

## **CHAPTER V**

### **PRESERVATION OF CLUES AND EVIDENCE AT ACCIDENT SITE, RECORDING OF MEASUREMENTS**

#### **501. STEPS TO BE TAKEN TO PRESERVE THE CLUES AND EVIDENCE AT ACCIDENT SITE**

**501.1 Action to be taken by Officer/Sr. Subordinate present at site.** The officer and senior sub-ordinate of any department, who may happen to be present at the time of accident or who first arrives at the site of accident (irrespective of whether he is on duty or not), shall take action to preserve the clues and evidence at the site of accident. He shall inspect the site of accident and locate the crucial evidence and clues that will help in determining the cause of accident. Thereafter, he should organize to post RPF constables or other Railway men available at site to guard the locations, where clues and evidence is available. Once the officials from safety department (safety counsellors, DSO, Sr. DSO etc.,) arrive at the site the locations with evidence and clues will be handed over to them.

The evidence and clues will be different in each accident. In a derailment due to track defect initial “point of mount” and “point of drop” are important. Sometimes “Rail fracture” or “Weld failure” can also cause derailment. Accidents are also caused by axle breakages, hanging parts from the wagon/coach, etc. Infringement of unloaded track materials like sleepers, rails can also cause accidents. In sabotage cases, the pandrol clips will be removed or sometimes rail itself is removed, or track is blasted, etc. Drivers passing signals at danger, receiving trains on occupied lines can also cause accidents. In order to determine the exact cause of the accident, the officer/Sr. sub-ordinate present at site should examine the site in detail and locate the clues and then take action to preserve them. This is apart from other duties like relief and restoration.

**501.2 Action by Safety Team/Accident In-charge.** On arrival at site, the safety team will take charge of the locations where evidence and clues are available. The safety team will thoroughly examine the site and come to some tentative conclusion about the probable cause of the accident. Careful observation of clues and a comprehensive record thereof is vital for accident enquiry. In addition, a comprehensive record of track and rolling stock parameters and operating features is required for investigation of derailments. The statements to be recorded and joint measurements to be taken. The following steps also to be taken. *(Item No.1 of AS-6)*

- i) In all cases of accidents, the Loco pilot, Asst. loco pilot and Guard will be subjected to breathalyzer test. If they test positive, blood samples will also to be collected.
- ii) However, breathalyzer test will be done and blood samples will be collected from Loco pilot, Asst. loco pilot and Guard in all cases of suspected SPAD.
- iii) Speed recorders and event recorders in the locomotives shall be freezed immediately post the accident. *(Item No.2 of AS-6)*
- iv) In all those accidents in which prima facie the cause appears to be human failure attributable to train passing staff, both breathalyzer and blood tests of SM/Pointsman/Leverman/ Cabinman/on duty staff be carried out immediately after the accident.
- v) Note the exact number and position of vehicles ie., derailed/ canting/ capsized etc,

- vi) In case the accident takes place within station section, observations of SM's Panel need to be recorded. SM's control panel shall be freezed till the time position of the knobs, switches, points & crossings etc. are jointly recorded. It is the responsibility of the concerned Controlling Officer/Safety Officials to ensure freezing of the above. The team will note down the following: (*Item No.3 of AS-6*)
- (a) Position of points, signals,
  - (b) Position of levers/ switches/ knobs/ slots in the cabins and panel.
  - (c) note down the indication of track circuits, axle counters, slots, point detection etc., in the panel/cabin.
  - (d) Readings of all counters/provided for the route, block, axle counters, route cancellation, crank handle, emergency operation of points, emergency route release, etc.,
  - (e) Block instruments, position of the handles indications available, readings on the counters, etc,
  - (f) Data logger print outs.
  - (g) Relay room should be immediately locked with a new and the key should kept in the safe custody of safety officer.
  - (h) In case of cabins having inter-cabin control, the position of levers used for slotting purpose.
- vii) Carefully examine and record the condition of the permanent way.
- viii) Must not interfere with any clue which may be of assistance in arriving at the cause of the accident and any item of debris which may help to trace the cause of the accident, unless such interference is emergent and unavoidable and is permitted by a responsible Officer present at the spot. If it is considered absolutely necessary to remove any items of debris, which may help to trace the cause of the accident, they shall be carefully preserved by the Officer permitting the removal and a record kept of the positions from which they were taken.
- ix) Where statutory inquiry of CRS is mandatory, no re-railing of rolling stock or any obliteration of the clues should be resorted to without the specific permission of the CRS unless the disturbance to the clues is necessary for saving lives of entrapped passengers.
- x) In all cases of derailments, the marks on the wheels of engine and/or vehicles and the marks on the rails, sleepers etc., of the permanent way in respect of the wheels mounting on and dropping from the rails, the wheels riding on the ballast, etc. shall be specially looked for and recorded. Special care shall be taken to examine the wheels, before the engine and/or vehicles are worked away from the accident spot. The wheel marks, etc. on the permanent way, especially between the points of mount / drop, required for a later reconstruction of the scene shall be carefully examined, preserved and / or recorded, irrespective of whether or not the cause of the accident has been known and irrespective of whether or not photographs have been taken. The rails, sleepers, fish bolts, nuts, etc. irrespective of whether they are serviceable or not, which bear marks as a result of the accident, especially between the points of mount and drop, shall be marked and serially numbered, with either chalk or paint and carefully preserved.

- xi) All damages to rolling stock, locomotives, permanent way etc. shall be recorded. Details of the loads ie. weight and contents of each load, whether evenly or unevenly loaded, etc., shall be recorded.
- xii) In case of suspected sabotage, foot prints, finger prints, etc; shall be carefully noted and preserved for examination by the Police. All the evidence should be preserved and undisturbed till the Police officials arrive and their signatures obtained and all documents authenticated by them. It is also necessary that the photographs and video of relevant clues are taken in their undisturbed state. Only then, restoration work should commence. The damaged rolling stock as well as other clues such as rails, fish plates etc., may be moved to a convenient place for further examination and should remain under the joint custody of the Police and the railway. These should not be removed from this place without the written permission of the Police Authorities. It would be preferable also to get the statements of as many independent eyewitnesses as possible and record their names and addresses. Unless the intention is to save human life, in all cases, the clearance and restoration operations should not commence until the arrival of the Police and until the Railway Officials are authorised to commence such operations. In addition, it should be promptly ascertained from the Commissioner of Railway Safety, whether he desires to inspect the site etc. before commencement of clearance and restoration work.
- xiii) Scrutinize as early as possible the Train Signal Register, Line Clear Enquiry and Reply Books, Private Number sheets, Station Diary, S&T failure register, Relay room key register, Route cancellation register, Caution order register and any other relevant records and initial them noting the time and date. In cases where the records are directly connected with the cause of the accident, they shall immediately be confiscated, secured and sealed.
- xiv) The joint measurement to be submitted by senior supervisors shall not be complete till all the measurement of rolling stock and track as per proforma have been recorded. Only completed joint measurement w.r.t. rolling stock and track shall become a document to be relied upon by the enquiry committee for drawing conclusion regarding cause of accident.
- xv) The photographs of the concerned sections of track and part of rolling stocks shall be taken in detail to show all the details the accident and annexed in the enquiry report. ART personnel should be trained for identifying such relevant part of track and rolling stocks involve in the accident.
- xvi) In case of derailment of passenger trains causing injury to passengers, video recording of the concerned part of track and rolling stock shall be carried out by nominated ART personnel, trained for the purpose.
- xvii) Photography & Videography of accident site shall be with great care & precision, similar to a crime scene photography/videography. ART personnel nominated for this shall be suitably trained for the purpose. The photographs, videos should be self explanatory such that relevant conclusion can be drawn.
- xviii) Site sketch of the derailment/accident location shall be prepared giving due care that all the relevant items are included along with the dimensions. A sample sketch is attached for the guidance.

- xix) Preservation of relevant clues, documents & photographs/videography of the accident scene shall be done under supervision of Safety Officials of the Division.
- xx) M&C report from RDSO must also be part of accident enquiry report in case accident is attributed to breakage of any component of track or rolling stock.
- xxi) If rail/weld failure is suspected to be cause of derailment, assessment of impact loading to which the rail/weld was subjected to prior to its failure becomes important. In such cases, WILD data for few preceding trains shall be analyzed for critical alarms and any critical alarm shall be brought out and deliberated by enquiry committee.
- xxii) Safety official shall take into custody of all the relevant documents, broken parts etc. *(Item No.4 of AS-6)*
- xxiii) In cases where immediate repairs to points and permanent way are necessary to pass trains, only such parts of the interlocking shall be disconnected as are necessary to carry out the repairs to the track. No alterations or repairs to interlocking gear concerned with the accident shall, on any account, be carried out without obtaining the permission of Safety and S&T Officers.
- xxiv) In the event of more than one Officer or Senior Subordinate being present at the site of accident or arriving first at the site of accident, the report in the prescribed form shall be signed by all the Officers or Senior Subordinates, as the case may be. If the report is made by one or more Senior Subordinates, it shall be called for and checked by the Officer or Officers who arrived first at the site of accident.
- xxv) The Officials of the Engineering, Mechanical, S&T, Loco and OHE Departments, before authorising the restoration shall be personally responsible for ensuring that all the evidence, of their respective departments, relating to the accident has been correctly collected and preserved. It is however to be understood that the establishment of through traffic shall not be unduly delayed, but to be continued side by side with such action as may be necessary to preserve clues, record evidence etc.
- xxvi) The Official of the Engineering Department shall be responsible for the preparation of the final sketch showing the site of accident, the permanent-way affected, the position of derailed vehicles and the sites at which loose fittings of track and rolling stock are found.
- xxvii) Detailed sketches of damage to rolling stock shall be prepared by the Officer of the Mechanical Department who arrives at the spot. If a large number of vehicles are involved, necessary photographs and video shall be taken.

**Note:-** It shall not be deemed that the staff other than Officers and Senior Subordinates present at or arriving first at the site of an accident need not take any steps to examine or preserve evidence relating to the accident. It shall be the duty of every railway servant to look for and preserve such evidence which shall be made available to the Officer or Senior Subordinate for incorporating in the prescribed form.