.48
NR	32422	1055.56	0	0.00	458	202.33	31964	853.22
SR	10639	60.14	211	0.61	847	2.23	10003	58.53
WR	6022	44.04	2398	2.15	2284	7.20	6136	38.99
SER	10835	182.58	14	0.02	521	1.24	10328	181.36
SECR	13109	49.82	0	0.00	510	0.44	12599	49.38
ECOR	7238	30.77	0	0.00	11	0.26	7227	30.51
CR	29040	21.73	185	0.17	1676	0.30	27549	21.59
NWR	1176	21.15	0	0.00	8	0.04	1168	21.11
SWR	942	18.98	0	0.00	121	4.00	821	14.98
NEFR	40810	181.71	2815	16.30	5539	16.30	38086	181.72
WCR	1358	6.24	0	0.00	171	0.36	1187	5.88
NCR	2991	50.54	40	4.07	214	7.86	2817	46.74
ECR	9967	25.38	0	0.00	373	4.61	9594	20.79
CLW	244	0.43	46	0.00	0	0.00	290	0.00
Total	**198916**	**1825.35**	**7294**	**24.52**	**17214**	**255.21**	**188996**	**1594.26**

Annexure-VIII (b)

Details of cases of encroachments

(Reference Para 2.11. 9)

(a) Encroachments by individuals/outsiders

Zone	Details	Land value	Audit observations/status of the case
SER	1.08 hectare at Santragachi.	Rs. 1.55 crore	The land was under encroachment by 750 individuals for the last 55 years. It was required (as per decision of October 1998) for provision of a tie line connection between Shalimar and Santragachi and Howrah-Santragachi section to facilitate movement of EMU rakes. The possibility of land being vacated by encroachers is remote.
SER	48.56 hectare at Tatanagar	Rs. 227.98 crore	Land is under encroachment since 1976.
SER	29.55 hectare	Rs. 67 crore	The land was under unauthorized occupation by M/s TISCO since 1958 and 1991. No tangible action was taken by the railway either to free the land or settle the matter with the firm to generate revenue.
WR	34.9145 hectare at Jamnagar	Rs 19.69 crore	The land was acquired during December 1972 to April 1974 for construction of 'New Jamnagar' station building. It could not utilize due to objections by Air Force Authorities. In 1984, the land was rendered surplus and handed over to Open Line (Divisional Authorities). Divisional Authorities neither took any action for its safe custody nor declared it as surplus. They found (in March 2005) that about 2000 nos. encroachment had taken place.
SCR	1 acre 14 Guntas at Lallaguda	Rs. 10 crore	The land was encroached by an outsider since January 1995. On issue of Form B, the encroacher filed a suit in the City Civil Court, Secunderabad (1996) claiming that the said property belonged to him. Due to non-representation of the case properly by the Railway Advocate, the case was decreed and judgment went in favour of the Plaintiff (Party) as "Set ex parte" by grant of Perpetual Injunction (September 1997).
SCR	4876 sq. mts. at Bhoiguda	Rs. 20 crore	Railway administration failed to initiate proceedings to evict the encroacher (2003). The party again approached High Court and the case is pending (2007).
SWR	3.42 acres land	Rs. 1.39 crore	The land was encroached upon by Railway employees and outsiders. It was declared as slum area and acquired by the State Government as such. The Railway Administration lost the case in the Supreme Court also. The Apex Court directed the Railway Administration to settle the issue of compensation with the State Government but the matter is yet to be settled with the State Government by the Railway Administration. No disciplinary action was initiated by the Railway Administration against those Railway employees who had encroached upon the land.
SWR	12.09 acres in Bangalore	Rs. 95.66 crore	The land was encroached upon by slum dwellers. Even after 15 years, Railway Administration has not been able to reclaim the land. As it is a hard encroachment, Railways may neither be able to reclaim the land nor obtain compensation.
CR	0.1 hectare (5^{th} and 6^{th} line project of Kalyan-Dombivli section, near Thakurli station)	NAV	Railway Administration could not remove the encroachments and failed to give clear site to the contractor to carry out electrical works. The contractor carried out the work wherever site was made available by the railway. The contract was foreclosed in June 2006.

WCR	1051.39 sqm	Rs. 2.48 crore	In Kota division, land measuring 1051.39 sqm was under occupation by outsiders since the last 16 years due to non-construction of boundary wall as per the land records (i.e on toe of railway land).
ER	27857 sqm	2.77 crore	Land measuring 27857 sqm in five locations in the vicinity of Kanchanpara workshop was under unauthorized occupation by 2518 persons for more than 16 years.

(b) Encroachment by Government Departments

Zone	Details	Land value	Audit observations
NEFR	42568 sqm near Bongaigaon College and 104691.5 sqm between ITI and New Colony area.	NAV	The land which was reserved for future colony extension was occupied by the District Administration, Bongaigaon which constructed a Botanical Garden and an Eco-Park without any formal permission from the Railway authorities. The matter was, however, not reported to Board so far.
SWR	8.25 acres in Bangalore City	Rs. 39.47 crore	Bangalore Development Authority occupied the land during 1989 for construction of a road without obtaining permission from the Railway Administration. Railway Administration made no efforts either to reclaim the land or to recover the cost of land. It was, instead, decided to prefer a claim of Rs.1.42 crore towards way leave charges treating the illegal occupation as an earnest right. Even this amount has not been recovered by the Railway Administration so far.
SWR	5.44 acres, 0.458 acres and 5.6 acres lands at three different locations in the Bangalore City/outskirts.	Rs. 34.58 crore	Bangalore Municipal Corporation occupied these lands for construction of roads during 1985 without obtaining permission from the Railways. Railway Administration preferred a claim of Rs.0.64 crore towards cost of lands measuring 5.44 acres and 0.458 acre. No efforts were made to recover the cost of the land measuring 5.6 acres.
SWR	3.7 acres of Railway land in Hubli division	Rs.1.41 crore	The land was encroached by National Mineral Development Corporation (NMDC) which created a Deer park. Railway Administration took no action to retrieve this land.
SR	10 acres at Tiruvottiyur near Tondaripet Marshalling Yard Colony.	Rs. 19.25 crore	The land was under occupation by Tiruvottiyur Municipality. Though the eviction order was issued in August 2005, the railway could not retrieve the land.
SR	7 areas in Chennai Metropolitan area measuring 45 hectares	NAV	The lands were taken over during 1980s–1990s by Tamil Nadu Slum Clearance Board (TNSCB) for the implementation of Madras Urban Development Project. Railway Administration agreed for the transfer of some areas. For the land agreed to be transferred, the Administration sought payment of Rs.120.09 crore or in the alternative the State Government was asked to hand over suitable area of land. No action has, however, been taken in this regard so far.

Annexure-VIII (c)

Encroachments in safety zone during 2006-07

(Reference Para 2.11.9)

Zone	Encroachments at the beginning of the year	New encroachments during the year	Encroachments removed during the year	Encroachments at the end of the year
	Number	Number	Number	Number
NR	8049	0	0	8049
SCR	115	0	8	107
NWR	164	0	1	163
SER	795	0	1	794
CR	0	0	0	0
ECOR	293	0	8	285
ECR	0	0	0	0
ER	15739	1249	1981	15007
NCR	172	0	0	172
NER	51	0	5	46
SECR	506	0	88	418
SR	1221	0	457	764
SWR	0	0	0	0
WCR	293	0	0	293
WR	10	0	0	10
TOTAL	**27408**	**1249**	**2549**	**26108**

Annexure- VIII (d)
Details of cases under Public Premises Eviction Act (2006-07)
(Reference Para 2.11.10)

Zone	Year	Total no. of cases pending at the beginning of the year	Total number of cases filed during the year	Number of cases decided by the Estate Officer during the year		Number of cases pending at the end of the year	Number of cases in which the orders of estate officers have not been implemented	Number of cases which have gone to civil courts
				in favour of railways	against the railways			
1	2	3	4	5	6	7	8	9
ER	2006-07	4	NAV	2	0	2	NAV	12
NER	2006-07	1651	29	118	0	1562	713	219
NR	2006-07	811	118	20	NAV	909	1	11
WR	2006-07	1526	21	250	0	1297	5	17
SER	2006-07	5447	167	97	1	5516	3653	34
SECR	2006-07	2277	4	425	0	1856	3098	30
SCR	2006-07	3724	899	887	NAV	3736	206	67
ECOR	2006-07	334	0	0	0	334	1738	28
CR	2006-07	399	2	89	0	312	430	33
NWR	2006-07	102	38	29	0	111	24	21
SWR	2006-07	1325	226	0	0	1551	302	165
SR	2006-07	10049	121	692	NAV	9478	789	181
NEFR	2006-07	18125	903	2738	0	16290	10674	167
WCR	2006-07	221	6	5	1	221	1	4
NCR	2006-07	1005	77	24	0	1058	20	11
ECR	2006-07	1442	0	94	0	1348	0	58
TOTAL	**2006-07**	**48442**	**2611**	**5470**	**2**	**45581**	**21654**	**1058**

Note: SR figures exclude data of cases filed and decided in Chennai division.

Annexure -IX

Licensing fee outstanding under Grow More Food Scheme

(Reference Para 2.12.1)

Zone	(in hectares)					(Rs. in crore)		
	Land under GMF as on 31-1-2000	Land required to be taken back from the licensees upto 31.01.2000	Land taken back from licensees upto period 31.01.2000	Land given under GMF from 01.02.2000 to 31.03.2007	Land under GMF as on 31.03.2007	License fee accrued upto period 31.03.2007	License fee recovered upto period 31.03.2007	License fee outstanding as on 31.03.2007
1	2	3	4	5	6	7	8	9
ER	1011.26	1011.26	0.00	0.00	1011.26	0.02	0.02	0.00
NER	14.97	0.00	8.90	0.00	6.07	0.00	0.00	0.00
NR	1047.84	1047.84	NAV	NAV	1047.84	2.38	0.04	2.37
WR	110.33	110.33	0.00	0.00	110.33	0.03	0.03	0.00
SER	642.99	642.99	0.00	0.00	642.99	NAV	0.16	NAV
SECR	615.76	581.56	29.02	156.17	742.91	0.11	0.06	0.04
SCR	910.82	910.82	910.82	2.23	2.23	0.00	0.00	0.00
CLW	1.35	1.35	0.00	0.00	1.35	0.00	0.00	0.00
SR	247.07	28.88	27.46	18.17	237.78	0.01	0.01	0.00
NEFR	1002.59	1.63	1.63	8.52	1009.48	0.09	0.01	0.08
WCR	47.32	47.32	0.00	66.89	114.21	0.04	0.04	0.00
NCR	NAV	NAV	NAV	378.57	378.57	0.05	0.04	0.01
ECR	0.00	0.00	0.00	9.21	9.21	0.00	0.00	0.00
ECOR	862.01	767.47	634.88	215.30	442.43	0.03	0.08	-0.05
CR	449.62	0.00	0.00	366.15	815.77	1.26	0.39	0.87
TOTAL	6963.93	5151.46	1612.72	1221.22	6572.44	4.04	0.91	3.32

Annexure-X

Shortfall in realisation of license fee from Container Corporation of India (CONCOR)

(Reference Para 2.12.3)

Zone	Year	Total area of land licensed to CONCOR as on 31 March (in hec)	No. of TEUs reported by CONCOR as handled on the basis of which license fee has been calculated	Licence fee to be realised on TEUs basis (Rs. in crore)	License fee @ 6% of the Market value prevailing during the corresponding year (Rs. in crore)	Difference (Rs. in crore)
CR	2004-05	57.72	146556.00	3.66	17.33	13.67
CR	2005-06	57.72	107167.00	1.79	19.71	17.92
CR	2006-07	57.72	134666.00	3.37	25.35	21.98
ECOR	2004-05	0.00	0.00	0.00	0.00	0.00
ECOR	2005-06	5.75	13863.00	0.35	2.25	1.90
ECOR	2006-07	5.75	21000.00	0.53	2.25	1.73
ECR	2004-05	7.74	1092.00	0.03	0.26	0.23
ECR	2005-06	7.74	1868.00	0.05	0.29	0.24
ECR	2006-07	7.74	1302.00	0.03	0.30	0.27
ER	2004-05	0.00	0.00	0.00	0.00	0.00
ER	2005-06	0.00	0.00	0.00	0.00	0.00
ER	2006-07	0.00	0.00	0.00	0.00	0.00
NCR	2004-05	124.57	42145.00	0.93	NAV	NAV
NCR	2005-06	124.57	146472.00	1.91	NAV	NAV
NCR	2006-07	124.57	13077.00	0.33	NAV	NAV
NEFR	2004-05	6.65	4777.00	0.12	0.16	0.04
NEFR	2005-06	6.65	7042.00	0.18	0.17	-0.01
NEFR	2006-07	6.65	9091.00	0.23	0.18	-0.05
NER	2004-05	5.02	0.00	0.00	0.00	0.00
NER	2005-06	5.02	0.00	0.00	0.00	0.00
NER	2006-07	5.02	0.00	0.00	0.00	0.00
NR	2004-05	119.39	832057.00	20.48	150.38	129.90
NR	2005-06	119.39	778941.00	19.46	162.56	143.10
NR	2006-07	119.39	779158.00	19.47	174.61	155.14
NWR	2004-05	7.74	76868.00	1.92	2.18	0.26
NWR	2005-06	7.74	56464.00	1.41	4.13	2.72
NWR	2006-07	7.74	62880.00	1.57	4.13	2.56
SCR	2004-05	21.40	50012.00	1.25	8.25	7.00
SCR	2005-06	21.40	53998.00	1.33	15.24	13.91
SCR	2006-07	21.40	52998.00	1.32	15.28	13.96
SECR	2004-05	12.84	2833.00	0.06	0.77	0.71
SECR	2005-06	12.84	7122.00	0.18	0.83	0.65
SECR	2006-07	12.84	15451.00	0.39	0.61	0.22
SER	2004-05	12.84	26611.00	0.66	1.22	0.55
SER	2005-06	12.83	37595.00	0.94	1.30	0.36
SER	2006-07	12.83	23051.00	0.58	1.40	0.82
SR	2004-05	43.72	122494.00	3.02	6.99	3.97
SR	2005-06	44.22	115642.00	2.86	7.48	4.61
SR	2006-07	43.52	99252.00	2.50	7.89	5.39
SWR	2004-05	57.08	77304.00	1.92	3.43	1.51
SWR	2005-06	57.08	89722.00	2.24	3.77	1.53
SWR	2006-07	57.08	102599.00	2.56	4.15	1.59
WCR	2004-05	4.65	0.00	0.00	0.17	0.17
WCR	2005-06	4.65	5408.00	0.14	0.17	0.04
WCR	2006-07	5.00	22415.00	0.52	0.17	-0.35
WR	2004-05	29.09	137711.00	1.10	4.47	3.37
WR	2005-06	29.09	118810.00	2.97	4.78	1.81
WR	2006-07	29.09	146420.00	4.11	5.12	1.01
Total	**2004-05**	**510.45**	**1520460.00**	**35.16**	**195.61**	**160.45**
Total	**2005-06**	**516.69**	**1540114.00**	**35.81**	**222.68**	**186.87**
Total	**2006-07**	**516.34**	**1483360.00**	**37.49**	**241.43**	**203.94**

Annexure-XI (a)

Outstanding license fee on account of commercial licensing

(Reference Para 2.12.6)

Zone	Year	No. of licensees as on 31 March	Area licensed (in hec)	No. of cases where agreements are not yet entered into as on 31 March 2007	Delays in execution/revision of license agreements			License fee outstanding as on 31 March 2007 (₹s.in crore)
					Cases more than 3 years but less than 5 years old	Cases more than 5 years but less than 10 years old	Cases more than 10 years old	
1	2	3	4	5	6	7	8	9
NR	2006-07	235	158.48	8	0	0	1	225.99
CR	2006-07	857	54.83	161	NAV	NAV	9	9.41
ECOR	2006-07	966	89.80	205	0	0	202	0.96
NCR	2006-07	430	24.04	113	0	22	91	4.43
NEFR	2006-07	7048	4477.37	2936	64	39	4249	9.30
NER	2006-07	8377	22.42	1714	0	0	5994	13.88
SCR	2006-07	395	NAV	0	0	0	0	3.86
SECR	2006-07	1758	1552.97	361	2	2	357	7.43
SR	2006-07	246	59.98	39	1	2	36	2.58
SWR	2006-07	54	35.74	0	0	0	0	0.03
WCR	2006-07	118	146.42	4	1	0	3	0.52
ER	2006-07	1887	60.73	675	NAV	NAV	NAV	28.83
SER	2006-07	6850	102.99	5374	NAV	NAV	5374	13.22
WR	2006-07	380	60.41	104	0	0	61	3.96
ECR	2006-07	3645	103.76	2395	16	2358	5	2.24
NWR	2006-07	258	20.00	216	6	4	206	1.52
Total	**2006-07**	**33504**		**14305**	**90**	**2427**	**16588**	**328.16**

Annexure-XI (b)
Deficiencies observed in respect of commercial licensing
(Reference Para 2.12.6)

Zone	Audit observation
SR	Three areas of land measuring 0.15 hectare, 5.13 acres and 62.91 acres in Mangalore were occupied by Konkan Railway Corporation Limited (KRCL) since 1991. Lease agreement had not been executed and lease charges of Rs.1.18 crore (equivalent to 99 per cent of the market value of land) had not been recovered.
SR	Railway Board's order of September 2002 prescribes the adoption of prevailing market value of land for the purpose of calculation of land license fee and its periodical revision every three years for bulk oil installations. In February 2005, Railway Board withdrew the above order and revised the methodology for working out the market value of land based on fixed percentage increase of land value. Adoption of incorrect methodology resulted in loss of license fee to the extent of Rs.15.96 crore in respect of bulk oil installations at Tondiarpet and Korukkupet for the years 2002-03 and 2003-04.
SR	In SR, a dispute on the quantum of land license fee was raised by 2 licensees in the Andhra Pradesh High court in 1991. The High court directed the Railway Administration to conduct personal hearings. The issue has however not been sorted out resulting in the non-recovery of license fee amounting to Rs.0.27 crore from the licensees.
SR	Land area measuring 20433 sqm was licensed to M/s Concrete Products Construction Company, Chennai for the manufacture of pre-stressed concrete sleepers. License fee was calculated taking into account the land value as on 1.4.1986 at Rs.13559 instead of the correct value of Rs.20016 as advised by the Sub-Registrar office. This resulted in short recovery of license fee of Rs.0.21 crore for the period 1.4.1986 to 31.3.2008.
SR	Land measuring 4319 sqm at Erode was licensed to the Highways and Rural Department for an approach road. Annual license fee amounting to Rs.0.38 crore for the period from 1995-96 to 2006-07 remains to be realized from them.
SR	Land measuring 82817 sqm at Royapuram was licensed to M/s Thirumalai Chemicals to install storage tanks for storing Ortho-xylene which is a hydrocarbon derived from crude oil. As per Railway Board's instructions, the land license fee was to be leviable @ 7.5 per cent as for Bulk Oil Installations. However, land license fee has been collected @ 6 per cent. Incorrect adoption of rate of license fee resulted in short recovery of license fee of Rs.0.24 crore for the period from 1995-96 to 2006-07.
SR	In 15 cases (Chennai division) land had been licensed to various parties as per the records of Engineering Department. However, no records were made available by the Divisional authorities in order to verify the correctness of the recovery of license fee.
SR	As per the Railway Board's Master Circular issued during February 2005, for the purpose of minimum license fee, the maximum size of the plot should be taken as 100 sqm and license fee for any fraction thereafter should be rounded off to the next 1000 rupees. In Palghat division/SR, in respect of 4 licensees, the above order has not been given effect to resulting in short realization of license fee to the extent of Rs.4.76 lakhs.
SWR	Land measuring 3.92 acres was licensed to M/s Maruthi Builders in Bangalore Division for manufacture and supply of PSC sleepers to Railways in 1992 at fixed license fee of Rs.25, 000/- per acre per annum. The agreement also provided that the license fee would remain unchanged during the contract period and six months thereafter. The contract period was renewed (May 1996) for supply of 500000 numbers of sleepers or 5 years therefrom, whichever was earlier, on the same terms and conditions. In August 1996, Railway Board clarified that the rules governing fixation of license fee for other types of plots covered sleeper factories also. Accordingly, Railway Administration preferred a bill for Rs.1.14 crore on M/s Maruthi Builders towards revised license fee for the period from June 1999 to March 2005, duly adopting 6 per cent of the market value of land licensed to them as envisaged in the Railway Board's directives. The firm filed a case in the Civil Court. The Court had directed the parties to settle the issue through Arbitration before 31.10.2005. Even after nearly 18 months, Railway Administration was yet to settle the matter through Arbitration. Review of the records further revealed that M/s Maruthi Builders had not been manufacturing and supplying track sleepers during the past 2 years. Railway Administration has allowed the firm to retain the land in the prime area at the nominal license fee of Rs.25,000/- per acre per annum even as there was breach of contract on the part of the firm in not supplying the required sleepers.

Zone	Audit observation
SECR	The market value of land licensed for commercial/industrial purpose was assessed on rates of agriculture land. Land measuring 8040 sqft was in possession of a company since 1932 for retail oil depot. License fee was assessed based on rate of Rs. 45000 per acre special category land which was equal to rate of un-irrigated (***Bhatha***) agriculture land of Raipur Khas village in 1985-86. Audit assessed a short assessment of license fee of Rs. 28.06 lakh for the period from 1995-96 to 2006-07 based on the rates of nearby area (Station Para ward) Rs. 40 per sqft for commercial purpose (1985-86). Market value of land during 2006-07 as assessed by Railway Administration and as per Guide Line of Registration Department was Rs. 4.40 lakh and Rs. 47.43 lakh respectively resulting in short assessment of license fees to the tune of Rs. 4.30 lakh in 2006-07 alone.
SER	M/s Hindalco, a company situated at Muri in Ranchi division of SER had occupied 4.52 hectares of railway land since 1962 without signing an agreement with the railway. In 2004, railway administration raised a bill for Rs. 0. 37 crore towards license fee on the basis of land value of 1962 but M/s Hindalco did not make any payment. In April 2005, M/s Hindalco was allowed to occupy another piece of land measuring 10.82 hectares without signing any agreement. Although railway administration raised a bill for Rs. 4.70 crore (Rs. 0.37 crore and Rs. 4.33 crore), no payment has been made by the company.
SER	The Shalimar Works Ltd., a licensee for temporary occupation of railway land measuring 1.66 hectares at Shalimar went into liquidation on 12-01-1981 by an order passed by the Hon'ble High Court, Calcutta. The Government of West Bengal purchased the entire assets and facilities of the erstwhile company from the official liquidator appointed by the Calcutta High Court with the objective of continuing the business of the company. Since then (i.e. from 12.01.81) the Shalimar works (1980) Ltd possesses the land in question without making any payment towards license fee. In October 2004, Government of West Bengal requested South Eastern Railway administration to revalidate the lease agreement for the next 35 years and also to assess the arrear dues of license fee payable by them. After assessment of the amount of Rs. 4.97 crore by the engineering department, the same was submitted to accounts for vetting in March 2006 but is still pending. Thus an amount of Rs.4.97 crore stood recoverable from the said company towards outstanding license fees for the period from 1948 to 2004-05.
CLW	Two Cinema Halls namely Ranjan Cinema Hall and Shreemati Cinema Hall were given on lease initially for a period of 10 years w.e.f. 1.2.1977 to 31.1.1987 at a monthly license fee of Rs. 4500/- and Rs. 3,025/- per month respectively. No revision of License fee was made after 1st February 1987. This has resulted in huge short realization of revenue.
WCR	In Jabalpur division, scrutiny of records revealed that the revised rate of plots fixed by the Standing Committee of three J.A. Grade officers set up at divisional level was sent to headquarters for approval during August 1998 to February 2004. However, the approval of the competent authority is still awaited. Due to delay in fixation/revision of license fee of commercial plots, Railway Administration failed to recover its dues amounting to Rs. 0.84 crore from the plot holders for the period from 1.4.1986 to 31.3.2002. It was further observed that some parties vacated the plots subsequently and thus recovery of arrears of license fee at revised rate can not be made from those parties.
WR	In Rajkot Division, plots were licensed to M/s Indian Oil Corporation, M/s Hindustan Petroleum Corporation and M/s Bharat Petroleum Corporation for setting up their bulk oil installations in 1984. Since as per Railway Board's orders of March 2004 and February 2005, the retrospective effect of reduced rate of license fee was withdrawn, the excess recovery amounting to Rs.1.53 crore already adjusted for the period from 01.04.86 to 31.03.95 became recoverable from these parties. On the matter being taken up by Audit in September 2004, the Divisional Accounts office raised bills (March 2007) to recover Rs. 1.53 crore from these parties.
NCR	Review of records of Allahabad Division of North Central Railway revealed that even after rationalizing (March 2004) the rate of license fee and making the revision effective from 1st April 1995 instead of 1st April 1986 by the Railway Board, the Divisional Railway Administration did not raise license fee bills at the revised rate against licensees of 30 commercial plots under the control of Deputy Chief Traffic Manager/Kanpur till date. Dues recoverable from these licensees for the period 1st April 1995 to 31st March 2007 assessed by Audit worked out Rs.1.05 crore.
NCR	Land measuring 42857 sqm was licensed to GRP at Jhansi in 1986 for construction of GRP lines. No agreement was executed by the railway while handing over the land and no license fee bills were preferred by the railway till July 2002. It was observed that GRP had constructed quarters on 1558 sqm area of land and the remaining land had no structure. In July 2002 while preferring the bills, the railway administration calculated all the land at concessional rate of three per cent leviable for quarters instead of charging for the extra land at 6 percent applicable for government departments. This resulted in short recovery of Rs. 1.09 crore.
CR	Railway land measuring 11914 sqm was licensed to M/s Hindustan Petroleum Corporation Limited (HPCL) /Pune for erecting bulk oil installation pumps, laying of pipeline, approach roads etc and agreement signed in September 1990. Subsequently, HPCL shifted its petroleum handling facility. Consequently, HPCL authorities were asked to hand over the land to Railway Administration for development of passenger amenities but it has not been handed over so far. It was further noticed that the license fee was not being recovered. An amount of Rs. 1.40 crore was outstanding for recovery.

Zone	Audit observation
CR	Office accommodation was allotted to IRCON in the railway building and based on the market value of land, rent rates were revised in 2006. The revised rates were effective from 1999-2000 and arrears worked out to Rs.0.76 crore. IRCON has not paid the arrears so far. Even regular rent for 2006-07 has also not been paid by IRCON. The matter was brought to the notice of CE by DEN/LN/CSTM in May 2006, but no concrete action has been taken so far to recover the arrears. It was further seen that rent rates were revised on the basis of ready reckoner rates and not as fixed by the PHOD Committee as required in terms of Railway Board's letter of February 2005. IRCON still continues to occupy the Railway premises
NWR	The Railway Board in April 1982 laid down instructions that the purpose of licensing of Railway land is restricted only to the welfare organizations with a view that such land should actually be utilized for the welfare of Railway staff and should not become a seat of commercial activity. In case of failure, the licensing should be terminated after due notice and recovery of land license fee at market rates. During review of records relating to land licensing in Ajmer Division, it was noticed that an agreement was entered in July 1925 between Railwaymen Consumers Cooperative Association Limited/Ajmer and Railway, an area of 57996.60 sq.ft./ 6444.06 sq.yard was leased for bonafide use, but the Association arbitrarily and without informing the Railway Administration sub let some land to other private parties which were not welfare organizations. In November 1989, the zonal railway reported the matter to Railway Board. The Railway Board asked to execute a fresh agreement with the licensees. The Railway Administration continued preferring the bills for license fee at nominal rate (i.e. Re. one per annum). Thus, due to non-execution of fresh agreements and inaction on the part of railway administration to effect recovery at market rate due to breach of contract, the Railway Administration suffered a loss of Rs. 2.09 crore for the period from 1986-87 to 2006-07 besides failing to safeguard the asset.
NWR	During review of a case of allotment of a STD/PCO booth (Hello Hut) at Jodhpur, it was observed that the booth was allotted to the said party in August 1993 by Railway without execution of any agreement. The owner of the booth encroached upon the area with the time that eventually went on to 200.88 sqm. The Railway administration calculated an amount of Rs. 1.39 crore towards license fee for the period 1.8.99 to 30.9.06. The amount is still outstanding for recovery.
NWR	In Bikaner Division, land measuring 7014.40 sqm was licensed to M/s Ashi Private Limited at Rewari in September 1987 for establishing a sleeper plant with the approval of General Manager/Northern Railway. As per agreement (executed in September 1987), annual license fee was fixed @ Rs. 18200/-. Though the Railway Administration licensed the plot measuring 7014.40 sqm, the firm acquired 8165.13 sqm of land. As per Railwy Board's letter of August 1995, the land value shall be fixed on the basis of the land value of the surrounding area as on Ist January 1985 as determined from the Revenue authorities or from Town planning department, actuals as per PWD/CPWD transactions, actual transactions as per Sub-Registrar and Professional valuators of State and Central Government. The revenue authority (Tehsildar/Rewari) had mentioned the rate of land at Rs. 500 per Sq Yard as per their letter dated 29.01.86 and dated 23.07.1987. Thereafter, on the request of Assistant Engineer, Northern Railway, Rewari for reassessment of rate of land, the Revenue department (Tehsildar) revised the rate of land @ Rs. 70000/- per acre or Rs. 17.29 per sqm vide letter dated 27.07.1987. The rate advised subsequently was 97.11 per cent less than the rate (Rs. 500 per sqm) advised earlier. The execution of an agreement on the basis of lower rates is suspicious and resulted in short recovery of license fee. Had the railway administration fixed the rate of Rs. 500/- per sq yard (Rs. 598/- per sqm) & plot area actually in use i.e. 8165.13 sqm, huge loss on account of short recovery of license fee amount to Rs. 1.54 crore (25.09.1987 to 31.03.2007) could have been avoided.
NWR	A number of buildings have been provided to Postal & Telecom Department in all the Divisions. Audit observed that non-revision of the cost of land and non/incorrect raising of licence fee bills resulted in non-realisation of Rs.5.06 crore.
NR	Railway lands measuring 86.50 acres and 86.91 acres had been under occupation at Phillaur and Jallandhar Cantt in Firozpur Division by Police Training Academy and Punjab Armed Police since 1942 and 1963 respectively. An amount of Rs. 30.26 crore for the period 1-1-1986 to 31-3-2007 is still outstanding. The railway administration has not taken any concrete action to realize the amount from the Punjab Government.
NR	Review of records of Firozpur and Moradabad divisions revealed that even after rationalizing (March 2004) the rates of license fee and making the revision effective from 1 April 1995 instead of 1 April 1986 by the Railway Board, the Railway Administrations did not prefer the license fee bills at the revised rates against the licensees till January 2006. It was also observed that an amount of Rs. 14.08 crore was outstanding against 56 licensees (41 of Firozpur and 15 of Moradabad).
NR	In September 1996, Union Cabinet decided that the Railway would lease its land to Delhi Metro Rail Corporation (DMRC) for Mass Rapid Transport System (MRTS) in Delhi area and the lease charges would be based on mutually agreed market rates of land. Accordingly, Railway Board directed (5 March 1997) NR to transfer its land. Till December 2002, NR transferred 10.016 hectares of land on long term lease and 3.708 hectares of land on temporary licensing (for limited period during construction) to DMRC for the project without entering into an agreement. The lease charges and the license fees, worked out by NR on the basis of commercial land rates (notified by L&DO) were Rs.55.40 crore and Rs.20.63 crore respectively. During 2003-05, another piece of land measuring 0.302 hectare was licensed to DMRC. DMRC requested the Railway Board that the market rate of land should be fixed on the actual land usage in the adjoining areas (lower than the commercial rates) instead of commercial rates. DMRC paid only Rs.38.18 crore as against the Railways' claim of Rs.76.03 crore (December 2002). As on April 2005, the amount due was Rs.61.82 crore besides loss of interest on the delayed payment of lease charges of Rs. 18.91 crore.
NEFR	Two plots of railway land measuring 61200 sqft at Adabari/Maligaon and 27625 sqft to Mal Gram Panchayat was licensed to BSNL in 1983 and 1979 respectively. Failure of railway administration to execute agreements, delay in preferring the license fee bills, incorrect updating of land value on percentage basis etc resulted in accumulation of dues amounting to Rs. 1.27 crore.

Annexure-XII
Deficiencies in the levy of way leave charges
(Reference Para 2.12.7)

Zone	Audit observation
SR	Way leave permission for a 5.5 Km pipe line running along the railway boundary from Walajah Road to the factory at Ranipet along the track given to M/s Thirumalai Chemicals Ltd, had expired in March 2004. The firm requested extension of the license for a further period of 10 years i.e. from 2004 to 2014 in November 2004. The capitalized way leave charges worked out to Rs.1.25 crore. Even three years after expiry of the original permission, way leave charges amounting to Rs.1.25 crore remain to be realized and the agreement is yet to be executed with the firm.
SR	As per Railway Board's instructions of November 2001, charges to be levied for granting way leave facilities for under ground/over ground Cable TV Crossings in and outside Metro cities are Rs.3000 per annum and additional supervision charges of Rs.5000 per annum per single track crossing and Rs.3000 per annum for each additional track crossing should be levied and the same has to be collected for three years in advance. In Palghat division, while extending the way leave facilities for a further period of 3 years, only way leave charges of Rs.9000 has been collected and additional supervision charges amounting to Rs.15000 for each crossing has not been collected. This resulted in short realization to the extant of Rs.13.38 lakhs in respect of 67 cases.
SR	In Madurai division, in 12 cases permission was accorded by the Railway Administration for formation of approach road, widening of level crossing etc and way leave charges were being recovered at Rs.1000 per annum instead of at 6 per cent of market value of land per annum subject to a minimum of Rs.10000/- per annum as stipulated in the Railway Board's order of November 2001. Taking into amount the minimum charges, the amount pending realization would be Rs. 5.40 lakhs per annum.
WR	In Mumbai Central division, way leave charges for pipe line laid below railway track along right bank of Mithi River at Mahim creeks in 1968 have not been billed till February 2007. Railway Administration while granting permission to repair the said pipe line demanded way leave charges from 1968 to 2007 and also demanded these charges for next 10 years i.e. up to 2016-17. The total way leave charges leviable works out to Rs. 0.67 crore. Though there is a provision of charging interest @ 10 per cent per annum on unpaid amount, the said provision could not be invoked as no bill was preferred earlier.
SWR	In Mysore Division, in respect of 43 cases recovery was being made at Rs.1000/- per annum instead of at Rs.10, 000/- per annum resulting in short recovery of Rs.18.53 lakh. Similarly in respect of 42 cases, 10 years advance way charges has been recovered at Rs.10, 000/- instead of Rs.1,00,000/- resulting in short recovery of Rs.37.80 lakh. In respect of 8 cases, the minimum charge of Rs.10, 000 per annum was not levied resulting in short recovery of Rs.3.00 lakh.
SWR	In Hubli Division, in respect of 14 cases, bills have not been preferred at the rates specified in Board's letter of Nov 2001. In respect of 9 cases, way leave charges were not being recovered. Further, in respect of 62 cases, even though bills have been raised, the Administration was not aware whether the parties had paid the same. Thus, total short recovery of way leave charges due to improper implementation of Board's orders was to the tune of Rs.59.33 lakh.
SWR	In terms of Railway Board's orders of Nov 2001, for ROB/RUB constructed on Deposit terms, way leave charges at the rate of Rs.6,000/- per annum upto two lane road crossing two tracks and at Rs.12,000/- per annum in case the bridge is wider than two lanes and/or crossing more than two tracks are to be recovered. It was observed that way leave charges were not being recovered in Bangalore and Mysore Divisions/SWR. The amount recoverable in respect of 15 ROB/RUBs in these divisions was assessed at Rs.5 lakh.
CR	M/s Deepak Fertilizer and Petrochemicals Company was granted permission to lay pipeline in the railway boundary from Uran to Taloja in 1981. Copy of agreement was not on record. The firm moved Mumbai High Court in 2000 in connection with shifting of pipeline and the suit is pending. Meanwhile the party did not pay the Way Leave charges from 2000 which accumulated to Rs. 0.94 crore. The matter was brought to the notice of Railway Board and also taken up with Ministry of Petroleum only in February 2006.