



सत्यमेव जयते

**GOVERNMENT OF INDIA  
MINISTRY OF CIVIL AVIATION  
COMMISSION OF RAILWAY SAFETY**



**ANNUAL REPORT FOR 2005-2006**

**BY  
*CHIEF COMMISSIONER OF RAILWAY SAFETY***

**LUCKNOW**

# **CHAPTER - I**

## **FUNCTIONS AND ORGANISATION OF THE COMMISSION OF RAILWAY SAFETY**

### **1.1 INTRODUCTION**

The Commission of Railway Safety, working under the administrative control of the Ministry of Civil Aviation of the Government of India, deals with matters pertaining to safety of rail travel and train operation and also performs such statutory functions as laid down in the Railways Act (1989), which are inspectorial, investigatory and advisory in nature. The Commission functions according to the rules framed under the Railways Act and various executive instructions issued from time to time. The most important duty of the Commission is to ensure that any new Railway line to be opened for passenger traffic conforms to the standards and specifications prescribed by the Ministry of Railways and also the new line is safe in all respects for carrying of passenger traffic. This is also applicable to other works such as gauge conversion, doubling of lines and electrification of existing lines. The Commission also conducts statutory inquiries into serious train accidents occurring on the Indian Railways and makes recommendations for improving safety on the Railways in India. Delhi Metro is governed by Delhi Metro Railway (O&M) Act, 2002. The annual Report for the period 2005-06 giving full Account of activities on Delhi Metro under Section 12 and 13 of the said act is placed at Appendix VII.

### **1.2 ORGANISATIONAL STRUCTURE**

- 1.2.1 The Commission is headed by a Chief Commissioner of Railway Safety (CCRS), at Lucknow, who acts as the Principal Technical Advisor to the Central Government in all matters with which the Commission is concerned. Working under the administrative control of CCRS are nine Commissioners of Railway Safety (CRS), exercising jurisdiction over the Zonal Railways. In addition, some of them have additional jurisdiction over railway establishments other than Zonal Railways viz (i) Metro Railway, Kolkata, (ii) DMRC, Delhi, and (iii) Konkan Railway. There are five Deputy Commissioners of Railway Safety posted in the Headquarters at Lucknow for assisting the CCRS. In addition, there are two field Deputy Commissioners, one each in Mumbai and Kolkata, to assist the Commissioners of Railway Safety in matters concerning the Signaling and Telecommunication discipline.
- 1.2.2 In Appendix I , at the end of this Report, given is an Organizational Chart of the Commission of Railway Safety. A brief narrative on the history and

functions of the organization, which dates back to the 19th century, is contained in Appendix II.

### **1.3 JURISDICTION**

The route kilometrages of the Railway Administrations under the jurisdiction of each circle, as on 31st March, 2006 were as under:-

<b>NAME OF CIRCLE</b>	<b>HEADQUARTERS</b>	<b>ROUTE KM.</b>	<b>PRINCIPAL RAILWAYS</b>
Central Circle	Mumbai	7483.410	Central/W.C. Rly.
Eastern Circle	Kolkata	5836.735	Eastern & East-Central Rly.
Northern Circle	New Delhi	6972.090	Northern Rly.
North Eastern Circle	Lucknow	6490.495	NorthEastern/ North Central
Northeast Frontier Circle	Kolkata	3781.910	Northeast Frontier & Metro Rly.,Kolkata.
Southern Circle	Bangalore	8317.420	Southern/South Western Railway
South Central Circle	Secunderabad	5743.420	South Central
South Eastern Circle	Kolkata	7468.310	South Eastern/ S.E.C. Rly/ East Coast
Western Circle	Mumbai	11985.262	Western & North-Western

**Note:** In addition to the Principal Railways, the Commissioners exercise jurisdiction over Konkan Railway Corporation, various Metropolitan Rail Transport Projects, Delhi Metro and Port Trust Railways, if any, located within their circles.

### **1.4 POSITION OF VACANCIES IN THE COMMISSION**

As on 31.3.2006 the actual strength of the Commissioners was 7 against the sanctioned posts of 9. The strength of Deputy Commissioners was 7 and there was no vacancy. The Details are at Appendix-I.

## **CHAPTER-II**

### **ANALYSIS OF TRENDS OF ACCIDENTS**

#### **2.1 TRAIN ACCIDENTS:**

The term 'train accidents' discussed in this Report has the following definitions:-

- 2.1.1 **Consequential train accidents** - are all accidents occurring to trains in the course of working of a Railway and include Collisions, Derailments, Fires in Trains and Running into obstructions or road traffic at Level Crossings.
- 2.1.2 **Section 113 Accidents** - are those railway accidents, referred to in Section 113 of the Railways Act 1989, which occur in the course of working a Railway and are attended with loss of human life or with grievous hurt (as defined in the Indian Penal Code) or with serious injury to property. They also include any collision between trains of which one is a train carrying passengers, derailment of a train carrying passengers, any accident of a description usually attended with loss of human life, grievous hurt or serious damage to property and accident of any other type which the Central Government may notify in the official Gazette.
- 2.1.3 **Reportable Accidents** - are the same as those referred to in Section 113 of the Railways Act 1989.
- 2.1.4 **Serious Train Accidents** - are those accidents requiring a Statutory Inquiry to be conducted by the Commission of Railway Safety in terms of Section 114 of the Railways Act 1989 and include every accident to a train carrying passengers, which is attended with loss of human life, or with grievous hurt (as defined in the Indian Penal Code) to a passenger or passengers in the train or with serious damage to railway property of value exceeding Rs. 25 lakhs. Any other accident which, in the opinion of the Chief Commissioner of Railway Safety or the Commissioner of Railway Safety, requires the holding of an inquiry, shall be deemed to be an accident of this category.

#### **2.2 TRENDS IN CONSEQUENTIAL TRAIN ACCIDENTS**

- 2.2.1 The incidence of consequential train accidents (both Goods and passenger trains) and passenger fatalities in passenger train accidents in the past 10 years from 1996-97 to 2005-2006 are shown in Figure 1 and Figure 2 respectively\*. The details relating to the total number of consequential train accidents, with the break-up of goods train accidents and passenger train accidents, are shown in Figure 1. There is an increase in no. of passenger train accidents during 2005-06. The total number of consequential train accidents per million train-kilometers and the number of passenger fatalities in passenger train accidents are shown in Table 1 in para 2.2.2 below. The fatalities in passenger train accidents is shown in Figure 2.

*\* All Figures are placed at the end of Chapter-II*

## 2.2.2 TABLE 1

### COMPARATIVE FIGURES OF CONSEQUENTIAL TRAIN ACCIDENTS IN THE PAST TEN YEARS

(Refer Figure 1)

Item	96-97	97-98	98-99	99-2000	00-01	01-02	02-03	03-04	04-05	05-06
1. Total No. of Consequential Train Accidents	377	396	397	463	473	414	351	325	<u>234</u>	<u>234</u>
2. No. of Passenger Train Accidents (out of 1 above)	160	175	199	210	261	218	216	214	<u>154</u>	167
3. No. of Goods Train Accidents (out of 1 above)	217	221	198	253	212	196	135	111	80	<u>67</u>
4. Total no. of consequential train accidents per million train-kilometers	0.56	0.60	0.58	0.65	0.67	0.55	0.44	0.41	0.30	<u>0.28</u>
5. No. of Passenger Fatalities including Railway crew in serious Train Accidents	110	182	295	374	63	99	186	139	<u>55</u>	177

**Note.** - Best figures have been underlined.

2.2.3 It would be seen from Table 1 that the no. of consequential train accidents is 234 in 2005-2006 which is the same in 2004-2005. The number of goods train accidents has decreased from 80 in 2004-05 to 67 in 2005-2006. This decrease is 16.25%. The Passenger train accidents have increased by 8.44%. (C.f. 2004-2005).

2.2.4 Most of the consequential train accidents result in minor consequences, such as minor damage or derailment to Rolling Stock. However, there are some consequential train accidents which come under the category of Sec. 113 accidents. These Section 113 Accidents include the serious train accidents

requiring Statutory Inquiry by the Commission of Railway Safety. The trends of serious consequential train accidents are analysed in Para 2.3 below.

## **2.3 TRENDS IN SECTION 113 ACCIDENTS & SERIOUS TRAIN ACCIDENTS**

2.3.1 The figures of total number of consequential train accidents, Sec. 113 accidents, serious train accidents including train accidents resulting in fatalities to passengers (including Railway Staff) travelling in trains (as distinct from other fatalities, such as, those occurring among trespassers, Level Crossing Road users etc.) for the last 5 years are compared in Table 2 below :

**TABLE 2**

Sr. No.	Year	Total No.of consequential train accidents	Sec.113 Accidents	Serious Train Accidents requiring Statutory inquiry	Serious Train Accidents resulting in passenger fatalities	Total No.of Passenger fatalities
1.	2001-2002	414	275	30	14	99
2.	2002-2003	351	265	36	13	186
3.	2003-2004	325	253	34	16	139
4.	2004-2005	<u>234</u>	<u>176</u>	<u>19</u>	<u>04</u>	<u>55</u>
5.	2005- 2006	234	185	23	07	177
Average for 5 years		311.6	230.8	28.4	10.8	131.2

*Note: (Best figures underlined)*

2.3.2 Section 113 accidents have increased by 5.11% in 2005-2006. The number of serious train accidents requiring statutory enquiry has also increased to 23 in 2005-06 as compared to 19 in 2004-05. The number of serious train accidents resulting in passenger fatalities has increased to 07 in 2005-2006 against 04 in the year 2004-05. In 2005-06 no. of fatalities has increased to 177 from 55 in 2004-05.

## 2.4 RAILWAY-WISE TRENDS OF CONSEQUENTIAL AND SECTION 113 ACCIDENTS

2.4.1 The number of consequential and Sec 113 accidents which occurred in each zonal railway in the years 2004-05 and 2005-2006 is shown in Table 3 below:

**TABLE 3**

Railway	Total No. of Consequen- tial train accidents		Total No. of Section 113 train accidents	
	2004-2005	2005-2006	2004-2005	2005-2006
1. Central	20	9	16	5
2. Eastern	14	6	9	6
3. East Central	18	18	12	14
4. East Coast	14	13	7	9
5. Northern	47	43	40	38
6. North Central	10	5	7	4
7. North Eastern	15	18	15	17
8. Northeast Frontier	12	14	11	10
9. North Western	14	16	10	15
10. Southern	8	9	8	8
11. South Central	16	17	10	13
12. South East Central	11	13	10	8
13. South Eastern	3	11	2	9
14. South Western	7	18	5	18
15. Western	16	17	11	11
16. West Central	7	6	1	-
17. Kolkata Metro	--	-	-	-
18. Konkan Rly. Corp.	2	1	2	-
19. Delhi Metro	-	-	-	-
<b>Total</b>	<b>234</b>	<b>234</b>	<b>176</b>	<b>185</b>

## **2.5 ANALYSIS OF TYPES OF CONSEQUENTIAL TRAIN ACCIDENTS**

Figure 3 depicts a chart showing the break-up of total number of consequential train accidents in the years 2004-2005 & 2005-2006 into various types of accidents. It would be seen that derailments account for a lion's share of the total number of consequential train accidents, being 55.99 % in 2005-2006 against 58.97% in 2004-05. Level crossing accidents are next accounting for 32.05% in 2005-2006 against 29.91% in 2004-2005. Collisions account for 3.85 % in 2005-2006 against 5.55% in 2004-2005. Fires account for 6.42% accidents in 2005-2006. Number of other accidents (Miscellaneous Accidents) also account for 1.70 % of the total accidents in 2005-2006.

## **2.6 CAUSE-WISE ANALYSIS OF VARIOUS TYPES OF TRAIN ACCIDENTS**

### **2.6.1 CAUSE-WISE ANALYSIS OF DERAILMENTS**

At figure 4 is shown a cause-wise analysis of the total number of derailments in the years 2005-2006 & 2004-2005. Rolling Stock defects and Failure of Workshop, Carriage & Wagon and Loco Maintenance Staff account for 4.59 % derailments in 2005-2006 as compared to 3.63% in the year 2004-2005. Track defects & Failure of Permanent Way Staff caused derailment accidents accounting for 29% in 2005-2006 as against 26.81% in 2004-2005. Other causes also account for 54.97% in 2005-2006. Errors by Drivers including Motormen caused 6.10% of derailments in 2005-2006 against 7.24% in 2004-2005. Sabotage accounted for 3.82% in 2005-2006 against 2.89% in 2004-2005. Signalling Equipment defects and failure of Signalling Maintenance Staff are responsible for 1.52% in 2005-2006 which was 1.45% in 2004-2005.

The term 'other causes' includes failure of station staff, commercial staff in charge of loading wagons, natural causes like floods and falling boulders, crossing of track by animals, combination of failure of staff of more than one Department, other than Railway staff and those under investigation.

The comparative number of derailments are as follows:-

<b>2004-2005</b>	<b>138</b>
<b>2005-2006</b>	<b>131</b>

There is a 5.07% decrease in the number of derailments in 2005-2006 compared to 2004-2005

### **2.6.2 CAUSE-WISE ANALYSIS OF COLLISIONS**

Figure 5 shows the cause-wise analysis of the collisions during 2004-2005 & 2005-2006. Failures of Drivers, including Motormen, accounted for 44.45 % of

the collisions in 2005-2006 against 38.47% in 2004-2005. Failures of station staff accounted for 11.11% in 2005-2006 against 7.69% in 2004-2005. Failures of other staff (Carriage and Wagon) accounted for 33.33% in 2005-2006 against 7.69% cases in 2004-2005. The combination of factor other than those above also contributed 11.11% to collisions.

The comparative number of collisions are as follows:-

<b>2004-2005</b>	<b>13</b>
<b>2005-2006</b>	<b>9</b>

There is a 30.78% decrease in the number of collisions in 2005-2006 as compared to the year 2004-2005.

### **2.6.3 ANALYSIS OF ACCIDENTS AT LEVEL CROSSINGS**

Shown in Figure 6 is the cause-wise analysis of train accidents at level crossings in the years 2004-2005 & 2005-2006. There were 75 no. of accidents on level crossings during the year 2005-2006 against 70 in 2004-2005. Failure of railway staff accounted for 8% of the accidents in 2005-2006 against 5.72% in 2004-2005, while failure of road users was responsible for 92% of the accidents in 2005-2006 as against 94.28% in 2004-2005.

The principal cause of accidents at level crossings, however, continues to be the negligence of road users at level crossings.

### **2.6.4 CAUSE-WISE ANALYSIS OF FIRES IN TRAINS**

Figure 7 shows the cause-wise analysis of fire accidents in trains during 2004-2005 & 2005-2006. During 2005-2006, there were 15 fire accidents in trains, 07 being attributed to negligence of Railway Staff. 07 cases are due to Passenger & outsider negligence, 1 was incidental case.. In the year 2004-2005 there were 10 cases of fire accidents in the trains, thus there was increase in five cases by 50 % in 2005.06.

## **2.7 INCIDENCE OF HUMAN FAILURE IN TRAIN ACCIDENTS**

2.7.1 The incidence of human failure (both Railway and other than Railway Staff) in the consequential train accidents is reflected in Table 4 :-

**TABLE - 4**

Item	2004-2005	2005-2006	
Total No. of consequential Train Accidents	234	234	
No. of Consequential train accidents due to failure of Railway Staff.	119	120	
No. of consequential train accidents due to failure of other than Railway Staff.	78		86
No. of consequential train accidents due to human failure (2+3)	197	206	
S. No. % of consequential train accidents due to failure of Railway Staff (2 divided by 1)	50.85	51.23	
1. % of consequential train accidents due to Human failure	84.18	88.03	
2. (both Railway and other than Railway Staff) (4 divided by 1)			
3.			

4. 2.7.2 Failure of Railway Staff' refers to Failure of various It would be seen from Table 4 that the no. of consequential train accidents are 234 in 2004-2005 and also the same in 2005-2006. The percentage of consequential train accidents, attributable to failure of Railway Staff, has increased to 51.28% in 2005-2006 from 50.85% in 2004-2005. The failure of human element comprising both Railway Staff as well as other than Railway Staff such as road users, passengers, miscreants etc., was responsible for 88.03% of consequential train accidents in 2005-2006 against 84.18% in 2004-2005. The failure of human element thus continues to be the largest single cause of accidents.

2.7.3 The term ' categories of staff in charge of both train operation and maintenance. The break-up of such staff responsible for the consequential train accidents in 2005-2006 is shown in Table 5 below:-

**TABLE 5**

S.No.	Type of Staff	Consequential train accidents attributable to Railway staff	
		Nos.	Percentage of total no. of Consequential train accidents.
1.	Permanent Way Maintenance Staff	37	15.81
2.	Driving Crew (including Motormen)	14	5.98
3.	Workshop, Carriage and Wagon and Loco Maintenance Staff.	23	9.82
4.	Station Staff	4	1.70
5.	Signalling Maintenance Staff	2	0.85
6.	Other Staff (Commercial Staff in charge of loading, Guards and others)	1	0.42
7.	Combination of failures of Staff	35	14.95
8.	Electrical Maintenance Staff	4	1.70
Total		120	51.23

2.7.4 The figures in Table 5 above reveal that the Permanent Way Maintenance staff was responsible for the largest number of consequential train accidents due to failure of Railway Staff, at 37 ( 15.81% of total consequential train accidents). Combination of Staff accounted for 35 accidents i.e. 14.95% of consequential accidents. Driving Crew caused 14 ( 5.98%) accidents. Workshop, Carriage and Wagon and Loco Maintenance Staff were responsible for 23 ( 9.82%) accidents, station staff were responsible for 4 ( 1.70%) accidents while Signalling Staff caused 2 ( 0.85%) accidents. Other Staff accounted for 1 ( 0.42 %) accident and the Electrical maintenance staff were responsible for 4 (1.70%) accidents.

## **2.8 LOSS OF RAILWAY ASSETS IN ACCIDENTS:**

The total estimated cost of damage to railway assets resulting from all consequential train accidents was Rs. 41.57 crores in the year 2005-2006 as compared to Rs.173.80 crores in the year 2004-2005.

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## CHAPTER – III

# INVESTIGATION INTO ACCIDENTS

### **3.1 PREAMBLE**

Among the statutory duties carried out by the Commissioners of Railway Safety, one of the main duty is the statutory investigation into railway accidents. The rules for the guidance of officers of the Commission of Railway Safety in holding Inquiries into railway accidents are contained in 'Statutory Investigation into Railway Accidents Rules 1998' notified by the Ministry of Civil Aviation. Extracts of the rules and procedures for holding statutory investigations are contained in Appendix III.

### **3.2 STATUTORY INQUIRIES HELD IN 2005-2006**

**3.2.1** During the year, 23 serious accidents required inquiry by the Commission in terms of Section 114 of the Railways Act 1989 which are detailed in Appendix IV. Out of these 23 accidents, 4 were collisions between trains, 6 were derailments, 5 involved collision of trains with road vehicles at Level Crossings and 3 were unusual occurrences , 4 were due to fire in the train and 1 was due to explosion in train.

**3.2.2** Of the 23 accidents, the following accidents attracted considerable attention of the media :-

- a) **Para 4 of Appendix iv.** Collision of 9198 Up Sabarmati Express with Up JNPT Conraj Goods train at Samlaya Jn station on Vadodra Division of Western Railway on 21.04.2005. In this accident 16 passengers were killed 40, were grievously injured and 110 received simple injuries.
- b) **Para 16 of Appendix iv.** Derailment of 1108 DN Bundelkhand Express between stations Datia-Sonagir on Jhansi Division of North Central Railway on 03.10.2005. In this accident 13 passengers were killed, 11 were grievously injured and 25 had simple injuries
- c) **Para 17 of Appendix iv.** Unusual occurrence leading to derailment of 415 up Repalle-Secunderabad Delta Fast Passenger train between block stations Ramannapet and Valigonda at bridge no. 61 of Guntur Division of South Central Railway on 29.10.2005. In this accident 116 passengers were killed, 26 were grievously injured and 78 had simple injuries.

**3.2.3** Brief details of the 23 accidents inquired into by the Commission during 2005-2006 alongwith important recommendations made, are at Appendix - IV.

**3.2.4** During the financial year under report inquiries into 4 accidents were entrusted by the Commissioners of Railway Safety to the respective Railway Administrations under Sub-Section (2) of Section 114 of the Railways Act. Two of the accidents were on level crossings and one was of a goods train that lost control. Brief details are at Appendix VI.

## **CHAPTER - IV**

### **INSPECTION AND OTHER FIELD DUTIES**

#### **4.1 INSPECTION OF NEW LINES :**

During the year 2005-2006, the Commissioners of Railway Safety carried out inspections of new lines and other works, prior to authorising them for public carriage of passengers, as detailed below :

a) New Lines	185.454 km
b) Diversions	9.600 km.
c) Doublings	249.756 km.
d) Conversion of Gauge	721.803 km.
e) Initiation of electric traction	598.695 km.

A list of these works appears at Appendix V.

#### **4.2 NEW MINOR WORKS :**

4.2.1 Structural works affecting the safety of trains on running lines, such as, provision of additional bridges, rebuilding or re-girdering of existing bridges, re-modeling of station yards, re-signaling works etc. can only be carried out after duly obtaining the sanction of the Commissioner of Railway Safety. Such works, after being sanctioned by the Commission, are executed by the Railway Administration and opened to traffic under safety certificates signed by the concerned railway officers, unless the Commissioner of Railway Safety decides to inspect them before being commissioned.

4.2.2 During the year, 3341 such works were sanctioned by the Commission of Railway Safety.

#### **4.3 WORKS INVOLVING INFRINGEMENTS OF STANDARD DIMENSIONS:**

Certain minimum and maximum dimensions for location of structures near railway lines and maximum and minimum dimensions in respect of rolling stock have been prescribed and are laid down in a publication called "Schedule of Dimensions". The Railways can not deviate from these dimensions without obtaining the sanction of the Railway Board or Commissioners of Railway Safety. During the year under review, 27 cases for condonation of infringements to the Schedule of Dimensions were

recommended by the Commission for sanction of the Railway Board. 4 cases which were within the powers of the Commissioners of Railway Safety were sanctioned by the Commissioners themselves.

#### **4.4 MOVEMENT OF OVER-DIMENSIONED CONSIGNMENTS :**

The railways have sometimes to transport various types of heavy machinery the dimensions of which are in excess of the prescribed maximum moving dimensions. Movements of some of these consignments require the sanction of the Commissioner of Railway Safety. During the year, transport of 22 over-dimensioned consignments was authorized for movement by the Commissioners of Railway Safety after due scrutiny, subject to observance of such conditions and speed restrictions as were considered necessary.

#### **4.5 NEW TYPES OF LOCOMOTIVES AND ROLLING STOCK :**

According to Section 27 of Railways Act, 1989, new rolling stock, such as, locomotives, coaches and wagons can only be used after prior sanction by the Railway Board. During the year, 15 new types of locomotives and other rolling stock were recommended by the Commission, in various sections, for sanction by the Railway Board. According to extant rules, the Commissioners of Railway Safety can authorize movement of new rolling stock on sections of the railway provided the previous sanction of the Railway Board has been obtained for their movement anywhere in the Railway system. During the year, 165 such cases were sanctioned by the Commissioners under their powers.

#### **4.6 PERIODIC INSPECTIONS :**

During the year, the Commissioners carried out periodical inspections of 13,536.72 kms. of Govt. railways either on their own or in the company of the Zonal Railway General Managers. Significant defects and deficiencies noticed during inspections were discussed with the Railway Officers during such periodic inspections and inspection reports were issued.

## CHAPTER-V

### REMARKS ON SOME IMPORTANT ISSUES

#### **5.0 PREAMBLE.**

- (i) A large number of issues pertinent to safety in train operation have been raised by the Commission of Railway Safety through its annual reports of past years. Though some of the issues raised earlier have been addressed to by the Railway Board, others have not received the desired level of attention in the opinion of the Commission. In the Annual report of 2004-05, four such issues were detailed. These were :
- (a) Foundation details and completion drawings of bridges (item initially raised in the Annual Report of the year 2002-03)
  - (b) Role of the Commissioner of Railway Safety in the opening of a Railway line for goods traffic (item initially raised in the Annual Report of 2003-04)
  - (c) Level Crossings (New items in the Annual report 2004-05), and
  - (d) Conflict of information conveyed to the driver of a train passing through station where some temporary speed restriction due to engineering work exists (New item in the Annual Report 2004-05).

The comments of Ministry of Railways (Railway Board) were received on the above items. The Commission is not fully satisfied with these comments and its views were reflected in the Annual Report (2004-05) accordingly. These are therefore, not being reiterated in this Annual Report.

- (ii) Two new items have been included in this year's Annual Report as given in para 5.1 and 5.2, here under :

#### **5.1 Reporting of accidents and unusual occurrences to the Commission.** (New item)

##### **Views of the Commission**

A number of unusual occurrences related to train operation generally indicate safety failures and are known to precede serious accidents. These incidents, it has been observed, generally come to the notice of Commission through print and electronic media and are not reported as such by the Zonal Railways to the Commission.

During the meeting of the officers of the Commission of Railway Safety with the Railway Board on 18.04.2005, it was agreed by the Railway Board that besides the normal reporting of accidents, Railways would also report some unusual incidents to the Commissioners of Railway Safety. The type of unusual incidents which may be reported by the Zonal Railways to the respective Commissioners were also advised to the Railway Board vide Commission's letter no. S.18011/1/04-RS, dated 17.05.2005. The issue was subsequently followed up vide CCRS's letter no. T.25011/2/2005-RS, dated 20.10.2005, (Annexure 5.1.1) requesting Railway Board to instruct the Zonal Railways to report following types of incidents to the respective Commissioners of Railway Safety :-

- (i) Train passing signal at danger, though not resulting in an accident
- (ii) Averted Collision
- (iii) Breach of Block rules, and
- (iv) Parting of passenger carrying train.

However, the Railway Board vide letter no. 2004/Safety(A&R)/3/5 dated 03.02.2006 (Annexure 5.1.2) have advised that they do not consider it appropriate to direct the railways to report incidents mentioned above to the Commission of Railway Safety and burdening them with additional responsibility.

The decision conveyed by the Railway Board is quite unfortunate and beyond comprehension. These unusual occurrences can be of grave consequences for train safety and therefore, need to be taken up with due seriousness. The Commission does not consider such reporting as burden or additional responsibility on the railways or on the Commission and would very much like to be informed of unusual incidents happening over the railways which are a potential threat to the safety of the travelling public and would like to intervene for the improvement of the safety in train operation wherever considered appropriate. It is not quite understandable why Railway Board should hold a veil of secrecy in such matters of public safety and concern.

The Commission would still urge the Ministry of Railways (Railway Board) to review their stand.

### **Comments of the Ministry of Railways :**

The contention of the Commission is not correct that during the meeting on 18.04.2005 it was agreed by the Railway Board that Railways would additionally report the stated unusual incidents to the Commissions of Railway Safety. Minutes of the meetings regarding this item are reproduced below:

#### **"Item 17-Reporting of Accidents and unusual occurrences to the CRS.**

Chairman, Railway Board felt that the position in this respect was laid down in Section 113 of the Railways Act, 1989 is very clear, however, the matter would be examined with respect to indicative accidents and other accidents,

details of which may be furnished by the Commission to the Safety Directorate.”

From the above, it is clear that Railway Board had only agreed to examine the matter though statutory provisions in this regard are very clear.

On receipt of details from the Commission vide referred letters dated 17.05.2005 and 20.10.2005, Railway Board deliberated on this matter and it was not considered appropriate to direct the Railways to report such unusual incidents which was communicated to the Commission vide Railway Board’s letter No.2004/Safety(A&R)/3/5 dated 03.02.2006.

Views of the Commission as recorded in their Annual Report 2005-06 have again been considered by the Ministry of Railway (Railway Board) and it has been again decided to maintain status quo.

#### **Further comments of the Commission:-**

The decision of Ministry of Railways to maintain status quo on non reporting of indicative accidents to the Commission by the Zonal Railways is not comprehensible in view of gravity of implications of these cases which are in reality potential serious accidents. These indicative accidents ought to be reported to the Commission of Railway Safety as these are reflective of shortcomings of Safety systems in train operation. Moreover, Explanation below rule 3 of Railway (Notice of and Inquiries into Accident) Rules-1998 issued by the Ministry of Railways also speaks of reporting those accidents which have not actually occurred but by nature which have potential of causing loss of human life or grievous hurt etc. The indicative accidents listed by the Commission for reporting fall in this category and therefore become “Reportable Accidents”. Ministry of Railways should direct the Railways to report such indicative accidents to the concerned Commissioners of Railway Safety.

#### **5.2 Running of Shatabdi Express train on New Delhi-Palwal-Agra Cantt. section at a maximum speed of 150 kmph.**

The Commission in its various communications to the Ministry of Railways had not favoured running of trains at speeds higher than permitted on Indian Railways prior to the raising of speed of above Shatabdi train to 150 Kmph by the Railway Board, on the following fundamental considerations :-

- (i) Inadequate measures presently available on the Railways to prevent trespassing on track, cattle run-over menace and non-provision of Hangers (frills) at level crossings.
- (ii) Non-availability of Train Protection and Warning System to prevent signal overshooting by drivers

Further, the present working system of observing trains to detect hanging parts etc and exchange of signals was also required to be suitably addressed.

However, Railway Board, despite the reservations of the Commission, have gone ahead and sanctioned the running of the above train vide their letter no. 2005/CEDO/SR/7, dated 12/13.01.2006, (Annexure 2.1) imposing several stipulations some of the important ones of which are given below :-

- (i) Fencing of the track at vulnerable locations prone which are to cattle crossing/trespassing.
- (ii) Observance of all conditions stipulated in RDSO Speed Certificate no. SD.POL.12.10 dt. 17/18.06.2004 except condition no. 2.1.7 (pertaining to provision of fencing along the track).
- (iii) USFD machines with data logger being received with 5 SPURT cars to be used on New Delhi-Agra Cantt. section and printout of the machines to be utilized for interpretation of USFD results to avoid errors of manual reading.
- (iv) Recording with OMS shall be carried out with 150 kmph high speed train only at a laid down frequency. Revision of frequency of OMS recording is not considered necessary at this stage.
- (v) Oscillograph car run may be done at maximum permissible speed to study the oscillation behavior of coaches under particular track conditions as is being done at present.
- (vi) Railway may provide suitable instrumentation to observe various parameters for one or two selected bridges. Zonal railways (NR & NCR) may undertake the study in consultation with RDSO.
- (vii) A-Class working of station only for this train as suggested by R.D.S.O., in the speed certificate, was not agreed to ?
- (viii) Traffic Deptt. shall ensure complete arrival of train at the station till such time Continuous Track Circuiting work is completed in the section.
- (ix) Suitable speed restriction shall be imposed on facing points not provided with Thick Web Switches and Clamp Lock Point Machines.
- (x) 25 W VHF sets shall be provided in the locomotive and guard's van for communication between driver, guard and the adjacent Station Masters till such time Mobile Train Radio Communication work is commissioned in the section.

It would be seen that these conditions are very general in nature and not binding on the Railways or the officials who are supposed to take action. The Train Protection Warning System (TPWS) for prevention of overshooting of signals at danger by the train driver is also yet to be commissioned.

The Commission feels that without addressing the basic issues raised by it, the increase in speed of trains with so many general restrictions (listed above) is not the right policy for safe train operation at higher speeds.

### **Comments of the Ministry of Railways:**

Suggestions made by CCRS/CRS were given due consideration and only after examining all technical and safety requirements, running of the solitary Shatabdi Express at maximum speed of 150 kmph has been permitted on New Delhi-Palwal-Agra Cantt. Section, subject to observance of stipulations laid down in the referred letter of the Railway Board.

Railways did an extensive study to identify the locations where the incidents of trespassing of track/cattle run over is likely, and running of this train has been permitted only after providing fencing on all such vulnerable locations. Having plugged the vulnerable locations, there is no need for through fencing. Moreover, trains are already running on the system at 130 kmph and raising the speed of only one train to 150 kmph would not materially affect the safety on this account.

Availability of train protection and warning system, again for running only one train at 150 kmph is not considered essential in the wake of existing other safety measures. However, provision of train protection and warning system in this section would be operational by June 2007 as a regular measure.

Further, the said train has been successfully running for almost an year without any adverse report, which should remove apprehension. If any, regarding safety of this train. The stipulations made by the Railway to run this train have become part of regular drill by all the concerned departments and are strictly followed to ensure safety.

### **Further Comments of the Commission:-**

The issue of running of high speed trains needs to be looked in a holistic manner and requires a thorough review of infrastructural and operational features involved. This should not be treated as mere increase of speed of only one train from 130 kmph to 150 kmph.

The Railway Board had taken a decision about 10 years ago not to go beyond a speed of 140 kmph for passenger carrying trains, keeping in view the various constraints such as likelihood of fencing not remaining in place, need for replacing the level crossings with ROBs/RUBs, the speed differential between Mail/Express trains and freight trains and impact of cattle run over on safety etc.

The Board's view at that time was that dedicated high speed corridors for a speed of 250/300 kmph would have to be developed. There has not been much progress in eliminating the factors considered at that time except that the speed of some of the freight trains have been raised which has also been offset by reducing the speed of those freight trains which are carrying CC+6t or CC+10t load.

The general view of the Railway Board that availability of Train Protection and Warning system is not considered essential in the wake of existing other safety measures, does not seem to be very appropriate. In the opinion of the Commission it is essential to provide technical aid to the driver of the train against passing signal at danger inadvertently particularly in a high speed environment. After all Driver is a human being and is likely to commit an error of judgement, which may seriously jeopardise the safety of the passengers of the train. Again providing fencing at sporadic locations and that too at the boundary of railway land, far away from the track, can not be considered an effective means of preventing trespassing.

The Railway Board's contention on successfully running of solitary Shatabdi Express at maximum speed of 150 kmph is, therefore, not acceptable to the Commission of Railway Safety. In future the Indian Railways will be tempted to run more such trains without taking adequate safety measures required for running of high speed trains.

It is therefore imperative that Ministry of Railways give the required attention to this very important safety matter and should frame necessary guidelines for running the passenger carrying trains at a speed higher than 140 kmph.

## **Circle Offices and their jurisdiction & Incumbency of Officers in the Commission**

### 1. **Jurisdictions of Circle Offices (as on 31.03.2006)**

	<b><u>Name of Circle</u></b>	<b><u>Headquarters</u></b>	<b><u>Route Kilometrage</u></b>
(i)	Central Circle	. . . Mumbai	7483.410
(ii)	Eastern Circle	. . . Kolkata	5836.735
(iii)	Northern Circle	. . . New Delhi	6972.090
(iv)	North Eastern Circle	. . . Lucknow	6490.495
(v)	Northeast Frontier Circle	. . . Kolkata	3781.910
(vi)	Southern Circle	. . . Bangalore	8317.420
(vii)	South Central Circle	. . . Secunderabad	5743.420
(viii)	South Eastern Circle	. . . Kolkata	7468.310
(ix)	Western Circle	. . . Mumbai	11985.262

**Note** : Northeast Frontier Circle's jurisdiction includes 16.450 km.of Metro Railway/Kolkata. Central Circle's jurisdiction includes 740.28 Kms. of Konkan Railway and Northern Circle's Jurisdiction includes 62.15 Kms. of Delhi Metro.

### 2. **Incumbency of Officers in the Commission (1.4.2005 to 31.3.2006)**

#### **2.1 Headquarters Office, Lucknow**

(i) Chief Commissioner	Full Period	Shri .G. P. Garg
(ii) Deputy Commissioner (General)	Full Period	Shri Veer Narayan

#### **Deputy Commissioners in Technical Wing/Lucknow**

(i)Operating	Full Period	Shri. Sanjay Tripathi
(ii)Electric Traction	Full Period	Shri Ashutosh Pant
(iii)Signal & Telecom	Full Period	Shri P.R.Izardar
(iv)Mechanical	Full Period	Shri B.S. Dohare

### 2.3 **Commissioners in charge of Circle Offices**

(i) Central Circle, Mumbai	Full Period	Shri Sudhir Kumar
(ii) Eastern Circle, Kolkata	01.04.05 to 31.08.05	Shri Mahesh Chand
	01.09.05 to 31.03.06	Vacant
(iii) Northern Circle, New Delhi	Full Period	Sh. Bhupender Singh
(iv) North Eastern Circle, Lucknow	01.04.05 to 16.08.05	Vacant
	17.08.05 to 31.03.06	Shri R.K. Kardam
(v) Northeast Frontier Circle, Kolkata	01.04.05 to 31.03.06	Vacant
(vi) Southern Circle, Bangalore	Full Period	Shri Pranab Kumar Sen
(vii) South Central Circle, Secunderabad	Full Period	Shri R.P. Agarwal
(viii) South Eastern Circle, Kolkata	Full Period	Shri Balbir Singh
(ix) Western Circle, Mumbai	Full Period	Shri Prashant Kumar

### 2.4 **Dy. Commissioners (Signalling & Telecommunications) attached to Circle Offices**

(i) Eastern Circle, Kolkata	Full Period	Shri P. K. Biswas
(ii) Western Circle, Mumbai	Full Period	Shri A.N. Toke

## **COMMISSION OF RAILWAY SAFETY**

### **HISTORY AND FUNCTIONS**

#### **1. Brief History**

- 1.1 To exercise effective control over the construction and operation of the first railways in India, which were entrusted to private companies, Consulting Engineers were appointed under the Government of India. Later when the Government undertook the construction of railways, the Consulting Engineers were designated as Government Inspectors. In 1883, their position was statutorily recognized. Later, the Railway Inspectorate was placed under the Railway Board which was established in 1905.
- 1.2 Under the Indian Railway Board Act, 1905 and Notification No.801 dated 24th March, 1905 of the Department of Commerce and Industry, the Railway Board was vested with powers and functions of the Central Government under various sections of the Railway Act and was authorised to make General Rules for the operation of Railways. The Railway Board is thus the Safety Controlling Authority for the working and operation of Government and Company managed railways.
- 1.3 Section 181(3) of the Government of India Act of 1935 provided that functions for securing the safety, both of the traveling public and of persons operating the railways, including the holding of inquiries into the causes of accidents, should be performed by an authority independent of the Federal Railway Authority. Due to the outbreak of the war, the constitution of the Federal Railway Authority did not materialize and the Inspectorate continued to function under the Railway Board.
- 1.4 To avoid direct subordination of the Railway Inspectorate to the Railway Board, the Pacific\* Locomotive Committee, headed by Lt. Col. A.H.L. Mount, then Chief Inspecting Officer of the British Railways, suggested in para 210 of their report, submitted in 1939, as under:-

“We understand that, under the Govt. of India Act, 1935, it is contemplated that the Inspectorate will be separated from the control of the Railway Board. This is very desirable in so far as it will eradicate the present anomaly of the Board being the Inspecting as well as the executive Authority. We were informed that the Board

\* Engines with 4-6-2 configuration of wheels are called “Pacific Locos”.

fully appreciate the position, and would welcome the change, although it appears that, in practice, Government Inspectors have generally retained their freedom of judgement.....”

- 1.5 The principle of separation of the Railway Inspectorate from the Railway Board was endorsed in 1940 by the Central Legislature who recommended that “Senior Government Inspectors of Railways should be placed under the Administrative control of some authority of the Govt. of India other than the Railway Board.” Accordingly, the Railway Inspectorate was placed under the administrative control of the Department of “Posts and Air” in May 1941 and continuously thereafter under whichever Ministry that held the portfolio of Civil Aviation.
- 1.6 The erstwhile Railway Inspectorate was re-designated as the Commission of Railway Safety on 1.11.1961.
- 1.7 The responsibility for safety in the working and operation of Railway rests solely with the Railway Board and the Zonal Railway authorities. The main task of the Commission of Railway Safety is to direct, advise and caution the Railway executives with a view to ensure that all reasonable precautions are taken in regard to soundness of rail construction and safety of train operation. The Railway Board refers to the Commission matters relating to modification or enhancement of standards in respect of operation of trains, track, locomotive, rolling stock and revision of rules embodied in the General Rules, Rules for the opening of New Lines, Manuals, IRCA Regulations, Schedules of Dimensions and other publications. Suggestions made by the Commission of Railway Safety are duly considered by the Railway Board before necessary revisions are notified.

## 2. **Duties:-**

- 2.1 The duties of a Commissioner of Railway Safety as spelt out in Chapter III of the Railways Act 1989 are as under:-
  - to inspect new railways with a view to determine whether they are fit to be opened for the public carriage of passengers, and to report thereon to the Central Government as required by or under this Act;
  - to make such periodical or other inspections of any railway or of any rolling stock used thereon as the Central Government may direct;

- to make inquiry under this Act into the cause of any accident on a Railway;
- to perform such other duties as are imposed on him by this Act or any other enactment for the time being in force relating to Railways.

2.2 The term “such other duties” mentioned in Para 2.2 has been detailed in Sections 22 to 24 of the Act and covers the following:-

- sanctioning the opening of new railway lines after inspection on behalf of the Central Government;
- sanctioning the execution of all works, including new works, affecting the safety of running lines;
- when, after inspecting a line already in use or a rolling stock already authorised, the Commissioner is of the opinion that their continued use will be attended with danger to the travelling public, he may report his opinion to the Central government, who may then order the closure of the line or the discontinuance of the use of rolling stock; and
- to inspect such a closed line and sanction its re- opening for carriage of passengers and also report to the Central Govt.on the fitness for use of discontinued rolling stock.

2.3 Functional duties, including field inspections, of an Inspector of Railway, since designated Commissioner of Railway Safety, are amplified, among other technical publications, in the;

- General Rules for all open lines of railways in India administered by the Government;
- Rules for the opening of a Railway or Section of a Railway for the public carriage of passengers;
- Indian Railways Code of practice for the Engineering department;
- Indian Railway Way, Works and Signal Engineering Manuals;
- Schedules of Dimensions;

- Conference Rules of the Indian Railway Conference Association;
- Statutory Investigation into Railway Accidents Rules, 1998
- Railway (Notices of and Inquiries into accidents) Rules, 1998

2.4 After its separation from the Railway Board in May, 1941, a post of Chief Government Inspector of Railways, later designated as Chief Commissioner of Railway Safety, was created to enable the Central Government to exercise “effective technical control”.

2.4.1 The Chief Commissioner of Railway Safety directs the activities of the Organisation and is responsible for advising the Central Government in all matters relating to Railway Safety, recruitment of officers, postings and promotions, budget and expenditure etc. The Chief Commissioner deals principally with: -

- Matters appurtenant to Field Inspections and statutory inquiries into accidents;
- Inspection Reports of Commissioners of Railway Safety;
- Reports of statutory inquiries held into accidents by the Commissioners. After careful study and opinion to the Controlling Ministry and the Railway Board with such recommendations as he considers necessary;
- Railway Board’s suggestions pertaining to corrections or amendments to General Rules, Rules for Opening of a Railway, Schedule of Dimensions, the P. Way, Works and Signal Engineering Manuals, Procedures for inquiries into accidents, Codes of Practice for Engineering Works and other publications; and
- Preparation of the Annual Report on the working of the Commission of Railway Safety and its placement in each House of Parliament.
- All the Technical publications indicated in para 2.4 above including others issued by Railway Board from time to time.

2.4.2 Field duties of the Chief Commissioner of Railway Safety consist of inspections of sections of Railways, visits to the Railway Headquarters and Divisional Offices, Railway installations and Circle Offices. If considered necessary by him, he may himself hold inquiries into important accidents.

## **STATUTORY INQUIRIES INTO RAILWAY ACCIDENTS-RULES, SCOPE AND PROCEDURE**

### **1. RULES**

#### **1.1 Rules for Inquiry into Railway accidents :-**

Rules for the guidance of the Officers of the Commission of Railway Safety for holding inquiries into Railway accidents are contained in the “Statutory Investigation into Railway Accidents Rules, 1998” notified by the Ministry of Civil Aviation in the Gazette vide G.S.R.No. 257 dated 26.12.98 and G.S.R. No. 63, dated-02.01.99.

#### **1.2 When should a Statutory Inquiry be held ?**

A statutory inquiry by the Commissioner is obligatory in every accident to a passenger-carrying train which is attended with loss of human life, or with grievous hurt as defined in the Indian Penal Code, to a passenger or passengers in the train or with serious damage to railway property of the value exceeding Rs. 25 lakhs. The Commissioners may also inquire into any other accident which in the opinion of the Chief Commissioner or the Commissioner of Railway Safety requires the holding of an inquiry. Where the Chief Commissioner of Railway Safety considers the holding of an Inquiry into an accident necessary, he may either hold the inquiry himself or direct the Commissioner of Railway Safety to do so.

The Inquiry shall be obligatory only in those cases where the passengers killed or grievously hurt were travelling in the train. If a person travelling on the foot-board or roof of a passenger train is killed or grievously hurt or if a person is run over at a level crossing or elsewhere on the railway track, an inquiry is not obligatory. Workmen’s trains or ballast trains carrying workmen shall also be treated as passenger trains and in the event of a workman getting killed or grievously hurt as a result of an accident to the train, an inquiry shall be obligatory.

#### **1.3 Procedure when Commissioner is unable to hold an inquiry:-**

When a Commissioner is unable to hold an inquiry, he is to inform the Chief Commissioner of Railway Safety of the reasons as to why an inquiry can not be

held by him. The Chief Commissioner may himself hold the Inquiry or may direct another Commissioner to inquire into the accident or else the inquiry can be entrusted to the Railway itself, who will then appoint a Committee of Railway Officers to inquire into the accident. The Committee's inquiry report is submitted to the Commissioner of Railway Safety who scrutinises it and in case he agrees with the findings, forwards it to the Chief Commissioner of Railway Safety along with his views on the findings and recommendations made. If, on the other hand, the Commissioner of Railway Safety considers that an inquiry should be held by himself, he proceeds to do so.

#### **1.4 When shall the Commissioner stop or discontinue his inquiry?**

Whenever the Central Government appoints a Commission of inquiry under the Commission of Inquiries Act, the Commissioner shall discontinue his inquiry.

## **2. SCOPE : -**

The Commissioner holds inquiries into accidents with a view to ascertaining the causes and fix the responsibility thereof on the individuals concerned. Investigations are also carried out into the question whether prompt and adequate steps were taken by the railway administration for relief measures such as provision of first aid, medical treatment and refreshments to passengers, evacuation of injured passengers and other facilities like arrangements for transshipment, completion of their journey to destination, running of duplicate trains etc. As a result of his inquiry, the Commissioner may also make recommendations which are designed to prevent the recurrence of similar accidents, and which may suggest laying down new rules or modifying existing rules of working, and improved standards of signalling, installation and maintenance of track, bridges, etc. He also comments on matters observed by him during the course of his inquiry which may not have any direct bearing on the cause of the accident under investigation but which may in some cases affect the safe working of the railway and lead to accidents.

## **3. Procedure for conducting a Statutory Inquiry**

As soon as the Commissioner of Railway Safety receives intimation about the occurrence of a serious accident, he proceeds to the site, conduct inspection of the accident site and records all particulars relevant to the accident; He then fixes a date for the inquiry, which is given publicity in the media. Officers of the local Magistracy and police are separately advised of the dates of the inquiry. The public is invited to give evidence in the inquiry in person or to write to the Commissioner.

## BRIEF DETAILS OF SERIOUS RAILWAY ACCIDENTS INQUIRED INTO BY THE COMMISSION OF RAILWAY SAFETY

**1--FIRE IN TRAIN NO.3008 DN-UDYAN ABHA TOOFAN EXPRESS BETWEEN STATIONS DARAULI-DILDARNAGAR ON DANAPUR DIVISION OF EAST CENTRAL RAILWAY ON 04/04/2005.**

a)CAUSE-THROWING OF LIGHTED ENDS OF BIDIS/CIGARETTES IN THE TRAIN BY UNKNOWN PASSENGER(S) INADVERTENTLY.

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- NIL SIMPLE- NIL

c)COST—RS. 54,20,000/-.

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

### RECOMMENDATIONS

1—The loco Drivers who worked train No.3008 Down on 3<sup>rd</sup> and 4<sup>th</sup> April, 2005 between Kanpur and Asansol should be counseled to wind up the key of the watch/ clock fixed in the speedometer of the train.

2--The practice of transporting of Thermit welding material by coaching trains be banned on Indian Railways.

3-A separate enquiry be conducted by East Central Railway for allowing the Guards to work without walkie-talkie and Mail/express Guard to work without first aid box.

4--Shortages of the personal equipment of Guards/Drivers should be displayed in the lobby/crew booking office at their headquarter station.

5--Shortages of stretchers in the brake van of mail/express/passenger trains should be recouped within a target date and a fool proof procedure should be stipulated to avoid these .

6--Shortage of ladders in the electric locos should be made good with in a target date.

7--Action be taken against Shri R.D. Pathak, Guard for not protecting his accident train in the rear. He had not displayed LV board also

8--Separate action against Shri A.K. Dubey, Station Superintendent Dildarnagar, Shri A.K. Sharma, Guard and Shri Gopal Prasad, Electric Driver be taken for backing their train from mid section of station without written authority.

9--Action against Shri Naresh Kumar Dubey. Traveling Ticket Examiner be taken for not turning up on duty and thus leaving the train unmanned.

10—Board are requested to get the replacement of old speedometers with micro processor based speedometers in locos of Gaziabad electric loco shed expedited.

11--E.C. Railway may be advised to implement GR 5.01(4).

12--Rear view mirrors/cameras may be provided in the locomotives.

**2--DASHING OF A ROAD VEHICLE TRACTOR WITH 7663 MANMAD KACHEGUDA EXPRESS AT UNMANNED LEVEL CROSSING BETWEEN STATIONS PARSODA-LASUR ON NANDED DIVISION OF SOUTH CENTRAL RAILWAY ON 13/04/2005.**

a)CAUSE-DUE TO NEGLIGENCE OF TRACTOR DRIVER

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- 2 (Passengers) SIMPLE- 6 (Passengers)

c)COST— Rs.1000

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

**RECOMMENDATIONS**

1--The condition of approach road to 'C' class unmanned level crossing no. 29 should immediately be improved and should be maintained to the standards laid down as per Indian Railway Permanent Way Manual. Railway Board should lay down the time limit for maintaining various level crossings to the new standards as laid down in Indian Railway Permanent Way Manual.

2--The Railway administration may examine the feasibility of shifting of 'C' class level crossing No. 29 by 10.90 m towards Parsoda side to have straight approach road from Goadwadi to Daigaon without any turns.

**3--DASHING OF TROLLY OF ROAD TRACTOR WITH 443 UP-AJMER-MHOW PASSENGER BETWEEN STATIONS MOKHAMPURA-BIJAINAGAR ON AJMER DIVISION OF NORTH WESTERN RAILWAY ON 16/04/2005**

a)CAUSE-DUE TO INFRINGEMENT BY STONE AGGREGATE AND TRACTOR TROLLEY,WHICH HAD BROUGHT STONE AGGREGATE FOR THE WORK OF GAUGE CONVERSION.

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- 4 (Passengers),SIMPLE- NIL

c)COST—Rs.500/-.

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

#### RECOMMENDATIONS

1--Approach ramps should have easy gradients and should meet formation in smooth curve to facilitate easy manoeuvring of vehicles from ramp to formation.

2--A gate/barrier should be provided across entry points for vehicles/machinery coming close to track. such gates should be kept locked and entry of vehicles should be regulated by an authorized representative of the Engineer-in-charge.

3--Duly designed semi-permanent fencing should be provided along running line, at a distance of 3.5m from the center line of the track, at work sites. The fencing should remain in position till vehicles/machinery are required to work adjacent to running line.

#### **4--COLLISION OF 9168 UP SABARMATI EXPRESS WITH UP JNPT CONRAJ GOODS TRAIN AT SAMLAYA JN STATION ON VADODRA DIVISION OF WESTERN RAILWAY ON 21/04/2005.**

a)CAUSE-DUE TO CLEARING OF RECEPTION AND DESPATCH SIGNALS WITHOUT ENSURING CORRECT SETTING OF POINT No. B9(N) AND DUE TO UNAUTHORISED INTERFERENCE IN INTERLOCKING CIRCUIT.

b)CASUALTIES:-KILLED- 16 (2 Railway crew, 14 Passengers), GRIEVOUS- 40(1 Rly crew), SIMPLE- 110 (Passengers)

c)COST—Rs. 76,83,500/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

#### RECOMMENDATIONS

1--Western Railway should ensure implementation of instructions contained in their letter no. SG.2A/21 dated 27.4.2005.

2--Cards with check list/trouble shooting chart should be prepared for attending to signal

failures. Separate cards should be prepared for points, signals, track circuit, etc. Staff should take relevant card while proceeding to attend a failure and should proceed with items sequentially upto their authorization and then consult SI.

3--It is to be ensured that problem due to illiteracy do not hamper the work by keeping maintenance staff in such combinations that at least one person in a group can maintain records and prepare messages.

4--Railway should issue instructions to signaling staff that testing of signals should be done by getting physical conditions created and not by interference with relays, circuits and terminals.

5--Use of wires for testing purpose should be stopped and probes fixed with adequate length of wires and jacks should be provided in relay rooms.

6--It should be ensured that data logger signals are thoroughly checked at the time of installation.

7--Checking of springing back of fixed heel switches should be included in items for checking in joint inspection of points and crossings by signal and P.Way officials.

8--Supervisors should be counseled to take note of use of vague or wrong terms in the working and repeatedly counsel staff for using standard and clearly defined terms.

9--Railway should ensure that works requiring disconnection are undertaken only after disconnection message has been issued and disconnection has been allowed.

10--Section Controller should be debarred from interacting directly with switchman in end cabins provided with telephone connection to control, except during emergency. During normal work, interaction from control should be only through SM.

11--Railway should ensure compliance of Subsidiary Rule 5.12(5)(b)(v) by random checking of records with data loggers and should take disciplinary action against erring staff.

12--Railway Should ensure compliance of Subsidiary Rule 3.68(1)(c) by random checking of records with data loggers and should take disciplinary action against erring staff.

13--Railway should implement the procedure order contained in their letter no. SG.215/46 Vol.III dated 20.5.2005.

14--Western Railway Administration should issues orders for designating authorized officers for issuing and amending Station Working Rules.

15--Railway should arrange inspection of all works, involving change from mechanical to electrical operation of points, commissioned in last three years and take corrective action for points, where toe of switch is projecting more than 50 mm from switch extension bracket.

Railway should ensure that in future, such works conform to RDSO's drawing and specifications.

16--Railway should seek RDSO's decision for extent of deviation which can be allowed to remain in position of switch extension bracket in already completed works, from RDSO's drawing No. SA 9101 and take further action as per RDSO'S decision.

17--Railway Board may consider directing RDSO to take up provision of electro pneumatic brakes on all types of coaches for study.

**5--UNUSUAL OCCURRENCE OF EMISSION OF SMOKE FROM THE BRAKE BLOCKS OF GDP-4 EMU AND JUMPING OUT OF THE PASSENGER FROM THE EMU AT VIVEKVIHAR HALT STATION OF DELHI DIVISION OF NORHTERN RAILWAY ON 25.04.2005.**

a)CAUSE-AT VIVEK VIHAR RAILWAY HALT STATION, SMOKE WAS SEEN COMING OUT FROM THE WHEEL AREAS OF THE EMU COACH BY PASSENGER STANDING ON THE PLATFORM AND THINKING IT TO BE DUE TO FIRE IN THE TRAIN, RAISED ALARM OF FIRE IN THE TRAIN WHICH CAUSED PANIC AMONGST THE TRAVELING TRAIN PASSENGERS AND AS A RESULT, THE TRAIN PASSENGERS STARTED JUMPING OUT OF THE TRAIN RESULTING IN THE GRIEVOUS INJURY TO A LADY PASSENGER WHEN SHE JUMPED OUT OF THE EMU COACH ON THE NON-PLATFORM SIDE.

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- 1 (Passenger),SIMPLE- NIL

c)COST--Rs NIL

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

**RECOMMENDATIONS**

1--Train passengers should be cautioned not to detrain from the EMU train on the non-platform side.

2--The height of platform should be specified as 840 mm for EMU in the Schedule of Dimensions Revised 2004 in Chapter-II.

3--A detailed survey of all the stations should be undertaken where EMU trains run and all the platform which are not having height as 840 mm should be raised.

4--Brake blocks should be of the material which do not produce slightest of smoke and emit smell of something during brake applications.

5--Doors of the motor coach where HT equipments are housed should be kept closed and locked during the services.

6--EMU trains should be provided with flashing tail lamps.

7--Assistant motorman should be provided on EMU trains.

8--Few services of EMU may be introduced which have the facilities of the opening and closing of the doors on the platform side only on stopping and these may be air-conditioned.

**6--UNUSUAL OCCURRENCE OF FIRE IN 1520 UP (DMU SHUTTLE) BETWEEN STATIONS MARKUNDI-TIKARIYA ON JABALPUR DIVISION OF WEST CENTRAL RAILWAY ON 10/05/2005.**

a)CAUSE-DUE TO MALFUNCTIONING OF AUXILIARY RECTIFIER-CUM-REGULATOR PANEL OF DPC 12003.

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- NIL, SIMPLE- NIL

c)COST—Rs. 26,50,000/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

**RECOMMENDATIONS**

1--The Railway Administration should issue guidelines for action to be taken by field staff in case of fire in one of the coaches of DMU rakes.

2--For skill development of Mechanical Officers training programmes should be organized at various levels regarding configuration and operation of various types of locomotives and rolling stock.

3--In addition to above recommendations, action on following aspects having oblique relation with safety may be taken:-

1. Asst. driver to look around both the DPCs on stopping stations.
2. Guard should be counseled for better response in emergency.
3. Concerned officers should be verbally counseled.
4. Mock trials to be conducted to train HQ officers regarding functioning and duties of HQ Disaster Management Cell.

5. Raising Minimum Educational qualifications of loco pilots from VIII standard to Diploma in Engineering or Graduation.

6. Implementation of various items mentioned in Manual for Prevention of Fires in DMUs to be monitored.

7. More Mock trials to be conducted to improve turning out and running of ARTs during accidents.

**7--DERAILMENT OF 489 UP CHITTAURGARH-MHOW PASSENGER BETWEEN STATIONS DHOSAWAS-RATLAM ON RATLAM DIVISION OF WESTERN RAILWAY ON 06/06/2005.**

a)CAUSE-DEFECT IN THE LOCOMOTIVE.

b)CASUALTIES:-KILLED- 2(Passenger) GRIEVOUS- 8(Passenger) SIMPLE- 10 (Passenger)

c)COST—Rs. 28,08,680/-.

d)CATEGORY- Failure of Railway Staff.

**RECOMMENDATIONS**

1--Procedure order for implementation of maintenance instruction contained in Para 2.5.15 of maintenance instructions MP.MI.71/78 Rec. July 92 should be prepared and circulated by RDSO.

2--Practices being followed by Ajmer Workshop should be thoroughly checked and it should be ensured that prescribed maintenance instructions are correctly followed by the workshop while carrying out schedules on rolling stock.

3--Practices being followed by Diesel/Electric Loco Sheds and Workshops of Western railway should be thoroughly checked and it should be ensured that prescribed instructions are correctly followed by sheds and workshops while carrying out schedules on rolling stock.

4--Railway should arrange one time checking of running quality of all locomotives running on Western Railway, by loco inspectors and officers, to identify any loco running with any serious defect and remedial action should be taken for such identified locos.

5--Railway should undertake a thorough check in Diesel Sheds and Rolling Stock Maintenance Depots regarding accuracy of critical measurements and it should be ensured that measurement are properly taken and recorded.

6--Railway should ensure full safety equipment availability with guards, who are booked to work passenger trains.

**8--HEAD ON COLLISION BETWEEN 2802 DN-NEW DELHI PURI PURUSHOTTAM EXPRESS AND UP ELE-NO.20631 WAM 4 BETWEEN STATIONS GAMHARIA-BIRARAJPUR ON CHAKRADHARPUR DIVISION OF SOUTH EASTERN RAILWAY ON 20/06/2005.**

a)CAUSE-FAILURE OF RAILWAY STAFF

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- 4 (Passengers),SIMPLE- 22(Passengers)

c)COST--Rs 4206726

d)CATEGORY-FAILURE OF RAILWAY STAFF

**RECOMMENDATIONS**

1--Necessary instructions are to be incorporated in SWR to keep a constant watch on the panel indications regarding yard position by the on duty panel operator of RRI/Panel inter locked stations.

2--Collision revealed poor knowledge of working and proficiency levels of crew and Station Superintendent in safety matters. Loco inspectors and Traffic Inspectors need to be proactive and effective in inculcating safety. They should foresee all possible eventualities, devise and organize mock drills to test the knowledge and impart training so as to raise the proficiency levels. For raising knowledge/proficiency levels of those directly responsible for working trains necessary instructions be issued and steps as deemed necessary be taken.

3--Adequate safeguards should be provided at Gamharia in the yard layout or otherwise to avoid untoward eventualities.

4--(i) Routes of Up starter signal Nos. 3M, 3L1,3L2, 3L3 leading to BIRP-GMH Up line should be controlled by Up Advance Starter signal No.6. Similarly routes of Up starter signal No. 3M,3L1,3L2,3L3 leading to GHM-SINI up line should be controlled by SA7.

(ii) ON aspects of last and 1st stop signals are to be proved in DLBI circuit of GHM-BIRP.

5--Necessary directions for extracting accident reports and their scrutiny to identify malfunctioning (if any) of signaling equipment to be issued.

6--Installation of Voice Recorder in Control Office and stations should be completed as targeted(by September 2005).

7--Provision of MUV suggested for the Medical Department should be expedited and completed as planned.

8--Provision of cell phones to Medical Officers should be considered.

**9--DERAILMENT OF 7481 UP BILASPUR-TIRUPATI EXPRESS BETWEEN STATIONS RAIPUR BLOCK HUT-MANDIRHASAUD ON SAMBALPUR DIVISION OF EAST COAST RAILWAY ON 05/07/2005.**

- a) CAUSE-DEFECTS IN LOCOMOTIVE NO. WDM 3A 14037 OF THE TRAIN.
- b) CASUALTIES:-KILLED- NIL, GRIEVOUS- 3 (Passengers),SIMPLE- 13 (Passengers)
- c) COST--Rs 4,14,49,000/-.
- d) CATEGORY-FAILURE OF EQUIPMENT

**RECOMMENDATIONS**

1--Based on condition and road worthiness of locomotives, Loco Sheds should advise suitable restriction on speed as deemed necessary so as not to jeopardize safety.

**10--INCIDENCE OF FIRE IN COACH OF THE TRAIN NO. 2673-CHENNAI-COIMBATORE DN CHERAN EXPRESS BETWEEN STATIONS SULUR ROAD-IRUGUR ON PALAGHAT DIVISION OF SOUTHERN RAILWAY ON 19/07/2005.**

- a) CAUSE-FIRE CAUSED BY THE ACTION OF THE PERSON COMMITTING SUICIDE WHO SET HIMSELF AFLAME.
- b) CASUALTIES:-KILLED- 1 (Passenger),GRIEVOUS- Nil ,SIMPLE- Nil
- c) COST--Rs 24,46,156/-
- d) CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

**RECOMMENDATIONS**

1--The checking of unreserved compartments of the trains by the squad TTEs, the Government Railway Police and the Railway Protection Force should be more purposeful, vigorous, repetitive and streamlined. Proper coordinated efforts should be made by these departments to detect the carriage of inflammable materials by the passengers.

2--It was found that the fire spread through the entire coach and the coach was burnt in a matter of approximately 15 minutes in spite of use of fire extinguishers to put out the fire from the beginning. The fire force also was of little help as the coach could not be saved. The result of the fire should have been catastrophic if it had happened at night when so early detection was impossible. Thus, the materials and paint used in the coaches of the trains should be fire-resistant particularly in view of increasing trend of fire and explosion incidences in Indian Railways. It is suggested that pre coated steel sheets of thin gauge should be used on inside wall and roof as well as benches and upper berths in general service compartments. The steel sheets will also contribute to increasing the structural strengths of the coaches which may be considered in the design calculations of the coach.

Alternatively steel wire reinforced concrete can be used in seat and upper berths. Similar material has been used with considerable success in the platform seats in Konkan Railway and South Western Railway. This will increase the self weight of the coaches but only marginally. Cloth curtains in air-conditioned coaches can be dispensed with. In any case, they do not serve any purpose on the tinted windows of air-conditioned coaches.

3--In case, the above modifications cannot be done for the entire coaches, fire barriers consisting of above materials can be used at suitable intervals to prevent the spread of fire.

4--It was seen that 8 fire extinguishers could not put out the fire though the same were used practically from the beginning. Some of the fire extinguishers in the train should be of higher capacity to deal with such situations.

**11--UNUSUAL INCIDENCE OF HITTING BY OPEN DOOR OF A SIGNALLING JUNCTION BOX TO THE PASSENGER OF TRAIN NO.6053 DN CHENNAI-TURUPATI EXPRESS BETWEEN TIRUNINRAVUR-VEPPAMPATTU STATION OF CHENNAI DIVISION OF SOUTHERN RAILWAY ON 21.07.2005.**

a)CAUSE-DUE TO OPENING OF CHENNAI SIDE DOOR OF THE LOCATION BOX NO. TS-4 FULLY ON ACCOUNT OF BENDING OF THE RESTRAINING MS FLAT DUE TO HAVE WIND FORCE GENERATED DURING MOVEMENT OF 6053 EXPRESS ON THE DOWN LINE

b)CASUALTIES:-KILLED- NIL ,GRIEVOUS- 2,(passengers) SIMPLE-1(Passenger)

c)COST--Rs 5,000/-

d)CATEGORY- Failure of equipment.

**RECOMMENDATIONS**

1--The unnecessary structures beside the track, noted during the joint inspection of officials for detecting infringements should be removed immediately.

2--The doors of signaling junction boxes(particularly near running track) should be closed as soon as the work is over, even temporarily. Suitable instructions in this respect may be issued.

3--Restraining members to prevent the doors of signaling junction boxes near running tracks to open beyond 90 degree should be properly designed to the extent possible. An angle section having high stiffness should be invariably used as restraining member.

**12--EXPLOSION IN COACH OF 2391 UP SHRAMJEEVI EXPRESS BETWEEN HARPALGANJ AND KOIRIPUR STATIONS OF LUCKNOW DIVISION OF NORTHERN RAILWAY ON 28.07.2005.**

a)CAUSE-EXPLOSION WAS CAUSED BY EXPLODING A MIXTURE OF HIGH EXPLOSIVE RDX, ALUMINIUM NITRATE AND FUEL OIL USING AN ALARM CLOCK AS TIMER KEPT SUSPECTED TO BE KEPT IN A SUITCASE UNDER THE SEAT NO.85 OF THE COACH NO. NF98466 GS.

b)CASUALTIES:-KILLED- 14,(Passengers) GRIEVOUS- 20(Passengers)  
SIMPLE- 42(Passengers)

c)COST--Rs 1.2 lakhs

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

**RECOMMENDATIONS**

1--The train passengers should be regularly cautioned to remain vigil and report to the railway authorities and or to the escort party in the train, of persons on whom they are suspicious of or suspicious of unclaimed objects or baggage lying in the coaches.

2--In the trains passing through areas suspected or reported of miscreant activities, RPF and GRP escorts should invariably identify baggage to detect any unclaimed baggage of objects. Such checks should invariably be made in the general second class coaches at the starting stations of the trains.

3--Guards and TTEs of the train must record the details of injured train passengers being sent to hospital soon after the accident.

4--Loco Pilot (Goods) should not be permitted to work mail and express trains. Selections of Loco Pilots may be reviewed giving greater emphasis on his driving skills, skills and knowledge to attend and to decide upon further movement of the train during failures in the mid sections of the locomotive.

5--No new passenger/mail and express trains should be introduced unless and until adequate Loco Pilots are available.

6--Ex-gratia payments not yet paid to the nearest kith and kin of two of the train passengers who died should be expedited.

**13--COLLISION BETWEEN 6 JNK PASSENGER TRAIN AND LOADED TRUCK AT UNMANNED LEVEL CROSSING BETWEEN STATIONS PEHOWA ROAD-KAITHAL ON DELHI DIVISION OF NORTHERN RAILWAY ON 13/08/2005.**

a)CAUSE-THE TRUCK DRIVER DID NOT STOP AT THE STOP BOARD PROVIDED AT UNMANNED LEVEL CROSSING GATE NO. 45C CLASS TO LOOK FOR ANY

APPROACHING TRAIN AND CROSS . THIS UNMANNED LEVEL CROSSING GATE WHEN HE WAS SURE THAT NO TRAIN WAS APPROACHING THIS LEVEL CROSSING. HE FAILED TO CONTROL HIS TRUCK BECAUSE OF OVERLOADING OF HIS TRUCK WITH BALLAST AND AS A RESULT HIS TRUCK COLLIED IN THE SIDE OF THE LOCOMOTIVE WHEN THIS TRAIN WAS RUNNING PAST THROUGH THIS UNMANNED LEVEL CROSSING GATE, AT ABOUT THE BOOKED SPEED OF THE SECTION. HE VIOLATED CLAUSE 131 OF MOTOR VEHICLES ACT 1988.

b)CASUALTIES:-KILLED- Nil , GRIEVOUS- 3 (Pass.), SIMPLE- 3 (Pass.)

c)COST--Rs 1,04,100/-.

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

#### RECOMMENDATIONS

1--The speed breaker on the approach road of the unmanned level crossing gate no. 45'C' class which has flattened should be repaired immediately.

2--Drivers of tractor trolleys and trucks should be checked for their knowledge regarding provisions of Section 131 of Motor Vehicles Act 1988 and counseled.

3--While conducting checks at level crossing gates, overloading in the trucks should also be checked.

4--In non-controlled sections, occurrence of any unusual incidents and any failures of S&T equipment should be reported immediately to the Section Controller through DoT phones provided at the railway stations and or from the nearby PCO.

5--Non-controlled sections should be converted into controlled sections on the railway.

#### **14--UNUSUAL OCCURRENCE OF FIRE TO THE PANTOGRAPH OF COACH OF L-13 DN LONAVALA-PUNE LOCAL BETWEEN STATIONS VADGAON-TALEGAON OF PUNE DIVISION OF CENTRAL RAILWAY ON 25/08/2005.**

a)CAUSE-DUE TO EXTERNAL CONDUCTING MATERIAL SHORTING OF THE PANTOGRAPH AND VENTILATION WIRE MESH ON HT COMPARTMENT ON THE ROOF.

b)CASUALTIES:-KILLED- NIL ,GRIEVOUS- 3(Pass.),  
SIMPLE- 3(Passengers)

c)COST—Rs. 14,000/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

#### RECOMMENDATIONS

1--The wire mesh and its frame should be immediately painted with suitable anti-track paint, so that there are no chances of shorting of live pantograph with any other portion of roof. Complete roof should be properly insulated electrically.

2--Inter sub-station tripping devices as recommended earlier vide recommendation no. 9.6 of detailed Inquiry Report of fire of N-16 Up train on Kasara-Kalyan section on 29.04.2004, should be provided in DC traction area on Central Railway at the earliest.

3--Protective screens may be provided on all over line structures such as ROB, FOB., etc. in Pune and Mumbai Division immediately.

#### **15--DASHING OF RAIL BUS-602 WITH AUTORICKSHAW AT MANNED LEVEL CROSSING NO 20 BETWEEN STATIONS VISNAGAR-VADNAGAR OF AHMEDABAD DIVISION OF WESTERN RAILWAY ON 05/09/2005**

a)CAUSE-MOVEMENT OF THE TRAIN THROUGH INTERLOCKED LEVEL CROSSING IN OPEN CONDITION.

b)CASUALTIES:-KILLED- NIL, GRIEVOUS- 1(Out sider) ,SIMPLE- NIL

c)COST--Rs 5,000/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

#### RECOMMENDATIONS

1--Railway should take urgent action for filling vacancies in the cadre of gatekeepers.

2--Railway should identify cases where trains are being worked under exceptional/failures conditions for long durations and take action to eliminate such exceptions/failures.

3--Railway should ensure that working of all lines is adequately supervised by field staff, inspected by officers and adequately monitored by Divisional Administration .

#### **16--DERAILMENT OF 1108 DN-BUNDELKHAND EXPRESS BETWEEN STATIONS DATIA-SONAGIR ON JHANSI DIVISION OF NORTH CENTRAL RAILWAY ON 03/10/2005**

a)CAUSE-DUE TO NON APPLICATION OF BRAKES OF THE TRAIN.

b)CASUALTIES:-KILLED- 13(12 Passengers & 1 Railway Crew) GRIEVOUS- 11 (passengers),SIMPLE- 25(Passengers)

c)COST--Rs 2,98,56,000/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

## RECOMMENDATIONS

1--The video cassette of the serious accidents shall be prepared not by taking clippings here and there but in a continuous manner by specifically showing the position of coaches, engine, under gears of coaches & engines and the clues which may in turn provide some information to the inquiring authority.

2--Railway Administration shall constitute only one or two teams of senior Supervisors comprising of different departments to take the joint observations of the track, coaches, locos, signals etc. or any other relevant information.

3--It is desirable to have separate set of drivers and assistant drivers for hauling Diesel and Electric locomotives for running passenger carrying trains.

4--Digital voice recorder with a memory of minimum one week should be installed in driving cabs of all locomotives for analyzing the conversation between the drivers, the assistant drivers and the station staff in case of need.

5--Breathalyzer and blood tests of all the train crew and train passing staff on duty at the stations on either end of the block section should be undertaken immediately after the train accidents.

6--Instructions be reiterated to ensure that the type of locomotive attached/booked with a train is authorized to run at the maximum permissible speed for the train on the entire run till the next loco changing point. Whenever in an emergency, it is necessary to attach/book a locomotive with lower sanctioned speed, caution order should be issued to the drivers for observing the sanctioned speed.

7--Instructions be reiterated to ensure that dead locomotive is escorted by a competent person not lower than Asst. Driver before it is attached to any train/light engine.

## **17--UNUSUAL OCCURRENCE LEADING TO DERAILMENT OF 415 UP REPALLE-SECUNDERABAD DELTA FAST PASSENGER TRAIN BETWEEN BLOCK STATIONS RAMANNAPET AND VALIGONDA AT BRIDGE NO.61 OF GUNTUR DIVISION OF SOUTH CENTRAL RAILWAY ON 29.10.2005.**

a)CAUSE-FAILURE OF RAILWAY AFFECTING RAMASAMUDRAM TANK AND SUBSEQUENT FAILURE OF RAILWAY BRIDGE NO.61, COUPLED WITH HUMAN FAILURE.

b)CASUALTIES:-KILLED- 116(115 Passengers&1Rly.crew GRIEVOUS-26 (Passengers)  
,SIMPLE- 78(77 Passengers &1 Rly crew

c)COST--Rs 4,60,00,000/-.

d)CATEGORY-FAILURE OF EQUIPMENT

## RECOMMENDATIONS

1--The linear waterway including the opening for the existing railway bridges and design of overflow surplus weir for railway affecting tanks should be as per laid down Codal provisions/bridge Rules by Railway Administration and Minor Irrigation Department of Andhra Pradesh Government. As jointly signed by Chief Bridge Engineer, South Central Railway and Chief Engineer, Minor irrigation and Chairman, State Committee of Engineers, A.P. Railway affecting and Bridges vide para 4.01 of Draft Manual of Instructions for Railway Affecting Tanks and Works, Andhra Pradesh government should approve the return period for calculating maximum design discharge and the design of overflow surplus weir for Railway Affecting Tanks as 50 years. The Railway Administration and the Minor Irrigation Department of Government of Andhra Pradesh should modify the existing Railway Bridges and the overflow surplus weir on a time bound programme basis.

2--The instructions contained in the A.P. state government Order No. G.O.Ms No. 943 Revenue (V.O.) department, dated 7.11.1990 should be reiterated to the concerned Revenue/Irrigation officials upto the level of Village Administration for informing to the Divisional Railway Engineers or to the nearest Railway Station Master, Gangmen/Gatemen of the nearest track location of any mishap of unusual occurrence of floods, cyclone and other natural calamities including likelihood of breach to any railway affecting tank in time. For this purpose, the High Flood Level/Maximum Water Level for the surplus weir shall be considered as danger level and prominently displayed for the nominated persons to take immediate action.

3--For Railway Affecting Tank bridges, the pucca flooring including curtain and drop walls along with pitching of formation upto 0.3m above danger level for a length on either side of the bridge to be decided by Railway Administration based on height of bank, distance of Railway Affecting Tank from Railway Bridge etc, should be provided.

4--C&T boards should be provided at the approach of Railway Affecting Tank bridge as provided in the Blue Book on Monsoon instruction -2003 issued by S.C. Railway .

5--Railway Board may be impressed on upon the necessity of devising some electronic/electrical gadgets for assessing the flood levels of vulnerable bridges and connecting them with the signals of approaching stations or with the Station Master so that in case of water level raising beyond a certain level, the signal is actuated/alarm is raised in SM's room.

6--The walkie-talkie set should form a part of monsoon patrol equipment for stationary watchman and mobile patrolman. The patrol charts for the entire section should be got prepared and on receipt of weather warning report the patrolling of the section by the mobile patrolman should be similar to the system as laid down in the blue book on monsoon instructions with exchange of patrol book by them/signing on the patrol book by the Assistant Station Master/Dy.SS of the concerned stations.

**18--DASHING OF TRUCK WITH JWO-SSB SPL.GOODS TRAIN AT MANNED LEVEL CROSSING NO 96 BETWEEN STATIONS SHRI MADHOPUR AND KACHERA ON JAIPUR DIVISION OF NORTH WESTERN RAILWAY ON 07/11/2005.**

a)CAUSE-LEVEL CROSSING NO. 96 BEING KEPT UNAUTHORISEDLY IN OPEN CONDITION.

b)CASUALTIES:-KILLED- 0,GRIEVOUS- 1(out sider),SIMPLE-2(Out sider)

c)COST--Rs 40,500/-.

d)CATEGORY-FAILURE OF RAILWAY STAFF

**RECOMMENDATIONS**

1--Railway should identify, through joint inspections by P.Way and traffic officials, those manned non-interlocked level crossings, where normal position of the gate is 'closed to road traffic' but due to high density of road traffic, gates are likely to be opened without obtaining private number from Station Masters or kept open unauthorisedly after giving private number for closing. Railway should arrange to counsel Station Masters of controlling stations of such identified level crossings to arrange opening of these gates frequently for road traffic.

2 --Railway should arrange counseling of Loco Pilots for not to delay switching on the short memory freeze of the speed recorder, in case of accidents.

3--Railway should ensure that officials do not leave Headquarters without taking permission from controlling officers.

4--Railway Should ensure that PCP sets provided in locomotives and brake vans are in working order.

**19—SIDE COLLISION OF 619 UP(GMO-CPU PASSENGER) WITH LHM SPL UP GOODS TRAIN LOADED WITH COAL IN BARWADIH STATION YARD OF DHANBAD DIVISION OF EAST CENTRAL RAILWAY ON 9.11.2005.**

a) CAUSE- DUE TO CLOSURE OF LEADING END ANGLE COCK OF A WAGON AT THIRD POSITION FROM THE LOCOMOTIVE BY UNIDENTIFIED MISCREANTS.

b)-CASULTIES ;-KILLED – 9(Passengers),GRIEVOUS- 8(Passengers),SIMPLE – 18 (Passengers).

c) COST- Rs. 9,14,50,000/-.

d) CATEGPRY- Failure of other than Railway Staff.

**RECOMMENDATIONS-**

1.The instructions as contained in slip No.1 of G&SR EC Railway 2005 Edition, in SR 44.19(i)(1)(o) regarding providing of walkie-talkie sets in working order to the Drivers & Guards of all trains including Passenger and Freight should be reiterated and implemented in the field. The responsibility for providing walkie-talkie sets to the guards of the train should be changed to the Operating Department instead of S&T Department, the Operating Department being the user department.

2. Post loading GDR check based on Railway Board Instructions No. 98/M(N)/951/12 dated 25.5.2005 by the drivers &Guards of freight trains should be ensured with proper recording at the station/siding point.

3.Instructions contained in Chapter III of Eastern Railway Accident Manual , Calcutta 1982 relating to preservation of clues and recording of joint measurements in time without delay should be reiterated.

4. Railway Administration should consider provision of locking arrangement to make it difficult/inaccessible for miscreants to operate the handle of the angle cock for miscreant-prone areas.

**20--COLLISION OF 8006 DN-KORAPUT HOWRAH EXPRESS AT REAR END OF STATIONARY K-112 KHARAGPUR HOWRAH PASSGER AT OUTSIDE HOME SIGNAL OFPANSKURA STATION ON KHARAGPUR DIVISION OF SOUTH EASTERN RAILWAY ON 25/11/2005.**

a)CAUSE-DUE TO THE FAILURE OF CREW OF 8006 DOWN KORAPUT-HOWRAH EXPRESS TO OBSERVE CAUTION AND CONTROL THE TRAIN AFTER PASSING AS 86 AT DANGER IN AUTOMATIC SIGNAL TERRITORY.

b)CASUALTIES:-KILLED-0,GRIEVOUS- 2(1 Passenger &1 railway Crew ,SIMPLE- 2(1 Passenger & 1 Railway Crew)

c)COST—Rs. 26,53,200

d)CATEGORY-FAILURE OF RAILWAY STAFF

#### RECOMMENDATIONS

1--Quality of Training being imparted should be improved.

2--Datalogger

(i) in automatic section, all track circuits up to the first automatic signal preceding the first stop signal of the station should be connected to the data logger.

(ii) instructions and arrangement for extracting/printing exception report be issued.

3--Safety consciousness

Action should be taken to improve general safety awareness and consciousness.

4--system for monitoring fitness for duty for booking staff belonging to safety category in particularly those associated with train running from the administration side should be devised as highlighted by CMD/South Eastern Railway.

5--Action to be taken in case of foggy weather conditions at various levels should be defined including disposal of reports having implication on safety.

#### **21--DERAILMENT OF 3049 UP HOWRAH-AMRITSAR EXPRESS BETWEEN STATIONS PURAINI-NAGINA ON MORADABAD DIVISION OF NORTHERN RAILWAY ON 26/02/2006.**

a)CAUSE-TAMPERING WITH THE TRACK BY REMOVAL OF FISH PLATE AND FISH BOLTS OF BOTH THE RAIL JOINTS OF THE GLUED RAIL JOINT AND ALL ITS FASTENINGS, ERC CLIPS, BY SOME UNKNOWN OUTSIDE PERSON IN THE NIGHT OF 25.0206/26.02.06.

b)CASUALTIES:-KILLED- 1(Passenger),GRIEVOUS- Nil ,SIMPLE- 2(Passengers)

c)COST--Rs 61.25 lakh

d)CATEGORY-FAILURE OF PERSONS OTHER THAN RAILWAY STAFF

## Recommendations

1. There have been number of cases of tampering with the track in the past in the block section of Nagina-Purani and FIRs in all those cases were lodged. The police must work out these tampering with the track, and the tampering with the track must be stopped.
2. To keep the Manned level crossing gates closed, locked and without gate man during the night. Railway Board should circulate approved gate working instructions, to the Railways.
3. Till such time the approved gate working instructions for keeping the manned level crossing gates closed, locked and without gateman during the night are received by the railway, gatemen should be posted during the night to man the level crossing gates.

### **22--UNTOWARD INCIDENCE OF TRAIN NO.234 DN BANGALORE CITY-MYSORE PASS.BEING GRAZED BY TIPPER LORRY BELONGING TO CONSTRUCTION DEPT. BETWEEN BIDADI AND RAMANAGARAM STATIONS OF BANGALORE DIVISION OF SOUTH WESTERN RAILWAY ON 26.02.2006.**

a) CAUSE-DUE TO NEGLIGENCE ON THE PART OF THE CONSTRUCTION DEPARTMENT OF SOUTH WESTERN RAILWAY TO PROVIDE ADEQUATE SUPERVISION, ADEQUATE SAFEGUARDS FOR WORKING NEAR RUNNING LINE AND THE DRIVER OF TIPPER LORRY NOT BEING ABLE TO CONTROL THE LORRY WHICH HIT THE OUTSIDE OF THE COACHES OF 234 PASSENGER.

b) CASUALTIES:-KILLED- 1(Passenger), GRIEVOUS-3(Passengers) SIMPLE- 7 Passenger)

c) COST--Rs 500/-

d) CATEGORY-FAILURE OF RAILWAY STAFF

## RECOMMENDATIONS

1--All the mandatory precautions required at the site of doubling works should invariably be taken including provision of proper rail fencing with a horizontal rail on top. provision of safety items and posting of look out men. The precautionary measures adopted should not be removed/withdrawn till such time as the works are fully completed. The item for fencing should be invariably provided for in the tender schedule & document of the earthwork as a paid item for entire length of earthwork.

2--The sanction of the Commissioner of Railway Safety should always be taken before the minor works are commenced. No work should be started unless CRS sanction is obtained for the works.

3--The South Western Railway should launch special drives, campaigns against footboard traveling.

4--In case of works involving joint work of open line and construction department, the duties and responsibilities should be clearly outlined in advance in a detailed written memorandum of understanding to be signed by both the parties. It is preferable that the work is done by a single party in whose charge the major worksite falls.

5--It is seen that rail or other suitable strong fencing made of structural section is not being erected by the Railway in spite of accepted recommendations of CRS in several accident cases referred to in para 7.4.3 above. In view of this it is felt that the railway Board should legislate the provision of proper strong fencing adjacent to running lines in case of doubling or other such works in the form of a correction slip to IRPWW.

**23. DERAILMENT OF 551 UP BHATNI-VARANASI PASSENGER BETWEEN KIRIHARPUR AND INDARA JN. STATIONS ON VARANASI DIVISION OF NORTH EASTERN RAILWAY ON 01.03.2006.**

- a) CAUSE- NEGLIGENCE OF RAILWAY STAFF.
- b) CASUALTIES- KILLED- NILL, GRIEVOUS-1(PASSENGER), SIMPLE-4 (PASSENGERS)
- c) COST- 15,69,630/-.
- d) CATEGORY- FAILURE OF RAILWAY STAFF

**RECOMMENDATIONS-**

1. Action should be taken to improve general safety awareness and consciousness among the train operation staff. For this a drive should be launched by N.E. Railway Administration.
2. Intensive checks and monitoring of all the drivers, assistant drivers and guard of the trains in N.E.Railway should be undertaken for their alertness. For this a drive should be launched by N.E. Railway administration.
3. The video cassette of the serious accidents shall be prepared not by taking clippings here and there but in a continuous manner by specifically showing the position of coaches, engine, under gears of coaches & engines and the clues which may in turn provide some information to the inquiring authority.
4. Railway Administration shall constitute only one or two teams of Senior Supervisors/officers comprising of different department to take the joint observations of the track, coaches, locos, signals etc or any other relevant information.

5. Digital voice recorder with a memory of minimum one week should be installed in driving cabs of all locomotives for analyzing the conversation between the drivers provided in the control offices.
6. Railway Administration should ensure proper functioning of the voice recorders provided in the control offices.
7. Breathalyzer and blood tests of all the train passing staff on duty at the stations on either end of the block section should be undertaken immediately after the train accidents.
8. Railway must ensure issuance of proper caution orders to the driver and guard of the trains.
9. Railway must ensure proper upkeep of their machineries.

**LIST OF NEW RAILWAY LINES ETC. AUTHORISED FOR PASSENGER TRAFFIC 2005-06****A-NEW LINES**

<b><u>S.N</u></b> <b><u>o.</u></b>	<b>Date of Authorisation</b>	<b>Section Opened</b>	<b>Railway</b>	<b>Km</b>
1.	04.04.2005	Chandigarh-Morinda Jn.	Northern	43.892
2	17.06.2005	Patna Sahib-Patna Ghat	East Central	1.000
3	08.06.2005	Kashmere gate-Central Secretariat (under Ground)	DMRC	6.621
4	9.12.2005	Kakdwip-Namkhana	Eastern	13.153
5	23.12.2005	Barakhamba Road-Dwarka	DMRC	22.936
6	26.12.2005	Omalur-Metur Dan	Southern	28.930
7	15.01.2006	Barahat-Banka	Eastern	15.528
8	18.01.2006	Princepaght-Majerhat	Eastern	5.750
9	20.01.2006	Shravanabelagla-Hassan	South Western	41.170
10	24.03.2006	Dwarka-Sec-9	DMRC	6.474
			<b>TOTAL</b>	<b>185.454</b>

**B DOUBLING**

<b>S.No</b>	<b>Date of Authorisation</b>	<b>Section Opened</b>	<b>Railway</b>	<b>Km.</b>
1.	22.04.2005	Barauni-Tilrath	East Central	8.140
2.	08.06.2005	Kashmere Gate-Central Secretariat (Underground)	DMRC	6.521
3.	15.06.2005	Sonarpur-Champahati	Eastern	7.900
4.	02.07.2005	Mansi-Mahesh Khunt	East Central	10.500
5.	05.07.2005	Harischandrepur-Bhaluka Road	Northeast Frontier	10.060

6.	12.07.2005	Masagram-Jangram	Eastern	7.092
7.	19.07.2005	Tanur-Tirunnavaya	Southern	16.487
8.	26.08.2005	Palla Roar-Masagram	Eastern	5.973
9	28.09.2005	Tirunnavaya-Kuttipuram	Southern	6.748
10.	06.10.2005	Cuttack-Raghunathpur	East Coast	31.553
11.	10.10.2005	Jalandhar-Pathankot	Northern	17.627
12.	25.11.2005	Naini-Link Jn.	North Central	0.815
13.	07.12.2005	Bharoli-Madhampur Punjab	Northern	12.264
14.	23.12.2005	Barakhamba road-Dwarka	DMRC	22.936
15.	02.01.2006	Raghunathbari-Rajgoda	South Eastern	7.983
16.	09.01.2006	Bhaluka Road-Kumarganj	Northeast Frontier	19.577
17.	15.01.2006	Chitpur-Dum Dum	Eastern	2.784
18.	24.03.2006	Kuttipuram-Pallipuram	Southern	7.175
19.	24.03.2006	Dwarka-Dwarka Sec. 9	DMRC	6.474
20.	28.03.2006	Balapalle-Pullampet	South Central	41.047
			<b>TOTAL</b>	<b>249.756</b>

### **C – GAUGE CONVERSION**

<b>S.No</b>	<b>Date of Authorisation</b>	<b>Section Opened</b>	<b>Railway</b>	<b>Km.</b>
1.	11.04.2005	Madurai Jn.-Manamadurai	Southern	47.973
2.	24.04.2005	Gosaigaonhat-Fakiragram	Northeast Frontier	23.000
3.	30.04.2005	Ranchi-Lohardaga	South Eastern	57.233
4.	04.05.2005	Agra-Bhartpur	North Central	51.590
5.	04.05.2005	Idgah –Agra Fort	North Central	1.390
6.	09.05.2005	Sihor Jn-Palitana	Western	27.520

7.	26.05.2005	Subramanya Road-Kabakapputtur	South Western	42.290
8.	10.06.2005	Mansi-Saharsa	East Centra;	42.45
9.	27.06.2005	Berach Jn Cabin-Udaipur City	North Western	112.012
10.	05.09.2005	Rupra-Baripada	South Eastern	51.617
11.	12.09.2005	Bankura-Sonamukhi	South Eastern	40.985
12.	20.09.2005	Salakati-Fakiragram	Northeast Frontier	19.000
13.	23.09.2005	Guntakal Jn-Hagari	South Central	34.932
14.	18.11.2005	Salakati-New Bongaigaon	Northeast Frontier	19.000
15.	16.12.2005	Kasara-Igatpuri	Central	19.550
16.	20.12.2005	Munabao-Indo Pak Border	North Western	1.600
17.	16.01.2006	Siwan-Thawe	North eastern	28.171
18.	20.01.2006	Barsoi Jn-Radhikapore Sec.	Northeast Frontier	54.420
19.	25.01.2006	Harari-Bellary	South Central	14.550
20.	07.03.2006	Bolarum-Secunderabad	South Central	13.780
21.	31.03.2006	Mansi-Khagaria	East Central	8.740
			<b>TOTAL</b>	<b>721.803</b>

#### **D - DIVERSION**

<b>S.No</b>	<b>Date of Authorisation</b>	<b>Section Opened</b>	<b>Railway</b>	<b>Km.</b>
1.	05./08.10.2005	Thalangai-Walajah Road ( Up Line)	Southern	4.300
2.	05./08.10.2005	Thalangai-Walajah Road (Dn Line)	Southern	5.300
			<b>TOTAL</b>	<b>9.600</b>

## **E- ELECTRIFICATION**

<b>S.No</b>	<b>Date of Authorisation</b>	<b>Section Opened</b>	<b>Railway</b>	<b>Km.</b>
1.	04.05.2005	Ernakulam-Kayankulam	Southern	124.000
2.	05.05.2005	Ernakulam-Kottayam	Southern	69.542
3.	08.06.2005	Kashmere Gate-Central Secretariate (underground)	DMRC	13.242
4.	15.06.2005	Sonarpur-Champahati	Eastern	7.900
5.	12.07.2005	Masagram-Jaugram	Eastern	7.092
6.	26.08.2005	Palla Road-Masagram	Eastern	5.973
7.	05./08.10.2005	Thalangai-Walajah Road (Up Line)	Southern	4.300
8.	05./08.10.2005	Thalangai-Walajah Road (Dn Line)	Southern	5.300
9.	29.11.2005	Bhadrak-Barang	East Coast	156.000
10.	09.12.2005	Kakdwip-Namkhana	Eastern	13.153
11.	23.12.2005	Barakhamba Road-Dwarka	DMRC	45.872
12.	02.01.2006	Raghunathbari-Rajgoda	South Eastern	7.983
13.	15.01.2006	Chitpur-Dum Dum	Eastern	2.784
14.	18.01.2006	Princepghat-Majerhat	Eastern	5.750
15.	22.03.2006	Saharanpur-Laksar	Northern	63.068
16.	24.03.2006	Dwarka-Dwarka Sec-9	DMRC	12.948
17.	30.03.2006	Kottayam-Kayankulam	Southern	53.788
			<b>TOTAL</b>	<b>598.695</b>

## APPENDIX VI

### RAIL ACCIDENT INQUIRIES WHICH WERE ENTRUSTED TO THE RESPECTIVE RAILWAY ADMINISTRATIONS.

1. **(a) Brief Description:** Dashing of tractor trolley with train No. 9733 Up Express at unmanned Level crossing between Chomun Samod- Nindhori Benar stations of Jaipur Division of North Western Railway on 24.05.2005.  
**(b) Casualties** : Killed : Nil  
Grievously injured : 2 (1 Passenger and 1 outsider)  
Simple injuries : 1 (Outsider)  
**(c) Cost of Damage to Railway Property** : Rs. 1000/-.  
**(d) Cause** : Negligence of Tractor Driver.
2. **(a) Brief Description:** Dashing of truck with train No. 290 Up at manned level crossing between Bakanian Bhaundri-Bairagarh stations of Ratlam Division of Western Railway on 11.10.2005.  
**(b) Casualties** : Killed : 1 (Outsider)  
Grievously injured : 2 (Railway Crew)  
Simple Injuries : 2 (Passengers)  
**(c) Cost of Damage to Railway Property** : Rs, 15,76,000/-.  
**(d) Cause** : Negligence of road user.
3. **(a) Brief Description** :Over shooting of starter signal by Driver of 1 ET passenger on Karura station of Allahabad Division of North Central Railway on 15.10.2005.  
**(b) Casualties** : Killed : Nil  
Grievously injured : 2 (Passengers)  
Simple injures : Nil.  
**(c) Cost of Damage to Railway Property** : Rs. 4,000/-.  
**(d) Cause** : The Motor man of the train failed to control the train as he was under the influence of liquor and not attentive to his duty. He also

permitted two unauthorized persons in the engine cab, who were not entitled to travel in the engine cab.

4. **(a) Brief Description** : Derailment of DN/RSP Up Goods Special at Bimalgarh Station of Chakradharpur Division of South Eastern Railway on 05.12.2005.

**(b) Casualties** : Killed 16 (4 Railway Crew and 12 Outsiders)  
Grievously injured ; Nil  
Simple injures : 3 (Outsiders)

**(c) Cost of Damage to Railway Property** : Rs. 1,31,75,000/-.

**(d) Cause** : As the train could not be controlled due to insufficient brake power arising out of negligence of the Guard and Driver in failing to carry out the GDR Check with due care in terms of S.R. 4.31.03.

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