DGMS (Tech) Instruction No. 1 of 2017
on
Accident Inquiry, Report Writing and Follow-up Action

1.0 INTRODUCTION

Inquiry into accidents/incidences (dangerous occurrences) is one of the important functions of this Directorate. Through these inquiries, procedural and technological gaps in the existing system or practices are identified. Lessons learnt from these inquiries can be utilized to eliminate/reduce the deficiencies in the system. What is really required is collecting all the required evidences painstakingly and thereafter an intelligent analysis of the evidence in the light of Inquiry Officer's own observations and finally arriving at a logical conclusion. The Inquiry Officer needs to address effective control strategies that will not only eliminate or reduce the deficiencies due to specific direct and indirect causes of the accident/incidence but also propose system deficiencies or inadequate safety system components (root causes) that has contributed to the accident/incident. It is worthwhile to mention that an accident/incidence is something unforeseen, unexpected, unusual, extraordinary, which take place not according to the usual course of events. Behind every accident/incidence, there are many contributing factors. These factors combine in a random fashion causing accident/incidence. Thus, to prevent recurrence and to take corrective action, there is a need to find the fundamental root causes along with direct and indirect causes. The causes and circumstances leading to an accident/incidence shall, therefore, be analyzed step by step (as mentioned in the following paragraph "Data Analysis") and presented in a logical manner in the report. The conclusions should be deduced from the facts so available and argued in a logical and cogent manner.

1.1 **Need & Objectives of Accident Inquiry**: The need & objectives of inquiry into accidents in mines are to:

- Meet the statutory requirements of investigating into fatal & serious accidents as required by the Mines Act and allied Regulations.
- Establish the facts,
- Identify and eliminate hazards,
- Prevent future incidents (leading to accidents),
- Review the adequacy of existing controls and procedures,
- Recommend corrective actions which can reduce risk and prevent recurrence and
- Identify key learning for distribution within the organization and externally (mining community) as required, and to create awareness.

1.2 **Importance of inquiries**: Inquiries into fatal, important serious accidents take precedence over all other work except under exceptional circumstances. When there is stress of work in one region, the Director may solicit assistance from another region through DDG.

2.0 IMMEDIATE ACTIONS AFTER OCCURRENCE OF ACCIDENT/INCIDENT

2.1 **Action to be Taken**: On getting information on occurrence of fatal accident or dangerous occurrences, the Director of Mines Safety of the region or in his absence

Dy. Director of Mines Safety of the region or Dy. Director of Mines Safety of a sub-region shall take necessary action to ensure that:

- Emergency plan prepared by the management is initiated,
- Appropriate action has been taken to make the area safe so as to prevent escalation of the situation, work-persons are evacuated wherever necessary,
- First aid and medical aid is provided to the injured,
- Appropriate action has been taken to preserve the incident scene to retain valuable information for incident investigation,
- Appropriate action has been taken to identify and implement corrective actions necessary to prevent further incidents from occurring,
- Photographs/video, as applicable, of the site of accident are taken before too many changes made so as to preserve the perishable evidence(s),
- Intimation/Notification of the accident/incident to appropriate authorities.

2.2 **Accident Intimation**: Immediately on receipt of the intimation of occurrence accidents/incidences, the Directors of Mines Safety of a region and the Deputy Director of Mines Safety of a sub-region shall inform the Ministry, Head Office (H.O.) and Zonal office (Z.O.) as indicated in the following sub-paras:

2.2.1 **Information to Ministry**

(i) All fatal accidents shall be intimated to the Ministry of Labour and Employment, New Delhi by fax or e-mail in the proforma at ***ANNEXURE ACCDT-1*** immediately on receipt of intimation of the occurrence. If the accident is prima facie Mining Non–statistical or Non–Mining, clarification on the issue shall be clearly mentioned in the fax/e-mail.

(ii) All dangerous occurrences, like a major rock burst, outbreak of fire (either on belowground or on surface likely to affect the workings belowground), irruption of water, failure of slope or high-wall or any dangerous occurrence involving five or more persons, shall be intimated immediately to the Ministry of Labour and Employment, New Delhi by fax/e-mail.

(iii) In case of accidents involving five or more deaths and in other cases if warranted, a preliminary report in the prescribed proforma at ***ANNEXURE ACCDT-2*** shall be furnished through DDG & DG to the Ministry of Labour and Employment, New Delhi as early as possible after reaching the site of accident.

2.2.2 **Information to Head Office**

(i) Information regarding all fatal accidents including Mining Non-statistical and Non-Mining shall be sent to H.O. by Fax/e-mail.

(ii) Copies of all communications addressed to the Ministry above shall be endorsed to H.O.

(iii) In case of fatal accidents involving three(3) deaths or more /serious accidents involving five(5) or more, DG shall be informed immediately over

telephone. When DG is not available, DDG(HQ) and in his absence, a Director in H.O. shall be informed.

(iv) Dangerous occurrences of serious nature, like a major rock burst, outbreak of fire (either on belowground or on surface likely to affect the workings belowground), irruption of water, failure of a slope or high-wall or any dangerous occurrence involving five or more persons, shall be intimated immediately to DG by Fax/e-mail and telephone. When DG is not available, information shall be given to DDG(HQ) and in his absence, a Director in H.O.

(v) In case of fatal accidents involving five or more persons, final report in duplicate shall be submitted within a week of completing the enquiry, to H.O. Where there is any undue delay in finalizing the report; an interim report giving more details than the preliminary report and explaining the reasons for delay in finalization shall be submitted in duplicate to H.O. This would enable submission of more information to the Ministry. The idea is to forward to the Ministry as much information as is available in this Directorate without any loss of time.

(vi) In case of serious accidents involving five or more persons, the preliminary report shall be submitted to H.O. only.

2.2.3 **Information to Zonal Office**: On receipt of the information, all fatal accidents, serious accidents involving five or more persons and dangerous occurrences/incidences shall be immediately reported to DDG of zone by telephone and fax/e-mail.

2.2.4 **Officers to be informed in ministry and who should inform**

(i) The officer(s) to be informed in the Ministry would be the Under Secretary. A list of Ministry officials dealing with DGMS affairs along with Telephone/Fax Numbers/e-mail is enclosed in ***ANNEXURE ACCDT–3***.

(ii) Director of Mines Safety of a region shall inform the Ministry. In case of sub-region, the Deputy Director of Mines Safety in-charge of the sub-region shall inform the Ministry.

2.2.5 **Intimation in tabular form**

Action to be taken as indicated in preceding paragraphs are given below in a concise form

Sl. No.	Type of accident or Dangerous Occurrence	Information to be sent to		
		Ministry	Head Office	Zonal Office
1. (a)	Fatal accident	Immediately by Fax/e-mail in Annexure Accdt-1 [Para 2.2.1(i)]	Immediately by Fax/e-mail in Annexure Accdt-1 [Para 2.2.2(i)]	Immediately by Fax/e-mail and by telephone Annexure Accdt-1 [Para 2.2.3]

Sl. No.	Type of accident or Dangerous Occurrence	Information to be sent to		
		Ministry	Head Office	Zonal Office
(b)	Fatal accident-Prime-facie non-mining or mining Non-statistical (with a note)	Immediately by Fax/e-mail [Para 2.2.1(i)]	Immediately by Fax/e-mail [Para 2.2.2(i)]	Immediately by Fax/e-mail [Para 2.2.3]
2.	Dangerous Occurrence involving more than 5(five) persons	Immediately by Fax/e-mail [Para 2.2.1(ii)]	Immediately by Fax/e-mail and telephone [Para 2.2.2(iv)]	Immediately by Fax/e-mail and telephone [Para 2.2.3]
Sl. No.	Type of accident or Dangerous Occurrence	Information to be sent to		
		Ministry	Head Office	Zonal Office
3.	Fatal accident involving 3(three) deaths or more or serious accident involving 5(five) or more		Immediately by telephone [Para 2.2.2(iii)]	Immediately by Fax/e-mail and telephone [Para 2.2.3]
4.	Dangerous occurrence			Immediately by Fax/e-mail and telephone [Para 2.2.3]

2.3 **Categorizations of Accidents**: In accident categorization following points shall be considered:

2.3.1 **Mining**

a) The accident has occurred in the mine; and

b) The accident must have been caused by an operation connected with mining or incidental to mining.

(This will not include accidents due to act of god like snake bite, lightning, natural cause like heart attack, brain haemorrhage etc.)

The harmful effects of inhalation of nitrous fumes can lead to delayed death with apparently no connection with mine accidents. In fact, in view of similarity of symptoms, there is possibility of recording such cases as Natural death due to broncho-pneumonia, particularly as they take place at home/hospital etc.

In enquiring into such cases therefore, care shall be taken to examine the full circumstances attending the occupation of the worker, his general health, his presence in the workings shortly after blasting (prior to his illness), system of ventilation in the mine and dispersal of blasting fumes etc. All possibilities relating to death due to the above hazard need to be eliminated before accepting such deaths as due to natural causes.)

Note: 1. In other cases, an accident will be classified as "Non-mining".

2. An accident taking place in a mine exempted under section 3(i)(b) of the Mines Act, 1952 should be treated as Non-mining accident.

2.3.2 **Statistical**

a) The person involved must be an employee of mine; and
b) He must be on duty; and
c) Existence of the mine should be known to this Directorate prior to the accident.

Note 1: In other cases, an accident will be classified as "Mining Non-statistical" accident.

2.3.3 **Injuries Due to Natural Causes**

In case where injuries (including fatal injuries) are found to have been caused due to 'fits' or other cause not connected with mining operation, a mention may be made of the fact in the accident report. The final decision whether the accident was a mining accident or not is to be taken by the Director-General.

3.0 ACCIDENT/INCIDENT INVESTIGATIONS PLANNING

3.1 **Types of accidents/incidences to be inquired**: The following accidents/ incidences shall be inquired immediately:

(i) All fatal accidents (fatal accident, which prima-facie appears non-mining, shall be inquired into as soon as possible but within one month from the date of intimation of accident.)

(ii) All serious accidents due to falls of roof and sides, haulage and machinery shall be inquired into as far as practicable.

In this connection, on receipt of a notice of serious accident, a standard letter shall be addressed to the concerned mine manager drawing his attention to the provisions of Regulation 43(10) of the Coal Mines Regulations, 2017 (CMR)/ Regulation 43(8) of the Metalliferous Mines Regulations, 1961 (MMR)/ Regulation 27(6) of the Oil Mines Regulations, 2017 (OMR) [or the corresponding Regulation of amended MMR] and calling for a copy of his report of Inquiry into the causes and circumstances attending the accident and remedial measures taken to prevent recurrence of similar accidents. The manager should analyze to fix the system, but do not investigate to fix the blame. On receipt of the managers' report, the matter may be followed up where necessary either through correspondence or by an enquiry.

(iii) All accidents due to explosives shall be inquired into.

(iv) All dangerous occurrences/incidences due to fire, major roof fall and rock burst, explosion or ignition, influx or noxious gases, irruption of water, instantaneous failure of a pillar, part of pillar or several pillars, premature collapse of workings, over winding, failure of suspension gears and brake, major fire and blowouts in oil mines shall be inquired into. Inquiry of other dangerous occurrences is at the discretion of concerned Director.

3.2 Inquiry Officer(s)[I.O.]

3.2.1 Accidents other than due to electricity or machinery

Fatal accidents involving up to two lives shall be investigated by the Deputy Director of concerned region.

Fatal accidents involving more than two lives and all dangerous occurrences referred at Regulation 8(b)(i) to 8(iv), Regulation 8(b)(vi) to 8(x) and Regulation 8(xvii) of the Coal Mine Regulations, 2017/Regulation 9(1)(a)(ii) to 9(1)(a)(ix) of the Metalliferous Mines Regulations, 1961/Regulation 7(1)(b)(i) to 7(1)(b)(iii), Regulation7(1)(b)(v), Regulation7(1) (b)(viii) and Regulation7(1)(b)(ix) of the Oil Mines Regulations, 2017 shall be inquired by the Director of concerned region. Director may, however, take assistance of a Dy. Director(s) during Inquiry. In case of accidents involving five or more deaths, the enquiry shall be conducted under the guidance of Dy. Director General of concerned zone.

CIM/DG may assign any officer(s) of DGMS to carry out inquiry into any accident and dangerous occurrence

The accident Inquiry shall be done promptly. Thus, if a particular officer normally required inquiring into an accident is not readily available, any other officer available in zone/headquarter (irrespective of his rank) shall proceed for Inquiry immediately. In case an accident is reported in an area where Dy. Director General or a Director is on tour, they shall immediately inspect the site of accident. The concerned officer shall complete the Inquiry subsequently.

The action letters arising out of the inquiry shall be issued by the Inquiry Officer.

3.2.2 Electrical accidents

All accidents due to electricity shall be inquired into by Dy. Director (Elect) of the concerned zone. However, in the zone where a Director (Elect) is posted, he shall conduct the Inquiry into the fatal accidents involving more than two lives. He may take a Deputy Director (Elect) for assistance. In case a Director/Dy. Director is not posted, an officer shall be authorized by CIM/DG to conduct the inquiry.

In case of accidents involving five or more deaths, the Inquiry shall be conducted under the guidance of DDG (Elect).

Dy. Director General of the concerned zone may direct the Dy. Director of the concerned region for preliminary Inquiry when it is apprehended that the visit of Dy. Director (Elect)/Director (Elect) in the area will take some time. But the Dy. Director will not take any action, except in case of serious danger. A copy of the said preliminary report shall be forwarded to the Dy. Director (Elect)/Director (Elect) concerned.

CIM/DG may assign any officer(s) of DGMS to carry out inquiry into any accident and dangerous occurrence

3.2.3 **Mechanical accidents**

All mechanical accidents shall be inquired into by the Dy. Director (Mech.) of the concerned Zone.

In case where Director (Mech.) is posted, he shall conduct the Inquiry into the fatal accidents involving more than two lives.

Dy. Director General of concerned zone may direct the Dy. Director of the concerned region for preliminary Inquiry when it is apprehended that the visit of Dy. Director (Mech.)/Director(Mech.) in the area will take some time. But the Dy. Director will not take any action, except in case of serious danger. A copy of the said preliminary report shall be forwarded to the Dy. Director (Mech.)/Director (Mech.) concerned. In case a Director/Dy. Director is not posted, an officer shall be authorised by CIM/DG to conduct the inquiry.

In case of accidents involving five or more deaths, the inquiry shall be conducted under the guidance of DDG (Mech.).

CIM/DG may assign any officer(s) of DGMS to carry out inquiry into any accident and dangerous occurrence

3.2.4 **Natural death**: If the fatality, prima-facie, appears to be a natural death, the Inquiry Officer may seek assistance from Dy. Director(OH)/Assistant Director(OH). In order to ascertain natural death, the post mortem report should invariably be examined.

3.2.5 **Who to enquire and who to finalize report [in tabular form]**

Sl. No.	Type	No. of fatality	Inquiry Officer	Report to be finalized at
1.	Fatal accident other than electricity or machinery	≤ 2	DD(Mining) of Region	the level of concerned zone
		>2 <5	Dir(Mining) of Region	the level of concerned zone
		≥ 5	DDG of zone	the level of HO
2.	Fatal accident due to electricity	≤ 2	DD(Elect.) posted in zone	the level of concerned zone
		>2 <5	Dir(Elect.)	the level of concerned zone
		≥ 5	Dir(Elect.) under the guidance of DDG (Elect.)	the level of HO
3.	Fatal accident due to machinery	≤ 2	DD(Mech.) posted in zone	the level of concerned zone
		> 2	Dir(Mech.)	the level of concerned zone
		≥ 5	Dir(Mech.) under the guidance of DDG (Mech.)	the level of HO

4.0 CONDUCT OF INQUIRY

4.1 **Inquiry Officer's Kit**: In every region a set of following materials etc. shall be readily available for immediate use during inquiry into an accident:

- Clipboard, lined papers, graph papers and pencils
- Digital camera(Intrinsically safe in case of belowground coal & hazardous mines)
- Enquiry Notice form
- Hard hat, safety boots, hearing protection, safety glasses and reflective vest
- Small first aid kit and water
- High visibility barrier tapes
- Measurement tape
- Magnifying glass
- Fluorescent jacket

4.2 **Inspection of the site of accident**: The place of accident shall invariably be inspected as early as practicable. If this is not possible, the fact should be clearly stated in the report with reasons.

The Inquiry Officer(s) [I.O.] shall inspect the site of accident/incident along with eye-witness(es), if any. If there is no eye-witness, the work-person(s), who has/have seen/attended the injured first, shall accompany the I.O.. Workmen's Inspector shall accompany the I.O.

At the accident site, the I.O. shall verify and gather the following information, which are relevant to the accident:

- Positions of injured workers.
- Condition of the working place.
- Exact location of the site.
- Operations being carried out.
- Materials being used.
- Position of all equipment/material in relation to the injured.
- Position of valves, switches, controls etc.
- Safety devices in use.
- Position of appropriate guards.
- Damage/Displacement to any equipment/material.
- Accessibility and evidence of congestion.
- Ventilation, Illumination, visibility and noise levels at the site.
- State of housekeeping at the site.
- Condition of the equipment.
- The effects of weather.
- Presence and location of supervisors and witnesses.
- Presence of unauthorized personnel.
- Evidence of safety equipment failures.
- Witness marks (gouges, scratches, smears, discolouration, burn marks etc.).

- Evidence of excessive force.
- Presence or absence of warning signs or barriers.
- Results of other inspections by company representatives or external authorities.

The I.O. shall try to corroborate the above information with eyewitnesses (if any) or from the person(s) who attended the injured first as far as possible.

4.3 **Photography**: Photography is one of the most useful and important tool to the I.O. **Thus, during Inquiry, photography shall invariably be done and included in the enquiry report.** All photographs used in the Inquiry Report must be numbered and captioned. Captions shall explain in detail what the picture is supposed to show. Captions will include type of equipment, date of the incident, and location of the incident. The direction toward which the photograph was taken may be included; for example, NE or SW. Photographs taken at the accident scene should include the following:

(a) An overall view of the incident site (wreckage) taken from a minimum of four directions.
(b) Adequate number of photographs taken in suitable direction is recommended.
(c) A view of the path of the equipment from point of initial and major impact to the place where it came to rest.
(d) Impact marks are vulnerable to rain and traffic; therefore, a photographic record of this type of evidence should be obtained.
(e) Photos of objects struck by the equipment.
(f) Larger portions of the equipment wreckage.
(g) Detailed photographs of suspected failed parts that contributed to the accident.
(h) Photos of failed personal protective clothing and equipment and the agents causing the failure or injuries.
(i) Photograph and measure skid marks, ground scars etc.
(j) Any other photographs decided by the Inquiry Officer.

Note: As an admissible evidence Memory Card/Negative, containing photographs, shall be preserved for the purpose of production before Court of Law.

The following tips may be useful for taking pictures,

- Use adequate light;
- Ensure unobstructed view of the area or object;
- Date the photograph;
- Reference the measurement (i.e. place a measuring tape/other object etc. next to the area or object to be photographed); and
- Preserve the photograph in electronic format.

4.4 **Collection of Evidences**: Gathering and evaluation of accurate and unbiased evidences are essential for successful accident inquiry. Human beings may be unreliable as observers, particularly when asked to recall details of significant events. A major potential for error occurs at the 'playback' stage, when the recorded memory of

an event is being accessed through interview. While it is felt that interview can be done competently and gathering evidence sounds simple, facilitating unbiased testimony is a surprisingly difficult and consistently under estimated task.

Contrary to popular belief, getting witnesses to say what we want to hear is not representative of an efficient interviewing technique. Even subtle, unintended variations in questioning technique or terminology can dramatically influence the content of recall. Importance should be given to training of prospective witness interviewers and incident investigators in the techniques of eliciting accurate and unbiased testimony from witnesses.

Once the accident scene has been roped off, it is most important to begin immediately to gather evidences from as many sources as possible during Inquiry. One of the biggest challenges faced by the I.O. is to determine what is relevant to the accident, how the accident happened and why the accident happened. Identifying items that answer these questions is the purpose of effective accident scene documentation. The main thing is to start the inquiry as soon as possible. It's easy to discard clues or leads if they are not useful. It is necessary to record personal observations and initial statements and collect available photos, sketches, videotape and paperwork. It is also very important to collect facts through Inquiry and questionnaire at right time and right place. Delays in conducting inquiry can affect the quality and quantity of information collected as memories deteriorate or are contaminated by outside influences (i.e. media, other witnesses etc.). If there will be a delay before an Inquiry can take place, ask the witnesses to write down their recollection of the event including any relevant events leading up to the actual occurrence. Except in cases where the accident is obviously of a trivial nature, or has occurred at a time considerably before the inquiry, the I.O. shall record the material evidence of witnesses, as in the absence of such evidence, it is not possible to arrive at a proper decision.

4.4.1 **Points to be kept in mind before recording of statements**

(i) The I.O. shall well prepare himself/themselves before recording of statements. It is essential for conducting a good Inquiry,
(ii) Take time to gather background information prior to recording of statements,
(iii) Consider information which is required to best structure the Inquiry,
(iv) Arrange the items available that may be helpful in the recording of statements; such as plans, models, checklists, procedures, photographs etc.,
(v) Make a list of witnesses and prioritize order of witness whose statements are to be recorded according to relationship to occurrence. The relationship of witnesses is often of importance and should be ascertained. A good question to start evidence is "Where were you at the time when the accident took place" This would often avoid waste of time,
(vi) In prioritizing list of persons to be interviewed following shall be kept in mind:

- Record the evidence of less educated witnesses first (at the spot if possible)as otherwise misunderstandings are likely to occur,
- Examine other witnesses in ascending order of official status as far as possible. (If the manager's/agent's statement is recorded first or he is given too early an opportunity to talk about the case, the whole Inquiry is likely to be prejudiced by his views),

- Must examine every person injured in an accident. If a person is likely to die due to the accident, his dying declaration should be recorded:
  - in the presence of a magistrate if possible, or
  - if it is apprehended that the injured persons may die before the arrival of the magistrate, in the presence of a medical officer, or
  - when even a medical officer is also not present, in the presence of two witnesses, and the aforesaid medical officer or witnesses shall attest the declaration.
- Record the evidence of the medical officer who attended the injured or deceased. The evidence should give details of all injuries and, in case of fatal accident, should state clearly that the death was due to injuries received,
- Record the statement of the manager to the effect that he is the manager of the mine and in all cases of falls of roofs or sides and other cases in which the question of supervision comes, the amount of supervision exercised by all concerned in connection with the occurrence of the accident should be inquired into and recorded in evidence.

(vii) Ensure statement of witnesses are recorded in a private setting with no distractions,
(viii) In some situations, it may be beneficial to record statement of witnesses at the site of accident to allow the environmental context to aid recall.

4.4.2 **Points to be remembered during recording statement**

(i) Introduce yourself and explain the aim of the interview prior to asking questions,
(ii) Develop an early rapport with witnesses,
(iii) Emphasize that the aim of the inquiry is to establish "what has happened" in order to prevent recurrence, not to blame anybody,
(iv) Avoid intimidation and enhance cooperation
(v) Attentive listening to the witness and your body language reflects your interest. (e.g. maintain eye contact, sit facing the witness, give feedback to indicate you are listening and understand what has been said).
(vi) Avoid interrupting the witness; remember you are there to obtain the witness's recall of the incident.
(vii) Use everyday language; try to avoid technical terms, jargon and acronyms to avoid misunderstanding or confusion.
(viii) Encourage the witnesses to give their evidence verbatim as far as possible and do not confuse by a volley of interrogations. Ask the witness to answer questions in as much detail as they can.
(ix) Remain conscious of the witness's emotional state (e.g. defensive, anxious, stressed, confused, angry or distressed). If this occurs, offer a glass of water, a short break or re-schedule the interview,
(x) Collect evidence in presence of Workmen's Inspector of the mine. Where there is no Workmen's Inspector, a representative of workmen may be allowed to be present during recording of statement. However, if the witness feels more comfortable with a friend or representative present, try to arrange this,
(xi) To ensure that all the facts are uncovered, ask the broad questions such as "who?, what?, when?, where?, why?, how?"

- Sample interview Questions:

- Where were you when the accident/incident happened?
- What were you doing at that time?
- What did you see?
- What did you hear?
- What else was around at the time?
- Is there a standard procedure for the task?
- Are workers trained in the standard procedure?
- Was this the first time this task was done?

(xii) Ask open-ended questions like
- "What did you see?"
- "What happened?"

(xiii) Ask those being interviewed:
- To explain in their own words what happened, taking care not to ask leading questions,
- To explain their actions immediately prior to the incident,
- To explain any actions taken to reduce risk in the task being conducted,
- Whether they knew of any safety features or PPE required for the task,
- Whether they knew of any previous incidents or near misses associated with conducting the task.

(xiv) Ask those being interviewed about the environmental condition whichever is relevant to the accident like:
- What were the weather conditions?
- Were any housekeeping issues involved?
- What were the workplace conditions?
- What surrounding noises were present?
- What were the light conditions?
- Were toxic or hazardous gases, dusts or fumes present?

(xv) Do not make suggestions.
(xvi) If the person is stumbling over a word or concept, do not help them out.
(xvii) Use closed-ended questions later to gain more detail.
(xviii) After the person has provided their explanation, these types of question can be used to clarify –
- "Where were you standing?"
- "What time did it happen?"

(xix) Don't ask leading questions like
- Bad: "Why was the front end loader operator driving recklessly?"
- Good: "How was the front end loader operator driving?"

(xx) If the witness begins to offer reasons, excuses, or explanations, politely decline that knowledge and remind them to stick with the facts.
(xxi) Record statement accurately which shall reflect all information obtained completely.
(xxii) Record hearsay evidence only occasionally and give secondary value to it.
(xxiii) Ask the following question to the witnesses

- Period of experience, in a particular type of work (in same mine and other mines), of deceased or injured work person before accident, if known,
- Type of training received, if known,
- Was the work being supervised at the time?
- Is there anything else you would like to add?
- Physical limitations of deceased/injured in conducting the task being performed before the accident, if known,
- Status of health of deceased/injured, if known,
- Period of time deceased/injured have been at work, if known.

(xxiv) Record the home address of every witness examined. For the purpose of identification and issue of summons to the witnesses by the Court of Law, the identity of every witness shall be established by reference of father (husband in the case of married woman). The name of every person whose evidence is recorded should therefore read as Shri ..... son/daughter/wife of .....

(xxv) Unnecessary evidence shall not be recorded as far as practicable.

(xxvi) Pay particular attention to the following aspects:

- The time elapsed between the accident and the receipt of first aid.¬
- The method of transport of the injured persons from the place of accident to aboveground and his conveyance to hospital, if necessary.
- In case of an injury of serious nature, the doctor is expected to visit the place of accident, including belowground workings, to supervise the operations mentioned above and to provide early medical attention. In case this is not done, the reason(s) why the doctor could not proceed to the place of accident for early assistance to the injured person should be enquired into.
- Treatment given below ground in the form of first aid and the subsequent¬ treatment given.

(xxvii) If possible, evidence of the attendance clerk, sirdar/mate or some other person who can establish the identity of injured/deceased should also be recorded.

(xxviii) It has been observed that in certain cases the Inquiry Officer(s) have not obtained the statements from the injured workers during inspection of the mine as the injured workers were not available at the mine but were in the hospital. It is to be understood that the statements of the injured workers are very essential to prove the fatal accident cases in as much as those workers are material witnesses in such cases. In the absence of the statements from the injured workers, it may become difficult to prove the cases in the Court of Law, as these workers are eyewitnesses to the accident. It is therefore desired that the Inquiry Officer(s) shall invariably obtain statements from the injured workers as soon as possible to prove the cases in so far as fatal accidents are concerned.

(xxix) It is best if the witness writes his/her own statement. If the witness declines to write his/her statement, it may be recorded by I.O.

(xxx) Obtain permission from the Medical Officer-in-charge to record the evidence/statement of the injured/other witness admitted to the hospital.

(xxxi) Correct misunderstandings, if any, of the events between you and the witness.

(xxxii) Prior to ending the interview, ask the witnesses "What do you think happened?" and "What do you think could be done to prevent a similar occurrence?"

(xxxiii) Always end the interview on a positive note and thank the witness for their time and co-operation.

(xxxiv) It is worth to call witnesses a few days after the initial interview, if necessary, to see if they have recalled any added information.
(xxxv) Ensure that the witnesses have your contact details to pass any details they may recall after the interview has finished.
(xxxvi) Record the statement of each witness on separate paper. **[Laptop may also be used for recording statement. In such case a print out of the statement may be taken.]** After taking/recording statement, it shall either read by witness himself or be read over to him by workmen's inspector/workmen representative or by the I.O. in absence of representative(s). In some cases, the work person do not follow Hindi language and as such feel difficulty in understanding the explanation of the I.O. It is therefore suggested that the I.O. while recording statement in English shall read over and explain the same to the concerned work person in Hindi or a local language in presence of a mine official. The signature of such official shall invariably be obtained in the recorded statement. The fact that the "Statement of Shri.....is recorded by the undersigned, read over and explained in Hindi (or local language) to him in presence of Shri....., (Designation)....., which he accepted as correct and signed or put his L.T.I. thereafter" shall be recorded at the end of all such statements.

The person present during recording of the statement shall certify that "The statement of Shri.....was recorded by Shri.....in my presence and was read over to the witness who accepted it as correct and signed/put his L.T.I. thereafter in my presence."
(xxxvi) The witness, whose statement was recorded by the I.O. and the person in whose presence statement was recorded shall sign/put L.T.I.(with date), on all pages, as token of approval.
(xxxvii) If the witness likes to give his statement in writing, it shall be accepted and the same shall be countersigned(with date) by the I.O. with a remark that the statement has been signed by the witness in my presence.
(xxxviii) All gathered evidences should be logged and securely preserved to allow for retrieval at a later date. This could be a matter of years in case of prosecution in the Court of Law/Court of Inquiry.

4.5 Gathering other information

4.5.1 The Inquiry Officer(s) shall

- review the task that was being conducted.
- examine the work procedures and the scheduling of the work to ascertain whether they contributed to the incident.
- examine the availability, suitability, use and supervisory requirements of standard operating procedures or work instructions.
- explore the actual work procedure being used at the time of the incident.

4.5.2 In case of accident due to electricity or machinery

- Examine the equipment involved in the accident,
- Pay particular attention to the condition of equipment, anything that may have changed or be out of the normal condition e.g. abnormal stress, modifications, substitutions, distortions, fractures etc.,
- Identify any design flaws, mismatched components or confusing labeling or marking,
- Ensure that the equipment was appropriate for the task being conducted,
- Check all the safety features including protective relays.

To seek out possible causes resulting from the equipment and materials used, investigators might ask:

- How did the equipment function?
- Were hazardous substances involved?
- What identification did they have?
- Were any alternative substances available?
- What was the state of the raw material?
- What personal protective equipment (PPE) was being used?

4.5.3 Inquiry Officer(s) shall look for answers to questions such as:

- What work procedure was used?
- Was a Risk Assessment/Job Safety Analysis conducted as part of the planning prior to the task?
- Had conditions changed that would have affected the way the normal procedure worked?
- What tools and materials were available?
- Were they used?
- How did the safety devices work?
- What lockout or isolation procedures were used?

4.5.4 Answer to any of the preceding types of questions logically lead to further questions such as:

- Whether applicable safety rules were communicated to employees? If yes, what & when?
- What written procedures were available?
- How were they enforced?
- What supervision was in place?
- What training was given to do the work? When? Is it still valid?
- How were hazards identified?
- What procedures had been developed to overcome them?
- How were unsafe conditions corrected?
- Was regular maintenance of equipment carried out?
- Were regular safety inspections carried out?
- Were there any changes to equipment, environment, people or procedures?

4.5.5 Review the documents like log books, work schedules, files, policy and procedure manuals, specific legislation, manufacturer's specification, check lists, training records, work place inspection reports, previous records of this kind of event, previous accident/incident investigation reports whichever is relevant.

4.5.6 **Home address of victim and dependents**

While holding inquiries into fatal accidents (or accidents likely to become fatal), the I.O. shall record the home address of the victim and, if possible the name and address of the principal dependents. When this information is not readily available at the time of inquiry, it may be ascertained by correspondence later on.

4.6 **Contributory factors leading to the accident**

The I.O. shall remember to establish the following points for identifying all of the contributing factors leading the accident:

4.6.1 **Events leading to the incident**

- The system of work being carried on.
- The instructions given for the work.
- The location of key personnel and their actions prior to the incident.
- Variations from instructions or safe work systems.
- Workplace conditions.
- The materials in use or being handled.
- The type of vehicle or equipment in use.

4.6.2 **Facts of the incident itself**

- The state of the system and the actions that occurred at the time of the incident.
- The persons directly involved, and those involved at a distance.
- The tools, equipment, materials and fixtures directly involved their capabilities and any failures.
- The time and exact location of the incident

4.6.3 **Relevant facts of what occurred immediately after the incident**

- The injuries or damage directly resulting.
- The events leading to consequential injury or damage.
- The persons involved, including those rendering aid.
- Any problems in dealing with the injuries or damage such as no method for releasing a trapped person, a faulty extinguisher, isolation switch difficult to locate, and similar specifics.

4.7 **Seizures**

4.7.1 While inquiring into accident cases which are likely to lead to prosecution, the I.O. shall seize all the relevant registers/documents/materials to prove the case. Seizure Memo as given at ***ANNEXURE ACCTD-8*** shall be used.

Following records are also sometimes useful during analysis & to establish cause of accident:

- Training, medical and work history records, work instructions,
- Applicable procedures, equipment manuals and maintenance records,
- Inspection Report Books,
- Statutory Diaries and Records
- Plans and Sections
- Audit reports,
- Organizational policies and procedures.
- Any other relevant document/material

4.7.2 For seizure of registers/documents/materials etc., the I.O. shall follow the procedure laid down in the instruction on legal guidelines issued by this office (Instruction 2 of 1968)

4.8 **Taking notes**: Keeping notes in a notebook throughout the inquiry process keeps information together and organized. Notes should be neat and detailed, yet concise. It should answer who, what, when, where, why and how. Good notes help to

recall facts and are useful when analyzing information to determine root cause. Note should include:

- ✓ Dates and times;
- ✓ Names and addresses;
- ✓ Information from statement;
- ✓ Observation & action taken by Inquiry Officer(s) and others;
- ✓ Description of the site and environmental conditions;
- ✓ Reference to photographs taken;
- ✓ Measurements;
- ✓ Sketches and diagrams; and
- ✓ Information about evidence gathered.

4.9 **Sketches & plans**

4.9.1 Where necessary, sketches should be prepared by I.O. to illustrate the accident. The sketches should be neat and clear. While preparing a report of accident enquiry, the plans, sketches etc. submitted with the reports should explain the position by cross-references made in the body of the report. The idea should be gradually developed with relevant bearing on the subject matter. I.O. should bear it in mind that the Senior Officer who has to take a decision on the reports may not have the advantage of a personal knowledge of the case and as such they must know all relevant facts. Sketches are particularly necessary in cases of accidents by falls of roof and sides and also in every case of fatal accident etc.

4.9.2 Sketches should, wherever possible, be drawn to an approximate scale with R.F. 200:1. All-important dimensions should be given. Where a plan showing a portion of the mine is necessary to illustrate an accident, the same may be obtained from the mine. All plans and sketches should bear an inscription at the top giving particulars of mine, date of accident, name of person killed etc. viz., particulars relevant for identification of the plan or sketch with reference to the accident. All plans/sketches submitted by mine management should be duly signed by the surveyor and manager and subsequently by the I.O.

4.9.3 **Preparation of Plan**

(a) The accident site plan(including sections where necessary) may ordinarily be prepared by the mine surveyors under the direction of the I.O. The aforesaid plan/sketch shall however, be certified by the I.O. that it was prepared under his direction.

(b) In respect of the following cases, however, the I.O. must personally prepare a hand sketch (including sections where necessary) with all measurements indicated thereon:

- ➢ In all cases where responsibility may lie on management; and
- ➢ Where there is no qualified mine surveyor or where there is difficulty in getting the plan made by the mine surveyor as per directions of I.O.

(c) In the preparation of sketches in respect of accidents due to fall of roof/sides, the height, slope, benching and other features of the remaining portion of the roof/sides that had not fallen should be specifically indicated so that the height, slope, benching and the state of the fallen portion can be reasonably inferred there from.

(d) In case of accidents involving five or more persons, preferably departmental survey staff shall be deputed to do the necessary survey work. The plan should be signed and dated by the person who prepared it. Field book and other notes taken shall be preserved.

4.10 **Post-mortem Report**: In respect of every fatal accident where death is purported to be due to natural causes or to homicide i.e. in effect, causes other than those coming under the scope of Mines Act, the cause of death should invariably be substantiated by the findings of the post-mortem report. In all such cases, management should be advised to get the post-mortem examination carried out.

(Refer D.G.'s Circular No. 37 of 1956 and 30 of 1960 for carrying out post-mortem report).

4.11 **Data organizing**

4.11.1 After collection of data, it is to be organized to provide the sequence of events leading up to the accident/incident, the accident/incident itself and post-accident/incident events. The Incident Tree Technique is an effective method of guiding the inquiry process. The advantages of the method are as follows:

- It is an effective method of guiding the inquiry process.
- Incident tree arranges the facts in a logical and sequential fashion.
- It provides a graphical display of information to aid the inquiry team in recalling what facts must be considered, their relationship to one another and to identify what facts are missing or conflicting.
- It also allows the inquiry team to hypothesize over possible causes of events and discard those that are not supported by factual data.

4.11.2 Commencing with the incident event, identify the earlier events or conditions which were necessary for the incident event to happen. These are known as contributing factors.

4.11.3 Trace each contributing factor back in a similar way, identifying further contributing factors.

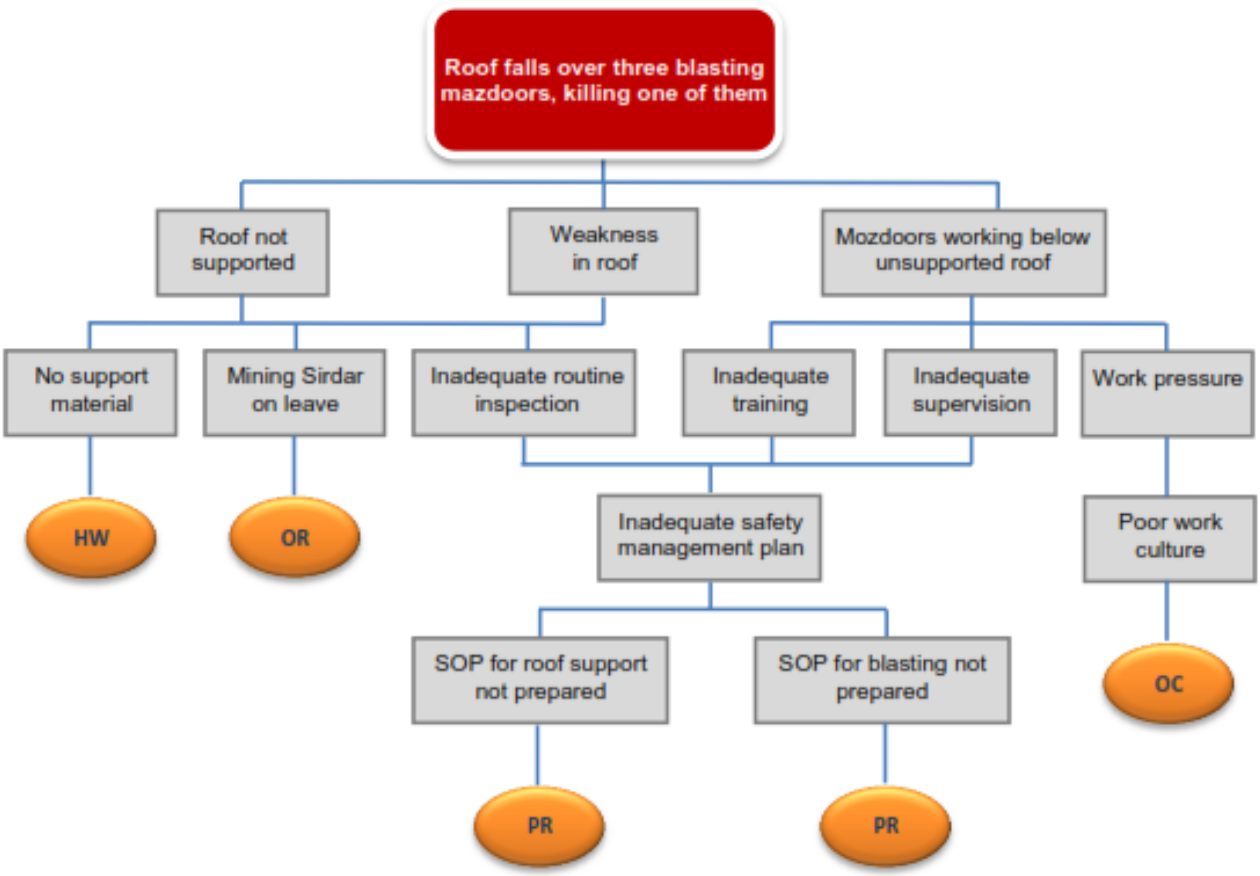
4.11.4 Process of tracing back continues for each chain of events to a point where it is considered to be outside the control or prevailing influence of the organisation.

4.11.5 Validate all contributing factors. If removal of a factor is seen not to affect the outcome, it cannot be considered a contributing factor.

4.11.6 Care shall be taken to describe contributing factors accurately. For example, "failure to wear protective equipment" may imply there was a procedure that was not followed. This would lead the inquiry team to examine areas such as supervision and motivation.

4.11.7 The statement "no procedure for wearing protective equipment" would lead to areas of policy and procedures.

4.11.8 An example (pictorial view) of incident tree is depicted below for better understanding



Organizational factor types

HW – Hardware	MM – Maintenance Management
OR – Organization	TR – Training
IG – Incompatible Goals	CO – Communication
PR – Procedures	DE – Design
RM – Risk Management	CM – Contractor Management
MC – Management of Change	OC – Organizational Culture
RI – Regulatory Influence	OL – Organizational Learning

4.12 **Data analysis**

4.12.1 Data gathered and organized shall be systematically analyzed to identify all underlying causes of the accident/incident. Normally, the Inquiry Officer(s), during investigation, is/are looking at the errors or violations that led directly to the incident. These direct causes are:

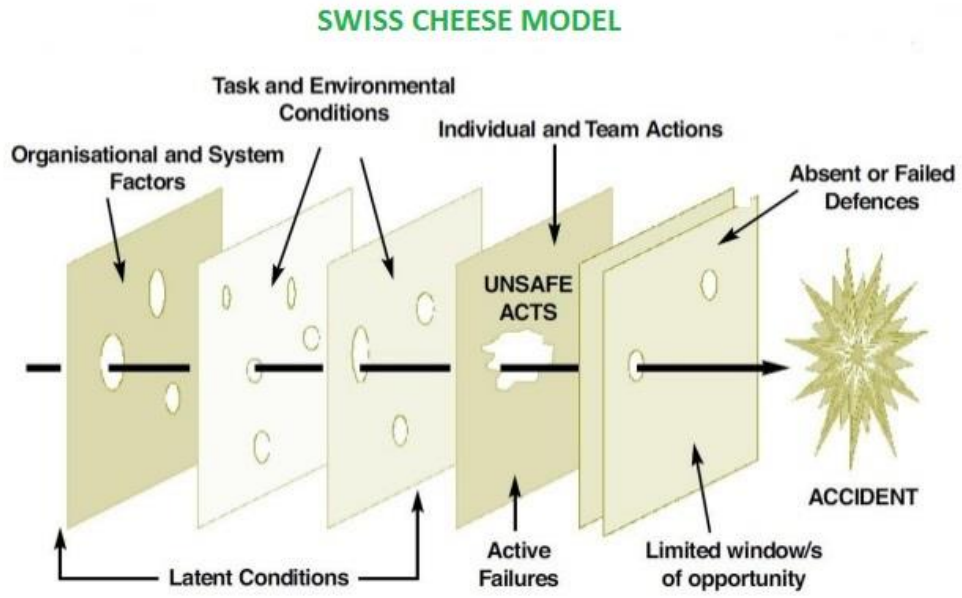
- typically associated with personnel having direct contact with the equipment, such as operators or maintenance personnel.
- always committed 'actively' (someone did or didn't do something) and have a direct relation with the incident.

Most of the time, the defences, built into the operation(s), prevent these 'human errors' from causing harm. Absence or failure of defences, which normally control the hazards, leads accident/incidence. But the workplace factors that contributed to the

accident/incident and the organizational deficiencies within the system that acts as forerunners to an accident/incident, in many cases, are unveiled. Accidents/incidences occur due to failure of following basic elements namely,

- Absence or failure of defences - Direct causes
- Individual level errors or violations - Indirect/Root causes
- Task and environmental conditions - Indirect/Root causes
- Organizational processes - Indirect/Root causes

4.12.2 Swiss Cheese Model, depicted below, shall give broader idea of occurrence of an accident (by James T. Reason, Professor of Psychology, University of Manchester)



4.12.3 The I.O., therefore, shall aim to find out, during analysis of an accident/incidence, all contributing factors, events and system weaknesses, which jointly causes the accident/incidence.

4.12.4 **Accident/incidence causation**

Organizational Factor	Task/ Environmental Conditions	Individual/Team Actions	Absent/Failed Defences	Consequence
Hardware Training Organization Communication Incompatible Goals Procedures Maintenance Management Design Risk Management Management of Change Contractor Management Organizational Culture Regulatory Influence Organizational Learning	Working conditions Time pressures Resources Tool availability Job access Task complexity Fitness for work Workload Task planning	Errors and Violations	Interlocks Isolation Guards Buffers SOPs' Inadequate ground control JSAs' (Job Safety Analysis) Awareness Supervision Emergency Response Personal Protective Equipment (PPE)	Accident Incidence Near-miss Equipment Failure Production Loss

4.12.5 **Identify the Absent or Failed Defences**

Finally what has failed and led to the accident:

- Defences are those measures designed to prevent the consequences of a human act or component failure producing an incident.
- Defences are equipment or procedures for detection, warning, recovery, containment, escape and evacuation, as well as individual awareness and protective equipment.

4.12.6 **Identify the Individual/Team Actions**

- These are errors or violations that led directly/indirectly to the incident.
- They are typically associated with personnel having direct contact with the equipment, such as operators or maintenance personnel or supervisors of operation or mechanic.
- They are always committed 'actively' (someone did or didn't do something) and have a direct relation with the incident.
- For most of the time however, the defences built into our operations prevent these 'human errors' from causing harm. Failure of such defences ultimately failed to prevent the occurrence of accident/incident.
- Once again, keep asking "Why?" someone acted (or was allowed to act) or didn't act in the way they might have leading up to the incident.
- Workplace factors : Some of the example of workplace factors are;
  - Poor working condition (illumination, dust, ventilation etc.),
  - Poor access to work place/job,
  - Poor housekeeping,
  - Under resourcing,
  - Inadequate supervision,
  - Poor procedures and instruction,
  - Change of routine,
  - Poor communication,
  - Poor shift pattern and overtime working,
  - Low operator pay/status,
  - Blame culture,
  - Task allows for easy shortcuts,
  - Perceived license to bend rules,
  - Time shortage,
  - Compliance goes unrewarded.

- Human factors: Some examples of human factors responsible for the accident are
  - Frequency bias/similarity bias,
  - Preoccupation/distraction,
  - False perception,
  - Incomplete knowledge,
  - Inference and reasoning,
  - Stress and fatigue,
  - Error proneness,
  - Poor judgment,
  - Overconfidence,
  - Unfamiliarity with task,

- Inadequate skill,
- Insufficient ability,
- Low morale,
- Job dissatisfaction,
- Misperception of hazard.

4.12.7 Identify the Task/Environmental Conditions

- These are the hazardous conditions or unsafe behaviors which exist immediately prior or at the time of the incident that directly influence human and equipment performance in the workplace.
- These conditions may directly lead to failed defences or through human error/lapses.
- These are the circumstances under which the errors and violations took place and can be embedded in task demands, the work environment, individual capabilities and human factors.
- Deficiencies in these conditions can promote the occurrence of errors and violations.
- They may also stem from an Organisational Factor Type such as Risk Management, Training, Incompatible Goals, or Organisation, when the system tolerates their long term existence.
- The Task/Environmental Conditions can be categorised in two groups: Workplace Factors and Human Factors as mentioned above.

4.12.8 Identify the Organizational Factors

- Identify which of the Organisational Factor Types (OFTs) are primarily implicated in producing the identified Task/Environmental conditions, allowed them to go unaddressed or undermined the system's defences.
- These are the underlying Organisational factors that produce the conditions that affect performance in the workplace.
- They may lie dormant or undetected for a long time within an organisation and only become apparent when they combine with other contributing factors that led to the incident.
- These may include management decisions, processes and practices.
- Conditions Behavior Fail to enforce Lack of time.
- Check question: Does this contributing factor identify a standard Organisational Factor present before the incident and which:
  - produced adverse task/environmental conditions, or allowed them to go unaddressed,
  - Promoted or passively tolerated errors or violations,
  - Undermined or removed the system defences?
  - One need to remember that this task requires considerable thoughts and deep studies before any conclusions are drawn.

4.12.9 Developing the corrective action for recommendation

- Each recommendation is a written statement of the action that management should take to correct a contributing factor.
- The recommendations which, if implemented, will reduce the likelihood of that factor contributing to future incidents.

- Recommendation should improve the system defenses to limit the consequences of the contributing factor, so that the residual risk is recognized by management as acceptable.
- Interim recommendations for immediate corrective actions shall be stated, wherever applicable, after an incident or near miss as a short-term measure to mitigate current risk prior to the establishment of long-tern corrective actions. It is essential that any corrective action be fully evaluated by management to ensure that change(s) do not weaken other defenses or expose other risks.
- Recommendation must address an organizational or system deficiency. It should not be one-time or band-aid fix.

5.0 ACCIDENT REPORT WRITINGS

5.1 General

The report of an accident inquiry should be as clear and concise as possible, as it is to be read by officers who have not visited the scene of the accident and are therefore unacquainted with relevant facts. Reports of major accidents and of such other accidents may be required to be placed on the table of parliament. Such reports would thus be liable to scrutiny by persons who may know very little about mining and sometimes by persons who may have interest in some cases. It is therefore very necessary that reports are drawn up and worked very carefully.

5.2 Headings for Accident Inquiry Report

First two pages of the inquiry report shall be in Form CIM-30

A. FIRST INTIMATION OF ACCIDENT

I.O. shall write how the information about the accident was received by him i.e. when, from whom and by what means including actions taken by him thereafter. When Form IVA was received? The following format shall be used to indicate details,

When the information received	:
From whom the information received	:
By what means the information received	:
What action taken by the person who received the information	:

B. BACKGROUND INFORMATION RELEVANT TO THE ACCIDENT

Generally should include,-

(i) Brief description of mine
(ii) Management structure
(iii) Employment & production
(iv) Geology & Strata Section
(v) Method of work
(vi) Mechanization
(vii) Shift timings

(viii) Supervision (Must mention supervision at the time of accident)
(ix) Conditions of working area like, seam/vein/load thickness, depth of cover, ventilation, support, blasting, haulage/transport system, etc.
(x) Relevant Statutory permissions/exemptions/relaxations/restrictions, etc.
(xi) Relevant Statutory provisions (reproduce the provisions)
(xii) Details of vocational training imparted to the person(s) involved in and those contributed the accident
(xiii) Description of the activity/activities**(relevant to the accident): This paragraph shall contain detailed activity/activities which resulted the undesired event. If any permission from this Directorate is accorded for the purpose, mention the salient condition(s) applicable. Mention about the Standard Operating Procedures (SOPs') or Work Instructions on the related activity prepared on the basis of risk assessment.

**in case of haulage accident, the haulage system in the mine, etc.; in case of roof/side fall, the condition of seam/vein/load, thickness worked, method of work, condition of roof, Systematic Support Rule details and its general compliance, type of roof and RMR, artificial support needed, proximity of fault, etc.

C. EVENTS PRIOR TO THE ACCIDENT

Start chronologically from the beginning of the shift (in some cases from the previous shift/day) mentioning sequence of events leading to the accident. Event starting time and end time, wherever required, shall be included.

Mention
- What the injured (fatally/seriously) was doing before the accident?
- What the co-worker(s) were doing?
- Who had told him/them to carry out that job?
- Who was supervising the job?

D. OCCURRENCE OF THE ACCIDENT

Mention
- What exactly the injured (fatally/seriously) was/were doing at the time of accident?
- Was the injured struck by an object or caught in/on/between object? How?
- Did the injured fall from same level of from a height?
- Was the incident due to inhalation of toxic gas(es)?
- Which part of the body involved?

E. RESCUE AND RECOVERY

Describe in detail the rescue and recovery operation of the injured mentioning the points in the checkbox. Prompt action on rescuing an injured due to accident, giving first aid and sending for medical attention in many cases (heavy bleeding from injured part of the body/internal injury/cardiac anomaly etc.) save life.

Check during Inquiry:
- Was there any eye-witness of the occurrence of accident/incidence? If yes, what had he done?

- Who reached the site of accident first (mention time)? What had he done?
- Who gave first aid to the injured (if any)?
- Who requisitioned vehicle (ambulance) for transporting the injured to hospital?
- When did the vehicle (ambulance) reach?
- If the vehicle was not ambulance, was there any facility to carry patient in supine condition?
- At what time vehicle (ambulance) reached hospital?
- If the first hospital referred the injured to other hospital, at what time the injured was referred?

F. INSPECTION AND INQUIRY

In this para, I.O. shall mention:

- ✓ When and with whom he inspected the site of accident?
- ✓ What did he observe at the site?
- ✓ Who were present at the site?
- ✓ Activities going on at the site.
- ✓ Conditions/descriptions of the site
- ✓ Information, if any, gathered during the inspection
- ✓ Details of photograph (except underground coal and oil mines) is taken, it should be mentioned

The observations made during inspection of the site of accident need to be clearly brought out.

The IO shall try to corroborate the information with the eye-witness or from the person(s) who attended the injured first as far as possible and reflect the same in this paragraph.

Caution: During inspection, IO shall take necessary precautions so as not to endanger himself and others present there.

Insert photographs taken during the course of inspection/inquiry

A statement in the following format shall be included :

Sl. No	Name of person/witness	Designation	Organization	Date of recording of statement	Place of recording of statement	Statement recorded by
1.						
2.						
3.						

G. TRAINING

The Inquiry Officer shall mention the following points on training,

(i) Whether training to work person(s), involved in the accident, was/were imparted or not? What type of training it was?

(ii) Whether content of the training was sufficient to inform work persons on safety related matter?

These can be ascertained from the injured or same category of work persons.

H. ANALYSIS OF THE EVIDENCE

(i) The cause and circumstances leading to an accident should be analysed step by step, presenting the facts of the case in logical manner. The conclusion should be deduced from the facts so available and argued in logical and cogent manner.

Every case usually presents varied circumstances leading to the cause of the accident. This is mainly because of the complex nature of mining operations and different management styles and practices. The Inquiry Officer has therefore to exercise great care in collecting and analyzing the evidence for coming to a correct conclusion on the cause and responsibility of the accident and in making suitable recommendations for necessary action to prevent similar accidents. For a balanced assessment of the situation it is helpful to consult senior colleagues before finalizing the case and it is in this context that the officers are advised vide DGMS (Tech) Inst No. 62 of 1981 to discuss the accident case with other officers. In some zones the case is discussed between all those officers who are to deal with the report in R.O. and Z.O. viz. DDG, Director, Staff Officer to DDG and DD (when he is the Inquiry Officer)- this is to be done soon after the occurrence of the accident and before the inquiry is completed. This practice however is not practicable when the R.O. is situated away from Z.O. but even in such cases the matter could be discussed between DD and Director, and the Director may like to consult DDG before taking action on the report of DD, wherever possible. This would ensure that the collective experience, technical knowledge and wisdom of as many officers as possible is utilized in accident inquiries in the interest of improving safety in mines and reducing accidents therein.

The Inquiry Officer shall aim to find out, during analysis of an accident/incident, all contributing factors, events and system weaknesses, which jointly causes the accident/incident. An in-depth analysis (as per paragraph 4.12) of the observations made during inspection of the site of accident, the evidences collected during Inquiry as mentioned in clauses of Paragraph 4.4, the information gathered on the basis of clauses mentioned in Paragraphs 4.5, 4.6, 4.8 and examining post mortem (if available) is to be carried out, after organizing aforesaid collected data as per Paragraph 4.11.

(ii) Effort shall be made to find out indirect/root cause(s) of the accident.

I. CONCLUSION ON CAUSES

The cause of accident shall be written in a separate page ~~and attached with~~ of CIM 30. In this page, all the contributing causes (without mentioning direct, indirect/root causes) shall be summarized. A paragraph shall be added in this page mentioning the ways to avert the accident (i.e. 'Had' paragraph).

At para 6.0 some of the common mistakes in writing cause and example of drafting fairly good causes are mentioned.

J. RESPONSIBILITY

(i) It is necessary to state distinctly who is/are responsible for the accident. Responsibility, if any, should be adjudged on the person/persons that brought forth the

circumstances leading to the accident. The above analysis should be done in a proper and perspective manner and substantiated by logical and meaningful reasoning.

As far as possible, the junior officers should discuss the report with the Director(s) before finalizing the responsibility. Efforts should always be made to see that the conclusions and reasoning brought forth in the reports are consistent with the finalized cause and responsibility. In case of writing the fatal accident report which is likely to lead to prosecution, the confirmation of the findings of the report by Zonal Office shall be awaited, before initiating further action, including issue of show-cause notice(s), violation letter(s) etc. In such cases, obviously, the matter needs to be expedited to avoid any undue delay.

Blaming deceased shall be avoided as far as practicable, since there is no possibility of giving his evidence to justify his action. Therefore, in affixing the responsibility on deceased, utmost care shall be taken and all factors, gathered during enquiry, shall be critically analyzed.

(ii) **Lack of specific provisions vis-à-vis Responsibility**

There may be instances where it is felt that observance of certain precaution(s) could have averted the accident and such precautions might not have been specifically covered in the Regulations. In such case(s), the accident shall not be categorized as "Misadventure". For fixing responsibility in those cases, recourse is to be taken to the provision of "General Safety".

(iii) **Categorization of responsibility**

In classifying the responsibility at the end and also on the first page of the report the following terminology shall be used:

Fault of Management: to cover Owner, Agent, Manager, Asstt. Manager, Engineer and equivalent ranks i.e. up to the level of senior supervisory officials.

Fault of subordinate supervisory staff: to cover Overman/Foreman, Sirdar/Mining Mate, Shotfirer/Blaster, electrical supervisor and equivalent ranks i.e. all subordinate supervisory staff.

Fault of co-worker or deceased in so far as it relates others.

It may be noted that there may be cases of multiple responsibilities, like Management and Subordinate Supervisory Staff or Deceased and Co-worker, etc. In such cases the specific contributory role of each should be clearly brought forth.

K. RECOMMENDATIONS

In this paragraph, immediate and long-term corrective actions shall be suggested (refer Paragraph 4.12.9) such as,

- ✓ Imparting training to particular group of work persons on relevant Safe Work Procedure;

- ✓ Preventive maintenance activities that keep equipment in good working condition;
- ✓ Conducting a job hazard analysis to evaluate the task for any hazards and then train work persons on these hazards;
- ✓ Engineering changes that make the task safer or administrative changes that might include changing the way the task is performed.

L. MISCELLANEOUS

In this paragraph, describe on the following points,

(i) Compensation paid/to be paid to kin of the deceased.

(ii) Action taken on serious contravention(s) (if any), not related to the accident, observed during inspection/enquiry.

(iii) Address of the concerned Workmen's Compensation Commissioner.

(iv) The I.O. should write a letter to the Compensation Commissioner about the accident for his necessary action especially in case of un-organized sector.

Signature with date
Inquiry Officer(s)

5.3 **Place of accident**

On the first page of the proforma for enquiry reports (**CIM-30**) the entry against place should specify the identification particulars of the place of accident by a reference to the Name or Number of the pit or shaft or excavation, followed by name of the seam and then by the actual place of accident. Codes of places being followed at Statistical Section shall be followed.

5.4 **Overwriting on reports**

Paragraphs of the report should be numbered for comments and preferably not sidelined or underlined. Paragraphs should be small as far as practicable. No comments should be written on the report itself by Director or Dy. Director-General. A separate sheet may be added for such purposes.

5.5 **Incidental or extraneous violations not connected with accident**

During the course of an enquiry, the Inquiry Officer(s) may come across certain other violations not directly connected with the accident. There may also be certain violations, which have absolutely no bearing on the accident. The report may mention such violations, but they should not form part of the second paragraph of cause. In fact, those violations, which have absolutely no reference to the accident, should form part of a separate "Note for file", with a mention to that effect in the report on inquiry.

5.6 **Use of standard terminology**

Uniform and standard terminology should be used in describing occupation of workers, methods of work, technical terms, etc. Local variations like 'filler' for 'loader' etc. should not be used. Further, the nomenclature should be uniform throughout the report, not 'coal cutter' at one place and 'miner' at another place. Where it becomes necessary to use a local term to illustrate a point, it may be used in brackets alongside term.

5.7 **Signature of I.O.**

All the pages of the report and the enclosures shall be signed by the I.O. and serially numbered showing individual page number and the last page number e.g. 1/10,……

10/10. A checklist as shown in ***ANNEXURE ACCDT-4C*** shall accompany the accident enquiry report.

6.0 FINALIZATION OF REPORTS

(i) The accident enquiry reports (other than those which require prior confirmation from H.O. as in cases of major accidents, etc.) shall be examined and finalized at the DDG's level. Action on the reports shall be taken only after the concurrence from Z.O.

(ii) All fatal Accident reports shall be forwarded through the Director concerned to the DDG for onward submission to H.O.

(iii) In case of electrical accidents where no Director (Elect.) is posted in the ~~circle~~ zone, the Dy. Director (Electrical) shall forward the report of enquiry through the concerned Director (Mining) but in zones where a Director (Elect.) is posted the report shall be forwarded by him.

(iv) In case of Mechanical accidents the report of enquiry shall be submitted by Dy. Director (Mech.) to DDG for approval through the Director in charge of the Region where no Director (Mech.) is posted. In case Director (Mech.) is posted the report shall be forwarded through him.

6.1 **Finalization of accidents involving upto 4(four) fatalities**: The Deputy Director-General of Mines Safety in-charge of a Zone shall be the final level of scrutiny in the case of all reports on accidents involving upto 4(four) fatalities. In all other cases a draft report shall be sent to HO. within two months from the date of accident along with note sheet for approval (Attention: Legal Section) and in such cases action letter will be issued only after approval from HO.

6.2 **Action letters**: In all cases the action letter shall be issued by the I.O. only after the report is finalized at ZO/HO level.

6.3 **Improving quality**: Enquiry into accidents and dangerous occurrence is one of the important functions of this directorate. Through these enquiries many a times we come to know of technological gaps in the techniques practiced and gray areas in accident prevention. Lessons learnt from these enquiries can be utilized to bridge this gap. What is really required is collecting all the required evidence painstakingly and thereafter an intelligent analysis of the evidence in the light of Inquiry Officer's own observations and arriving at a logical conclusion. A proper presentation of the facts, analysis and conclusions in the enquiry report is equally important.

In the past, accident inquiry reports were finalized in H.O. Any deficiencies or shortcomings noticed where communicated to the concerned R.O./Z.O. Most of the accident enquiry reports are now finalized in Z.O. Hence it is important that the concerned Director or Dy. Director General makes a critical scrutiny of the report before sending the same to HO.

7.0 SUBMISSION OF REPORTS AND TIME LIMIT ETC.

7.1 **Preliminary report**: A preliminary report is required to be submitted in respect of every major accident (i.e., a fatal accident involving 5 or more deaths) as

early as possible after reaching the mine in the proforma as at ***ANNEXURE ACCDT-2***. The Director of region should send one copy directly to the Under Secretary to the Govt. of India, Ministry of Labour, New Delhi and another copy to HO.

7.2 Submission of Main Report

(i) **Time limit**: the enquiry report shall be finalized and submitted by I.O. to R.O. as soon as possible and not later than two months from the date on which the accident came to the knowledge of the I.O. and the same shall be despatched to HO by Director through DDG within three months.

Inquiry Officer/ Controlling Officer	Time limit	Submit to
I.O.	2 months	R.O.
R.O.	2 weeks	Z.O.
Z.O.	2 weeks	H.O.

Note: In case prosecution is contemplated, the whole case shall be referred to H.O. [Attention Sr. Law Officer(SLO)] for approval two months before the date of limitation as indicated in Para 8.5.

Other timetable may be worked out by the Director but whenever there is delay in forwarding the report to H.O. beyond three months from the date on which the accident came to the knowledge of the inquiry officer, the Director through DDG shall inform HO giving reasons for delay and likely date of submission of report.

(ii) **Proforma**: Inquiry reports in respect of fatal and serious accidents should be submitted in the proforma prescribed CIM-30. Reports in respect of dangerous occurrence should be in the form of note for file. **Non-mining and Mining Non-statistical accidents inquiry reports** are to be submitted in **CIM-30** indicating **"Non-mining" or "Mining Non-statistical"** at the top of **CIM-30**. The computer printout/carbon copy along with carbon copy of the evidence with original signature should be submitted to H.O.

(iii) **Number of copies**: Normally only one copy of the report, complete with hand sketch of the site of accident, plans, mine accident report (examination) form, statements and copy/copies of violation letter(s) issued where required along with the Note sheet shall be submitted. All pages shall be numbered and initialed by the I.O.

However, in case of major accidents an additional copy for ministry shall be submitted.

In case prosecution is proposed, an additional copy along with the enclosure should be forwarded to SLO.

Non-mining/Mining Non-statistical accident inquiry report shall be submitted in CIM-30 indicating accordingly.

(iv) Mine Accident Report (Examination) form: In case of all fatal accidents- excluding the non-mining cases, the supplementary form under the above heading shall be invariably filled and submitted along with the report, (see proforma at ***ANNEXURE ACCDT-5***). The information in the form is necessary to prepare material for answering possible Parliament Questions in respect of the accident.

(v) Ex-gratia payments: It is sometimes necessary to intimate Ministry of the amounts paid as ex-gratia payments to the families of the deceased immediately after the accident to meet funeral expenses, etc. A note may, therefore, be added at the end of the report of such payments made, whether by the mine management or by other organizations etc.

7.3 **Circulation of typical cases**: Where a Director considers that detailed of a particular avoidable accident should be circulated, he may make a note to that effect in forwarding the report.

7.4 **Note for V.T. Section on accident enquiries** : A separate note should accompany every accident report with the above heading specifically mentioning the typical matter in the accident, which could be discussed at the vocational training centres. The said note should neither be a copy of the report of enquiry nor merely the reproduction of cause, but should deal on the specific points of interest in the accident.

8.0 FOLLOW UP ACTION

8.1 **Issue of violation letters**:

(i) In issuing violation letters to Management ~~etc.~~ in respect of contraventions observed during the enquiry, care should be taken to see that the letters are worded properly and that the correct violations are pointed out. Copying extracts from the report as a rule must be avoided as this leads to lengthy letters giving unnecessary details to the management. Drafting of a violation letter is thus a very important aspect as sometimes improper violation letters place this Directorate in an awkward and compromising position. Care should also be taken to see that no typographical errors creep in and that the correct Regulations be referred to and contraventions be reproduced verbatim from CMR, MMR, etc.

(ii) In the context of the identification of the specific responsibility, address directly the concerned management officials, calling for their explanations, etc., with copies to senior management. Each such letter may indicate the lapses identified on the part of the addressee and the Regulations, etc., contravened by them. This would be valid, whether it is a junior official or top management like owner, etc.

For example if in an accident, the manager, safety officer, Overman and Sirdar are held responsible, separate action letters shall be issued to each one of them indicating the lapses for which they are held responsible and asking for their explanation. Copies of such action letters in respect of the former two

may be endorsed to senior management and those of subordinate supervisory staff to local management (manager or agent).

(iii) The show cause letter shall bring out the same violation and shall be addressed to all those persons held responsible for the accident in the accident enquiry report.

(iv) **Action against persons held responsible for fatal accidents**: Once the inquiry report has been finalized at ZO/HO level, action has to be initiated against all the persons held responsible. Final action proforma duly filled in shall be submitted through DDG soon after the action has been completed to HO.

8.2 **Endorsements**: Endorsement of action letters in respect of accident enquiries (or for that matter arising out of any inspection etc.) to officers of this Directorate should be made separately from those to outside parties such as:

Copy forwarded for information and similar action to:

(1) Manager… &
(2) Nominated owner…

(Sd/-)
Dy Director/Director

Copy also forwarded to DGMS, Dhanbad…

(Sd/-)
Dy Director/Director

8.3 **Action (Suspension of certificate) against supervisory staff**

(i) **Procedure**: Where it is proposed to take action by way of suspension of certificates against overman/mine foreman, sirdar/mining mate, shotfirer/blaster, etc., the persons concerned shall be given an opportunity to explain his action as prescribed under the Regulations. Such persons shall be addressed directly by name (c/o the Manager) and not through manager and the persons concerned shall be requested to send his comments directly to the Director however, copies of letters addressed by Director to overman, etc. should be sent to agent or manager. Double punishment by way of suspension/cancellation of certificates and prosecution should be avoided in respect of these sub-ordinate supervisory staff. Where it is found that overman/mine foreman, sirdar/mining mate, shotfirer/blaster, etc. are primarily responsible for the accident, as a rule, they may not be prosecuted; instead, action may be taken for suspension or cancellation of their certificates. However, in cases where owner, agent or manager are sought to be prosecuted and it becomes inevitable to prosecute overman/mine foreman,

sirdar/mining mate, shotfirer/ blaster, etc. also along with them, then no action for suspension or cancellation of their certificates should be taken.

(ii) **Suspension periods-specification**: The recommendation for suspension/ cancellation of certificates of subordinate supervisory staff should be on the lines indicated in ***ANNEXURE ACCTD-6***. It is clarified that ordinarily our policy should not be to encourage sirdar/mining mate and shot-firers/blaster to be given alternative employment in case of suspension of their certificate.

(iii) Where no enquiry under Regulation 24 of the CMR, 2017/Regulation 29 of the MMR, 1961 (or corresponding regulation of amended MMR) is contemplated and the intention is to let off the subordinate supervisory staff with a warning, adequate care should be taken in the wording of the letter issued to such persons. The delinquent must not be made to feel that the case is already decided against him, but that it is an opportunity given to him to justify his position.

8.4 **Submission of Final Action Proforma etc. and endorsement of correspondence to HO**: Copy of every action letter issued in respect of the accident report shall be forwarded to HO along with the accident report. Replies to the letters, comments on the same and final action taken in respect of the matter shall also invariably be intimated to HO in due course, as the HO has to keep track of the final action in each case. There shall be a clear mention of the final action taken-prosecuted, certificates suspended or matter recorded etc, instead of simply forwarding copies of replies received. A proforma is annexed (***ANNEXURE ACCTD – 7***) in this connection and the final position is to be intimated in the same. **The replies from management etc.** to action letters together with the comments of the RO on the points raised in the replies shall be forwarded to HO. Likewise, the final action taken and the final action proforma shall be forwarded **within a week** of taking the final action. There may be cases, where though a show-cause notice for a prosecution was issued; management may be let off with a warning. The reasons as to why a prosecution was not instituted must be recorded clearly and intimated to HO in the above proforma. Similar action shall be taken whenever the final action taken was not as severe as it was originally intended in the show-cause letter or recommendation in the report.

8.5 **Prosecution cases**

(i) **Policy**: If it can be proved that contravention of the provisions of the Regulation(s) had resulted in an accident, criminal proceedings shall invariable be instituted. All cases where management officials are held responsible should normally result in prosecution. It is reiterated, however, that action on such cases shall be taken only after DG approves the report."

(ii) **Time limit**: Recommendations for prosecutions made to HO need careful study and examination of related papers, etc. In order to enable such a detailed examination and also to obviate hasty disposal due to shortage of time or recommendations made in the eleventh hour, all prosecution cases shall be referred to HO for approval, two months before the date of limitation.

It should simultaneously be ensured that all connected papers on the subject are forwarded to HO. All communications seeking approval of prosecutions in accident cases should be accompanied by the proforma specified in Annexure PROSEC-I in triplicate and routed through Law Section for Director General of Mines Safety's approval, to ensure proper linking of all relevant papers.

(iii) Witnesses: In case of prosecution, minimum no. of witnesses as is necessary to prove the case to be included in the charge sheet. Long list will take long time to the Courts to dispose the case. It is preferred to have some Govt. witnesses to prove the case as the mine workers of private mines will become hostile in long run and also very difficult to present them before the Court by this office. In some cases the witnesses are demanding TA & DA for attending the case.

Above Issues may be discussed with DG & SLO and to incorporated as deemed fit.

9.0 COMPENSATION

9.1 **Depositing the amount**: According to Sub-section (1) of Section 8 of the Employee's Compensation Act 1923, compensation payable in respect workmen whose injury has resulted in death is required to be deposited with the Compensation Commissioner appointed under Section 20 of that Act and no such payment made directly by an employer shall be deemed to be a payment of compensation. In every case of fatal accident therefore, the Inquiry Officer should state whether this has been done or not. When this is not possible at the time of enquiry, the matter should be pursued through correspondence. In case where compensation has not been deposited the requirement may be brought to the notice of the mine management.

9.2 **Exoneration of liability to pay compensation**: According to Proviso of Sub-section (1) of Section 3 of the Employee's Compensation Act, 1923, an employer shall not be so liable to pay compensation

(a) in respect of any injury which does not result in the total or partial disablement of the employee for a period exceeding three days;
(b) in respect of any injury, not resulting in death or permanent total disablement caused by an accident which is directly attributable to
  (i) the employee having been at the time thereof under the influence of drink or drugs, or
  (ii) the willful disobedience of the employee to an order expressly given, or to a rule expressly framed for the purpose of securing the safety of employees, or
  (iii) the willful removal or disregard by the employee of any safety guard or other device which he knew to have been provided for the purpose of securing the safety of employee,

In case the injury results in fatality, payment of compensation becomes obligatory irrespective of the role of the deceased.

For Payment of compensation under the Employee's Compensation Act, 1923, address of Compensation Commissioner to be given as an annexure of the accident report. A letter to that effect should also be addressed to the said Compensation Commissioner.

9.3 **Role of Officers**: It is not unlikely that the officers of this Directorate may be asked to express opinions or even to give evidence as to willful disobedience or willful removal or disregard of safety appliances. Officers, therefore, should when enquiring into the causes of accidents, sift very carefully the statements of witnesses on these points, and should obtain as much corroborative evidence as seems necessary.

9.4 **Follow up compensation**: The IO should bring this accident to the notice of the concerned Workmen's Compensation Commissioner for necessary action.

10.0 RECORD OF FINAL ACTION

After completing the final action, the report on the final action shall be submitted in the enclosed proforma in ***ANNEXURE ACCDT-7***.

11.0 CONTRAVENTION BY WORKERS

In the course of investigations into accidents it was found that contraventions by workers were of serious nature and legal action was called for these offences. It was decided that in such cases, the management should be asked to take action against the workers, as they will be in a better position to produce witnesses.

12.0 POLICE ENQUIRIES

12.1 Recommendation of the Conference of Safety in Mines:

Govt. of India (Ministry of Labour &Employment) letter No.MI-21 (6)/59 dated 03.09.1960 is reproduced below:

"State Govt. are generally in favour of the recommendation of the Safety Conference that where the Director-General of Mines Safety has started an enquiry into a mining accident the Police Authorities should await the report of the Investigation Officer instead of starting a fresh inquiry into the accident on their own. The recommendation will apply only to cases where the Director-General of Mines Safety has already started an inquiry and even in such cases the Police will be free to hold an inquest. The course suggested will considerably help the police themselves and at the same time. Avoid two parallel enquiries into the same accident. One of which would necessarily be without competent technical assistance. On receipt of the report of the Mines Inspectorate, it will be open to the police to make such further enquiries, as they consider necessary. In the circumstances, the State Govt. May kindly consider the feasibility of issuing suitable instructions in the matter to the district authorities concerned under advice of the Director-General of Mines Safety, Dhanbad.

12.2 Request from Police Authorities for findings of this Directorate: All requests from police authorities for findings of the accident enquiries will be attended to by H.O. Requests received by R.O.'s from Police authorities should be forwarded in original to H.O., after sending an interim reply to police.

13.0 ACCIDENT DUE TO BOILERS

Submission of Notice of accidents/incidences involving of boilers is statutorily required under Regulation 8(xiv) of Coal Mines Regulations, 2017 and Regulation 9(xiii)

Metalliferous Mines Regulations, 1961. Such accidents/incidences should be inquired but they will not be treated as mining accidents if it is established that they come under the purview of the Boiler Act.

14.0 ADDITIONAL INFORMATION FOR ANALYSIS OF ACCIDENTS

Analysis of accidents is being carried out at SOMA section of HO. Some additional information are required for the same which shall be submitted with the report as shown in the following format as

(a) ***CIM-30(A)*** for accidents due to fall of roof & sides;
(b) ***CIM-30(B)*** for accidents due to rope-haulage &
(c) ***CIM-30(C)*** for accidents due to wheeled trackless machineries.

15.0 MINING NON-STATISTICAL ACCIDENTS

All Mining accidents stands at par in so far as further action is concerned like prosecution, etc. The division of them as Statistical or Non-statistical is only for our records. An accident which is mining but non-statistical does not bar us from taking action against management, etc. where required.

15.1 In respect of **accidents taking place on railway siding**, the area criterion does not make them non-mining unless they are outside the "mine". The ownership of the siding will be vested on to the mine under whose lease-hold the siding falls unless it has been declared as a separate mine.

15.2 **Clarifications and instructions issued from time to time on specific points**: It was observed that **too many accidents** were being classified as **'misadventure'**. Most of the safety experts felt that such a high percentage of accidents being classified as misadventure is due to inadequate investigation. It is felt that the enquiries be made more thorough and factors directly or indirectly affecting the accidents be ascertained.

Cases have been detected where responsibility for the accident as given in the body of the report, on the first page of report and as reflected in the action letters, are all different. Likewise, the final action taken is incomplete, particularly with reference to the persons held responsible for the accident. All this is leading to protracted correspondence on one hand and delay in replying to Parliament Questions on the other. The latter aspect has invited severe criticism from Ministry.

While therefore reiterating the need to bestow careful attention on finalization of accident enquiry reports, determination of responsibility, monitoring of follow up action and taking final action, the following changes are suggested in the enquiry report and record of final action.

ANNEXURE CAUSE

16.0 WRITING OF CAUSE OF ACCIDENT

16.1 **Writing Cause**: Cause & responsibility shall be written on a separate page as an enclosure to CIM-30.

'Cause' of an accident as given on the first page of the enquiry report is published in the annual publication of this Directorate. These publications are widely circulated not only within the country but outside also. Thus, it becomes utmost importance to write the 'cause' in correct language and comprehensive manner so as to give the reader a broad picture about the occurrence of the accident and yet be concise.

The second paragraph of the 'cause' should be compatible with the first paragraph. Following are but a few examples which will indicate that due care was not taken in drafting the cause properly:

Case-1: "On receiving information about pieces of coal falling from roof on a slice in a depillaring district, a sirdar went to the level and examined the roof by mining stick when a mass of coal measuring 1.2m x 1.2m x 0.5m fell on his at a height of 2.8 meters inflicting serious bodily injuries to which he succumbed after 45 days".

It will be appreciated that the language used to describe the accident could have been improved. Elaboration is also needed regarding the reason for falling of coal pieces. In the body of the report it was mentioned that supports in the slice and at the site of accident were in order but this fact is not reflected in the 'cause'. In the absence of this detail one starts wondering about the wisdom of classifying the accident as a case of misadventure.

Case-2: "While a support crew of three dislodged by 'basula' a prop, prior to blasting, a ledge of roof coal in a split gallery, set underneath it, a mass of roof coal of size approximately 4.8 m x 2.0 – 2.6m x 1.1 m thick fall from a height of 2.65 meters inflicting fatal injuries on one timber mazdoor and a sirdar cum shotfirer who was present and serious injuries to the other timber mazdoor to which, he succumbed 12 hours later while the timber mistry escaped unhurt.

(a) Had the roof been kept supported as per Support Plan enforced under the provisions of Regulation 123.

(b) Had the splitting of pillars been not commenced in contravention of conditions of permissions granted under the provisions of Regulation 112 of the Coal Mines Regulations, 2017, and

(c) Had these workings been placed under the charge of an Overman in working shift as required under the provisions of Regulation 33(1) of the Coal Mines Regulations, 2017, the accident could have been averted".

Although in the first paragraph there is stress on dislodging support with a 'basula' yet there is no mention of this unsafe practice in the second paragraph. Further construction of sentences could have been better.

16.1.1 **Relevant details not given on first page of the report**: The particulars on first page of the report should be comprehensive so that important statistical data can be complied without going through the entire report. While going through the reports of accidents due to falls of roofs, it has been noted that details such as place of accident (depillaring or development district), distance from face, time elapsed from blasting, type of fall (whether coal, sandstone or shale), height from which the fall occurred etc., are lacking in some of the reports.

16.1.2 **Conclusion not logical**: Analysis of evidence keeping in view I.O"s own observations is the heart of an enquiry report in many of the reports a very casual approach to arrive at a conclusion has been noticed. Following are some of the examples.

Case – 1:
Cause: - "While timber mazdoor was withdrawing from goaf edge he was struck by a mass of roof stone measuring about 1.5m x 1.2m and about 5 to 6cms, thick which fell from a height of 1.65m and extended into supported area injuring him seriously which proved fatal after two hours".

"Misadventure"

Instances have come to the notice of H.O where the cause and responsibility for an accident had undergone frequent changes as the case was being dealt with in the Region/Zone. Certain aspects of the case, which were perhaps not given adequate importance in the initial stages had come into prominence subsequently and the whole complexion of the case had undergone a change. There are also instances where persons held responsible for the accident had been exonerated subsequently. The above state of affairs is thus indicative of the complexity of the problem. Any vagueness in the determination of cause and responsibility and in the initiation of suitable follow up action would place this Directorate in an embarrassing position both with the industry and with Ministry and parliament. There is thus an imperative need to bestow adequate thought and care in the determination of cause and responsibility. Currently, two levels of officers are involved in this viz. the enquiry officer and his immediate superior. There seems to be a strong case for utilizing the pooled wisdom of all available officers in the Region one for this purpose. This is best achieved by discussing the accident case in the monthly zonal/regional officers' meetings and inviting opinion of other officers on the findings of the case. The enquiry officer can present the facts of the case, results of this inspection and enquiry and then his conclusions. There can be a healthy discussion on the case and, if any new aspects are to be covered or any points that need clarification, the I.O. can take note of these before the finalization of the report.

The above procedure is therefore being suggested for immediate adoption in all Regions. In Dhanbad and Sitarampur, where a number of Regions are located, such discussions can take place in the zonal officers meetings, where the

participation is larger. It may, however, be born in mind that speed in mind that speed in finalization of the report is equally important. The suggested procedure, therefore, should not be construed as a hurdle to finalization of the cases in time. The Directors/DDGs may work out suitable modalities. For speedy finalization of the cases, taking into consideration the benefits of the poled wisdom as per the procedure suggested.

16.1.3 **Consistency of cause with findings of the report**

(i) Sometime it has been observed that there was variation between the conclusions arrived by the Dy. Director General/The Director in second paragraph of the cause and conclusion arrived by the Inquiry Officer in the inquiry report. It is desirable that the contents of the second paragraph of cause are consistent with the logical conclusions arrived at in the report. It may be embarrassing if such report is to be produced in the Court of Law. The need for such consistency is all the more pertinent in the context of the frequent requests from police.

(ii) It is expected that before writing accident enquiry report, the Inquiry Officer (Dy. Director) would normally discuss his findings and recommendations with the Director. Nevertheless, when there is any difference of opinion between the Inquiry Officer and Director, an independent accident report may be produced by the Inquiry Officer and in such eventuality, the Director should attach a separate note giving his reasons for not agreeing with the findings of the Inquiry Officer and forward it along with the report to Dy. Director General who in turn should give his opinion on the note of the Director before sending the report to H.O. for further action.

16.2 **Guidelines**

In the drafting of the first and where necessary, second paragraph of cause, the following points should be borne in mind:

(i) The word "deceased" shall not be used in the first paragraph; instead, word "a person" should be used. Likewise, the words he, she, they etc., should not be used initially. Thus, instead of saying "While deceased was cutting coal ……" the sentence should be framed as "while a miner was cutting coal ……". Another example would be:
"While twelve persons were being lowered in a shaft, 380 meter deep, the winding engineman lost control of the engine and the descending cage struck the landing platform with great force resulting in serious injuries to four persons; two of them succumbed to their injuries subsequently".
(ii) If the word ' deceased' is to be used in the second paragraph. The dead person or person(s) should be referred to as 'deceased', 'the two deceased' or 'the three deceased' etc. as the case may be.
(iii) In the first paragraph of cause, there shall be reference of all persons killed, seriously injured, received minor injuries and those who escaped unhurt.
(iv) It may be mentioned whether the person involved in a fatal accident died on the spot or while being transported or subsequently, but it is not necessary to state that he died in the hospital/home etc.

(v) In describing accidents due to falls of roof or sides, the measurements of the fall and the height from which it fell shall be given as "a slab of shale 3m (length) X 2m(width) x 0.2m(thick) fell from a height of 1.76m". Metric system units shall be used.
(vi) Elaborate description of injuries in the first paragraph of cause shall be avoided.
(vii) Sentences shall not be too long and punctuation shall be appropriate.
(viii) Care shall be taken to use the definite and indefinite articles appropriately.
(ix) Phrase such as "he was crossing a tub line, when some tubs ran wild" is not good; instead it may be written as "while a miner was crossing a haulage track, some tubs ran wild."
(x) The second paragraph of cause is meant to describe how the accident could have been averted or in other words, what actions had resulted in the accident. It shall include all factors related to direct/immediate causes, indirect causes and root/basic causes. There shall always be a reference to the provisions of the Regulation contravened and shall be qualified by a descriptive statement instead of simply giving the number of the Regulation. For example, instead of saying" Had the provisions of Regulation 123 been complied with……",it should be stated as "Had the roof at the place been adequately supported in accordance with the Support Plan framed, as required under Regulation 123(1)(a) of the Coal Mines Regulations, 2017……". The specific provisions attracted [as e.g., Regulation 48(3) shall be referred to instead of a general reference (as simply Regulation 48)]. Any reference to a Regulation shall be followed by "…… of Coal Mines Regulation, 2017/Metalliferous Mines Regulation, 1961/Oil Mines Regulation, 2017" [or the corresponding Regulations of amended MMR] as the case may be.
(xi) There arise some cases where none of the specific provisions of safety are attracted and recourse has to be taken to the omnibus provision i.e. Regulation 239 of the Coal Mines Regulation, 2017, Regulation 181 of the Metalliferous Mines Regulation, 1961 etc. or similar provisions in the new amended Regulations. Since these provisions themselves do not enjoin any particular safety precaution, a direct reference to them would not only be absurd, but would look odd. Examples would be:

"Had safety belts, U-brackets etc., been provided inside the bunker as required under Regulation 239 of the Coal Mines Regulation, 2017".

"Had the area beneath the ropeway at the driving station been fenced off and had the ropeway been stopped while persons were employed beneath it as required under Regulation 239 of the Coal Mines Regulation, 2017".

"Had persons been not engaged on the lower benches while rolling down ore from the upper benches directly above, as required under Regulation 181 of Metalliferous Mines Regulation 1961".

Correct statement would be:

Since these provisions are only general provisions of safety, a reference to them should be qualified as"…… thus not negligently omitting to ensure the safety of

work persons as required under Regulation 239 of Coal Mines Regulation 2017/ Regulation 181 of Metalliferous Mines Regulation 1961 ……." .

(xii) The second paragraph of cause could also be written as ---- 'the accident was a result of failure to lay and maintain the haulage track properly in contravention of the provisions of Regulation 92 of the Coal Mines Regulations, 2017'

The causes of accidents as published in DGMS publications may be referred to get an idea of composition of the cause of accident.

16.3 **Examples of some correct punctuations**

Following are but a few examples which will indicate that due care was not taken in drafting the cause properly:

Case-1
"On receiving information about pieces of coal falling from roof on a slice in a depillaring district, a sirdar went to the level and examined the roof by mining stick when a mass of coal measuring 1.2 m x 1.2 m x 0.5 m fell on him at a height of 2.8 meters inflicting serious bodily injuries to which he succumbed after 45 days".

It will be appreciated that the language used to describe the accident could have been improved. Elaboration of the reason for falling of coal pieces in the depillaring district is needed. But it shall be written in the body of the report.

The above cause may be written as:

"While a sirdar was testing the roof in slice of depillaring district in an underground coal mine, suddenly a mass of coal measuring 1.2 m x 1.2 m x 0.5 m fell from a height of 2.8 meters inflicting serious bodily injuries to him in which he succumbed after 45 days"

Case-2
"While a support crew of three dislodged by 'basula' a prop, prior to blasting, a ledge of roof coal in a split gallery, set underneath it, a mass of roof coal of size approximately 4.8 m x 2.0 – 2.6 m x 1.1 m thick fall from a height of 2.65 meters inflicting fatal injuries on one timber mazdoor and a sirdar cum shot-firer who was present and serious injuries to the other timber mazdoor to which, he succumbed 12 hours later while the Timber mistry escaped unhurt.

(i) Had the roof been kept supported as per Support Plan enforced under the provisions of Regulation 123 the Coal Mines Regulations, 2017.
(ii) Had the splitting of pillars been not commenced in contravention of conditions of permissions granted under the provisions of Regulation 112 the Coal Mines Regulations, 2017, and
(iii) Had these workings been placed under the charge of an overman in working shift as required under the provisions of Regulation 33(1) of the Coal Mines Regulations, 2017, the accident could have been averted."

Although in the first paragraph there is stress on dislodging support with a 'basula', yet there is no mention of this unsafe practice in the second paragraph. Further, construction of sentences could have been better. The above paragraphs may be re-written as follow :

"While a support crew of three persons were dislodging a prop, set underneath a ledge in a split gallery, by 'basula', in an underground coal mine, a mass of roof coal of about 4.8m x 2.0–2.6m x 1.1m thick fell from a height of 2.65m, inflicting fatal injuries to one them and the sirdar cum shot-firer, supervising the job and serious injuries to the other support crew while third support crew escaped unhurt".

Had

(i) Safety Management Plan been prepared as required under Regulation 104 of the Coal Mines Regulations, 2017 read with recommendations of 11th Conference on Safety in Mines,
(ii) Safe Work Procedure for dislodging of prop been prepared and implemented as required under Regulation 125 of the Coal Mines Regulations, 2017 read with recommendations of 11th Conference on Safety in Mine,
(iii) the roof been kept supported as per Support Plan framed under the provisions of Regulation 123 of the Coal Mines Regulations, 2017,
(iv) the splitting of pillars been not commenced in contravention of conditions of permissions granted vide letter No. _____ dated _____ under the provision of the Coal Mines Regulations, 2017 and
(v) the workings been placed under the charge of an overman in working shift as required under the provisions of Regulation 33(1) of the Coal Mines Regulations, 2017, the accident could have been averted."

16.4 **Classification of cause of accident**

All accidents should be properly classified under the specific cause group to which it belongs. While preparing the accident report different classification along with the codes being followed at statistical section and as shown in ***Annexure ACCDT.-4B*** should be followed. In classifying the cause, it should be noted that the primary agency should be the most important one. If for example a roof fall disturbs timber support and the falling timber inflicts or causes the accident, the accident should be classified as due to fall of roof, not miscellaneous cause. Some other points to be borne in mind are as under:

(a) Falls of sides in shafts should be classed under "falls of sides or face" and not under "Miscellaneous (in shafts)".
(b) Falls from roof or from sides whether natural or brought about while cutting dressing etc. should henceforward be treated as "fall of roof" and "fall of side" as the case may be and not under "other falls".
(c) All accidents in connection with tubs and haulage appliances should be classified under "haulage".
(d) When persons fall out of cages, the accident should be classed under "while ascending or descending by machinery" and not under "By falling". The latter should be confined to falls from a stationary position.

(e) Natural falls unaided by human agency only should be classified as "falls of roof and sides" as the case may be.

(f) Accidents on railway sidings due to movement of wagons only should be classified as "at railway sidings belonging to the mine" and other accidents as e.g. loader slipping from gangplank while loading a wagon, classified as due to "miscellaneous causes".

(g) As regards classification of some accidents as 'Non-Mining' or 'Mining Non-Statistical', the matter shall be finalized at HO level.

ANNEXURE ACCDT-1

PROFORMA OF FAX/e-mail
TO BE SENT TO MINISTRY INTIMATING FATAL ACCIDENTS/DANGEROUS OCCURRENCES

FAX/e-mail

No…… dated : / /2017

From
Director/Deputy Director of Mines Safety,
…… Region/Sub Region.

To
The Under Secretary *
Government of India,
Ministry of Labour and Employment.
Shram Sakti Bhawan,Rafi Marg,
New Delhi – 110 001.

* By name
Shri……

Subject: Report about a fatal accident/Dangerous Occurrence

Sir,

I regret to report a fatal accident at …… (name of the mine) of ……(name of the owner) in …… (district) ……(state) on …… (date) in which ……(number) person(s) was/were killed and ……(number) person(s) seriously injured. Cause of the accident as reported is ……
Detailed inquiry is under progress. Prima facie the accident is Non-Mining/Mining Non-Statistical*

Yours faithfully,

Director/Dy. Director of Mines Safety

Memo No…… dated : / /2017

Copy forwarded for information to

(i) the Director General of Mines Safety, DGMS, Hirapur, Dhanbad – 826 001
(ii) the Dy. Director-General of Mines Safety, ……

Director/Dy. Director of Mines Safety

*Note: Declaration about Non-Mining/Mining Non-Statistical is to be indicated wherever applicable.

ANNEXURE ACCDT-2

PRELIMINARY REPORT ON MAJOR ACCIDENT

1.	Name of the mine	:
2.	Situation	
(a)	District	:
(b)	State	:
(c)	Distance from the headquarters of the Officer who first reached the spot after the accident.	:
3.	Ownership	:
4.	Management (Name and qualification of the Manager and other important supervisory staff)	:
5.	Date and time of the accident	:
6.	When information of the accident was received by the Directorate	:
7.	Number of persons	
(a)	Killed	:
(b)	Injured	:
8.	Cause of the accident	:
9.	Responsibility so far as can readily be fixed	:
10.	Rescue measures adopted immediately after the accident	:
11.	Name of the Investigating Officer (Date and time of such inspection)	:
12.	Precautionary measures, if any, adopted to prevent further danger	:
13.	Total number of persons employed in the mine and the number unemployed as a result of the accident	:
14.	Total output and the output affected by the accident	:
15.	Any other remarks	:

ANNEXURE ACCDT-3

LIST OF MINISTRY OFFICIALS DEALING WITH DGMS

Sl. No.	Name and designation	Telephone	Fax	e-mail
1.	Smt. M. Sathiyavathy, Secretary (L&E)	+91 11 23710265 +91 11 23473119	-	secy-labour@nic.in
2.	Shri Devender Singh, Economic Advisor	+91 11 23710446	-	dev.singh@nic.in
3.	Shri Manish Kr Gupta, Joint Secretary	+91 11 23710239 +91 11 23710239	-	guptamk2@nic.in
4.	Shri Suresh Singh, Director	+91 11 23731574	-	suresh.singh25@nic.in
5.	Smt. B. Neeraja, Under Secretary	+91 11 23766937	+91 11 23714018	
6.	Shri A.H. Ganesh, Section Officer (ISH-I)	+91 11 23473326	+91 11 23718730	ah.ganesh@nic.in

ANNEXURE ACCDT-4A

CLASSIFICATION OF CAUSE OF ACCIDENT

0100	**Ground Movement**	0600	**Electricity**
0111	Fall of roof	0661	Overhead lines
0112	Fall of sides (other than o/hangs)	0662	Trailing cables
0113	Fall of overhang	0663	Switch gears, gate & boxes, pommel etc.
0114	Rock burst/bumps	0664	Energized machines
0115	Air blast	0665	Power cables other than trailing cable
0116	Premature collapse of working/pil	0669	Unclassified
0117	Subsidence		
0118	Landslide	0700	**Dust, gas & other combustible material**
0119	Collapse of shaft	0771	Occurrence of gas
		0772	Influx of gas
0200	**Transportation machinery (winding)**	0774	Explosion/ignition of gas/dust etc.
0221	Overwinding of cages/skip etc. (upg)	0775	Outbreak of fire or spontaneous heating
0222	Breakage of rope, chain, draw/suspn	0776	Well blowout (with fire)
0223	Falls of persons from cages, skip	0777	Well blowout (without fire)
0224	Falling of objects from cages, skip	0778	Other combustible material
0225	Hit by cages, skip etc.	0779	Other accidents due to dust/gas/fire
0228	Overwinding of cages/skip downgo)		
0229	Other accident due to winding ope.	0800	**Falls (other than fall of ground)**
		0881	Fall of person from height/into depth
0300	**Transportation machinery (non-winding)**	0882	Fall of persons on the same level
0331	Aerial ropeway	0883	Fall of objects incl. Rolling objects
0332	Rope haulage	0889	Unclassified
0333	Other rail transportation		
0334	Conveyors	0900	**Other causes**
0335	Dumpers	0991	Irruption of water
0336	Wagon movements	0992	Flying pieces (except due to explosive)
0339	Wheeled trackless (truck, tanker etc.)	0993	Drowning in water
		0994	Buried in sands etc.
0400	**Machinery other than transportation machinery**	0995	Bursting/leakage of oil pipe lines
0441	Drilling machines	0999	Unclassified
0442	Cutting machines		
0443	Loading machines		
0444	Haulage engine		
0445	Winding engine		
0446	Shovel, draglines, frontend loader		
0447	Crushing & screening plants		
0448	Other heavy earth moving machinery		
0449	Unclassified		
0500	**Explosives**		
0551	Solid blasting projectiles		
0552	Deep hole blasting projectiles		
0553	Secondary blasting projectiles		
0554	Other projectiles		
0555	Misfires/sockets (while drilling into)		
0556	Misfire/socket (other than drilling into)		
0557	Delayed ignition		
0558	Blown through shots		
0559	Unclassified		

ANNEXURE ACCDT-4B

CLASSIFI CATION OF PLACE OF ACCIDENT

0100	**Belowground**	0200	**Opencast**
0110	Development Area	0210	Benches
0111	< 10 m of development face	0211	Waste/overburden alluvium
0112	> 10 m and within working district	0212	Waste/overburden float
0120	Longwall panel	0213	Waste/overburden hard rock
0121	> 10 m of longwall face	0214	Coal/ore benches
0122	Gate roads in longwall panels	0220	Quarry (other than benches)
0130	Depillaring / stoping	0221	Top of the quarry
0131	< 10 m of face	0222	Bed of the quarry
0132	> 10 m but < 30 m	0230	Roads
0133	> 30 m but within working dist.	0231	Haul roads
0140	Outside working district	0232	Rope haulage roads
0141	Travelling roadways	0239	Other transportation roads
0149	Unclassified	0240	Other opencast places
0150	Tramming roadways	0241	Waste dump
0151	Within district	0249	Other places (specify)
0152	Outside district		
0160	Haulage roadways (within district)	0300	**Above ground**
0161	Rope haulage roadways	0310	Transportation road/sites
0162	Conveyor roadways	0311	Aerial ropeways
0163	Loco roadways	0312	Rope haulage roads
0169	Unclassified	0313	Wheeled trackless transport
0170	Haulage roadways (outside dist)	0314	Railway lines belonging to mine
0171	Rope haulage roadways	0315	Petroleum pipelines
0172	Conveyor roadways	0319	Unclassified
0173	Loco roadways	0320	Plant sites
0179	Unclassified	0321	Site of ore handling plants
0180	Shaft	0322	Workshop powerhouse engine room
0199	Other belowground places	0323	Erection/rigging site
		0324	Gas col stn/gas comp stn/group
		0325	Oil wells/water inject wells
		0329	Unclassified
		0330	Other aboveground places
		0331	Depot
		0332	Waste dump
		0333	Water reservoir
		0339	Unclassified

ANNEXURE ACCDT-4C

CHECK LIST

Sl. No.	Subject	Page No.	Remarks
1.	Note Sheet		
2.	Accident Report		
3.	Evidences		
4.	Sketches, Plans & Sections		
5.	Post Mortem Analysis Report		
6.	Mines Accident examination form		
7.	Action Letter(s)		
8.	Note on VTC		
9.	Letter to Compensation Commissioner		
10.	Miscellaneous		

ANNEXURE ACCTD-5

MINE ACCIDENT REPORT (EXAMINATION)

1.		Name of the mine	:
2.		Situation	
	(a)	District	:
	(b)	State	:
	(c)	Distance from the headquarters of the Officer who first reached the spot after the accident.	:
3.		Management	
	(a)	Name of the owner	:
	(b)	Name of the Agent and Managing Director	:
	(c)	A brief history about ownership indicating the previous changes in management and also since when the present management owns the mine.	:
4.		Name and qualification of	
	(a)	Manager	:
	(b)	Other important supervisory staff	:
5.		Average monthly production	:
6.		Daily average number of persons employed	
	(a)	In mine	:
	(b)	In the district where accident occurred	:
7.		Place of the accident	:
8.		Date and time of the accident	:
9.		When the intimation reached the officer concerned and the time he reached the spot.	:
10.		Mode of transport available and used	:
11.		Number of persons involved	
	(a)	Deaths	:
	(b)	Seriously injured	:
12.		When was the mine last inspected before the accident	:
13.		When was the district where the accident occurred last inspected before the accident	:
14.		Reference to previous serious accident, if any	:
15.		Who conducted the enquiry	:
16.		Cause of the accident	:
17.		Responsibility	:
18.		Recommendation of the Investigating Officer/RO/ZO	:
19.		Inspections made of the mine during two calendar years prior to and up to the date of accident	:

Sl. No.	Date of Inspection	Mention ,if Afternoon or Night	Purpose of Inspection

ANNEXURE ACCTD-6

ACTION AGAINST SUBORDINATE SUPERVISORY OFFICIALS

	OFFENCE	PUNISHMENT Punishment for periods within the limits specified below may be recommended depending upon the gravity of the case and the share of responsibility of the accused
(a)	Shotfiring in the presence of inflammable gas or contravention of any Regulation etc. which result in serious/fatal accidents involving 4 persons	Up to cancellation of certificate
(b)	Allowing persons to work in the presence of dangerous concentration of inflammable gas	Up to a period of six months
(c)	Failure to ventilate the galleries so as to dilute and render the inflammable gas harmless	
(d)	Violation of any provision relating to danger from Fire, Dust, Gas and Water (Chapt.-XI), Safety Lamps (Chapt.XIII), Explosives and Shotfiring (Chapt.XIV), resulting in serious or fatal accident	
(e)	Failure to keep a place safe (ref. Regulation 115, or violation of Regulation 123 of CMR, 2017, resulting in a serious or fatal accident	Up to a period of three months
(f)	Violation of any Regulation, rule or order made thereunder (except those referred to in items (a), (b) or (c) above) which results in a serious or fatal accident	
(g)	An offence listed under (d) and (e) above which does not result in an accident	Up to a period of three months under (d) and two months under (e)
(h)	Sleeping on duty	Up to a period of one month
(i)	Disobedience of orders	
(j)	Any other violation of a Regulation, rule or order made thereunder, enforcement of or compliance with which is the responsibility of accused	

Any variation beyond the upper limit may be made with the approval of DG justifying such a recommendation.

ANNEXURE ACCTD-7

FINAL ACTION PROFORMA
[To be submitted in duplicate to HQ]

1. Name of the Mine :
2. Name of Owner :
3. Mineral Worked :
4. Type of Accident : Fatal / Serious accident / Dangerous Occurrence
5. Date of Accident :
6. Responsibility for the accident/incident and Final Action taken (give full detail)

Name of person(s) held responsible	Designation	Responsibility code	Nature of violation	Reg./Rule contravened	Details of action taken

7. If prosecution not launched reason(s) thereof :
8. If dept. Action is asked for, justification why This is considered sufficient and adequate :
9. Enclose copies of correspondence indicating final action taken (e.g. statement of letters of warning issued, management's letter indicating departmental action taken etc.) :
10. Case closed on :

Director of Mines Safety
……..Region

Countersigned by :

Dy. Director-General of Mines Safety
……..Zone

Note : The Final Action Proforma is to be submitted expeditiously and maynot be withheld simply on the ground that compensation remain to be paid which information may be furnished subsequently.

Change in place of Note, instead of above signature it should be below signature.

ANNEXURE PROSEC-1

PROFORMA FOR RECOMMENDATION FOR PROSECUTION

Case will become time barred on.....

1.1	Name of the Mine		:
1.2	Name of Owner (Public Sector/Private Sector)		:
2.1	Summary of the case		:
2.2	Brief reference to the contravention of law For which prosecution is recommended		:
2.3	Persons against whom prosecution is recommended		
3.0	Special considerations about the case, if any		:
4.0	Recommendations of	I.O.	:
		Dir.	:
		DDG	:
5.0	Legal opinion about admissibility of case (By L.A./L.O./S.L.O.)		:
	ORDERS OF D.G.		:

For use in H.O.

(i)	Date of return of one copy to R.O.	:
(ii)	Date when case was instituted	:

INSTRUCTIONS:

(i) In respect of accident cases, form is to be submitted in triplicate and marked "LAW" on top;
(ii) In respect of other cases, form is to be submitted in duplicate and marked "LAW" on top.

ANNEXURE PROSEC-1A

EXPLANATORY NOTE ON PROFORMA FOR RECOMMENDATION OF PROSECUTION

Para Nos.	Sub Para No.	Explanatory Note
1.1 & 1.2		Are self explanatory
2.1		Give a brief summary of the reasons for instituting this case, as e.g. "The case is for the occurrence of an accident due to fall of roof at this mine on 10.9.70 in which 2 persons were killed. The fall is attributed to inadequate support of roof, for which management are considered responsible". OR "The case is for working the area in the mine where a prohibitory order under Section 22(3) is in force since 07.10.1971. An inspection on 13.12.1971 revealed that persons were engaged in winning the mineral and not for rectifying the defects. Management are found responsible for this contravention".
2.2		Indicate here as: "Support Plan enforced under Regulation 123(2) of Coal Mines Regulations, 2017 were not complied with" and/or "Order under Section 22(3) was contravened and/or "Rule 72(c) of Mines Rules, 1955 (Appointment of Welfare Officer) was contravened".
2.3		Indicate as: All Directors, Agent (Sri XYZ) & Manager (Sri ABC) OR Manager (Sri PQR), Asstt. Manager (Sri MN) and Overman (Sri BCD).
3.0		Indicate other considerations such as: "Prosecution is considered essential even if legal opinion may be adverse, for administrative reasons/to have a salutary effect:. "Management is habitual offender of this/other type of violations". "The contravention is repeated/of grave nature".
4.0		For example, the entries may be: For I.O. "Strong action is recommended" For Dir. "Prosecution recommended" and For DDG "I agree with Dir" or "I do not agree with Dir (Giving reasons)"
5.0		Indicate the name/designation of officer giving legal opinion and also the actual legal opinion as:
5.0	(a)	There is a prima facie case.
5.0	(b)	There is a case for contravention of ..... but there is a doubtful case for contravention.
5.0	(c)	A successful case cannot lie because there is no adequate and acceptable evidence to establish the violation(s).
5.0	(d)	There is no prima facie case.

CIM-30
(Page -1)

CATEGORY OF ACCIDENT: Indicate [Mining/Mining Non-statistical/Non-mining]

भारत सरकार
Government of India
श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय
Directorate General of Mines Safety

No..... dated : / /2017

REPORT ON FATAL ACCIDENT

By cause : .....(Cause Code) :.....
By place : .....(Place Code) :.....

Date of accident:..... Time of accident:..... Hours
Commencement of shift:..... Hours End of shift:.....
Hours
Hours at work:..... Hours
Mine: ..... Mine
Owner: .....
Agent: .....
Manager: .....
Mineral Worked: .....

Killed

Sl. No.	Name	Father's/Husband's Name	Age	Sex	Occupation

Seriously Injured

Sl. No.	Name	Father's/Husband's Name	Age	Sex	Occupation

Place of occurrence:
.....
.....
.....

CIM-30
(Page -2)

Cause:
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.....
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Had
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Responsibility:

Sl. No.	Name(s) of person(s) held responsible	Designa-tion	Responsibility Code	Nature of violations	Regulation Rule contravened

Name of the Inquiry Officer :
Assisted by :

CIM-30(A)

FORMAT FOR INFORMATION REQUIRED TO BE FURNISHED SEPARATELY FOR ACCIDENTS DUE TO FALL OF ROOF

1.	Shift of accident with shift hours (e.g. 1st shift 8AM-4PM etc)	:
2.	Height of working (m)	:
3.	Depth of working (m)	:
4.	(a) Method of working. (e.g. B/P development/depillaring, L/W development/depillaring, caving/stowing)	:
	(b) Other places (e.g. Haulage roadway, travelling roadway, tramming roadway, other roadway, old workings)	:
5.	Distance of accident site from face	:
6.	Type of support [e.g. prop, chock, roof bolt, friction prop, hydraulic prop, other steel prop, crossbars, a combination of the above (specify)]	:
7.	Adequacy of support.	: Yes/No
8.	Length (maximum) width (maximum) & thickness (average) of fall.	:
9.	Time elapsed after blasting	:
10.	Distance of accident site from goaf	:
11.	Nature of fallen roof (shale, sand stone, shale and sand stone, coal etc)	:
12.	Length of pillar	:
13.	Width of pillar	:
14.	With of gallery	:
15.	Operation at the time of accident (e.g. drilling, blasting, cutting, loading, dressing, supporting, withdrawal of support, transporting, salvaging, supervising /inspecting).	:

CIM-30(B)

ADDITIONAL INFORMATION REQUIRED TO BE FURNISHED FOR ACCIDENTS DUE TO ROPE HAULAGE

1. Time and Shift hour :

2. Details of the haulage :
(Location, type, make, HP, designed draw bar pull, brake, clutch etc.)

3. Details of the haulage roadway :
(Gradient, total distance, location of accident, man holes)

4. Accidents during lowering :
(Total load attached, over speeding, curves, brake, lowering with clutch, with or without power.)

5. Failure of rope attachment/couplings/draw bar :
(Type, capacity, name of manufacturer, test certificate, date of installation, condition at the time of accident)

6. :
Failures of haulage rope
(Dia, construction, name of the manufacturer, B.I.S. Licensee or not, F.O.S. of the rope at the time of accident, Test report of the sample rope near the broken end for break load, torsional values, reverse bend tests, original test certificate from the manufacturer, date of installation, normal

7. rope life, present condition) :

8. Non provision of safety devices :

9. Accidents due to human failure :
(VTC training, authorization, experience, medical examination etc.)

CIM-30(C)

ADDITIONAL INFORMATION REQUIRED TO BE FURNISHED FOR ACCIDENTS DUE TO WHEELED TRACKLESS MACHINERY

1.	Time, Shift and hour	:
2.	Place of accident (Haul Road, Dump yard, Loading point, Stock yard, CHP, Workshop etc.)	:
3.	Details of the equipment (Capacity, HP, Width, Make, Type of brakes provided, retarder etc.)	:
4.	Accidents during reversing (Spotter, Berms, Audio Visual Alarm, Visibility etc.)	:
5.	Accidents due to human failure (VTC training, Valid driving license, experience, Medical Examination and fitness, authorization etc.)	:
6.	Accidents due to equipment failure (Details of the failed item, shortcomings in the design, recommendation there of effectiveness of parking brake, service brake, emergency steering system etc.)	:
7.	Accidents due to over speeding (Load, Gradient, moving up or down, Berms, Bends or curves, slippery road condition, careless driving, brake failure, steering failure, Retarder failure)	:
8.	Accidents due to collision/falling down (Brake, Steering, Visibility, illumination, sudden stopping of engine, proper gear selection, condition of tyre, width of haul road – adequate or not.)	:

ANNEXURE ACCTD – 8

SEIZURE MEMO

I. I, (Name)……, (Designation)……. by virtue of powers conferred under Section 7(2) of the Mines Act 1952, have seized the documents/and/things fully described hereunder (in the presence of mediators whose name and address are placed below):

1. Name of the mine:
2. Name of Owner or manager:
3. Particulars of the documents or things seized:
   (a)
   (b)
   (c)
   (d)
4. Place where seized:
5. Date and time of seizure:
6. Name of the person from whom seized:

II. ……..(define number & type of sample) the sample of articles, i.e. bottles box, rope etc has been dully seized and sealed by me and also by Shri……. of the above mine (in the presence of following mediators) has/have been handed over to Shri……..

Mediators (if available):

1. Name & Signature
   Address:
2. Name & Signature
   Address:

Date:
Place:

Signature & Designation of officer who is seizing	Signature & Designation of Management Representative	Signature & Designation of person from whom seized

During seizure the I.O. must keep in his mind the following points:

(a) Whenever the IO seizes or takes sample of any substance or thing, he shall in presence of owner, agent, manager or any officer of the mine, efficiently seal and put his signature and any suitable and distinguishable mark on the seized article. The signature and mark of any of the above persons should also be obtained on the sealed record or sample.

(b) Every document seized shall be signed and dated on the 1st and last page both by the officers seizing it as well as by the person from whom it has been seized.

(c) Presence of at least one disinterested or independent witness is desirable. If such witness is available he should attest the seizure memo.

(d) In case of heavy and complicated machinery, when it is not possible for the IO to seize it physically, he will properly seize and seal it at site as per above procedure. The IO will instruct the management that the tampering with the machinery on any part thereof is not allowed. Such fact should be mentioned on the seizure memo in detail.

(e) In case the IO has to seize any explosive the sample must be seized and sealed and kept at the site in proper magazine etc.

ANNEXURE ACCTD-9

NOTICE

Inquiry into fatal/serious accident on .....(date) to.....(name of the deceased/injured) at.....(name of the mine) owned by.....(name of the owner).

Notice is hereby given to all persons affected and concerned, including owner, agent and manager of.....mine that the undersigned shall be recording evidence and taking statements during the course of inquiry under Sec. 23 of the Mines Act, 1952 at the office of the mine between.....Hrs to .....Hrs on.....(dates) into the fatal accident that occurred at .....Mine on.....resulting in death/serious injury to.....name(s) of deceased/injured(s).

All eye witnesses to the said accident, concerned mine officials and any other worker or interested person(s) who wish to be included to adduce any evidence or wants his views to be heard may inform the undersigned immediately and present himself at the aforesaid place on the above mentioned dates.

Place..... Signature.....

Date..... Designation:.....