GOVERNMENT OF INDIA

MINISTRY OF TOURISM AND CIVIL AVIATION

(COMMISSION OF RAILWAY SAFETY)

RAILWAY ACCIDENT INVESTIGATION REPORT

ON

Occurrence of casualties among passengers of 7 up Tinsukia Mail train at Km./77/3-4 between Pathsala and Tihu Stations on the Single Line New Bongaigaon Gauhati Metre Gauge Section of Alipurduar Division of Northeast Frontier Railway at 13-09 hours on 12 th March, 1981

Price : (Inland) Rs. 6.75 (Foreign) £ 1.62 or $ 3.15 Cents.

Date	: 12-3-1981.
Time	: 13.09 hours.
Railway	: Northeast Frontier.
Gauge	: Metre Gauge (1000 mm).
Location	: Km. 77/3-4 between Pathsala and Tihu stations on New Bongaigaon-Gauhati Section.
Nature of Accident	: Occurrence of casualties to passengers of 7 Up Tinsukia Mail.
Trains involved	: 7 Up Tinsukia Mail consisting of YP class steam locomotive No. 2074 and 9 coaches.
Speed	: 30 Km/h.
System of Operation	: CTC Section provided with Absolute Permissive Block Signalling.
Number of track	: One.
Gradient	: 1. in 1000 rising.
Alignment	: Straight.
Weather	: Clear.
Visibility	: Good.
Cost of damage	: Nil.
Casualty	: Killed — 1 Grievous — 3 Simple — 10
Relief arrangement and Medical attention.	: Satisfactory.
Cause	: Due to motor truck engaged in unloading ballast on the top of the embankment for the construction of a bridge on New B.G. project, infringing the moving dimensions of 7 Up Tinsukia Mail running on valid authority between Tihu and Pathsala stations.
Persons held responsible	: 1 An unknown person who was the Driver of the "culprit" truck which caused the infringement is held primarily responsible for the accident. 2. Sri Joydeb Mandal, IOW (Con), Sri A. K. Chakraborty, Asstt. Engineer (Con) and Sri K. C. Chowdhury, Executive Engineer (Con) are held to be blameworthy for not posting an additional man to supervise unloading of the truck and ensure safety.
Important Recommendation	: 1. Construction Department of N. F. Railway should arrange for posting of men wherever necessary in order to protect the metre gauge track whenever the track is fouled by the working of machinery or trucks of the Contractor. It is necessary that the provisions for adopting safety precautions should be followed scrupulously by all Construction Officials while carrying out any work likely to affect the safety of rail traffic. (Para 9.1). 2. Speed Recorder to be provided on all Steam locomotives hauling Mail and Express trains. (Para 9.2)

Abbreviations used in this Report

N. F. Railway	: Northeast Frontier Railway.
C.T.S.S.	: Chief Traffic Safety Superintendent.
D.R.M.	: Divisional Railway Manager.
Dy.CE/BG/Con	: Deputy Chief Engineer/Broad Gauge/Construction.
OC/GRP	: Officer in charge/Government Railway Police.
ADMO	: Assistant Divisional Medical Officer.

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S&T	: Signal and Telecommunication.
P.O.H.	: Periodical Overhaul.
Kms.	: Kilometers.
M.G.	: Metre Gauge
B.G.	: Broad Gauge.
CTC	: Centralised Traffic Control.
DEN	: Divisional Engineer.
IOW(Con)	: Inspector of Works (Construction).
TPs	: Telegraph Posts.
TTE	: Travelling Ticket Examiner.
AEN	: Assistant Engineer.
JCO	: Junior Commissioned Officer.
PWI	: Permanent Way Inspector.
SI	: Signal Inspector.
DME(C&W)	: Divisional Mechanical Engineer (Carriage and Wagon).
D.T.O.	: District Traffic Officer.
DSO	: Divisional Safety Officer.
E.L.R.	: Extra Labour Requisition.
TELCO	: Tata Engineering and Locomotive Company.

GOVERNMENT OF INDIA,
MINISTRY OF TOURISM & CIVIL AVIATION,
(COMMISSION OF RAILWAY SAFETY).

No...../*MAC*-68. *Dated the April*, 1981.

From : S. Subramanian,
Commissioner of Railway Safety, South Eastern Circle.
14, Strand Road (12th floor), Calcutta-700 001.

To : The Secretary to the Government of India,
Ministry of Tourism & Civil Aviation,
Sardar Patel Bhavan, Parliament Street, New Delhi.

Through : The Chief Commissioner of Railway Safety,
16-A, Ashok Marg, Lucknow-226 001.

Sir,

In accordance with Rule 4 of the Statutory Investigation into the Railway Accidents Rules 1973, I submit herewith the Report of my inquiry into the accident that occurred to passengers of 7 Up Tinsukia Mail at Km. 77/3-4 between Pathsala and Tihu stations on New Bongaigaon-Gauhati Metre Gauge Section in Alipurduar Division of Northeast Frontier Railway at 13.09 hours on 12-3-1981.

1.2 **Inspection and Inquiry**

1.2.1 I inspected the site of accident on 25-3-1981, N. F. Railway lines within the jurisdiction of Commissioner of Railway Safety, North Eastern Circle. Owing to the post being vacant, the N. F. Railway was being looked after by the Commissioner of Railway Safety, Eastern Circle, Calcutta. As he was busy with inquiries into a series of accidents on the Eastern Railway, I was directed by the Chief Commissioner of Railway Safety on 21-3-1981 to inquire into this accident. Accordingly I visited the site of accident on 25-3-1981. Under the circumstances mentioned above, the inquiry of this accident could not be held earlier.

1.2.2 A Press Notification was issued in the local papers, Gauhati inviting members of the public having knowledge relating to the accident to tender their evidence at the inquiry, or communicate to me by post at the Calcutta address. The Civil and Police authorities were duly notified. The inquiry was held at Gauhati station on 26-3-1981 and 27-3-1981. I also visited the 151 Army Base Hospital, Basista, Gauhati on 27-3-1981 and met three injured military passengers there.

1.2.3 The following officials were present at the inquiry :—

Railway officials

(i) Shri S.R. Sarkar, CTSS, N. F. Railway, Maligaon.

(ii) Shri M.V. Ramamurthi, DRM, N. F. Railway, Alipurduar Jn. (on 26-3-1981 only).

(iii) Shri M.K. Dev Barman, Dy., CE/BG/Con, Maligaon (on 27-3-81 only).

Non-Railway officials

(i) Shri M. Majumder, OC/GRP/N. F. Railway/Rangiya.

1.2.4 The evidence of 17 witnesses was recorded during the enquiry. Out of 17 witnesses 5 are non-railway witnesses.

1.2.5 In this report the terms 'right', 'left', 'leading', 'trailing', 'front' & 'rear' where used, are in reference to the direction of movement of 7 Up Tinsukia Mail.

1.3 **The Accident**

1.3.1 On 12-3-1981 at about 13.09 hours, some passengers travelling in 7 Up Tinsukia Mail sustained serious injuries as a result of coming into contact with a motor truck which was positioned to the right of, but too near to the Metre Gauge track, and was unloading ballast required for the extension of Bridge No. 483 for the Broad Gauge Construction Project. Two of the passengers fell down from the moving train. The Driver of the steam loco, himself having sustained a bleeding injury on his forehead, applied the brakes of the train immediately thereafter. The train came to a stop after a distance of approximately 250 m. There were no marks of collision with the truck on any of the coaches of the train, which suffered no damage whatever.

1.3.2 The weather was clear and visibility good under daylight condition. The speed of the train was estimated to be 30 Km/h at the time of accident.

1.3.3 Immediately after the accident, the Driver of the motor truck drove away his truck from the scene of the accident along with the labourers who were unloading ballast and it has not been possible for the Police authorities to apprehend either the truck or the Driver and other persons in the truck so far.

1.4 **Casualties**

As a result of the accident 14 persons suffered injuries, 4 sustaining grievous injuries and 10 simple injuries. Unfortunately one of the grievously injured passengers, who had fallen down from the train, rolled further and fallen into the floor of the culvert, died at the 151 Army Base Hospital Basista, Gauhati on

14-3-1981 afternoon without regaining consciousness. 2 other military passengers and one civilian passenger sustained grievous injuries. 9 other passengers and the Driver of the ill-fated train sustained simple injuries.

II. RELIEF MEASURES

2.1.1 As soon as the accident happened, the Guard of the train rendered first-aid to most of the injured passengers. The train continued its journey to Rangiya reaching Rangiya at 14.48 hours. The ADMO, N.F. Railway, Rangiya provided medical attention to all the injured passengers. 4 military personnel were taken charge of by Major Rao a Military Doctor stationed at Rangiya. After further medical attention at the Military Health Unit at Changsari these military personnel were shifted to 151 Army Base Hospital Basistha, Gauhati reaching there at about 22.00 hours. One more military Personnel injured in the accident reached the Base Hospital on his own.

2.1.2 6 civilian passengers were taken to Gauhati by the same train. They were sent to Medical College Hospital at Gauhati where 2 were admitted and the remaining discharged. The ADMO, Rangiya escorted the injured passengers to the Medical College Hospital.

2.1.3 2 Railway employees viz. the Driver of the train and a Khalasi of S & T Department received treatment at the railway hospital Maligaon and at Rangiya Health Unit respectively.

2.1.4 The Railway Administration made ex-gratia payment of Rs. 750 each to the grievously injured passengers.

2.2 Restoration and Interruption to traffic

2.2.1 As there was no damage to the train or the track, the train after backing to pick up the passengers who had fallen from the train, continued its journey further.

2.2.2 There was no interruption to traffic.

III. THE TRAIN

3.1 Locomotive

The ill-fated 7 Up Tinsukia Mail was hauled by YP Class steam locomotive No. 2074, 4-6-2 type belonging to Alipurduar Shed. The locomotive was manufactured at TELCO and commissioned in April 1954. The speedometer in the engine had developed a fault during the run on 11-3-1981 but was attended to at the headquarters at Alipurduar Junction on that day itself. On the day of the accident the speedometer was working. There was no speed recorder available on the locomotive. The length of the locomotive was 19.09 m and its weight 98.60 tonnes. The engine was provided with vacuum brake and the tender with vacuum and hand brakes. The braking force on the locomotive was 44.25 tonnes. The locomotive was underwent P.O.H. on 24-4-1978 after which it earned 1,15,566 Kms. Schedule III was done on 8-2-1981 after which the loco had earned 2640 Kms. The last trip inspection was done on 5-3-1981 at Alipurduar.

3.2 Coaches

The trailing load of 7 Up Tinsukia was 9=18 against the normal authorised load of 12=24. The length of the train was 198 m and its weight 310.9 tonnes. The braking force was 230 tonnes. The train was fully vacuum braked with two vacuum cylinders for each coach making a total of 18 active vacuum cylinders. The marshalling order of the train is given below :—

Sl. No.	Coach No.	Owning Railway	Type & body		Year Built	Date of last POH	Return Date
1	2	3	4		5	6	7
1.	SLR 4036	NF	ICF	AT	1980	Built in March/80	3/81
2.	GS 2017	,,	ICF	AT	1964	7/80	7/81
3.	FC 1168	,,	ICF	AT	1972	10/80	10/81
4.	FC 1122	,,	ICF	AT	1966	2/80	2/81
5.	GSCN 1671	,,	ICF	AT	1979	8/80	8/81
6.	GSCN 1674	,,	ICF	AT	1979	8/80	8/81
7.	GS 2045	,,	ICF	AT	1965	1/81	1/82
8.	VPU 810	,,	Jessop (Steel)	AT	1962	5/80	5/81
9.	SLR 4406	,,	Jessop (Steel)	AT	1965	10/80	10/81

3.3 Damages

There was no damage either to the locomotive, coaches or the permanent way.

3.3.1 A few pieces of broken timbers and crumpled steel sheet both painted in blue were seized from the site of the accident by the Government Railway Police Authorities. These apparently belong to the culprit truck.

3.4 Cost of damages

Locomotive	— Nil.
Carriage	— Nil.
Permanent Way	— Nil.

IV. LOCAL CONDITIONS

4.1 The Section and the Site

4.1.1 The accident occurred at Km. 77/3-4 between Pathsala and Tihu stations on the New

Bongaigaon-Gauhati Metre Gauge Single line section. The Metre Gauge railway alignment at the site of the accident is on a straight reach and runs from West to East. The gradient is 1 in 1000 rising. The height of bank is about 2 metres and the country is plain and cultivated. The maximum permissible speed of the section is 75 Km/h but temporary speed restriction of 30 Km/h exists between Km 76/6 and 78/11 followed by a restriction of 15 Km/h from 78/11 to 79/9.

4.1.2 The proposed Broad Gauge Railway alignment runs alongside the M.G. alignment and widening of the embankment for the B.G. line has already been completed. The "culprit" truck was unloading ballast on top of the finished embankment for construction of box culvert in extension of Bridge No. 483.

4.2 **Signalling**

The accident spot falls within the CTC section between New Bongaigaon and Changsari.

4.3 The kilometrages of stations referred to in this report are reckoned from the centre line of Brahmaputra Bridge at Saraighat and are as under :—

Centre line of Saraighat Bridge. . .	0·00 Kms
Rangiya	36·50 ,,
Tihu	70·68 ,,
Site of accident	77/3-4 ,,
Pathsala	80·03 ,,
New Bongaigaon	145·50 ,,

4.4 **Headquarters, System of working and Train Speeds**

The section is a Centralised Traffic Control (CTC Section) between Bongaigaon and Changsari stations and provided with Absolute Permissive Block Signalling. The 15 wayside stations between Bongaigaon and Changsari are all controlled from the master panel installed at Bongaigaon and operated by a Centralised Traffic Control Operator.

4.4.1 The DEN of the section is headquartered at Alipurduar Jn. The construction work is being supervised by an Executive Engineer posted at Bongaigaon, who has under him an Assistant Engineer (Con) at Barpeta Road and an IOW (Con) Grade II at Pathsala.

V. SUMMARY OF EVIDENCE

5.1 **Sri Nirmal Chandra Banerjee,** (witness No. 1) Driver 'B' of 7 Up Tinsukia Mail, while on the run between Pathsala and Tihu, noticed a truck unloading material close to the track at Km. 77/4. He sounded the whistle repeatedly and it appeared as if the truck Driver was reversing his truck. Having himself sustained a cut on his forehead, he shut off the regulator and applied the brakes. Owing to the nearness of the truck, some of the passengers who had their limbs projecting outside the coaches got injured. After stopping the train, he sent his Fireman to the Guard for rendering first-aid to the injured passengers.

5.1.1 Answering questions he stated :—

(i) As soon as he saw the truck close to the track he whistled and the truck Driver started reversing his truck and came close to the moving train while reversing. He looked out and got a slight injury on his forehead. Just before getting hit he had shut off the steam. As soon as he got hit he applied the brakes and brought the train to a stop.

(ii) The speed of the train at the time of the accident was about 25 Km/h, as there was a speed restriction of 10 Km/h 1 Km. further ahead (at Km. 76/9-8) as well as another of 15 Km/h between Kms 79/9 and 78/11 short of the accident spot.

(iii) He found that a number of passengers were injured and two had fallen down. The train was backed to pick up the injured passengers and after first-aid was given to them the train proceeded to Tihu, stopping there to enable information being sent to all concerned.

(iv) The train was heavily crowded and some people were found travelling on the foot board.

(v) During his previous runs he had always found the Contractor's trucks plying sufficiently far away from the track.

(vi) After application of brakes the train stopped within 3 to 4 TPs beyond the bridge.

5.2 **Sri Pratulendu Sekhar Roy,** (witness No. 2) Guard/A Special of 7 Up Tinsukia Mail stated that the train left New Bongaigaon at 11.10 hours about 3 hours 10 minutes late. While passing between Pathsala and Tihu stations the train suddenly stopped at Km. 77/0 at 13.10 hours. He found wounded passengers coming to the brake-van for first-aid. The train was backed to Km. 77/4 to pick up two injured passengers and first-aid was rendered to all the injured passengers. He learnt from the villagers standing nearby that one motor truck unloading materials for BG construction Contractor was infringing the main line and as a result caused injuries to about 10 to 15 passengers. He did not see any motor truck at the site when the train stopped and he came to know that the truck Driver fled away with the truck immediately after the accident.

5.2.1 Answering questions he stated :—

(i) The train suddenly stopped at Km. 77/0 at 13.10 hours and people rushed towards him saying that passengers had fallen down.

(ii) He saw a boy of 17 years lying on the embankment with severe injury on his arm.

(iii) The train was backed after observing due precautions to pick up one more passenger, a Military Jawan who had fallen down.

(iv) First-aid was given to all the passengers. The Military Jawan who was unconscious was placed on the luggage van along with the boy who had fallen down. He could not tell in which coach the military man was travelling.

The train was travelling approximately at 30 Km/h at the time of accident.

(v) The train was heavily overcrowded. Some people were travelling on the foot board.

(vi) During his regular runs he did not notice any trucks coming so close to the track and they were always found to work well clear of the track without infringing it in any way.

5.3 **Sri Bijoy Kumar Dutta,** (witness No. 3) was Contractor's representative at bridge site. He had been working under Sri D. K. Das, Contractor as site incharge for the past three years. On 12-3-81 he was at Bamankuchi Bridge No. 84 and had left for his camp for taking his meal. He suddenly found that 7 Up Mail had stopped and a number of passengers were shouting. He saw one of the trucks unloading ballast backing and rapidly moving away. He learnt from the villagers that the truck was unloading materials and one ice-cream wooden box of a vendor hanging from the outside of the window of the train had got entangled with the truck and in the process been smashed to pieces. Some passengers were injured who were sitting or standing near the door. As he found the attitude of some of the people hostile to him he himself left the site.

5.3.1 When questioned as to what instructions he was given as site incharge by the railway supervisor with regard to safety of running trains, he stated that he had advised the railway supervisors about two weeks before the accident that his trucks carrying materials would have to be unloaded on top of the bank. The IOW had measured a line 2.5 metres from the centre of track and instructed him to keep his trucks clear of that line. Some pegs had also been driven to demarcate the line but were being stolen and removed by villagers who found them hindering their walking at night. He had accordingly ensured that his trucks always kept clear of the line while unloading. About 5 to 6 trips were unloaded prior to the accident and the trucks were not only kept clear of the demarcation line but were stopped quite some distance short of the culvert and the materials unloaded there. They were subsequently lifted by manual labour from the unloading point to a place near the bridge site. When asked how it came about that this particular truck did not obey the instructions and caused the accident, he replied that this truck had come for the first time on that day about 25 minutes before the time of the accident and as it was lunch time he was not present to supervise the unloading and the truck appeared to have come close to the track.

5.4 **Sri Lakeshwar Baiswa,** (witness No. 4) an employee of the Contractor stated that while standing in front of his camp on the Tihu side of the bridge he found one truck was unloading ballast near the bridge. From one coach of Tinsukia Mail one icecream box was hanging out-side and hit the truck and got broken. A portion of the box was entangled with the truck which then hit an army man travelling on the foot board who fell down as a result rolling and falling into the floor of the bridge. He was unconscious and was lifted up from the floor on to the embankment and put into the train when the train pushed back.

5.4.1 Answering questions he stated that he was a Fitter working on the bridge for the Contractor on tying of reinforcement. He had gone for bath at 12 noon and when he returned he saw a military man failing down from the train and into the bridge. Alongwith three others he lifted the military man on to the top of the bank the train was backed and the military man placed in one of the coaches. He had not seen the truck at 12 noon when he went for his bath and hence the truck must have come only after 12 noon. When asked whether he had seen the truck close to the track on previous occasions while unloading ballast, he replied that he had never seen any trucks so close to the track and they always used to work well clear of the track.

5.5 **Sri Gauranga Roy,** (witness No. 5) son of Late Nani Gopal Roy was a passenger travelling by Tinsukia Mail. He stated that suddenly he sustained an injury on his right hand near the elbow and became unconscious. He was given some first-aid on the spot and given medical attention at Rangiya Railway Hospital from where he was shifted to Gauhati Medical College Hospital and discharged at night. He did not notice what hit him on his elbow.

5.6 **Sri Radha Dutta,** (witness No. 6) of Village Bamunkuchi stated that he was inside his house at about 13.00 hours when he heard some abnormal sound. He came out and saw an army man lying on the bed of the river and some broken parts of an icecream box lying on the formation. He along-with others lifted the injured man on to the bank. In the meantime the truck reversed and rapidly went away. The Guard was requested to push back the train and the injured men were placed on the train.

5.6.1 Answering questions Sri Dutta stated that he did not see the number of the truck. There was no representative of the Contractor present nor was there any railway official at the time of the accident. According to him the truck appeared to be stationary when the train was passing by though he did not specifically see whether the truck was moving. He however had an impression that the truck was tilted towards the track. He actually saw the military jawan falling down and rolling on to the floor of the bridge. He shouted for help and with the help of 4 men lifted the military man and placed him on the bank. Asked whether prompt first-aid was given to the injured passengers he affirmed that the first-aid was given promptly and there were no complaints from the passengers. Asked about trucks unloading materials on earlier occasions he stated

that two trucks had come on the previous evening and some trucks used to come regularly on earlier occasions. But he never saw any truck coming so close to the track as this truck did.

5.7 **Sri Sibendu Chakraborty,** (witness No. 7) Travelling Ticket Examiner, Alipurduar Jn. stated that he was a TTE booked to work 7 Up ex. New Bongaigaon in 2-tier coach No. GS 2017 (2nd from the engine). He found the train stopping suddenly between Pathsala and Tihu. He contacted the Guard of the train when he was told that a side collision had taken place with a motor truck and some passengers injured. He helped the Guard in giving first-aid to the passengers. At Rangiya the injured persons were sent to Railway Hospital. After attention there, some military persons were sent to the Military Hospital at Rangiya and the rest sent to Gauhati Hospital.

5.7.1 Answering questions he stated that there were no people travelling on the foot board in the 2-tier coach in which he was travelling and the first class coaches but the remaining 2nd class coaches in rear of the first class coaches were heavily over crowded with people standing on the foot board. He observed a truck standing close to the track with its front towards Gauhati and he had a feeling that the truck was moving in reverse when the train passed by. He felt that the injured military man was probably travelling in rear GS 2045 (7th from the locomotive) or the rearmost SLR. When asked as to how more people travelling in the rear sustained injuries, he replied that the rear coaches were heavily overcrowded with more people travelling on the foot board who might have been injured even if the truck was stationary. As the truck appeared to be reversing when the train was passing by, it was possible that more people in the rear sustained injuries.

5.8 **Sri Joydeb Mandal,** (witness No. 8) Inspector of Works, Broad Gauge Construction/ II, Pathsala was working at Bridge No. 483 in the morning at 8.00 a.m. (near which the accident took place). He then went to bridge No. 484 from where he left for his office around noon. He was informed of the accident late in the night at 23.30 hours and went with AEN/ BG. Con/Barpeta to the bridge site.

5.8.1 Answering questions he stated that his jurisdiction was over 5 Kms. of earth work and included construction of 3 minor bridges. When asked what precautions he took to ensure safety of rail traffic he replied that he had demarcated a line 2.5 metres from the centre line of the M.G. track and fixed pegs along the line. He had instructed the Contractor to ensure that his trucks kept clear of this line while unloading ballast. When asked how he ensured that the Contractor carried out his instructions and whether he had posted any watchman or mate at the bridge site, to ensure compliance, he replied that he had not posted any permanent watchman at the bridge site. He had however instructed the Contractor to inform him beforehand when the trucks were expected. Accordingly he was present when the first two trips of the Contractor's were unloaded on previous occasions. The subsequent trips were unloaded in his absence. When asked specifically as to why he did not post a separate mate or chowkidar to ensure that the truck kept clear of the track while unloading materials, he stated that he had only four khalasis of whom two had been sent to bring steel reinforcement rods from the stores. He did not have enough men to post on each bridge site. He had asked for five khalasis in the extra labour register but only four were sanctioned.

5.9 **Sri Mrinal Kanti Dey,** (witness No. 9) Fireman 'B' New Bongaigaon was working on 7 Up Tinsukia Mail from New Bongaigaon to Gauhati on 12-3-81. He deposed that after passing through Pathsala station the Driver closed the regulator to observe speed restriction of 10 Km/h short of the accident spot. After sometime the witness saw a truck by the side of the railway track and sounded the whistle continuously. Then he engaged himself with shovelling the coal in the fire box to maintain steam pressure. Suddenly he heard the Driver cry out that he was injured. The Driver immediately closed the regulator and stopped the train. The Driver had a bleeding injury in the forehead. The Driver went towards the Guard for first-aid while he remained on the locomotive.

5.10 **Sri Shankar Jiban Sengupta,** (witness No. 10) was Travelling Ticket Examiner, Alipurduar Jn. and was booked to work 3-tier coach No. 1671 of 7 Up Tinsukia Mail on 12-3-81, while the train was running between Pathsala and Tihu it suddenly stopped. The witness got down and went to the Guard of the train to ascertain the cause of stoppage. He was informed by the Guard that a side collision had taken place between a motor truck and the train and as a result some passengers got injured. The witness was asked by the Guard to assist him in rendering first-aid to the injured passengers. The train then moved to Rangiya where the injured passengers were sent to the Railway Hospital. Some of the military passengers who were injured were sent to the Military Hospital, Rangiya while the remaining were sent to Gauhati Hospital.

5.10.1 Answering questions he stated that he was incharge of coach No. 1671 but also looked after the next 3-tier coach No. 1674. He did not find any passenger travelling on the foot board of the two 3-tier coaches. However there was heavy overcrowding in coach No. GS 2045 and SLR 4406 and people were travelling on the foot board in these two coaches. Most of the injured passengers were from these two coaches. He could not see the truck unloading ballast as he was travelling on the far

side i.e. on the non-BG side. According to him nobody complained about lack of first-aid when all the injured passengers were given first-aid at the accident spot.

5.11 **Dr. S. K. Brahma,** .(witness No. 11) was Assistant Divisional Medical Officer, Rangiya. He received intimation at 13.50 hours about some injuries caused to passengers of 7 Up who were being brought to Rangiya by the same train. Accordingly he and other medical staff made all preparations to receive the injured passengers. The train arrived at Rangiya station at about 14.47 hours and immediately all injured persons numbering 13 were attended to. 3 were discharged straightway and the Driver of the train was asked to proceed with the train and to attend the Central Hospital, Maligaon. 4 persons were handed over to the Military Doctor, Major Rao who was incharge of the Military Health Unit at Rangiya and came to the Railway Health Unit at 15.30 hours. The remaining 6 injured persons were taken to by the same train to Gauhati and escorted by him. 4 persons were discharged after treatment and 2 were admitted in Surgical Unit No. I of Medical College Hospital, Gauhati at 20.30 hours. One of them, Krishna Karmakar by name absconded from the hospital on 13-3-81. The other, Babul Ch. Roy, was discharged from the hospital on 17-3-81. The Driver of 7 Up Sri N. C. Banerjee was later admitted into the Central Hospital, Maligaon on 12-3-81 and discharged on 14-3-81.

5.11.1 Of the 4 military passengers injured, one was discharged by Major Rao at Rangiya and 3 were sent to 151 Base Hospital, Basistha, Gauhati. Subsequently one of them, Satnarayan by name expired on 14-3-81, without ever regaining consciousness.

5.12 **Sri Yogendra Jha,** (witness No. 12) Coach Attendant, Alipurduar Jn. The witness was booked to work 7 Up ex. New Bongaigaon and was incharge of coach Nos. 1122 and 1168. In between Pathsala and Tihu stations the train suddenly came to a stop. He went to the Guard and was informed that a side collision had taken place between a motor truck and the train as a result of which some passengers were injured. He was asked by the Guard to assist him in rendering first-aid to the injured passengers, which he did.

5.12.1 Answering questions he stated that one first class passenger, a military JCO, travelling with family in 'B' compartment of first class coach No. 1122 was injured in his elbow. He took the injured passenger to the Guard for first-aid. After first-aid the officer was kept in the Guard's brakevan and taken to Rangiya where he was handed over to the military doctor. The other passengers after being given treatment at Rangiya in the Railway Health Unit were shifted to first class compartment 'E' and taken to Gauhati for admission to the Medical College Hospital, Gauhati. When asked whether he found passengers travelling on the foot board, the witness replied that there was none in the first class coach but a number of people were travelling on the foot board in the second class coaches in the rear.

5.13 **Sri A. K. Majumder,** (witness No. 13) Permanent Way Inspector (Open Line), Sorbhog stated that on 13-3-81, (a day after the accident) he was informed by IOW/III/Sorbhog that 7 Up of 12-3-81 was involved in a side collision with a motor truck at Km. 77/3-4 as a result of which some passengers were injured. The witness then accompanied the IOW to the site. He found some marks of the wheel of the truck on the ballast section.

5.13.1 Answering questions the PWI stated that during his inspections he had never noticed trucks of the Contractor coming within fouling distance of the running track and they always used to work quite clear of the track. When asked as to how he would ensure safety if incharge of the Construction works, the witness replied that he would always depute an intelligent Gangman or Mate to supervise the unloading of the truck.

5.14 **Sri Habibar Rahaman,** (witness No. 14) Khalasi under SI/BG/Con/Bongaigaon. The witness was travelling in the rear second class coach GS 2045. He was dozing with his elbow resting outside the window which was provided with bars. Suddenly he felt that he was hit by something but could not notice what hit him. His colleagues comforted him and he received medical aid at Rangiya. According to the witness the coach in which he was travelling was heavily overcrowded with a lot of passengers standing.

5.15 **Sri Mathura Majunder,** (witness No. 15) was officer inchargt of Government Railway Police station, Rangiya. He received intimation of the accident at 15.00 hours after 7 Up reached Rangiya. He met the injured passengers and from their evidence came to know that they sustained injuries after being hit by a truck which was unloading shingle on the embankment but was very close to metre gauge track. They could not however say whether the truck was moving or stationary. He also examined the Driver and First Fireman of the train. The Driver stated that he noticed a truck near the track from a distance and he was whistling. The Driver however did not apprehend that the truck was infringing the track until he himself got hit and stopped the train. The witness however stated that he had observed some scratch marks on the body of Coach No. 2017 and found its handle bent (subsequently the matter was again checked up by the Senior DME (C&W), Tinsukia who stated that no marks were seen on any of the coaches of 7 Up). The witness then reached the accident spot at 23.00 hours on 12-3-81. He found some wheel marks of the truck on the ballast. But the space available between the stack of shingle and the track was not

enough for a truck to stand without fouling the track. He also found one damaged steel sheet, a few pieces of wooden of the truck and a piece of cloth with blood stains which he seized. He could not find any responsible man except a labourer from Orissa who stated that the truck was standing parallel to the track and on the ballast section. After hitting the train the truck turned. Meanwhile a person had fallen down from the train and rolled into the culvert floor. By this time the truck was moving away fast.

5.15.1 The witness stated that he had registered a case No. S/A No. 1/81 and was carrying out investigations. The name of the truck Driver and the person incharge of the work at site was not yet known. He had a truck No. furnished to him but after checking with the D.T.O. office at Darrang, he had some doubt about the validity of the number and ownership of the truck. Meanwhile he was continuing his investigation and efforts to get the number of the truck and whereabouts of the truck Driver who according to him was the main culprit in this case.

5.16 **Sri A. K. Chakraborty,** (witness No. 16) was the Assistant Engineer BG/Con/Borpeta Road incharge of the construction. He first received the intimation of accident at 21.00 hours on 12-3-81. He went to the accident spot the same night to verify if there were materials infringing the track. He did not find any material infringing but found some truck wheel marks, 1.5 metres away from the centre line of the track. There was no one except a night Chowkidar who was not present at the spot during the day time. On 13-3-81 he conducted an enquiry at site and collected statements from some villagers as well from a Mistry of bridge Contractor.

5.16.1 Answering questions the witness stated that a line was marked 2.5 metres away from the centre of track and instructions were issued to the Contractor to ensure that his trucks always kept clear of this line. During his inspections he used to check up from the wheel marks of the trucks that they were not infringing the line. He did not give any written instructions to the Contractors about observing safety precautions while working near the track. There was however a clause in the Contractor's agreement which reads as follows :

> "3.4 — The Contractor shall be entirely responsible for ensuring safety of his labour, vehicles, plant or equipment while working along or near the track and shall programme his working so as not to interfere with the movement of trains. No extra payment shall be allowed to the Contractor for all safety precautions to be observed during the execution of the work. The cost of such precautions shall be deemed to be included in the rates for all items of the schedule".

When asked as to why he had not arranged for Mate or Watchman to be posted while Contractor's trucks were working close to the track he replied that he did not consider it necessary to post separate men for this purpose in view of the demarcation of the line and verbal instructions already issued to the Contractor and also the fact that during inspections he had found that trucks were plying quite clear of the line.

5.17 **Sri K. C. Chowdhury,** (witness No. 17) Executive Engineer/BG/Con/Bongaigaon stated that on 12-3-81 he came to know about the injuries caused to passengers of 7 Up Mail owing to a truck infringing the metre gauge track. He went to the accident spot the following afternoon along with the DRM, DSO and DEN/I and took the statement of one villager and made a sketch of the site.

5.17.1 Answering questions he stated that in order to ensure the safety of rail traffic, a line was demarcated to 2.5 metres away from the metre gauge track and instructions were issued to the Contractor to see that his trucks always kept clear of that line. During his inspections, he used to ensure that the line was not infringed by observing the wheel marks of the truck. He had not issued any written instructions to the Contractor as he took over this post in July 1980 but he issued verbal instructions to his subordinates to ensure safety. When specifically asked as to why he did not instruct that a suitable Mate or Watchman were posted to ensure safety of rail traffic, he confessed that he did not think along the lines that there would be infringement of safety by the Contractor's trucks, in view of the measures already taken by him as explained above.

VI. TESTS AND OBSERVATIONS

6.1.1 I visited the site of accident on 25-3-81, two weeks after the date of accident. I found some stone ballast stacked on top of the completed embankment for the broad gauge line. These stacks were made out of the ballast brought in before the day of the accident. The clearance between the edge of the stack and the centre line of the metre gauge track was found to be 3.30 m. I noticed some wheel marks on the top of the new embankment which were well clear of the line demarcated by the Construction officials.

6.1.2 It was explained by the Executive Engineer (Con) that when the earlier trips were unloaded in the presence of the IOW, the trucks were unloaded by stopping them about 60 metres short of the Bridge No. 483 and well clear of the line demarcated at 2.5 m. from the centre line of M.G. track. The unloaded material was then carried forward by manual labour and stacked. However the particular truck which caused the accident, having come there for a first time, seemed to have stopped in the 3.3 m. distance between the metre gauge track and the stacks already made.

In this position it was observed that the truck would be fouling the moving dimensions of the metre gauge track.

6.1.3 It was stated by the Divisional Engineer that soon after the accident some wheel marks were found on the ballast shoulder of the metre gauge track at a distance of 1.5 metres from the centre line of the track. The truck standing in this position would have fouled the metre gauge track sufficiently to have been hit by the locomotive and to be smashed up. Therefore these marks should have been made while the truck came in before and went back soon after the accident.

6.2 Mock Trial

On reaching Gauhati I arranged for a mock trial to be conducted with a truck parked close to metre gauge coach it was seen that the sides of the truck were above the level of the window of the coach. At the spot where the trial was conducted, the ground was almost level with the top of the sleepers. At the accident spot however, the formation level was above 10 to 15 cm below the bottom of sleepers and hence the sides of the truck could have been just level with or slightly higher than the window of the coach depending upon the actual dimensions of the body of the culprit truck. Any person sitting with his elbow projecting outside the window would surely have been hit by the sides of the truck.

6.3 Visibility of truck to the Driver

At the accident spot the metre gauge track runs straight and the Driver of the locomotive would have had no difficulty in observing the truck from a distance as actually confirmed by him during his testimony.

6.4 Observation of the Coaches

I could not unfortunately observe the coaches of the train but it was stated by the Divisional Mechanical Engineer at Tinsukia that no mark of any kind was observed on either the locomotive or the coaches of the ill-fated train.

VII. DISCUSSION

7.1 Time of the accident

According to the Guard the train stopped at the accident spot at 13.10 hours. It would have been taken about one minute for the train to stop after the Driver applied the brakes. So the time of the accident has been accepted as 13.09 hours.

7.2 Speed of the train at the time of the accident

The Driver stated that he was travelling at a speed of 25 Km/h. The Guard stated that the speed was approximately 30 Km/h. The maximum permissible speed of the train on the section is 75 Km/h. In view of the fact that there were two speed restrictions on either side of the accident spot it is accepted that the train was travelling at 30 Km/h.

7.3 Position of the Truck

All the witnesses who were in a position to witness the truck before the accident happened, have stated that the truck was standing parallel to the metre gauge track with the Driver's cab towards Gauhati end. According to the evidence of the Driver and a TTE of the coach it appeared that the truck was moving while the accident took place. The other witnesses could not say whether the truck was moving or stationary. It is possible that the Driver was trying to move when he heard the Driver whistling. On the other hand it is also possible that the Driver was stationary when the train passed through. The position in which the truck was parked was such that the truck would have caused injuries to passengers whether it was moving or stationary. From the fact that there were no marks observed on the body of the coaches, it can be concluded that the truck must have been parked close to the track but not so close that truck itself would have been smashed by the train.

7.4 Sequence of the coaches in which the casualties occurred

During my visit to the Military Hospital I asked the injured military personnel in which coaches they were travelling. One of them stated that he was travelling in the first coach next to the locomotive. The JCO was travelling in a first class coach 4th from the engine. The remaining casualties appeared to have occurred to these passengers who were travelling in the last three coaches. Thus passengers travelling in almost all the coaches suffered injuries as a result of having their limbs projecting outside the coaches. It could not be established where the military jawan who sustained head injury and subsequently expired was travelling. Krishna Karmakar a boy, aged 14 years who was admitted to Gauhati Medical College Hospital and subsequently absconded from there appears to be an ice-cream vendor who was moving from one coach to another coach to sell his ice-cream.

7.5 Could the Driver have averted the accident by stopping the train ?

Driver of the train in his testimony has stated that he observed a truck standing near the track and hence sounded the whistle continuously. It may be argued that if he had applied the brakes and stopped the train short of the truck, the accident would not have occurred. I have carefully examined the possibility whether the Driver was guilty of negligence in not bringing his train to a halt on account of the fouling of the track by the truck. I have come to the conclusion that no blame could be attached to the Driver on this account in view of the following circumstances.

(i) It is not possible for the Driver of a moving train to judge accurately by observing from a distance the extent to which the truck, which was standing parallel to the track, was

fouling the metre gauge track. In the present case the truck was close enough to cause injuries to passengers who had kept their limbs projecting outside the window but it was far enough not to come in contact with the body of the coach.

(ii) The Driver was accustomed to seeing the trucks plying on the completed embankment. Since the truck was standing parallel to the track he must not have apprehended danger, which he would have done if the truck had been standing across the track as at level crossings. Hence I am satisfied that there was no negligence on the part of the Driver.

7.6 **Responsibility of Railway Officials**

Having carefully considered the statements of three officials of the Construction Department I hold that while they cannot be primarily held responsible for the accident, they are however considered blameworthy for the reasons discussed below. The rules for carrying out any work likely to affect safety of running trains are contained in Para 3009 of Way and Works Manual and General Rule 214 attached as Annexure I. The blameworthiness of the Railway officials concerned have to be viewed in the light of the above provisions.

7.6.1 Inspector of Works Sri Joydeb Mandal— The Inspector of Works, incharge of the Construction of Bridges and earthwork is expected to ensure that the works are carried out without affecting the safety of the running trains. He was aware of the importance of ensuring safety. The Inspector did take some measures to ensure the safety by demarcating a line 2.5 metres from the centre of the track and instructing the Contractor to ensure his trucks always kept clear of the line so demarcated. He should have foreseen the possibility of some truck fouling this line and hence should have posted a man to ensure that the trucks kept clear of the line. To the extent that he failed to do so, his conduct is blameworthy. However the extenuating circumstances are that the IOW did ask for engagement of additional men in his E.L.R. which was not sanctioned.

7.6.2 Assistant Engineer, Sri A. K. Chakraborty — the officer directly incharge of the Construction works has the primary responsibility of ensuring the safety of rail traffic while executing works close to the track. When questioned he stated that he had arranged for the demarcation of the line and issued verbal instructions to the Contractor. He also referred to the salient conditions of the contract agreement imposing a special responsibility on the Contractor. He should nevertheless have foreseen the possibility of some individual truck infringing the standard dimensions while unloading ballast and should have arranged for posting of a Watchman/Mate to supervise the work of unloading of Contractor's trucks. I consider that his conduct is blameworthy in that respect as he failed to arrange for the posting of necessary men.

7.6.3 Executive Engineer, Sri K. C. Choudhury incharge of the Construction works is responsible for ensuring that the works are carried out with due regard to ensuring safety not only of the works themselves but also the safety of rail traffic. He also considered it sufficient to arrange for the demarcation of a line and to issue instructions to he Constractor not to allow trucks to stray beyond the line of demarcation. As Executive Engineer incharge of works he should have foreseen the possibility of some individual truck fouling the metre gauge track temporarily and in view of the heavy rail traffic on this section he must have taken steps to instruct his AEN and Inspector to ensure that safety of rail traffic is secured at all times by posting men to supervise any activity carried out in close proximity to the track. Therefore I consider that the Executive Engineer should also share some blame.

VIII. CONCLUSIONS

8.1 **Cause of the accident**

Having considered carefully the factual material and circumstantial evidence I have come to the conclusion that the occurrence of casualties among the passengers of 7 Up Tinsukia Mail at 13.09 hours on 12-3-1981 was caused due to a motor truck, engaged in unloading ballast on top of the embankment for the construction of a bridge on new broad gauge project, infringing the moving dimensions of 7 Up Tinsukia Mail running on valid authority between Tihu and Pathsala stations.

8.2 **Responsibility**

8.2.1 An unknown person who was the Driver of the "culprit" truck which caused the infringement is held primarily responsible for the accident.

8.2.2 Apropos paras 7.6.1, 7.6.2 and 7.6.3 above, IOW (Con) Sri Joydeb Mandal, Assistant Engineer (Con) Sri A. K. Chakraborty and Executive Engineer (Con) Sri K. C. Chowdhury are held to be blameworthy for not posting an additional man to supervise the unloading of the truck and ensure safety. The extenuating circumstances in the case of IOW (Con) was that he asked for engagement of additional men in his E.L.R which was not sanctioned.

8.3 **Relief Measures**

I am satisfied with the relief arrangements and the medical attention rendered to the injured passengers.

IX. REMARKS AND RECOMMENDATIONS

9.1 At the time of submitting the Preliminary Report I had recommended that the Construction Department of N. F. Railway should arrange for posting of men wherever necessary in order to protect the metre gauge track whenever the track is fouled by the working of machinery or trucks of the Contractor. It is necessary that the provisions for adopting safety precautions should be followed scrupulously by

all Construction Officials while carrying out any work likely to affect the safety of rail traffic.

9.2 Another safety aspect which came to notice during the inquiry was that steam locomotive of the ill-fated train was not provided with Speed Recorder, which as per extant instructions, should have been provided on all locomotives hauling Mail and Express trains. The Railway may like to fix responsibility for the lapse. They may take action to ensure that the speed recorders are fitted immediately in all steam locomotives hauling Mail-/Express trains.

Yours faithfully,

Sd/-

(S. Subramanian)
Commissioner of Railway Safety,
South Eastern Circle, Calcutta.

Annexure — I

Rules relevant to the accident

Extract from Indian Railways Way and Works Manual

Rule No. 300 — Prevention of accidents.—(a) All Engineering Officers, Inspectors and their assistants responsible for the supervision of labour, should take every possible precaution to prevent the occurrence of an accident in connection with any work in progress, whether to the labour working under them or to the general public.

(b) Although contractors are responsible for protection of the works they undertake and the safety of their labour, this in no way absolves Engineering Officials from drawing immediate attention to any unprotected obstruction, defective structure or other condition which is likely to be dangerous to human life, and to ensure that adequate action is taken at once to obviate such danger.

(c) All dangerous obstructions should be protected in day light by means of notices, barricades or other devices and, at night, by lighted red lamps. *Where necessary, watchmen should be posted.*

Extract of G.R. 214

214. Precautions before commencing operations which would obstruct the line.— No person employed on the Way or Works shall change or turn a rail, disconnect points or signals, or commence any other operations which would obstruct the line and necessitate the showing of Danger Signals, —

(a) until such signals have been shown, and

(b) if within the station limits, until he has also obtained the written permission of the Station Master and all necessary signals have been placed at 'ON'. Provided that the showing of Danger Signal may be dispensed with, if such operations are performed or carried out after the necessary signals, other than automatic stop signals, or permissive stop signals, have in addition to being placed in the 'ON' position, been disconnected, so that such signals cannot be taken 'off' again until it is safe to do so and the corresponding adequate distance beyond such signals is kept clear.

Railway Boards comments on various paras of the Report

Para 9.1 :

Instructions have been issued by the Railway to all concerned to exercise strict supervision on the working of contractor's machinery or trucks to ensure that track is not fouled. Instructions, highlighting the circumstances of this accident, have also been issued to the Zonal Railways.

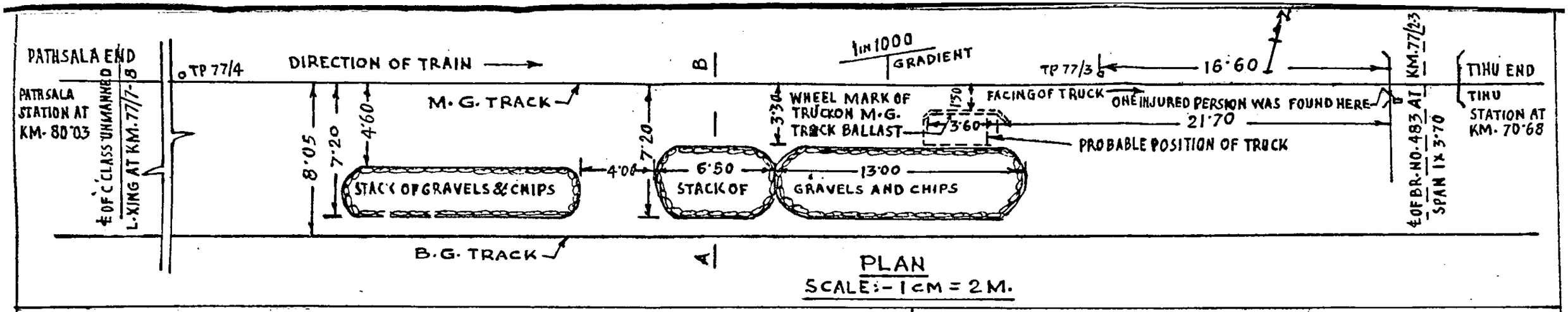
Para 9.1 :

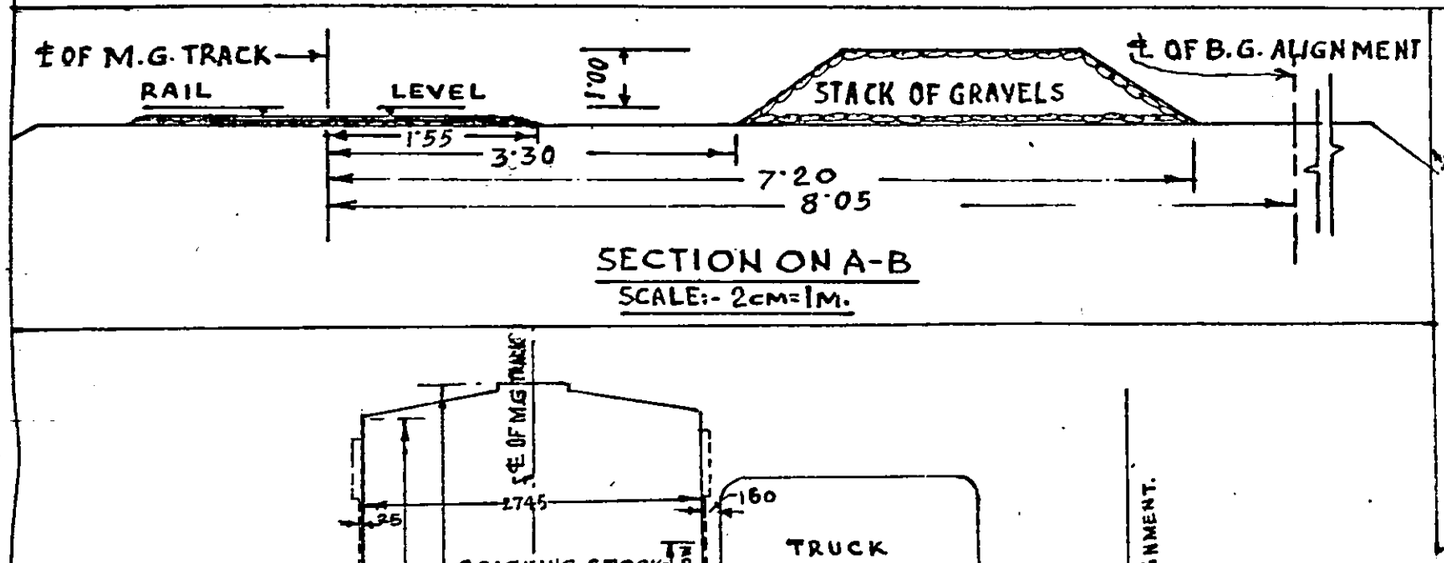
The Staff concerned has been taken up for their failure to provide speed recorder in the locomotive of the ill-fated train. Instructions already exist for provision of speed recorders on locos hauling mail and express trains. Accordingly action regarding fitment of speed recorders on all steam locomotives hauling Mail and Express trains is also on hand.

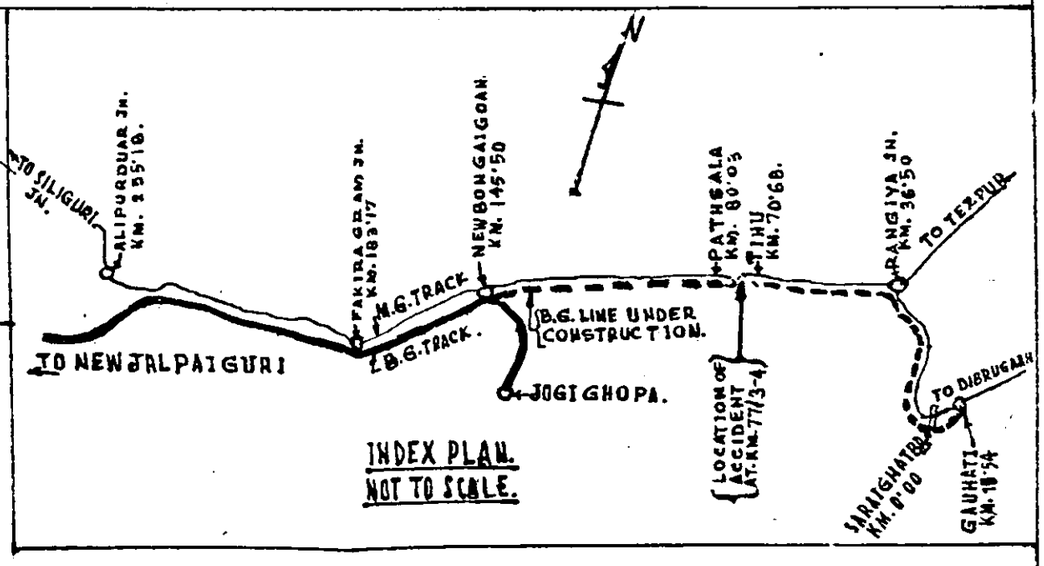
Publication :

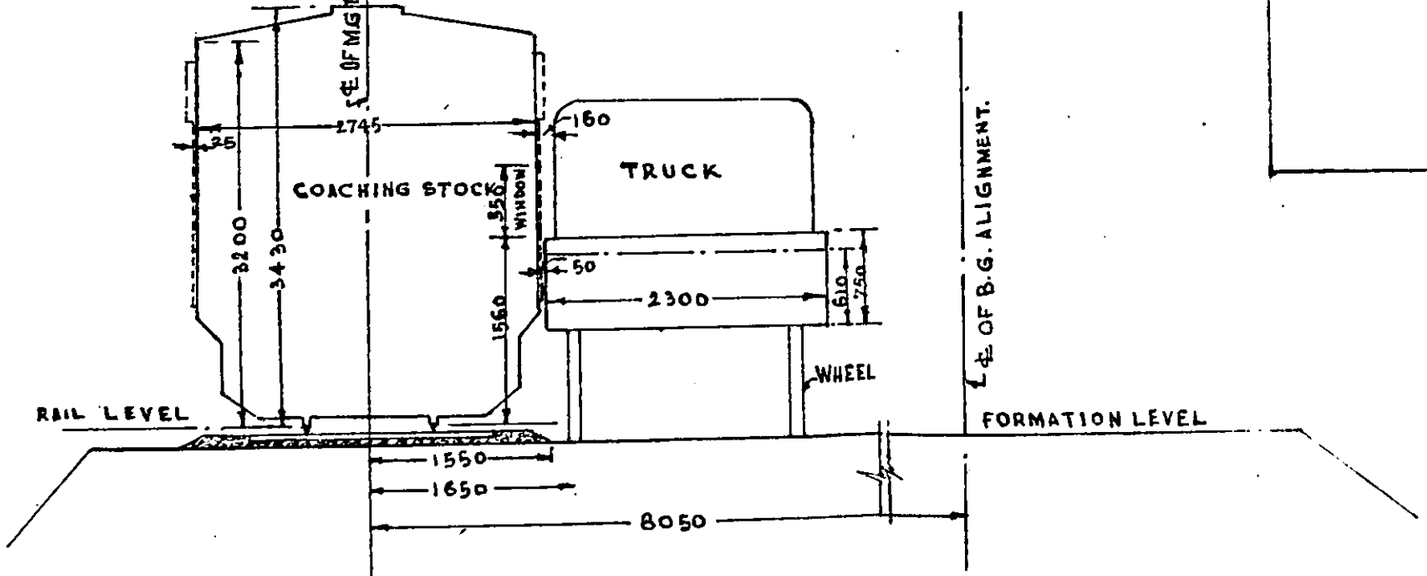
This Ministry agree that report on this accident may be published.

GIPN—S9—530 CRS/Luck/82—10-6-83—500.









SECTION SHOWING PROBABLE POSITION OF COACH AND TRUCK.
AT THE TIME OF ACCIDENT.
SCALE:- 2 CM = 1 M.

203603

N.F. RAILWAY.
ALIPURDUAR DIVISION.

FILE NO.

CHD.
DRN.
TRD.

AT KM. 77/3-4.
BETWEEN TIHU AND PATHSALA.
SKETCH IN CONNECTION WITH
ACCIDENT OF 7 UP ON 12-3-81.

SCALE:- 1 CM = 2 M & 2 CM = 1 M.

CDM/N.F.R./APDJ.	XEN/BG-CON/N.F.R/BNGN.	DSO/N.F.RLY./APDJ.	DEN-I/N.F.RLY./APDJ.	DRM(W)'s DRG. NO. APDJ/SK/18/81

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