1. Introduction

Minerals constitute the backbone of economic growth of any nation and India has been eminently endowed with this gift of nature. A number of minerals of economic and commercial value abound in this country. There are many evidence that exploitation of minerals like coal, iron-ore, copper, lead-zinc has been going on in the country from time immemorial. However, the first recorded history of mining in India dates back to 1774 when English Company was granted permission by the East India Company for mining coal in Raniganj. Coal mining got a boost in 1855 when railway line was laid from Howrah to Raniganj. M/s John Taylor & Sons Ltd. started gold mining in Kolar Gold Fields in the year 1880. The first oil well was drilled in Digboi in the year 1866 - just seven years after the first ever oil well was drilled anywhere in the world viz. in Pennsylvania State, USA in 1859. Mining activities in the country however remained primitive in nature and modest in scale uptill the beginning of the current century. Thereafter, with progressive industrialisation the demand for and hence the production of various minerals gradually went up. After India became independent, the growth of mining under the impact of successive Five Year Plans has been very fast. There are ambitious plans in coal, metalliferous and oil sectors to increase production of minerals during the 11th Five Year Plan and thereafter.

Table-1 shows the increasing trend in output of important minerals, whereas Table-2 shows the growth of mining activities in terms of some important parameters like number of mines, value of minerals mined, aggregate horsepower installed and explosive used. Table-3 shows average daily employment in coal, metal & oil mines. Table-4 shows the trend in average place-wise daily employment of men and women in mines. The table shows that there is a gradual fall in average daily employment of women in mines. Table-5 shows trend in production of coal from belowground and opencast workings. It also shows the trend in average daily employment in belowground, opencast workings and aboveground in the coal mines. It is observed that the production of coal from opencast workings has increased substantially while that from belowground workings has remained almost stagnant.

Minerals are depleting assets of a nation. Extraction of the same from below the surface of the earth is fraught with innumerable dangers. Mining has been and continues to be a hazardous profession and has rightly been deemed to be a war with the unpredictable forces of nature. The condition of roof and sides of underground mines can change without any prior indication. Dangers due to sudden inrush of water, release of lethal and inflammable gases or the fall of roof and side are inherent to mining and it is essentially because of such unpredictable dangers that mining is considered the most hazardous of all peace-time occupations.

2. Mine Safety Legislation

In earlier years when mining activities were modest in scale, safety problems too were simple. With the progress in exploitation of minerals, safety of persons employed became a matter of concern. In 1895, the Government of India initiated steps to frame legislative measures for safety of workmen. In 1897 first major disaster in mining hit the Kolar Goldfields killing 52 persons, to be soon followed by the Khost Coal Mine disaster in Baluchistan (now in Pakistan) killing 47 persons. The disaster hastened the process of formulation of safety laws and the first Mines Act was enacted in 1901. With further experience, this Act was superseded by the Indian Mines Act, 1923, which was again replaced by the present Mines Act, 1952. This Act came into force on the 1st July 1952. Major changes were incorporated in this Act in the years 1959 and 1983. The Mines Act, 1952 applies to mines of all minerals within the country except the State of Sikkim, including the offshore mines within the limits of territorial water.

For administering the provisions of the Indian Mines Act, 1901, the Government of India set up a "Bureau of Mines Inspection" on the 7th January 1902 with headquarters at Calcutta. The name of the organisation was changed to Department of Mines in 1904 and its headquarters shifted to Dhanbad in 1908. On 1.1.1960, the organisation was renamed as "Office of the Chief Inspector of Mines". Since 1.5.1967, the office has been re-designated as Directorate-General of Mines Safety (DGMS in short).

2.1 In view of recent development in the mining industry various amendments in Mines Act, 1952, Coal Mines Regulations, 1957, Metalliferous Mines Regulations, 1961 and Oil Mines Regulations, 1984 are under process. It is expected to complete the amendment job shortly. It has also been proposed to

extend the jurisdiction of the enforcement of the Mines Act upto 200 nautical mines of territorial water in the sea by which offshore oil mines will also come under its purview.

3. Organisational Set-Up

Under the Constitution of India, safety, welfare and health of workers employed in mines are the concern of the Central Government (Entry 55-Union List-Article 246). The objective is regulated by the Mines Act, 1952 and the Rules and Regulations framed thereunder. These are administered by the Directorate-General of Mines Safety (DGMS), under the Union Ministry of Labour & Employment. Apart from administering the Mines Act and the subordinate legislation there under, DGMS also administers a few other allied legislation, including the Indian Electricity Act.

A list of the subordinate legislation under the Mines Act and certain allied legislation administered by DGMS is at **Annexure-I**.

Officers appointed to different technical posts in DGMS are selected by U.P.S.C. They are required to have Degree in Mining or Electrical or Mechanical Engineering and several years of experience, varying from seven to ten years of working in responsible capacity in mines or allied industry. Besides, officers of mining cadre posses First Class Mine Manager's Certificate of Competency. The Occupational Health cadre is manned by qualified and experienced medical personnel. Due to the nature of work performed by the officers of DGMS, the Govt. of India declared this organisation as "S&T Institution" on the recommendation of Science and Technology Department of Govt. of India, in November, 1987.

The organisation has its headquarters at Dhanbad (Jharkhand) and is headed by Director-General of Mines Safety. At the headquarter, the Director-General is assisted by specialist staff-officers in mining, electrical & mechanical, occupational health, law, survey, statistics, administration and accounts disciplines. The headquarters has also a technical library and S&T laboratories as a back-up support to the organisation.

The field organisation has a two-tier network of field offices. The entire country is divided into eight zones, each under the charge of a Deputy Director-General of Mines Safety. There are three to four Regional offices under each zonal office. Each Region is under the charge of a Director of Mines Safety. There are in all 29 such Regional Offices. Sub-regional offices have been set up in important areas of concentrated mining activities away from Regional office. There are three such sub-regional offices, each under the charge of a Deputy Director of Mines Safety. Each Zone, besides having inspecting officers of mining disciplines has officers in electrical & mechanical engineering and occupational health disciplines.

Organizational chart of DGMS is at **Annexure-II**.

DGMS has a total sanctioned strength of 950 persons with 683 in position as indicated below:

CATEGORY	SANCTIONED STRENGTH	IN POSITION STRENGTH
GROUP-A	279	125
GROUP-B (GAZETTED)	38	23
GROUP-B(NON-GAZETTED)	186	163
GROUP-C	222	214 (170+44*)
GROUP-D	07	141 (5+136*)
TOTAL	**732**	**666**
** To be filled up by outsourcing	**231	

* Incumbents present on the post abolished/earmarked for outsourcing.

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2011)

Sl.No	Designation	Discipline							
		Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-	-	-
2.	DY.DIRECTOR-GENERAL	9	6	1	1	1	-	-	-
3.	DIRECTOR	50	23	16	9	16	6	-	-
4.	DY.DIRECTOR	99	61	34	6	33	1	5	1
5.	ASSTT.DIRECTOR	-	-	-	-	-	-	GR.I- 4	2
TOTAL		**159**	**91**	**51**	**16**	**50**	**07**	**9**	**3**

S - Sanctioned P - In position

3.1 Budget

For meeting with the expenditure on salaries, allowances, office expenses etc. in connection with various plan and non-plan activities, the following financial provisions have been made:

(Rupees in thousand)

Activity	Budget Estimate	Revised Estimate	Final Estimate	Actual Expend.	Budget Estimate	Revised Estimate	Budget Estimate
	2009-10	2009-10	2009-10	2009-10	2010-11	2010-11	2011-12
A-Non-plan							
1. DGMS Non plan	334573	347402	341567	339704	354400	347539	341440
2. Examination	8648	9798	9718	9433	9800	10000	10560
Total Non plan	**343221**	**357200**	**351285**	**349137**	**364200**	**357539**	**352000**
B. Plan Schemes							
1. MAMID	15000	17000	16400	16128	40000	40000	50000
2. SOCFOD	30000	27000	24500	24276	60000	59200	70000
3. Civil Works	20000	20000	20000	20000	80000	80000	100000
Total Plan	**65000**	**64000**	**60900**	**60404**	**180000**	**179200**	**220000**

4. Role and Function of DGMS

4.1 Mission of DGMS

The mission of DGMS is the reduction in risk of occupational diseases and casualty to persons employed in mines, by drafting appropriate legislation and setting standards, by overseeing compliance thereof and through a variety of promotional initiatives and awareness programmes creating an environment in which safety is given due priority.

4.2 Vision of DGMS

The vision of DGMS is “To ensure nationally acceptable and internationally competitive standards of health, safety and welfare for employees of the Indian mines.”

4.3 Current functions of DGMS broadly include:

1. Inspection of mines
2. Investigation into -
   (a) accidents
   (b) dangerous occurrences - emergency response
   (c) complaints & other matters

3. (a) Grant of :
   (i) statutory permission, exemptions & relaxations

(ii) approval of mine safety equipment, material & appliances

(b) Interactions for development of safety equipment, material and safe work practices through workshop etc.

(c) Development of Safety Legislation & Standards

(d) Safety Information Dissemination

4. Conduct of examinations for grant of competency certificates.

5. Safety promotional initiatives including :

(a) Organisation of -

- Conference on Safety in Mines
- National Safety Awards
- Safety Weeks & Campaigns

(b) Promoting -

- safety education and awareness programmes
- workers' participation in safety management through -
  - workmen's inspector
  - safety committee
  - tripartite reviews

5. Measures to improve safety in mines

5.1 Legislative Measures

5.1.1 Inspection & Enquiries

Since mining is beset with many inherent hazards, detailed precautions have been laid down in the Mines Act and the Rules and Regulations framed thereunder to guard against dangers in mines and it is the responsibility of the mine management to comply with the same. While the onus of providing for and ensuring safety in mines rests with the mine managements, as clearly laid down under section 18 of the Mines Act, 1952 as "**The owner and agent of every mine shall each be responsible for making financial and other provisions and for taking other such steps as may be necessary for compliance with the provisions of this Act and regulations, rules, bye-laws and orders made thereunder.**" The DGMS has the responsibility to see that the safety law is kept updated to absorb the technical advancements as well as to make the same comprehensive, practicable and legally sound and also to carry out periodic inspection of mines to oversee compliance of safety laws. The Mines Act and the subordinate legislations framed thereunder is periodically updated for the purpose. Each and every accident involving fatality is enquired into by an officer or a team of officers of DGMS. A few accidents involving serious bodily injury and most of the important dangerous occurrences are also investigated by DGMS Officers.

Action taken subsequent to inspections:

- Pointing out contraventions
- Withdrawal of permission
- Issue of improvement notices
- Prohibition of employment
- Informal stoppages
- Prosecution in the court of law

5.1.2 Enquiry into Accidents, Dangerous Occurrences etc.

Statutory Provisions

The notifiable dangerous occurrences include:

- All fatal & serious accidents and specified dangerous occurrences & occupational diseases are required to be notified to DGMS,
- Explosion, ignition, spontaneous heating, out-break of fire, irruption or inrush of water or other liquid matter;
- Influx of inflammable or noxious gases;

- Breakage of rope, chain or other gear by which persons or materials are lowered or raised in a shaft or an incline;
- Overwinding of cages or other means of conveyance in any shaft while persons or materials are being lowered or raised; or
- Premature collapse of any part of the workings.

All fatal accidents are required to be enquired into by DGMS within 2 months.

Apart from the incidents mentioned above the officers also enquire into complaints connected with the safety and welfare of the persons connected with mining which are received from various sources. Being concerned with safety, normally, even anonymous complaints are enquired into.

Following actions are taken after an enquiry:
- Warning to delinquent
- Suspension of certificate
- Modification in the method of working
- Action by management like stoppage of increment, dismissal from service, recorded warning, withholding promotion and
- Prosecution in the court of law

The number of inspections and enquiries conducted by DGMS officers during the year 2010 is shown in appended Table-6

Discipline	**Inspection**				**Enquiries**				**Inspections & Enquiries**			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	720	147	115	982	65	8	0	73	785	155	115	1055
Mechanical	281	53	3	337	61	18	1	80	342	71	4	417
Mining	2582	3183	164	5929	813	449	57	1319	3395	3632	221	7248
O.H.	126	0	0	126	3	0	0	3	129	0	0	129
TOTAL	**3709**	**3383**	**282**	**7374**	**942**	**475**	**58**	**1475**	**4651**	**3858**	**340**	**8849**

Note: Figures are provisional.

5.1.3 Permission, Exemptions and Relaxations

DGMS is keeping a constant vigil on the method of extraction of minerals, supports of the workings, working environment and safe code of practices to ensure that mine workers are not exposed to dangers and dangerous environments while working in belowground, opencast or any surface operations. Permissions, exemptions and relaxations are regularly granted by this Directorate to the mine operators under various provisions of the statute. Whenever a new technology is planned to be introduced in the mines, the officers of this Directorate are always approached to analyze and scrutinize the proposal for its safety and affectivity. The technology is either directly permitted to be introduced or modified to suit Indian environment. The workings in the mine are regularly checked by field officers during the course of their inspection and enquiries. If the conditions of workings and manner of extraction are found unsafe and not carried out as per the permissions granted, the permissions are immediately revoked.

Details of permission cases during the year 2010 are given below:

Name of Mineral	No. received	Dealt	Recorded	Rejected	Granted	Under process	Pending on 31.12.2010
Coal	1204	1096	207	86	697	143	132
Metal	1552	1464	120	67	1237	88	90
Oil	149	98	29	13	42	14	60
Total:	**2905**	**2658**	**356**	**166**	**1976**	**245**	**282**

5.1.4 Improvement Notices & Prohibitory Orders

During inspection of mines, if the workings or the environment are found to be unsafe and dangerous notices or prohibitory orders are immediately issued to the management to take necessary steps for improvement. Unless the conditions improve for re-deployment of persons as recorded through inspections, the orders are not vacated and persons are not allowed to be deployed in such dangerous conditions.

Details of the improvement notices and prohibitory orders are given in Table-7 in the annexure. In addition 25 statutory permissions were withdrawn for non-compliance of conditions laid down in the permissions.

5.1.5 Prosecution cases

Details of prosecution cases instituted and their status during the year 2010 are given below:

Prosecution	Coal	Metal	Oil
Launched	18	23	1
Disposed off	8	6	-
Pending	169	255	9
Total	**195**	**284**	**10**

5.1.6 Approval and Testing

What constitutes “mine safety equipment” has not been precisely defined anywhere. Mining is a hazardous occupation and therefore the equipment, machinery, tools and material used in mines required to be safe, robust and reliable capable of working safely under hostile environment. The equipment needs to remain safe under prolonged usage even in adverse condition.

Approval Policy and Procedure

The objective of granting approval to various equipment for use in mines is to primarily fulfill the statutory obligation enshrined under different provisions of Coal Mines Regulations, 1957, Metalliferous Mines Regulations, 1961, Oil Mines Regulations, 1984, Indian Electricity Rules, 1956 and Mines Rescue Rules, 1985 besides statutory notification under these regulations by the competent authority from time to time.

For obtaining approval of any mines safety equipment material it is generally required to conform to the Bureau of Indian Standard specification and if there is no such specification then to standard specification of other countries like ISO/EN/DIN etc. Sometime the standard evolved on the basis past practice are also accepted. The equipment/material is tested in any approved test house in India in accordance with the above standard. If the test report is satisfactory it is considered for grant of approval.

Approval are granted in two phases

a) Approval for field-trials
b) Regular approval

Based on preliminary examination of the application, which is made in a prescribed format, test report from an approved test house in conformity of applicable standard, approval to conduct field trial is granted. Sometimes factories of the manufacturer are also visited to ensure their capability and to check the quality control system adopted in the manufacturing process. The period of field trial approval vary between three months to one year. It is necessary to ensure that the field trials are conducted in mines suitable for the purpose and will offer adequate scope for monitoring the performance by DGMS officials. After successful completion of the field trial and receipt of the satisfactory report, the case is again examined and recommendations made to accord regular approval. If shortcomings are observed during the field trials the same is communicated to the manufacturer. The manufacturer may seek extension of the field trial. Regular approval is granted for a particular period initially for one year and is

subsequently extended after obtaining satisfactory performance report from the field. The time period for extension vary between two years to three years.

During the year 2010, 554 approvals for use of material, equipment, machinery etc. in mines were granted as detailed below:

Type of approval	No. of approved
Approval for field trial	432
Regular approval including extensions	122
Total	**554**

5.2 Developmental Measures

5.2.1 Standard Setting

Based on the experiences, the developmental initiatives undertaken by DGMS are -
(i) amendment of safety laws,
(ii) issue of guidelines for safer operations in identified thrust areas through circulars and
(iii) issue of technical instructions to DGMS officers for their guidance.

Standard setting is a complex process consisting of translation of the vast experience of DGMS and multilevel interaction. Results of inspections and analysis of accident enquiries, recommendations of courts of enquiries and safety conferences, results of research & development activities, ILO guidelines and international state of the art of technology and its safety ramifications are some of the inputs going into standard setting. Amendment of statutes is an elaborate process wherein all the likely affected stake holders viz. Labour, management, academicians, research institutes, professional bodies are given adequate opportunities to send their comments, which in turn are considered before finalizing the amendment.

During 2010, DGMS issued 16 circulars to the mine management and 7 instructions to the inspecting officers as indicated below:

Type of Circular	No. issued
DGMS (Technical) Circulars	07
DGMS(Legislation)Circulars	00
DGMS (Approval) Circulars	08
DGMS (General) Circulars	01
Total Circulars	**16**
DGMS (Technical) Instructions	05
DGMS (General) Instructions	02
Total Instructions	**07**

5.2.2 ILO Conventions - DGMS is paying utmost attention to the various recommendations of the ILO conventions held in the past related to the mining. Status of such conventions is given in Annexure-IA.

5.3 Conduct of Examinations and Award of Statutory certificates of Competency

Mining is a war against unpredictable forces of nature and since conditions of workings go on changing moment to moment, man at the spot has to take instantaneous decisions. Practical and on the spot decision of the front-line supervisor and managerial executive is of paramount importance to save life. To examine the competency of persons eligible for manning such posts and to grant certificate of competency, two Boards of Mining Examination, one for Coal mines and the other for Metalliferous mines, function under the Chairmanship of the Director-General of Mines Safety.

Competency examinations are different from university examinations. In these Examinations stress is laid on practical aspect of managing/supervising a mine/district apart from his theoretical knowledge. In case of managers, assistant managers, surveyors and overman, the competency examination consists of a written part and an oral part. In manager's competency examination i.e. first class/second class there are five subjects in which candidates are examined viz. Legislation, Mine Management & General

Safety, Method of work, Ventilation, Mining machinery and Mine Surveying. Depending on the qualification and experience of the candidates, exemptions from appearing in some papers/subjects are granted. Candidates obtaining at least 40% marks in written examination in any subject is then called for the oral examination. Candidates obtaining at least 40% in orals and at least 50% in aggregate i.e. written and oral examinations are declared successful. Before a candidate is allowed to appear in an examination his application is scrutinized for valid first aid certificate, gas-testing certificate, other statutory certificate, practical experience, character certificate, medical certificate and basic qualification certificate.

In case of junior examinations i.e. sirdar's, shotfirer's, mate's, blaster's etc. only oral examinations are held. A candidate has to secure at least 50% marks with different examiners to be declared successful.

Details of examinations conducted during the year 2010 are given in **Annexure-III**.

Processing of the large nos. of application is a big job and the system requires computerization for which a plan scheme named SSEX has been initiated.

5.4 Promotional initiatives

Some of the recent developments in safety movement, besides the legislative measures, include:

5.4.1 Conference on safety in mines.

The Conference on Safety in Mines is a tripartite forum at the national level in which the employers' representatives, the trade unions' representatives, the Government represented by Ministry of Labour & Employment, DGMS, various administrative ministries/ departments and State Governments and associated institutions, professional bodies, service associations, etc. take part. They review the status of safety in mines and the adequacy of existing measures in a spirit of mutual cooperation. The conference also suggests measures for further improvement in safety, welfare and health of mine workers. The first Conference was held in the year 1958 and the tenth conference was held on 26th & 27th November, 2007 at New Delhi. A number of recommendations of these conferences have been given statutory backing and most of the others have been absorbed in management practices and policies.

5.4.2 National Safety Awards (Mines)

Ministry of Labour & Employment, Government of India instituted National Safety Awards (Mines) in 1983 (for the contest year 1982) with a view to promote a competitive spirit amongst mine operators for the betterment of safety standards in mines and to give due recognition to outstanding safety performance at national level. This award is generally given away by the Hon'ble President of India every year and has generated considerable enthusiasm amongst the Mining community. National Safety Awards (Mines) for the year 2007 were given away on 23rd October, 2009 at New Delhi by the Hon'ble Vice President of India. Details of prize winning mines are given in Annexure-V. The Ministry has reconstituted the National Safety Award (Mines) Committee vide their letter No.D-14011/17/2009-ISH.I dated 15.2.2010 for a period of three years.

5.4.3 Vocational Training and Other Training

Recognizing the need for safety education to enable the mine workers to prepare them to face the challenges of mining, the Mines Vocational Training Rules were framed in 1966. These rules provide for initial, refresher and specialised training to mine workers. This also provides for construction of mines vocational training centres with training officers and instructors along with proper and adequate equipment and softwares. It also provides for payment to trainees during the training period.

5.4.4 Observance of Safety Week, Safety Campaign etc.

During the safety week held every year in different mining fields, efforts are made through various audio-visual means, to inculcate safety consciousness amongst workers, supervisors and others so as to influence their behaviour at work. Further, by holding competition amongst various participating mines an attempt is made to improve the working conditions. In all 51 nos. of safety weeks were observed during the year 2010 in different regions spread over the country covering all types of mines.

Based on the accident experience, special safety drives are sometimes launched to focus attention on specific cause-groups.

5.4.5 Holding of First Aid and Rescue Competitions etc.

Unfortunately inspite of all-round efforts by every body accidents continue to occur. To mitigate the consequences of such occurrences speedy and timely rescue & rendering of first aid assumes great importance. Recognising the importance of preparedness, speed and efficiency in first aid and rescue, competitions are held to bring improvement in these services. First Aid and Rescue Competitions were held in a number of mining companies. These keep the rescue workers and first-aiders in battle ready conditions. The officers of DGMS actively associated themselves with these competitions.

5.4.6 Promoting Participation of workers in safety management

Much greater strides in safety can be achieved by participation of workmen in safety programme, the twin institutions of 'Safety Committee & 'Workmen's Inspector' have been conceived and even given the statutory backing. DGMS is also associated with training of Workmen's Inspectors to make them effective in discharge of their duties. In coal mines almost all the eligible mines had a Workmen's Inspector and a Safety Committee. The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2010:

Type of Mine	**No. of Safety Committees**		**No. of Workmen's Inspectors**	
	Required	Provided	Required	Provided
Coal	567	567	1692	1642
Metal	345	356	375	387
Oil	43	43	63	63
Total	**955**	**966**	**2130**	**2092**

5.4.7 Promoting Self-regulation by management

Most of the mining companies in the organised sector have enunciated company's safety policy and set up Internal Safety Organisation (ISO) for monitoring, advising on and aiding in the implementation of safety measures in mines as per Company's policies and guidelines in keeping with the statutory provisions. ISOs are headed by a senior officer of the Executive Director/Chief General Manager level in the coal companies and are multi-disciplinary in character.

5.4.8 Awareness and information dissemination

Officers of DGMS serve as guest faculties at several short-term safety courses organized by the Mine Managements, Institute for Miners & Metal Workers' Education and Scientific and Academic Institutions. The officers also participate in various technical workshops, seminars, symposia and conferences and present technical papers relevant to their field of work. At all these forums they strive to spread the message of safety in right perspective.

Lists of various training courses/seminars/symposium & workshops attended/ participated by DGMS Officers during 2010 are given in **Annexures IV** & **IVA** respectively. Besides, lectures were delivered by Officers of DGMS in various forums. They also chaired technical sessions and delivered key-note/valedictory addresses at various seminars/symposia/workshops and conferences etc.

Another piece of information which is widely disseminated and extensively made use of relates to accident statistics and analysis thereof. The DGMS also publishes the following:

(a) DGMS Annual Report - annually
(b) Statistics of Mines in India Vol.I (Coal) - annually
(c) Statistics of Mines in India Vol.II(Non-coal) - annually
(d) Monthly Review of Accidents - monthly

5.4.9 Technical Measures

It is well recognised that reasonable frequency of inspections is important to keep the mine operators alert to their responsibilities. It is also recognised that quality of inspections is equally important. This underscores the need for:

- Technical and professional competency of the officers of DGMS to be kept continually updated and upgraded;
- The regulatory, enforcement, advisory and promotional roles of DGMS to be backed by strong in-house S&T support; and
- Optimize the scarce resources of DGMS through:
    - Automation of office work so as to free the technical officers from work of routine and repetitive nature; and
    - Develop and implement comprehensive computer-based Mines Safety Information Monitoring System.

5.4.10 e-Governance in DGMS

The directorate has moved on the path of e-Governance as an effective mechanism for discharging its role and functions. A "Road Map has been prepared" and submitted to the Ministry. Detailed Project Report (DPR) is in the process of preparation. Once the DPR is prepared, the detailed proposal of the Plan Scheme incorporating the basic requirements such as infrastructure i.e. hardware for computerization and data management system, Networking and other system and application software, manpower, financial requirements and other necessaries shall be prepared. It is expected that the e-Governance Project can be completed within a period of 18 months from the date of approval of the Scheme.

5.4.11 A Dynamic Website for DGMS is under preparation which would enable the directorate to strengthen its core infrastructure through e –Governance. The website shall be in bi-lingual (Hindi-English) format to serve larger spectrum of the people in the mining profession. It would cover Organization Structure and Department Information, Government Orders and Standing Orders, Policy Manuals, News and Updates of important initiatives taken by different divisions, etc.

5.4.12 The directorate has initiated **Strategic Plan – (2011-15)** as the Mining activities in most of the minerals including oil and natural gas have increased due to exponential rise in demands of the user industries. Mining domain which was limited to rich deposits at shallow depths has extended to lean deposits at greater depths associated with multiple geologic and environment settings. Mining has also extended from on-land operations to offshore deep sea areas. In order to meet the demands and extract minerals safely and economically, mechanization and introduction of latest technologies are being opted for. In view of the fast changing scenario, the directorate has taken measures for accident prevention programmes and activities on Human Resource Development through in- house Mines Safety and Health Academy (MSHA).

5.4.13 Interactions & advisory role

One of the measures to promote the cause of safety is inter-action with mine operators, workers' representatives, teaching and research institutions etc. A list of important organisations/ committees the meeting of which are organised/ participated by DGMS is indicated below:

1. Standing Committee on Safety in Coal Mines under the Chairmanship of the Union Minister of Coal.
2. Safety Board of Coal India Ltd.
3. Review Committees of various mining companies on implementation of recommendations of the Conference on Safety in Mines.
4. Mineral Advisory Council of India.
5. Mining Education Advisory Board, West Bengal.
6. Executive Council, Central Institute of Mining & Fuel Research.
7. Research Council of Central Institute of Mining & Fuel Research
8. Project Advisory Committee - Central Institute of Mining & Fuel Research.

9. Standing Sub-committee on Production, Productivity & Safety of Central Mining Research Institute.
10. Task Force Committee of Central Institute of Mining & Fuel Research
11. Advisory Panel for Mine Environment & Health Discipline - Central Institute of Mining & Fuel Research
12. General Council of Indian School of Mines University.
13. Executive Board of Indian School of Mines University.
14. Establishment & Finance Sub-committee of Indian School of Mines University.
15. Joint Board on Mining Engineering Education & Training.
16. Advisory Committee for Mining Engineering Department, Indian Institute of Technology, Kharagpur.
17. Coal Advisory Council of India.
18. The Council of the Mining, Geological & Metallurgical Institute of India.
19. Bihar Mineral Advisory Council.
20. Environmental Appraisal Committee for Mining Projects.
21. SSRC's Standing Sub-committee on production productivity & safety - CMPDI
22. Advisory Committee for Safety Review of Projects of Indian Rare Earth Ltd. (Organised by Atomic Energy Regulatory Board)
23. Governing Body of National Institute of Rock Mechanics.
24. Standing Co-ordination Committee on Mine Safety and Mineral Development.
25. Coal Conservation & Development Advisory Council.
26. Consultative Committee of the Ministry of Labour & Employment.
27. S & T Advisory Committee of the Ministry of Labour & Employment.
28. Standing committee of Parliament of Labour Welfare.
29. Committee of Parliament on Environment & Forest - Sub-committee on Dams & Mining.
30. Various Technical Committees of Bureau of Indian Standards.

Director-General or other Officers of DGMS being the Chairman/Member of these bodies are able to influence the policies and programme with a view to promote safety, welfare and health of workmen employed in mines.

6. Plan Schemes

In order to provide in-house technical support to field offices, DGMS is implementing following Plan Schemes namely:

Ongoing schemes:

(1) "Mine Accident Analysis and Modernization of Information Database (MAMID)"
(2) "Strengthening of Core Functions of DGMS (SOCFOD)"

6.1 "Mine Accident Analysis and Modernization of Information Database (MAMID)"

This is the restructured plan scheme after merging of the two Plan Schemes of Tenth Plan (2002-07) namely (i) Study of Mines Accidents and Development of Mines Safety Information System (SOMA) and (ii) Modernization of Information Database in DGMS (MID) as per the Report of Working Group on Occupational Safety & Health for 11th Five Year Plan 2007-12 of Ministry of Labour and Employment, Government of India. - Oct 2006. Keeping the objective of integration in view, these schemes were merged into one scheme "Mine Accident Analysis and Modernization of Information Database (MAMID)"

Objective of the Scheme:

(A) Mine Accident Analysis and Information Database

- ✓ To eliminate risk of disasters and accidents in mines through detailed analysis of accidents and dangerous occurrences using risk assessment and risk management techniques;
- ✓ Development of standard Safe Operating Procedures (SOPs) and Code of Safe Practices (COPs);
- ✓ Identification of mines having potential of accidents/disasters through detailed investigation into the operating systems and environment in the mine;
- ✓ Development of mine data acquisition system and analysis through computerized databases and processing system;
- ✓ Dissemination of mine information system through various reports, technical instructions/guidelines, circulars on electronic as well as other conventional media;
- ✓ Identification of mines having high accident potential and formulation of risk elimination/management plan;

(B) Computerized Mine Safety Information System

- ✓ Computerization of process and procedures on Mine Safety Information in DGMS;
- ✓ Establishment of Communication Network using LAN and WAN in DGMS;

The major activities taken up during the year included –

- Publication of Annual Report, 2008 and compilation of Annual Report for the year 2009.
- Publication of Standard Note on DGMS as on 1.1.2010
- Analysis of data for Identification of accident-prone mines in respect of coal & lignite mines.
- Compilation of statistics and preparation of manuscript for –
    - Statistics of Mines in India, Vol.I (Coal), 2007
    - Statistics of Mines in India, Vol.II(Non-Coal), 2007
    - Monthly Review of Accidents and
    - Report on Monthly Inspection Analysis

- National Safety Awards (Mines) for the contestant years 2007 were given away. For the contest year 2008, the names of the award wining mines were finalized on 9.7.2010 and for the contest year 2009, those mines were finalized on 21.12.2010 by the National Safety Awards (Mines) Committee.
- Training on "Accident Enquiry Procedures" to DDMS in Mining, Electrical & Mechanical disciplines ware conducted in two batches on 2nd & 3rd and 7th & 8th December, 2010 at DGMS, Dhanbad. 34 numbers of inspecting officers of different disciplines attended the above mentioned training programme.

6.2 "Strengthening of Core Functions of DGMS (SOCFOD)"

This is a continuing plan scheme. The scheme had been formulated by merging three on-going plan schemes of DGMS, namely (1) "Augmentation of S&T Capabilities, Mine Rescue Services and Human Resource Development (S&T)(1975)", (2) "Strengthening of Machinery for Conduct of Statutory Examinations (SSEX)(2000-01)" and (3) "Improving Efficiency by Providing Infra Structure Facilities in DGMS (PIF)(" along with components like Occupational Safety and Health Surveillance, promotional initiatives and Emergency Response system.

Objectives of the Scheme:

The objectives of the scheme are:

- To render scientific and technological support to the enforcement wing of DGMS in proper fulfillment and discharge of its statutory duties, responsibilities and advisory role.
- To develop, improve and update need based rescue and emergency response services to the mining industry & to help field offices of DGMS in the form of technical support while taking up rescue and emergencies of specific nature.
- To establish Mine Safety & Health Academy with institutes at different offices of DGMS for imparting structured training to DGMS officers and key personnel of the mining industry.
- Strengthening of Machinery for Conduct of Statutory Examinations
- To develop a structured mechanism for Occupational Health Surveillance & Disease Control in Mining Industry.
- To establish a National Council for Mines Safety with a view to generate safety and health awareness among miners and address their training issues.
- To improve the efficiency of DGMS by providing better infrastructure facilities which include providing own office buildings and residential complexes to the officers and staff members, providing better communication facilities and office equipment and furnishing of offices.

The overall activities are broadly divided into three components:

(1) Science & Technology (S&T) Component:

The Studies and Investigations, Research & Development, Monitoring and Assessment of Hazards that were undertaken and still continuing, are given below:

- Studies and Investigations into the existing methodology and techniques of exploration and exploitation of various types of minerals for improvement in the standards of Safety and Occupational Risks associated therewith
- Studies and Investigations into the new methodology and techniques of exploration and exploitation of various types of minerals for improvement in the standards of Safety and Occupational Risks associated therewith
- Development, Updation and advancement of methods, techniques, processes and materials through interactions, investigations, training etc.
- Standardization of prototype tests and accreditation of testing laboratories /test houses

- Guidelines for accreditation of testing laboratories/test houses
- Guideline for testing steel chocks , Propos, Powered Supports, and other support materials
- Standardization of Ultrasonic Testing Technique and formulation of Acceptance & Rejection Norms for components and vital parts of the machinery & equipment including winding ropes and guides.
- Technical Direction and Guide Lines on various subjects to support the Inspection wings of DGMS as well as to the industry.
- Special Investigations and Studies on :-

  i) Strata Control and Rock Mechanics

  ii) Development of Hidden Slip Detector FOR COAL MINES

  (iii) Explosives and Blasting Techniques for improving efficiency and reducing blasting hazards

  (iv) Mines Gases, Fires & Explosions for control and monitoring to ensure safety against dangers associated therewith.

  (v) Classification of Coal Seam/Mine Prone to Spontaneous Combustion and Fire on Scientific Basis.

- Development of Mine Disaster Control Plan & Emergency Response Mechanism
- Modernization and furnishing of DMRS Laboratories with latest testing instruments and equipments including training
- Medical Examinations, Surveillance and control of Silicosis, Pneumoconiosis, Manganese Poisoning and other occupational disease and disorders in mines.
- Development and furnishing of OSH Laboratories in HQ and other field Offices.
- Establishing a fully equipped Central Mines Safety and Health Academy with Institutes at Dhanbad and Nagpur and creating a core team of well-trained faculty members to train DGMS officers and key personnel in mining industry.
- To develop basic training aids and safety manuals/monographs for use at the institutes and also at in-house training centers in mining companies.

(1) During the year 2010, the following activities were undertaken by S&T wing:

SN	Activity	Achievement
A. S&T Cell		
1.	Mine Environment & Fire	23
2.	Occupational Health Review, Survey & Medical Exam. Etc.	20
3.	Ground Control	17
4.	Mine Mechanization	-
5.	Additional Job: Gas Analysis	11
6.	FRHF	22
B. Development of Mines Rescue Services		
1.	Testing of Filter Self-Rescuer	-
2.	Testing of Self-contained Self-rescuer	-
3.	Rescue competition	07
4.	Field visits	-

5.	Organization of conference on Rescue/Recovery experience	-
6.	Monitoring of First aid competition	05
7.	Creation of Rescue Databases on Rescue facilities	-
8.	Creation of Rescue Databases on actual Rescue/Recoveries	-
9.	Issue of technical circulars	-
C. Human Resource Development		
i.	Conduct of training Programmes: i. DGMS Officers ii. Key Personnel from mining industry iii. Workmen's Inspectors	 75 127 18

(2) SSEX Component of the Scheme

1.	Procurement of computers & peripherals	In progress
2.	Procurement of Office equipment	-do-
3.	Furnishing of offices	-
4.	Establishing exam section at Nagpur	-
5.	System Study	In progress
6.	System review	-do-
7.	Application software development	-do-
8.	Testing and implementation of software	-do-
9.	Training	-do-
10.	Design & development of the web content of the examination-specific web pages	-do-
11.	Design & development of online application form.	-do-
12.	Development of other internet- enabled services with enterprise-wide WAN connectivity.	-

(3) PIF Component:

1.	Renovation of Vikash Bhawan at Dhanbad	Completed
2.	Provision of centralized AC plant for auditorium building at Dhanbad	-
3.	Modular furnishing of SOMA Section, Stat. Section & Hindi Section at Dhanbad	Completed
4.	Construction of overhead tank & sump for water supply at DGMS, Dhanbad	-
5.	Roof treatment of main building	In progress
6.	Construction of main gate at DGMS, Dhanbad	In progress
7.	Renovation of budget & account section of DGMS, Dhanbad	In progress
8.	Construction of boundary wall at Jabalpur	Completed
9.	Renovation of office, HQ set up at Ghaziabad	-
10.	Lighting mast and fitting at DGMS, Dhanbad	In progress

7. Accident Experience

7.1 During the year 2010, there were 100, 49 and 5 fatal accidents involving 120, 87 and 5 fatalities in coal, metal and oil mines, respectively. The numbers of fatal accidents during the previous year 2009 were 83, 40 and 4 for coal, metal and oil mines respectively.

7.2 Table 8 indicates the trend in 10-yearly average number of fatal accidents and that of fatality rates per thousand persons employed from 1901 to 2010 for coal and non-coal mines. For coal mines, a consistent decline is observed in the 10-yearly average number of accidents per year since the 1950s and in the 10-yearly average number of fatalities since the 1970s. The same trend continued for the last 10-yearly period 2001-2010. For non-coal mines, the average number of accidents and fatalities has remained more or less at the same level during the last three decades ending in 2000 while the last 10-yearly averages have fallen during the period 2001-2010.

7.3 Table 9 shows the variation over the last ten years in the number of fatal and serious accidents separately for coal, metal and oil mines. It is seen that the number of accidents (fatal and serious taken together) has decreased in 2010 in comparison to 2009. The trend of number of accidents (taken together for fatal & serious) has decreased sharply since 1998 to 2010 for coal and metalliferous mines.

7.4 Mineral-wise trends in annual death rates per 1000 persons employed during the last decade are shown in Table 10 for major minerals. The rate has increased for both the coal and oil mines in 2010 as compared to 2009. It is seen from Table 10 that in the year 2010, among the important non-coal minerals, death rate was the highest for Galena & Sphelarite ore mines. Table 11 shows the mineral-wise break-up of accidents and casualties during the year 2010. From Table 11 it is seen that out of 49 deaths reported from metalliferous mines, 8 occurred in Iron-ore mines, 6 in Limestone mines, 2 each in Manganese & Stone mines, 1 in Galena & Sphalelarite mines and 30 in others. In oil mines only 5 fatal accidents occurred during the year 2010 causing 5 fatalities.

7.5 Trends in serious injury rates, as well as death rates, appear in Tables 12, 14 & 16 for coal, metal and oil mines respectively. Place wise trends in death and serious injury rates are shown for coal mines in Table 13 and for metalliferous mines in Table 15.

7.6 Tables 17 to 20 give cause-wise and place-wise figures of fatal and serious accidents in coal and non-coal mines during the years 2008 to 2010. The observations from these tables are given below.

In coal mines:

- ✓ Number of fatal accidents due to ground movement involving roof fall and side fall accidents are 20, 26 and 21 for the year 2008, 2009 and 2010 respectively. Roof fall and side fall accidents accounted for about 21% of all fatal accidents during the year 2010.
- ✓ About 13% of all fatal accidents in 2010 were due to roof fall alone.
- ✓ The number of fatal accidents due to dumper has increased from 13 in 2009 to 21 in 2010 which accounted for about 21% of the total accidents. Truck, tanker etc. accounted for about 12%, rope haulage 3%,Other machinery 8% and other causes 22% during the year 2010.
- ✓ Fall of persons, the dominant cause of serious accidents, accounted for about 27% followed by other causes 23 % and Fall of object 18% during the year 2010.

Figures 1 and 2 below show cause-wise fatal and serious accidents in coal mines during the year 2010.

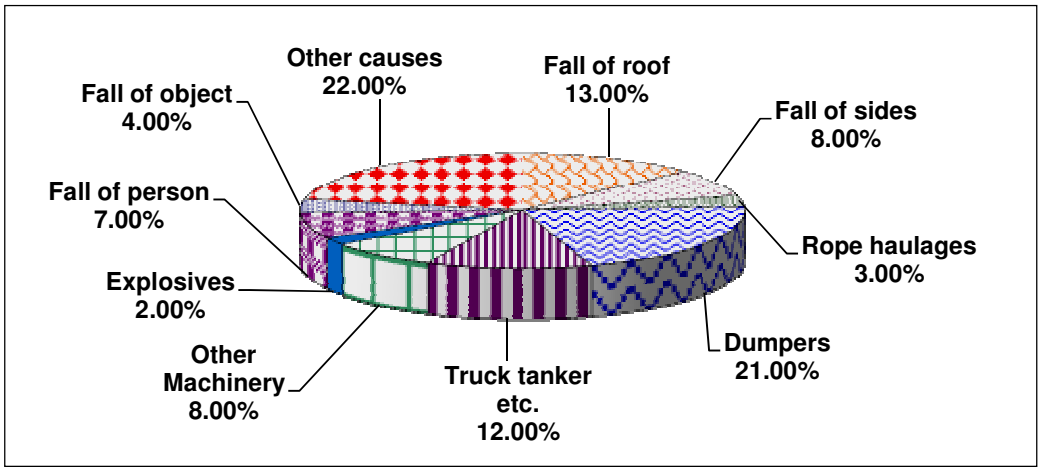

Fig. 1 Cause-wise distribution of fatal accidents in coal mines during 2010

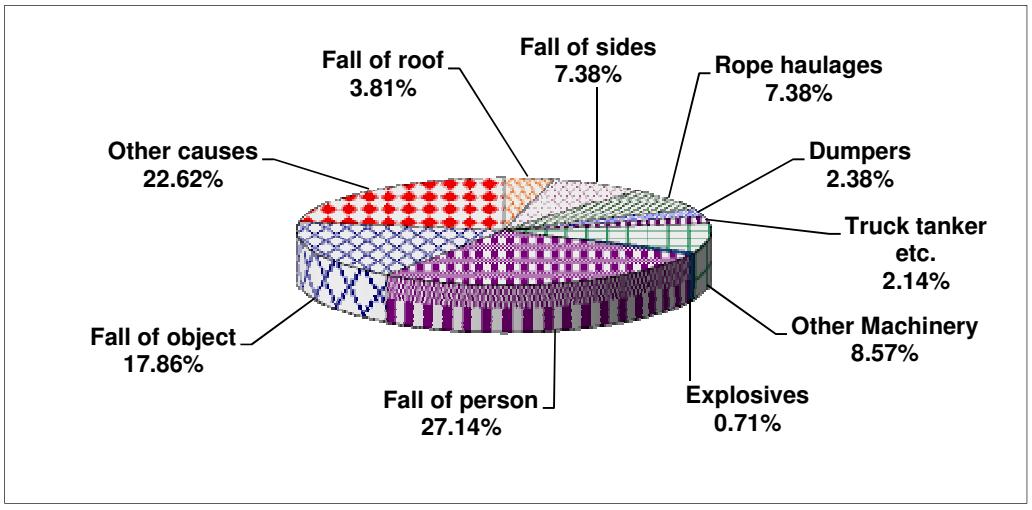

Fig.2 Cause-wise distribution of serious accidents in coal mines during 2010

In non-coal mines:

- ✓ During 2010, highest percentage of fatal accidents was due to fall of sides and it was about 24%. It was followed by other machinery accounted for about 20% and Fall of object about 19%.
- ✓ The main frequent causes of serious accidents in non-coal mines in 2010 was fall of objects accounting about 28% followed by other machinery 24% and fall of persons and other causes 21% each.

Figures 3 and 4 below show cause-wise fatal and serious accidents in non-coal mines in 2010.

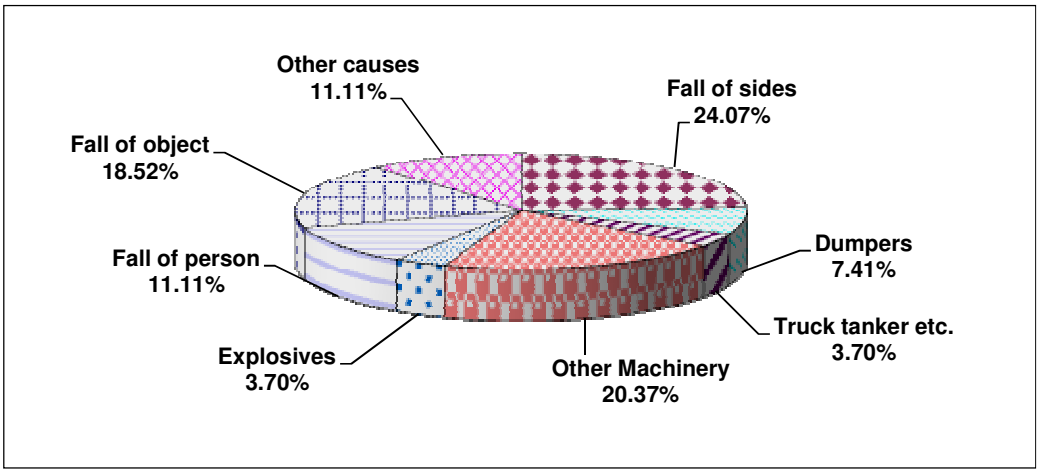

Fig. 3 Cause-wise distribution of fatal accidents in non-coal mines during 2010

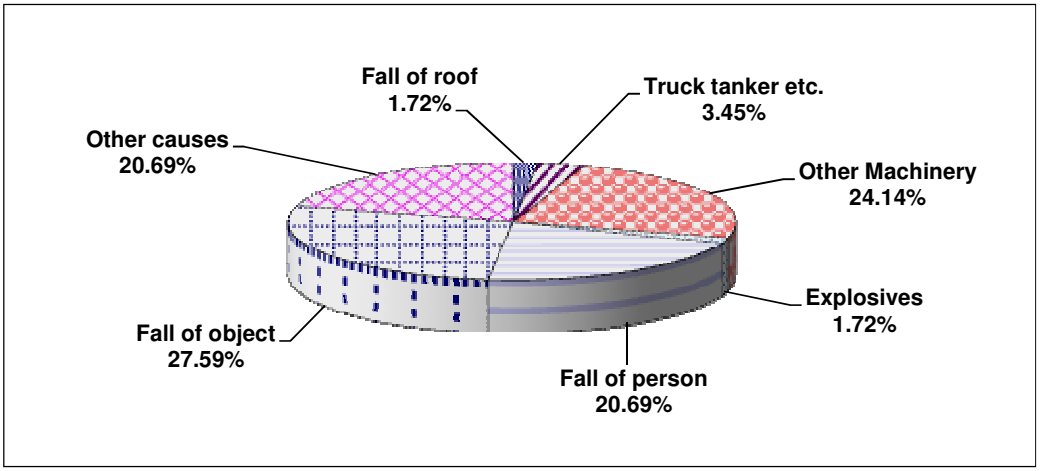

Fig.4 Cause-wise distribution of serious accidents in non-coal mines during 2010

7.7 Tables 21 to 23 give state-wise details of accident statistics for coal, metal and oil mines.

TABLE-1	Trend in Output of Important Minerals										
Year	**Coal**	**Oil & Natural Gas**		**Other Minerals**							
		Oil	**Gas**	**Copper Ore**	**Lead & Zinc**	**Gold Ore**	**Iron Ore**	**Mang. Ore**	**Lime stone**	**Bauxite**	**Stone**
	Million tonnes	**Million tonnes**	**Million Cu. Mtr.**	**Million tonnes**	**Million tonnes**	**Million tonnes**	**Million tonnes**	**Million tonnes**	**Million tonnes**	**Million tonnes**	**Million tonnes**
1951	4.98	n.a.	n.a.	0.37	0.01	n.a.	3.71	1.18	2.96	0.06	0.72
1961	55.71	n.a.	n.a.	0.42	0.15	n.a.	12.27	1.23	14.35	0.48	1.68
1971	75.64	.19	720	0.68	0.30	0.6	32.97	1.61	25.26	1.45	3.81
1981	127.32	7.92	2220	2.01	0.96	0.50	42.78	1.55	32.56	1.75	4.10
1991	237.76	9.51	3543	5.05	1.82	0.47	60.03	1.68	75.02	3.86	11.64

1992	249.94	10.75	3510	5.20	2.14	0.45	61.24	1.96	77.79	4.36	9.12
1993	260.60	11.81	4912	5.15	2.10	0.40	63.26	1.78	87.72	4.81	10.81
1994	267.52	11.60	4740	4.78	1.90	0.36	64.91	1.69	86.77	4.70	11.12
1995	284.59	11.66	5323	4.77	2.10	0.46	73.00	1.83	93.64	5.09	6.34
1996	304.10	11.24	5451	4.75	2.06	0.47	71.59	2.01	120.87	5.35	4.78
1997	316.68	13.71	7068	4.26	2.01	0.46	78.36	2.29	123.56	5.17	10.43
1998	319.90	18.28	7289	4.38	2.23	0.51	77.34	1.92	116.61	5.91	12.03
1999	315.19	13.68	7548	3.29	3.21	0.64	75.89	1.65	131.70	5.81	10.63
2000	334.32	14.24	7821	3.20	3.32	0.58	84.77	1.99	148.80	6.39	15.62
2001	341.51	14.56	8203	3.53	1.76	0.48	90.47	1.93	147.34	7.02	15.15
2002	363.31	14.56	8024	3.19	3.18	0.62	99.81	1.91	158.59	8.96	14.36
2003	379.19	18.50	8494	2.84	3.53	0.10	118.81	2.41	190.45	10.65	10.45
2004	409.30	16.64	6456	3.09	3.52	0.70	135.75	2.83	256.70	9.24	12.68
2005	420.85	16.94	6557	2.66	4.40	0.62	155.42	2.77	214.36	9.17	20.28
2006	430.33	21.13	4548	3.10	4.23	0.60	193.50	2.85	213.85	9.23	21.73
2007	481.12	14.31	7612	3.27	5.07	0.39	235.76	3.50	269.65	10.85	23.15
2008	506.29	14.70	10419	7.75	7.02	0.77	235.36	4.12	268.87	16.49	31.52

N. B. Data for the year 2008 is provisional

TABLE- 2 Growth of Mining Activities in India

Year	No of reporting mines			Value of minerals (in Million Rupees)			Aggregate H.P. (in 1000s)			Explosives used (in 1000 tonnes)	
	Coal	Metal	Oil	Coal	Metal	Oil	Coal	Metal	Oil	Coal	Non-coal
1951	893	1810	-	505	235	N.A.	188	83	N.A.	1.5	1.0
1961	848	2323	-	1141	487	N.A.	438	159	N.A.	4.5	3.8
1971	781	1995	13	2543	1080	756	732	282	25	12.3	9.4
1981	496	1768	8	18114	3620	2748	1841	925	35	46.3	15.3
1991	561	1787	24	79794	19076	18533	4292	1519	507	124.2	40.3
1992	567	1810	27	96377	21700	23104	4653	1644	583	140.0	44.1
1993	570	1845	27	107467	23392	31777	3942	1853	541	155.6	44.1
1994	576	1869	29	122216	24648	34302	4690	1891	548	156.9	43.3
1995	579	1930	32	133314	33611	37065	5218	1735	579	189.6	46.2
1996	576	1872	32	157474	36521	37388	5300	1877	523	207.8	47.2
1997	580	1834	34	193877	43758	32608	5314	2016	570	232.7	43.4
1998	594	1864	37	205307	45286	42851	5399	2020	602	247.0	47.1
1999	598	1957	44	219101	46415	72824	5660	2147	769	267.6	49.8
2000	595	2022	45	234531	53111	92954	5561	2371	757	290.5	57.0
2001	568	1907	43	261082	54032	106747	5586	2087	712	318.8	55.8
2002	567	1870	42	286390	64964	123326	5432	2175	757	315.3	55.6
2003	562	1716	49	299954	77605	131897	5527	2129	621	304.8	63.7
2004	567	1764	47	348898	104283	166083	5409	2336	685	334.0	70.6
2005	569	1835	50	371391	133417	230586	5415	2495	701	297.2	70.8
2006	568	1720	44	374671	162160	370657	5953	2666	468	345.3	95.1
2007	567	1770	49	419279	235351	256944	5843	2646	457	352.7	97.8
2008	569	1770	67	481635	275495	287192	6099	2846	845	534.1	97.9

N.B. Data for the year 2008 is provisional

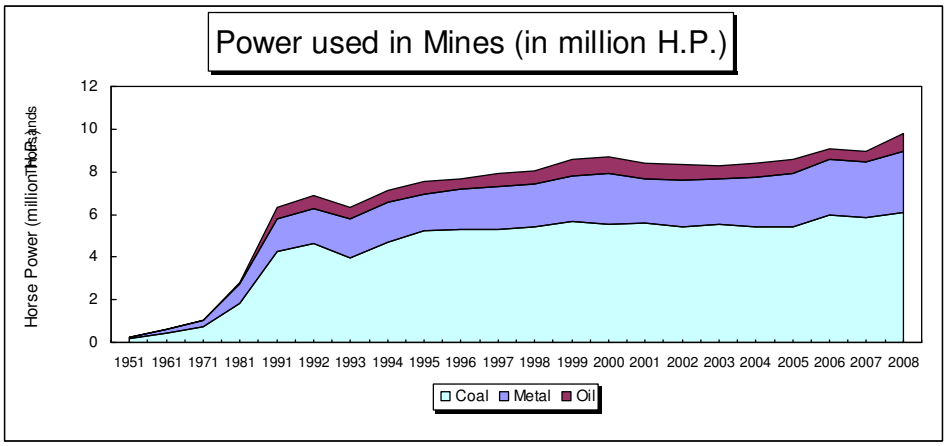

TABLE -3			Average Daily Employment in Mines (in ('000)								
Year	Coal	Oil	Copper Ore	Gold Ore	Iron Ore	Lime Stone	Mang. Ore	Mica	Stone	Others	Total Metals
1951	351.9	N.A.	3.7	21.7	20.2	16.0	55.5	52.2	5.1	22.7	197.1
1961	411.2	N.A.	4.2	21.7	54.5	54.7	47.0	29.6	8.5	39.5	259.7
1971	382.3	13.6	7.6	12.4	52.8	53.2	30.4	12.2	8.8	57.5	234.9
1981	513.4	14.5	13.4	12.3	44.9	49.8	26.5	6.7	7.7	60.6	221.9
1991	554.1	35.5	12.8	9.3	40.0	43.5	17.9	2.2	11.2	63.3	200.2
1992	552.0	35.7	12.7	9.4	42.0	43.0	18.4	1.6	8.9	67.2	203.2
1993	546.3	33.5	12.2	7.9	39.8	41.6	18.5	1.5	9.2	68.9	199.6
1994	523.7	34.3	11.2	7.4	38.5	39.8	18.2	1.7	9.4	65.2	191.4
1995	513.3	34.0	10.5	7.1	39.6	39.8	18.1	1.8	7.5	64.4	188.8
1996	506.4	33.4	9.9	6.9	39.2	35.7	18.1	1.2	5.2	60.1	176.3
1997	503.4	28.6	10.3	6.8	38.6	33.0	16.0	1.2	4.9	61.6	172.4
1998	491.3	29.5	8.7	6.1	37.3	31.2	15.9	1.1	5.3	59.3	164.9
1999	475.8	25.5	7.7	5.9	36.2	29.8	16.5	1.0	5.2	55.3	157.6
2000	458.4	23.4	6.9	5.3	35.3	31.1	16.1	1.0	6.4	54.8	156.9
2001	438.2	24.4	3.9	3.6	32.3	24.2	17.8	1.0	6.3	47.5	136.6
2002	422.6	22.3	3.3	3.3	33.6	25.1	13.7	1.0	7.8	49.2	137.0
2003	416.7	18.6	2.5	2.7	35.8	24.2	13.2	0.6	8.0	50.0	137.0
2004	405.2	19.1	2.0	2.7	38.6	24.8	14.6	0.6	7.9	52.2	143.5
2005	399.0	19.2	1.9	3.1	37.4	25.8	14.7	0.6	7.0	50.5	141.0
2006	385.7	13.9	2.0	3.1	41.6	25.6	13.2	0.6	6.5	50.8	143.4
2007	379.5	19.2	2.5	3.1	41.8	27.7	13.4	0.6	8.8	53.8	151.7
2008	369.4	23.6	2.6	3.1	44.8	27.7	13.5	0.7	7.0	57.5	156.9
N. B. Data for the year 2008 is provisional											

TABLE- 4	Average Daily Employment in All Mines by Place of Work					
Year	Belowground	Opencast		Aboveground		Total
		Men	Women	Men	Women	
1951	220312	89467	54107	129662	55500	549048
1961	261703	157033	67927	145944	38380	670987
1971	255297	142911	52916	157295	22316	630735
1981	331613	144729	45883	198580	28998	749803
1991	339781	154422	29225	240621	25831	789880
1992	334805	158717	28302	244902	24245	79071
1993	330697	159905	26069	205460	23829	745960
1994	313923	155413	24793	231058	24303	749490
1995	307356	154611	23358	193457	23323	702105
1996	300196	148676	20609	224192	22510	716183
1997	298329	144590	19533	220144	21941	704537
1998	288075	144807	17273	213822	21696	685673
1999	273966	144457	16145	204584	19749	658901
2000	263217	144701	15593	197300	17930	638741
2001	250416	137661	12032	183758	15436	599303
2002	234954	139506	12349	179897	15174	581880
2003	223377	141746	11643	179952	15608	572327
2004	218320	147162	12275	174545	15609	567911
2005	213090	146305	11988	173559	14153	559095
2006	203656	154391	10157	158762	16043	543009
2007	196695	165833	9437	143339	15875	531179
2008	196747	163656	9923	164761	14852	549939

N.B. Data for the year 2008 is provisional

TABLE- 5	Placewise Distribution of Average Daily Employment and Production in Coal Mines						
Year	**Belowground**		**Opencast**		**Aboveground**	**Total**	
	Output (in '000 tonnes)	**Employment (in '000 number)**	**Output (in '000 tonnes)**	**Employment (in '000 number)**	**Employment (in '000 number)**	**Output (in '000 tonnes)**	**Employment (in '000 number)**
1951	30199	178	4784	36	138	34983	352
1961	44887	230	10822	60	121	55709	411
1971	58552	228	17090	43	111	75642	382
1981	76205	302	51120	55	156	127325	513
1991	70731	316	167026	67	171	237757	554
1992	71062	311	178879	67	174	249941	552
1993	73672	308	186935	68	170	260607	546
1994	70644	293	196878	67	164	267522	524

1995	68512	287	216074	68	158	284586	513
1996	70128	281	233969	68	157	304097	506
1997	69062	279	247619	69	156	316681	504
1998	68571	270	251324	69	152	319895	491
1999	68101	258	247088	71	147	315189	476
2000	66225	249	268092	69	140	334317	458
2001	64134	239	277379	69	130	341513	438
2002	56330	225	297982	69	129	363312	423
2003	63632	216	315556	69	132	379188	417
2004	61921	211	347347	70	122	409268	405
2005	64087	205	356758	70	124	420845	399
2006	61213	196	369120	76	114	430333	386
2007	62302	188	418822	80	111	481124	379
2008	66290	187	440004	77	106	506294	370
N. B. Data for the year 2008 is provisional							

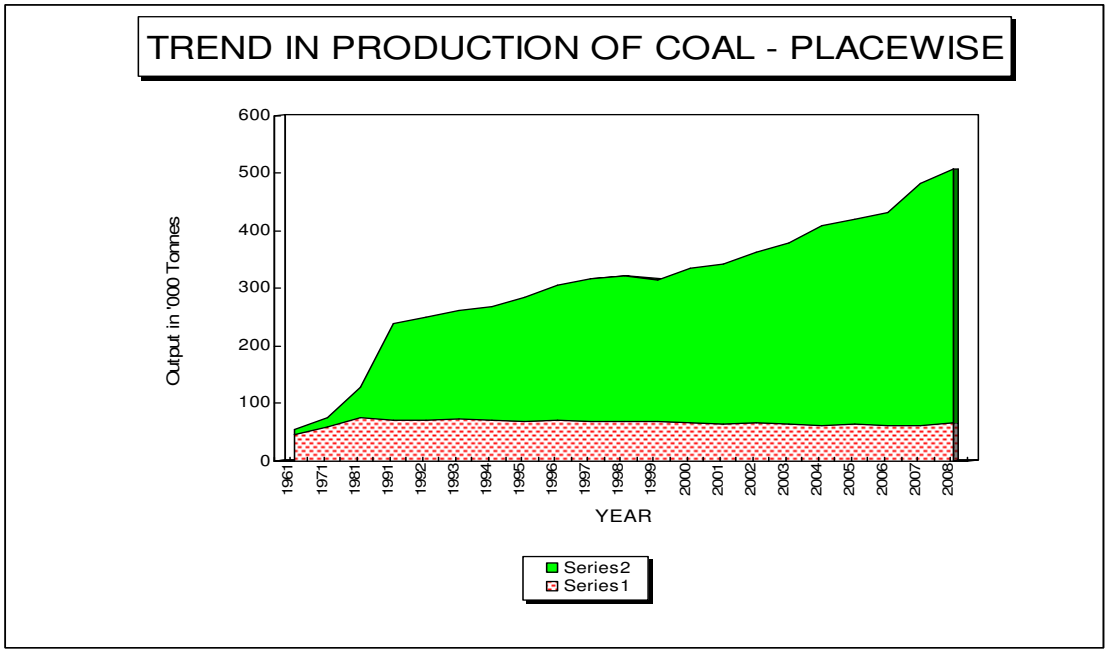

TABLE-6	Number of Inspections and Enquiries								
Year	No. of inspections				No. of Enquiries				Grand Total
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	
2001	5410	2908	229	8547	1148	418	51	1617	10164
2002	5667	2856	269	8792	1022	402	30	1454	10246
2003	5574	3247	246	9067	966	427	13	1406	10473

2004	5214	2983	228	8425	834	436	8	1278	9703
2005	5247	3107	295	8649	933	372	30	1335	9984
2006	4192	2630	219	7041	951	338	27	1316	8357
2007	4330	2309	183	6822	796	380	24	1200	8022
2008	4614	2838	216	7668	840	417	24	1281	8949
2009	4404	3325	250	7979	899	372	52	1323	9302
2010	3709	3383	282	7374	942	475	58	1475	8849

N.B.Figures for 2010 are provisional

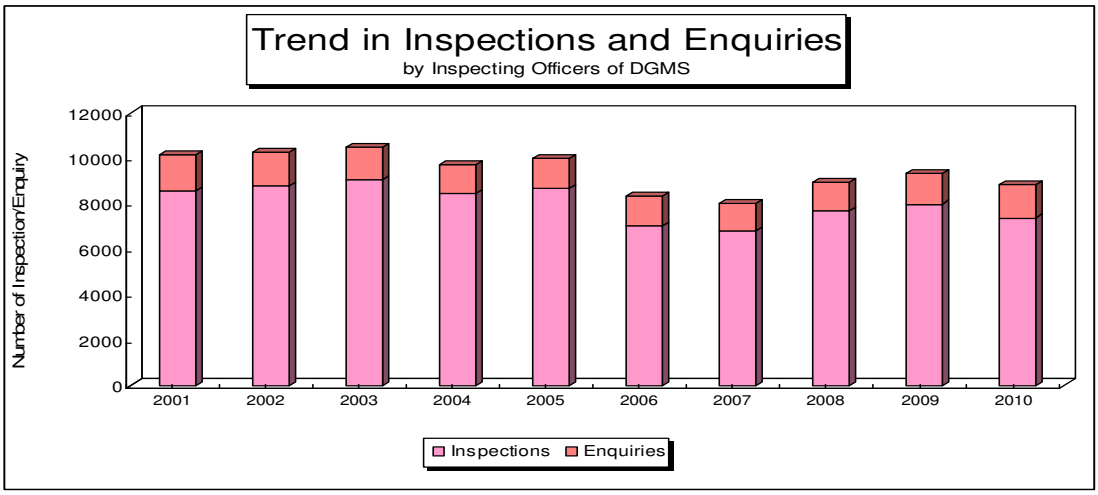

Table.7	IMPROVEMENT NOTICES AND PROHIBITORY ORDERS								
(Under Section 22 of Mines Act and under Reg. 103/108 of Coal/Metalliferous Mines Regulations)									
	COAL MINES					***NON-COAL MINES***			
	Notices	Issued	Orders	Issued		Notices	Issued	Orders	Issued
YEAR	Section	Reg.	Section	Reg.		Section	Reg.	Section	Reg.
	22(1) or	103	22(1A)	103		22(1A)	108	22(1A)	108
	22A(1)		or 22(3)			or 22(3)		or 22(3)	
1991	7	Nil	13	Nil		1	17	50	9
1992	3	Nil	5	Nil		Nil	19	37	7
1993	7	1	38	Nil		9	11	79	11
1994	26	9	19	4		4	4	29	5
1995	35	1	19	1		Nil	14	41	14
1996	39	6	32	3		12	9	99	6
1997	28	1	21	Nil		27	12	37	2

1998	38	1	16	Nil		6	1	26	1
1999	31	Nil	19	Nil		13	7	71	4
2000	74	2	37	1		32	6	186	10
2001	126	18	69	Nil		44	5	63	6
2002	36	Nil	30	Nil		32	2	80	3
2003	127	Nil	65	Nil		38	2	185	2
2004	147	Nil	62	Nil		56	Nil	251	1
2005	124	Nil	36	Nil		130	1	136	Nil
2006	103	Nil	72	Nil		38	1	160	1
2007	122	Nil	49	Nil		85	Nil	174	Nil
2008	85	1	36	1		88	Nil	161	Nil
2009	99	Nil	25	Nil		56	Nil	106	Nil
2010	97	Nil	27	Nil		83	Nil	168	Nil
N.B. Data for the year 2010 are provisional.									

TABLE-8

Trend in fatal accidents and fatality rates per 1000 persons employed (Ten yearly average)

	COAL MINES				NON-COAL MINES			
	Av. No. of Acc.	Acc. rate	Av. No. of Fatalities	Fatality rate	Av. No. of Acc.	Acc. rate	Av. No. of Fatalities	Fatality rate
1901-10	74	0.76	92	0.93	16	0.47	23	0.67
1911-20	139	0.94	176	1.29	29	0.57	37	0.73
1921-30	174	0.99	219	1.24	43	0.54	50	0.66
1931-40	172	0.98	228	1.33	35	0.41	43	0.51
1941-50	226	0.87	273	1.01	26	0.24	31	0.29
1951-60	223	0.61	295	0.82	64	0.27	81	0.34
1961-70	202	0.49	259	0.62	72	0.28	85	0.33
1971-80	187	0.40	264	0.55	66	0.27	74	0.30
1981-90	162	0.30	185	0.34	65	0.27	73	0.31
1991-00	140	0.27	170	0.33	65	0.31	77	0.36
2001-10	**86**	**0.21**	**107**	**0.27**	**55**	**0.34**	**65**	**0.40**

N.B. Data for the period 2008-2010 are provisional and figures for 2010 are upto 31.12.10.

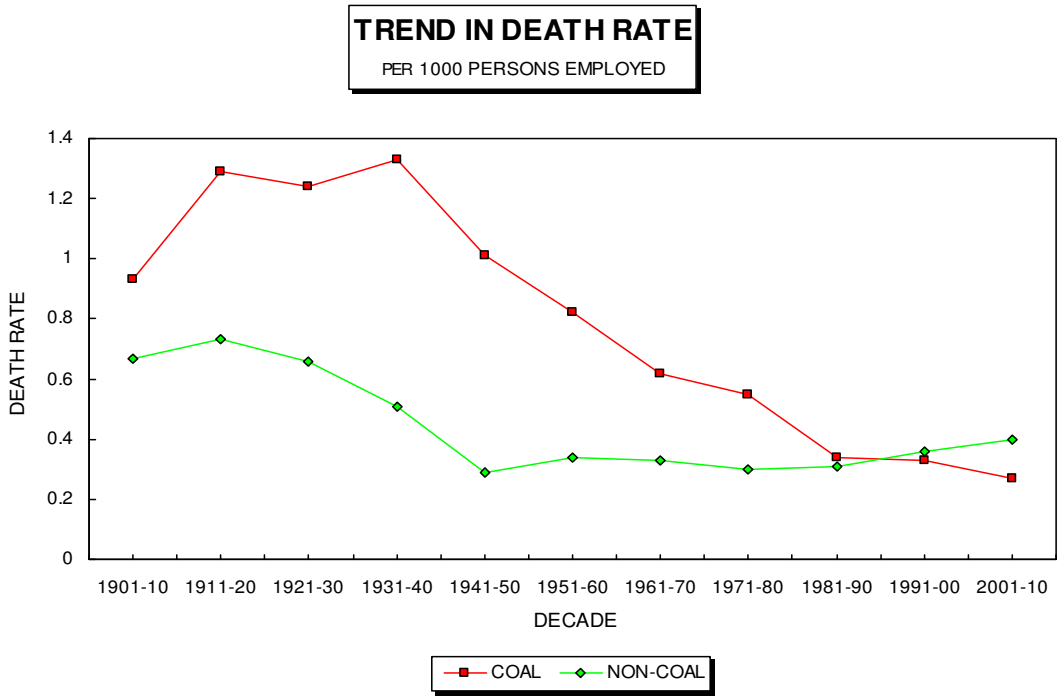

TABLE- 9	Trend in Incidence of Accidents in Mines								
YEAR	COAL			METAL			OIL		
	Number of accidents			Number of accidents			Number of accidents		
	Fatal	Serious	Total	Fatal	Serious	Total	Fatal	Serious	Total
1998	128	523	651	50	234	284	6	20	26
1999	127	595	722	59	207	266	2	23	25
2000	117	661	778	50	160	210	1	27	28
2001	105	667	772	62	178	240	9	21	30
2002	81	629	710	50	174	224	2	31	33
2003	83	563	646	51	147	198	1	21	22
2004	87	962	1049	55	150	205	2	38	40
2005	96	1106	1202	47	93	140	1	15	16
2006	78	861	939	54	63	117	4	15	19
2007	76	923	999	53	63	116	3	16	19
2008	80	686	766	50	63	113	5	20	25
2009	83	625	708	40	76	116	4	18	22
2010	100	420	520	49	46	95	5	12	17

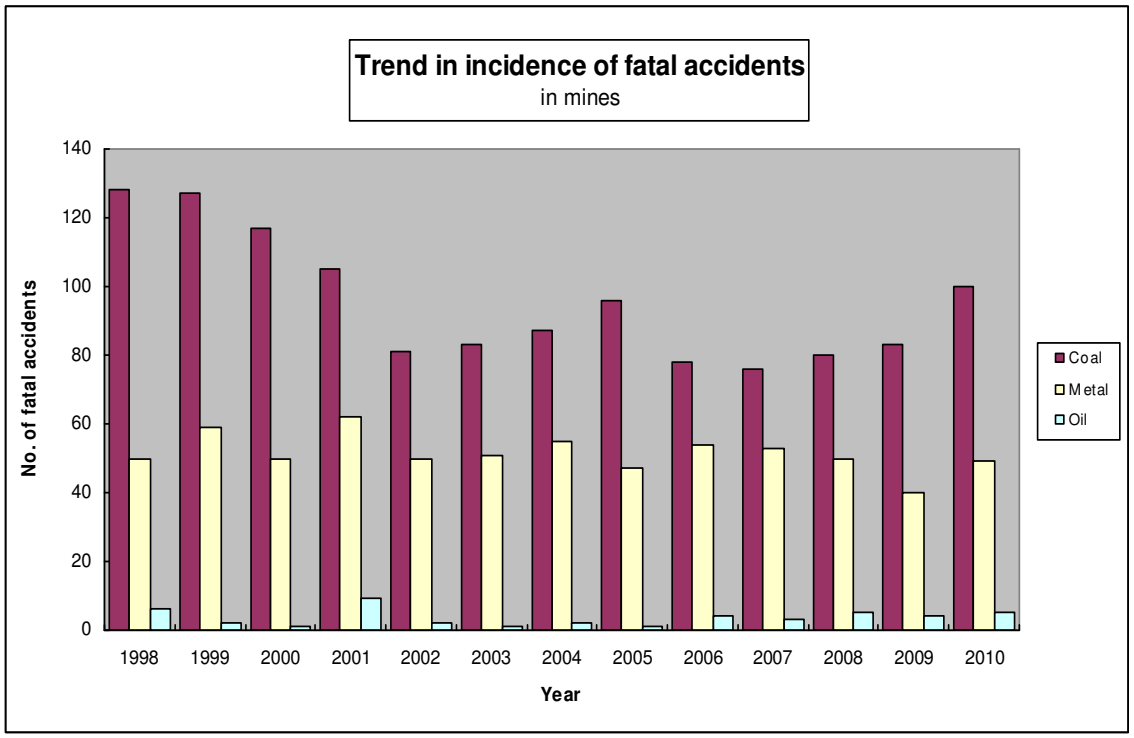

Table - 10			Trend in death rate per thousand persons employed							
Year	Coal	Oil	Copper Ore	Gold Ore	Iron Ore	Lime Stone	Mang. Ore	Galena & Sphl.	Total Metals	All Mineral
1998	0.30	0.24	0.11	0.33	0.40	0.42	0.19	0.36	0.35	0.31
1999	0.29	0.08	0.00	0.68	0.22	0.44	0.24	0.18	0.44	0.32
2000	0.31	0.04	0.15	0.00	0.28	0.29	0.31	0.00	0.34	0.31
2001	0.32	0.37	0.25	0.28	0.37	0.45	0.07	0.00	0.53	0.37
2002	0.23	0.09	0.30	0.00	0.30	0.52	0.29	0.22	0.45	0.28
2003	0.27	0.05	0.00	0.00	0.39	0.33	0.08	0.00	0.45	0.31
2004	0.24	0.10	0.00	0.00	0.34	0.52	0.21	0.79	0.43	0.28
2005	0.29	0.05	0.00	0.00	0.43	0.27	0.00	0.31	0.36	0.30
2006	0.36	0.29	0.00	0.32	0.51	0.59	0.15	0.31	0.47	0.38
2007	0.21	0.16	0.00	0.33	0.34	0.47	0.07	0.30	0.40	0.26
2008	0.25	0.31	0.41	0.00	0.26	0.32	0.30	1.21	0.46	0.31
2009	0.25	0.21	0.41	0.33	0.22	0.11	0.07	0.00	0.33	0.27
2010	0.32	0.26	0.00	0.00	0.24	0.25	0.15	0.30	0.57	0.39
N.B. Rates for the years 2008 to 2010 are provisional and figures for 2010 are up to 31.12.10.										

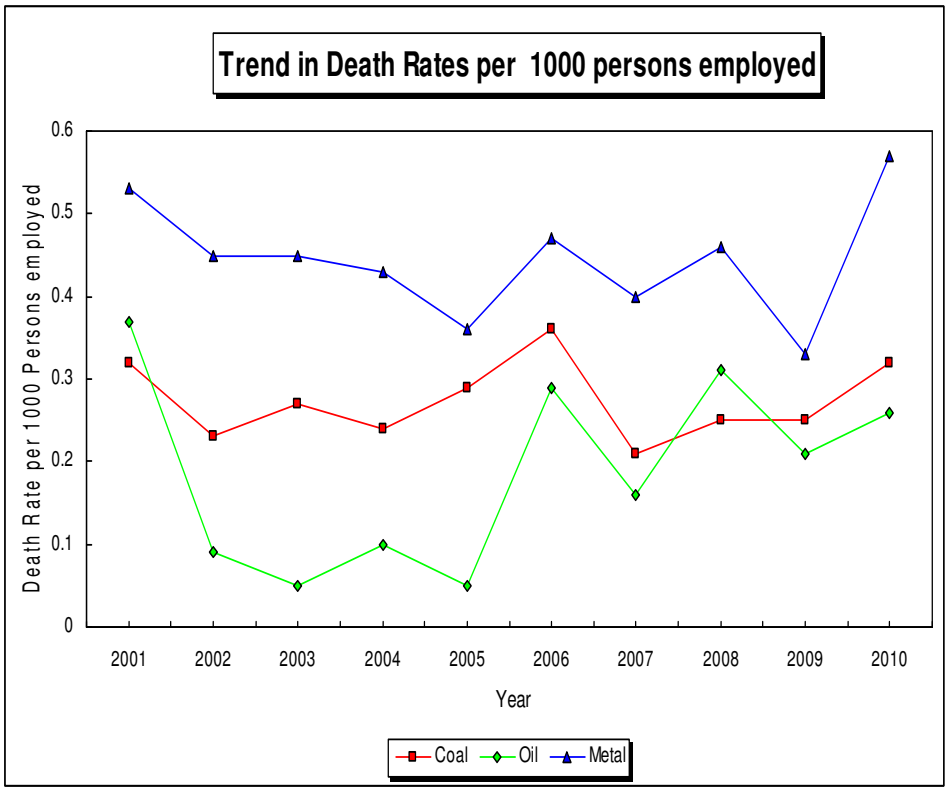

TABLE- 11 Mineral	Accidents and Casualties in 2010 by Major Minerals			
	Number of Accidents		Number of persons	
	Fatal	Serious	Killed	Seriously injured*
Coal	100	420	120	449
Oil	5	12	5	13
Copper	0	3	0	3
Galena & Sphalerite	1	7	1	7
Gold	0	11	0	11
Iron Ore	8	10	10	10
Lime Stone	6	3	7	4
Manganese	2	0	2	0
Stone	2	0	2	1
Others	30	12	65	14
Total Metalliferous	49	46	87	50
All Minerals	154	478	212	512

Figures are provisional and upto 31.12.10

* Includes seriously injureds from fatal accidents also.

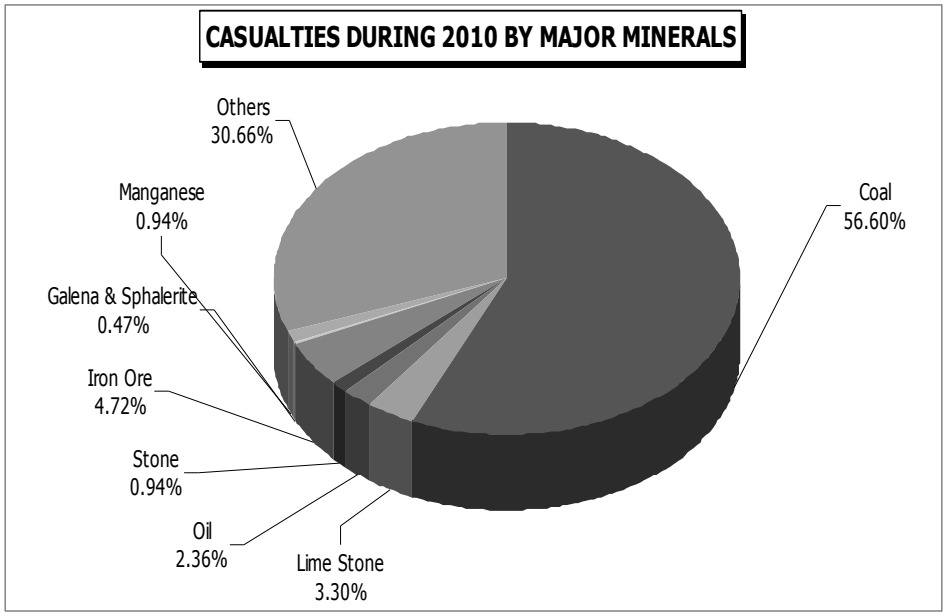

TABLE-12	**Trend in Fatal & Serious Accidents and Death Rates & Serious Injury Rates in Coal Mines**								
Year	Number of Accidents			Accident Frequency Rate/Lakh Manshifts	Number of Persons		Rate per 1000 Persons Employed		Death Rate per Million Tonnes
	Fatal	Serious	Total		Killed	S/Injured*	Death Rate	S/Inj. Rate	
2001	105	667	772	0.57	141	720	0.32	1.64	0.41
2002	81	629	710	0.54	97	665	0.23	1.57	0.27
2003	83	563	646	0.50	113	590	0.27	1.42	0.30
2004	87	962	1049	0.82	96	991	0.24	2.45	0.23
2005	96	1106	1202	0.96	117	1138	0.29	2.85	0.28
2006	78	861	939	0.76	137	891	0.36	2.31	0.32

2007	76	923	999	0.82	78	951	0.21	2.51	0.16
2008	80	686	766	0.63	93	709	0.25	1.87	0.19
2009	83	625	708	0.58	93	647	0.25	1.71	0.19
2010	100	420	520	0.43	120	449	0.32	1.18	0.25

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are upto 31.12.10.

* Includes seriously injureds from fatal accidents also.

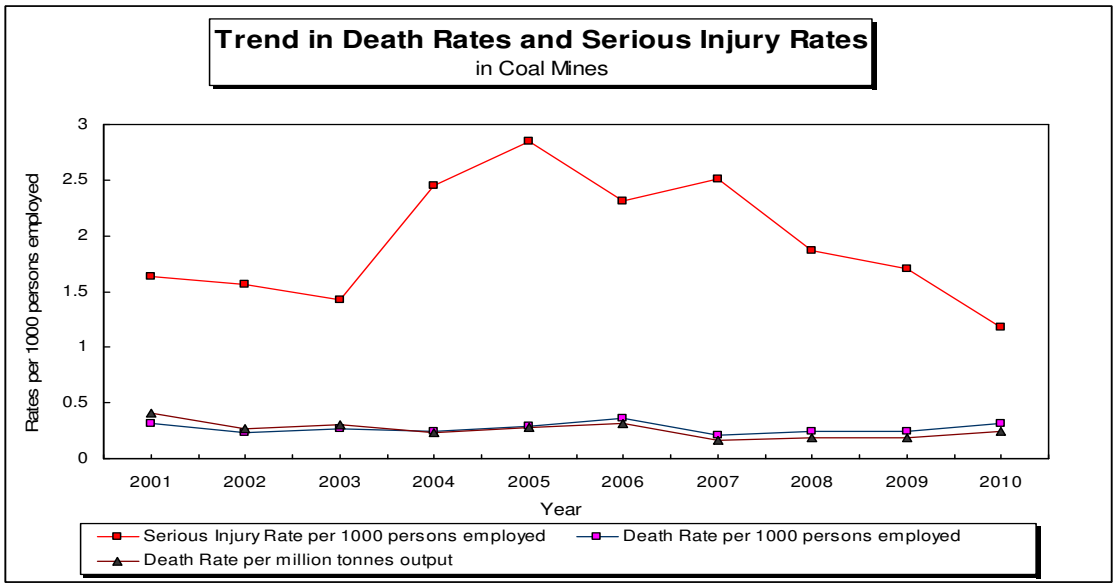

Table – 13	Trend in Fatal & Serious Accidents and Death & Serious Injury Rates in Coal Mines - Placewise															
Year	Number of Fatal Accidents				Number of Serious Accidents				Death Rate per 1000 Persons				Serious Injury Rate per 1000 Persons			
	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall
2001	67	26	12	105	464	73	130	667	0.43	0.38	0.10	0.32	2.10	1.12	1.07	1.64
2002	48	22	11	81	434	92	103	629	0.27	0.32	0.11	0.23	2.07	1.43	0.80	1.57
2003	46	23	14	83	380	82	101	563	0.33	0.35	0.13	0.27	1.85	1.30	0.77	1.42
2004	49	32	6	87	757	82	123	962	0.27	0.47	0.05	0.24	3.69	1.24	1.02	2.45
2005	50	28	18	96	843	98	165	1106	0.34	0.42	0.15	0.29	4.23	1.45	1.37	2.85
2006	44	24	10	78	646	88	127	861	0.52	0.33	0.09	0.36	3.40	1.30	1.11	2.31
2007	25	35	16	76	717	83	123	923	0.13	0.46	0.14	0.21	3.91	1.10	1.15	2.51
2008	32	29	19	80	516	74	96	686	0.21	0.44	0.17	0.25	2.85	0.95	0.87	1.87
2009	39	29	15	83	480	50	95	625	0.24	0.40	0.14	0.25	2.63	0.67	0.89	2.71
2010	40	40	20	100	304	52	64	420	0.31	0.52	0.18	0.32	1.73	0.70	0.61	1.18

Note : Data for the years 2008 to 2010 are provisional. Rates for the years 2008 to 2010 are provisional. Figures for 2010 are upto 31.12.10
Serious injuries from fatal accidents are also considered for computation of serious injury rates.

TABLE-14	Trend in Fatal & Serious Accidents and Death Rates & Serious Injury Rates in Metalliferous Mines							
Year	No. of accidents			Accident frequency rate per	Number of persons		Rate per 1000 persons employed	
	Fatal	**Serious**	**Total**	**1000 persons employed**	**Killed**	**Seriously injured***	**Death rate**	**Serious injr. rate**
2001	62	178	240	1.76	72	186	0.53	1.36
2002	50	174	224	1.64	62	178	0.45	1.30
2003	51	147	198	1.45	61	163	0.45	1.19
2004	55	150	205	1.43	62	163	0.43	1.14
2005	47	93	140	0.99	51	98	0.36	0.70
2006	54	63	117	0.82	67	73	0.47	0.51
2007	53	63	116	0.76	61	89	0.40	0.59
2008	50	63	113	0.74	70	98	0.46	0.65
2009	40	76	116	0.76	50	88	0.33	0.58
2010	49	46	95	0.63	87	50	0.57	0.33

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.10.
* Includes seriously injureds from fatal accidents also.

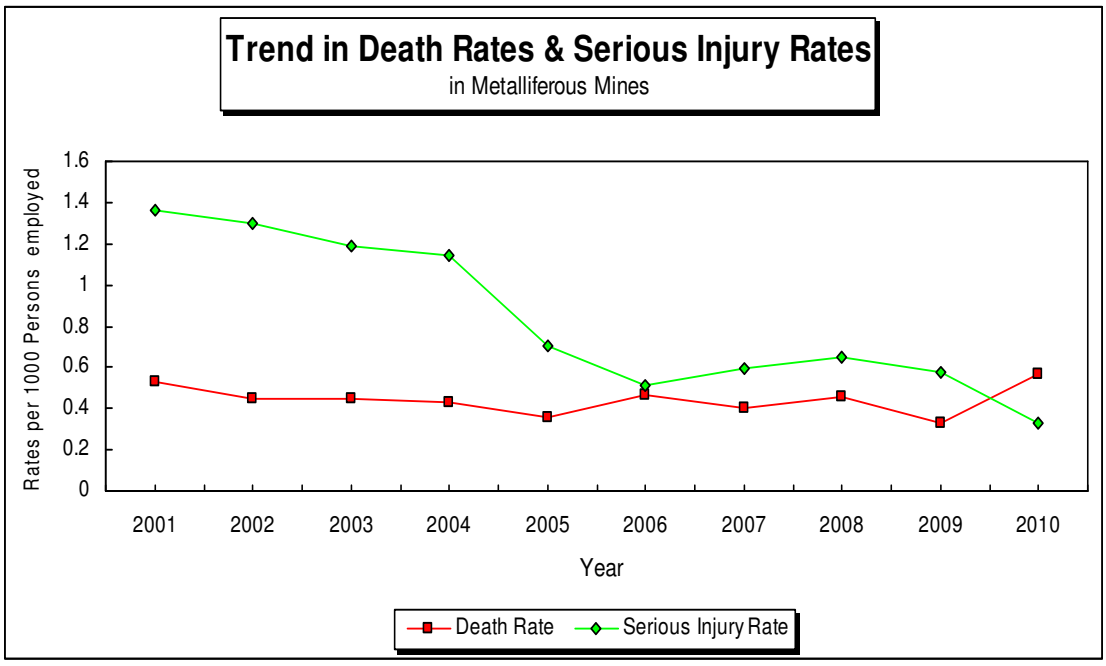

TABLE-15

Trend in Fatal & Serious Accidents and Death & Serious Injury Rates in Metalliferous Mines - Placewise

Year	Number of Fatal Accidents				Number of Serious Accidents				Death Rate per 1000 Persons				Serious Injury Rate per 1000 Persons			
	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall	Below Ground	Open-Cast	Above Ground	Overall
2001	5	45	12	62	59	37	82	178	0.46	0.63	0.36	0.53	5.57	0.53	1.82	1.36
2002	5	33	12	50	52	40	82	174	0.49	0.54	0.28	0.45	5.07	0.53	1.89	1.30
2003	3	31	17	51	57	25	65	147	0.52	0.45	0.42	0.45	7.36	0.43	1.56	1.19
2004	5	36	14	55	54	34	62	150	0.62	0.47	0.32	0.43	6.70	0.52	1.36	1.14
2005	3	34	10	47	27	22	44	93	0.38	0.43	0.23	0.36	3.41	0.30	0.99	0.70
2006	3	42	9	54	24	13	26	63	0.38	0.62	0.19	0.47	3.20	0.25	0.55	0.51
2007	3	38	12	53	19	14	30	63	0.35	0.48	0.25	0.40	3.51	0.29	0.64	0.59
2008	3	36	11	50	15	20	28	63	0.47	0.47	0.44	0.46	1.87	0.32	1.08	0.65
2009	4	30	6	40	30	18	28	76	0.59	0.41	0.12	0.33	3.86	0.27	0.50	0.58
2010	3	35	11	49	8	21	17	46	0.35	0.77	0.23	0.57	1.05	0.25	0.35	0.33

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are upto 31.12.10.

Serious injuries from fatal accidents are also considered for computation of serious injury rates.

TABLE-16	Trend in Fatal & Serious Accidents and Death Rates & Serious Injury Rates in Oil Mines							
Year	No. of accidents			Accident frequency rate per	Number of persons		Rate per 1000 persons employed	
	Fatal	**Serious**	**Total**	**1000 persons employed**	**Killed**	**Seriously injured***	**Death rate**	**Serious injury rate**
2001	9	21	30	1.23	9	22	0.37	0.90
2002	2	31	33	1.48	2	31	0.09	1.39
2003	1	21	22	1.18	1	22	0.05	1.13
2004	2	38	40	2.09	2	40	0.10	2.09
2005	1	15	16	0.83	1	15	0.05	0.78
2006	4	15	19	1.36	4	15	0.29	1.08
2007	3	16	19	0.99	3	16	0.16	0.83
2008	5	20	25	1.30	6	22	0.31	1.15
2009	4	18	22	1.15	4	20	0.21	1.04
2010	5	12	17	0.88	5	13	0.26	0.68

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.10.
* Includes seriously injureds from fatal accidents also.

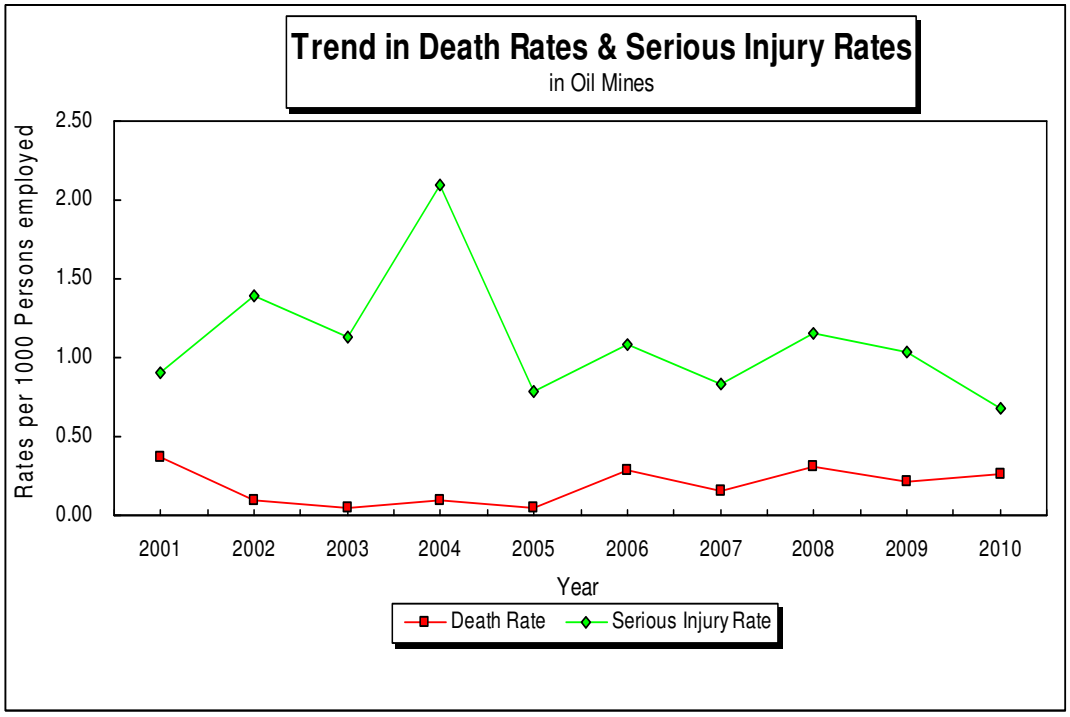

TABLE-17		Cause wise & Place wise Fatal Accidents in Coal Mines														
Cause	Yr.	BCCL	CCL	ECL	MCL	NCL	NECL	SECL	WCL	CIL	SCCL	IISCo	NLC	TISCo	Other	Total
Fall	08	3	0	1	1	0	0	5	2	12	1	0	0	0	1	14
of	09	2	0	2	0	0	0	1	2	7	7	0	0	3	0	17
roof	10	0	0	1	0	0	0	7	4	12	1	0	0	0	0	13
Fall	08	3	0	0	0	0	0	0	2	5	1	0	0	0	0	6
of	09	4	0	0	0	0	0	1	4	9	0	0	0	0	0	9
sides	10	0	1	1	0	0	0	3	0	5	3	0	0	0	0	8
Rope	08	1	1	1	0	0	0	0	0	3	1	0	0	0	0	4
haul-	09	0	0	1	0	0	0	0	1	2	3	0	0	0	0	5
ages	10	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Dum-	08	1	0	1	2	2	0	3	3	12	3	0	0	0	2	17
pers	09	2	2	0	0	4	0	2	1	11	2	0	0	0	0	13
	10	3	3	3	1	7	0	1	1	19	0	1	1	0	0	21
Truck	08	0	0	2	0	0	0	1	1	4	0	0	1	0	0	5
tanker	09	2	1	0	0	0	0	1	0	4	1	0	1	0	3	9
etc.	10	1	2	0	1	1	1	1	2	9	2	0	1	0	0	12
Other	08	2	1	3	1	1	0	2	1	11	2	0	0	0	0	13
Machi-	09	2	2	3	2	0	0	2	1	12	3	0	1	0	2	18
nery	10	1	0	2	0	0	0	2	2	7	1	0	0	0	0	8
Explo	08	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1
sives	09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	1	1	2	0	0	0	0	0	2
Fall	08	1	0	1	0	0	0	0	2	4	2	0	0	0	0	6
of per	09	0	0	1	0	0	0	1	0	2	0	0	0	0	0	2
-son	10	0	1	1	0	1	0	0	1	4	0	2	0	1	0	7
Fall	08	0	0	1	0	1	0	0	0	2	1	0	0	0	1	4
of obj	09	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
-ect	10	0	0	1	0	1	0	1	0	3	0	0	0	1	0	4
Other	08	0	1	1	0	1	2	0	0	5	2	0	1	0	2	10
causes	09	2	0	1	1	0	0	1	2	7	0	0	1	0	0	8
	10	4	1	3	0	2	0	4	2	16	2	0	0	2	2	22
Below-	08	8	0	5	1	0	1	6	6	27	4	0	0	0	1	32
grou-	09	6	1	6	0	0	0	4	8	25	11	0	0	3	0	39
nd	10	2	1	4	0	0	0	14	6	27	8	2	0	3	0	40
Open-	08	2	2	2	2	5	1	3	2	19	5	0	2	0	3	29
cast	09	4	3	2	1	4	0	5	1	20	6	0	2	0	1	29
	10	6	5	4	2	9	1	1	5	33	3	1	1	0	2	40
Above-	08	1	2	4	1	0	0	2	3	13	4	0	0	0	2	19
grou-	09	4	2	0	2	0	0	0	2	10	0	0	1	0	4	15
nd	10	1	2	4	0	3	0	5	2	17	1	0	1	1	0	20
	08	11	4	11	4	5	2	11	11	59	13	0	2	0	6	80
Total	09	14	6	8	3	4	0	9	11	55	17	0	3	3	5	83
	10	9	8	12	2	12	1	20	13	77	12	3	2	4	2	100

N.B. Figures are number of accidents. Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.10.

TABLE-18		Cause wise & Place wise Serious Accidents in Coal Mines														
Cause	Yr	BCCL	CCL	ECL	MCL	NCL	NECL	SECL	WCL	CIL	SCCL	IISCo	NLC	TISCo	Other	Total
Fall	08	2	0	5	0	0	0	8	0	15	15	0	0	0	0	30
of	09	2	0	5	1	0	0	4	5	17	7	0	0	1	1	26
roof	10	0	1	5	0	0	0	2	1	9	7	0	0	0	0	16
Fall	08	1	1	3	0	0	0	7	3	15	23	0	0	1	0	39
of	09	0	0	5	0	0	0	4	2	11	15	0	0	0	0	26
sides	10	2	0	5	0	0	0	2	6	15	16	0	0	0	0	31
Rope	08	8	2	17	0	0	0	3	4	34	55	0	0	1	0	90
haul-	09	4	0	13	1	0	0	2	4	24	47	0	0	0	0	71
ages	10	2	0	3	0	0	0	0	2	7	24	0	0	0	0	31
Dum-	08	2	3	4	0	2	0	0	2	13	2	0	0	1	1	17
pers	09	1	3	4	0	0	0	1	2	11	3	0	0	0	0	14
	10	0	3	0	1	2	0	0	1	7	1	0	2	0	0	10
Truck	08	1	1	0	0	0	0	0	0	2	0	0	1	0	0	3
tanker	09	1	0	1	1	0	0	0	2	5	3	0	2	0	0	10
etc.	10	0	0	0	1	2	0	0	1	4	4	0	1	0	0	9
Other	08	1	1	9	0	2	0	11	4	28	28	0	0	0	0	56
Machi-	09	3	1	10	1	1	0	6	3	25	18	0	2	0	0	45
nery	10	1	1	6	1	0	0	9	2	20	14	1	1	0	0	36
Explo	08	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
sives	09	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
	10	0	0	0	0	0	0	1	0	1	2	0	0	0	0	3
Fall	08	23	7	35	2	4	0	9	7	87	112	3	0	0	0	202
of per	09	17	1	42	0	0	0	8	10	78	112	0	1	1	0	192
-son	10	8	3	21	0	2	0	10	7	51	61	1	1	0	0	114
Fall	07	5	2	20	1	0	0	6	6	40	103	1	1	1	0	146
of obj	08	3	0	16	2	1	0	6	1	29	79	0	0	0	0	108
-ect	09	4	0	5	0	1	0	7	10	27	47	1	0	0	0	75
Other	08	5	1	19	2	0	0	10	3	40	62	0	0	0	0	102
causes	09	10	1	14	0	0	0	3	9	37	90	0	3	0	1	131
	10	4	0	8	0	0	0	5	7	24	71	0	0	0	0	95
Below-	08	28	8	85	1	0	0	43	17	182	328	4	0	2	0	516
grou-	09	20	1	82	4	0	0	28	29	164	313	0	0	1	2	480
nd	10	17	1	43	0	0	0	29	20	110	191	3	0	0	0	304
Open-	08	7	5	8	2	7	0	6	8	43	26	0	2	2	1	74
cast	09	12	1	9	2	2	0	1	3	30	15	0	5	0	0	50
	10	1	3	3	2	6	0	5	11	31	18	0	3	0	0	52
Above-	08	13	5	19	2	1	0	5	4	49	47	0	0	0	0	96
grou-	09	9	4	19	0	0	0	6	6	44	47	0	3	1	0	95
nd	10	3	4	7	1	1	0	2	6	24	38	0	2	0	0	64
	08	48	18	112	5	8	0	54	29	274	401	4	2	4	1	686
Total	09	41	6	110	6	2	0	35	38	238	375	0	8	2	2	625
	10	21	8	53	3	7	0	36	37	165	247	3	5	0	0	420

N.B. Figures are number of accidents. Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.10.

TABLE-19			Cause wise & Place wise Fatal Accidents in Non-Coal Mines								
Cause	Yr	Oil	Copper	Galena	Gold	Iron Ore	L.Stone	Mang-anese	Stone	Others	Total
Fall	08	0	0	1	0	0	0	1	0	0	2
of	09	0	1	0	0	0	0	0	0	3	4
roof	10	0	0	0	0	0	0	0	0	0	0
Fall	08	0	0	0	0	0	0	0	4	8	12
of	09	0	0	0	0	0	0	0	3	8	11
sides	10	0	0	0	0	1	1	1	0	10	13
Rope	08	0	0	0	0	0	0	0	0	0	0
Haul-	09	0	0	0	0	0	0	0	0	0	0
age	10	0	0	0	0	0	0	0	0	0	0
Dum-	08	0	0	0	0	5	2	0	0	5	12
pers	09	0	0	0	0	5	1	0	1	1	8
	10	0	0	0	0	1	1	0	1	1	4
Truck	08	0	0	0	0	0	1	0	0	0	1
tanker	09	0	0	0	0	1	1	0	0	0	2
	10	0	0	0	0	0	0	0	0	2	
Other	08	0	0	1	0	3	1	1	0	0	6
Machi	09	0	0	0	1	2	1	0	0	2	6
nery	10	0	0	0	0	4	0	0	0	7	11
Explo	08	0	0	0	0	0	1	0	1	0	2
sives	09	0	0	0	0	0	0	0	2	0	2
	10	0	0	0	0	0	0	0	1	1	2
Fall	07	0	0	0	0	1	3	1	0	5	10
of per	08	1	0	0	0	0	0	0	1	1	3
-son	09	0	0	1	0	0	2	0	0	3	6
Fall	08	1	0	0	0	0	0	0	0	0	1
of obj	09	2	0	0	0	1	0	0	0	2	5
-ect	10	2	0	0	0	1	2	1	0	4	10
Other	08	4	1	0	0	2	1	0	1	0	9
cause	09	1	0	0	0	0	0	1	0	1	3
	10	3	0	0	0	1	0	0	0	2	6
Below	08	0	0	1	0	0	0	1	0	1	3
grou-	09	0	1	0	0	0	0	0	0	3	4
nd	10	0	0	0	0	0	0	2	0	1	3
Open	08	0	0	0	0	7	7	1	5	16	36
cast	09	0	0	0	0	7	3	0	7	13	30
	10	2	0	0	0	6	6	0	1	22	37
Above	08	5	1	1	0	4	2	1	1	1	16
grou-	09	4	0	0	1	2	0	1	0	2	10
nd	10	3	0	1	0	2	0	0	1	7	14
	08	5	1	2	0	11	9	3	6	18	55
Total	09	4	1	0	1	9	3	1	7	18	44
	10	5	0	1	0	8	6	2	2	30	54

N.B. Figures are number of accidents. Data for the years 2008 to 2010 are provisional.

Figures for 2009 are up to 31.12.10

TABLE-20		Cause wise & Place wise Serious Accidents in Non-Coal Mines									
	Yr.	Oil	Copper	Galena	Gold	Iron Ore	Lime Stone	Manga-nese	Stone	Others	Total
Fall of roof	08	0	0	0	1	0	0	0	0	0	1
	09	0	0	1	0	0	0	0	0	0	1
	10	0	0	1	0	0	0	0	0	0	1
Fall of sides	08	0	0	0	0	0	0	0	0	0	0
	09	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0
Rope Haul-age	08	0	0	0	0	0	0	0	0	1	1
	09	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0
Dum-pers	08	0	0	0	1	1	1	0	0	0	3
	09	0	0	0	0	2	1	0	0	0	3
	10	0	0	0	0	0	0	0	0	0	0
Truck tanker etc.	08	0	0	1	0	1	0	0	0	0	2
	09	0	1	0	0	0	0	1	0	1	3
	10	0	0	0	0	1	1	0	0	0	2
Other Machi nery	08	3	0	6	0	3	1	0	0	2	15
	09	2	2	7	3	5	1	0	0	1	21
	10	4	1	2	1	3	1	0	0	2	14
Explo sives	08	0	0	0	0	0	0	1	0	0	1
	09	0	0	0	0	0	0	0	0	1	1
	10	0	0	0	0	0	1	0	0	0	1
Fall of per -son	08	3	1	2	1	6	1	1	0	2	17
	09	4	0	1	1	4	1	0	0	2	13
	10	3	1	2	2	1	0	0	0	3	12
Fall of obj -ect	08	6	1	4	4	5	0	0	0	0	20
	09	7	1	8	4	4	1	0	0	1	26
	10	3	0	1	5	2	0	0	0	5	16
Other cause	08	8	1	8	2	3	0	0	0	1	23
	09	5	1	7	7	5	0	1	0	0	26
	10	2	1	1	3	3	0	0	0	2	12
Below grou-nd	08	0	1	8	5	0	0	0	0	1	15
	09	0	4	13	10	0	0	1	0	2	30
	10	1	3	2	2	0	0	0	0	1	9
Open cast	08	0	1	5	1	9	2	0	0	2	20
	09	0	1	3	3	7	3	0	0	1	18
	10	7	0	3	4	4	2	0	0	8	28
Above grou-nd	08	20	1	8	3	10	1	2	0	3	48
	09	18	0	8	2	13	1	1	0	3	46
	10	4	0	2	5	6	1	0	0	3	21
Total	08	20	3	21	9	19	3	2	0	6	83
	09	18	5	24	15	20	4	2	0	6	94
	10	12	3	7	11	10	3	0	0	12	58

N.B. Figures are number of accidents. Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.10.

TABLE - 21

State wise details of accident statistics for Coal Mines during the year 2002-2010

State	Year	Fatal		Fatality rate per 1000 persons	No. of serious accidents	Persons seriously injured*	Serious injury rate per 1000 persons
		No. of Accidents	Persons Killed				
Andhra Pradesh	2002	14	23	0.37	117	125	2.00
	2003	19	44	0.73	88	92	1.52
	2004	11	14	0.23	437	447	7.48
	2005	11	11	0.19	795	800	13.63
	2006	16	19	0.33	557	565	9.77
	2007	11	11	0.20	566	574	10.27
	2008	13	14	0.25	401	405	7.24
	2009	17	20	0.36	375	384	6.87
	2010	12	14	0.25	247	257	4.60
Assam	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	2	2	0.74	1	1	0.37
	2005	1	1	0.36	0	1	0.36
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	2	7	2.57	0	14	5.14
	2009	0	0	0.00	0	0	0.00
	2010	1	1	0.37	0	0	0.00
Chhattisgarh	2002	7	7	0.20	79	82	2.34
	2003	9	9	0.26	63	65	1.85
	2004	3	4	0.11	68	69	1.92
	2005	7	7	0.19	55	56	1.55
	2006	3	3	0.08	46	46	1.27
	2007	11	11	0.33	40	43	1.29
	2008	9	9	0.27	27	27	0.81
	2009	10	10	0.30	22	24	0.72
	2010	13	26	0.78	20	26	0.78
Gujarat	2002	1	1	0.60	2	2	1.20
	2003	0	0	0.00	3	3	1.76
	2004	0	0	0.00	2	2	1.18
	2005	1	1	0.55	1	1	0.55
	2006	0	0	0.00	1	1	0.59
	2007	1	1	0.53	0	0	0.00

	2008	3	3	1.59	1	1	0.53
	2009	1	1	0.53	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Jharkhand	2002	26	27	0.20	133	149	1.10
	2003	21	22	0.17	117	124	0.96
	2004	27	30	0.25	147	156	1.28
	2005	29	49	0.41	78	92	0.77
	2006	25	75	0.65	62	66	0.58
	2007	20	22	0.19	105	107	0.94
	2008	16	16	0.14	89	91	0.80
	2009	24	28	0.25	58	63	0.56
	2010	27	29	0.26	36	42	0.37
Jammu & Kashmir	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	1	1	0.99
	2004	0	0	0.00	3	3	2.92
	2005	0	0	0.00	1	3	3.08
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Madhya Pradesh	2002	14	17	0.35	49	55	1.12
	2003	7	7	0.14	51	54	1.09
	2004	8	9	0.19	71	74	1.52
	2005	16	17	0.38	64	69	1.53
	2006	15	16	0.36	46	51	1.14
	2007	11	11	0.24	60	62	1.37
	2008	11	18	0.40	41	42	0.93
	2009	9	9	0.20	30	33	0.73
	2010	21	23	0.51	32	36	0.79
Maharashtra	2002	8	8	0.26	49	51	1.66
	2003	4	7	0.23	54	56	1.84
	2004	11	11	0.38	39	41	1.41
	2005	5	5	0.17	27	28	0.97
	2006	6	6	0.21	34	36	1.26
	2007	8	8	0.29	34	35	1.27
	2008	8	8	0.29	21	21	0.76
	2009	5	7	0.25	24	24	0.87
	2010	9	10	0.36	25	27	0.98

Orissa	2002	3	3	0.18	17	17	1.04
	2003	7	7	0.38	12	12	0.65
	2004	4	4	0.22	17	17	0.95
	2005	10	10	0.57	14	14	0.80
	2006	2	2	0.12	12	20	1.22
	2007	4	4	0.24	8	8	0.48
	2008	4	4	0.24	5	5	0.30
	2009	3	3	0.18	6	6	0.36
	2010	2	2	0.12	3	3	0.18
Rajasthan	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	1	1	3.64	2	2	7.27
Tamil Nadu	2002	1	1	0.14	11	11	1.51
	2003	1	2	0.22	8	11	1.21
	2004	3	3	0.31	3	3	0.31
	2005	1	1	0.08	2	3	0.25
	2006	5	5	0.47	4	4	0.38
	2007	2	2	0.19	1	1	0.09
	2008	2	2	0.19	2	3	0.28
	2009	3	3	0.28	8	9	0.85
	2010	1	1	0.09	3	4	0.38
Uttar Pradesh	2002	0	0	0.00	3	3	0.49
	2003	2	2	0.33	9	9	1.49
	2004	2	2	0.33	5	5	0.82
	2005	2	2	0.32	3	4	0.64
	2006	0	0	0.00	3	3	0.48
	2007	3	3	0.45	2	2	0.30
	2008	2	2	0.30	2	2	0.30
	2009	3	3	0.45	1	1	0.15
	2010	3	3	0.45	3	3	0.45
West Bengal	2002	7	10	0.13	169	170	2.29
	2003	13	13	0.18	157	163	2.24
	2004	16	17	0.24	169	173	2.45

	2005	13	13	0.19	66	67	0.96
	2006	6	11	0.17	96	99	1.53
	2007	5	5	0.08	107	119	1.88
	2008	10	10	0.16	97	98	1.55
	2009	7	8	0.13	101	103	1.63
	2010	10	10	0.16	49	49	0.77
All India	2002	81	97	0.23	629	665	1.57
	2003	83	113	0.27	563	590	1.42
	2004	87	96	0.24	962	991	2.45
	2005	96	117	0.29	1106	1138	2.85
	2006	78	137	0.36	861	891	2.31
	2007	76	78	0.21	923	951	2.51
	2008	80	93	0.25	686	709	1.87
	2009	82	92	0.25	625	647	1.71
	2010	100	120	0.32	420	449	1.18

* Includes seriously injured from fatal accidents also.

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.2010.

TABLE - 22

State wise details of accident statistics for Metalliferous Mines during the year 2002-2010

State	Year	Fatal		Fatality rate per 1000 persons	No. of serious accidents	Persons seriously injured*	Serious injury rate per 1000 persons
		No. of Accidents	Persons Killed				
Andhra Pradesh	2002	5	5	0.60	3	3	0.36
	2003	10	13	1.68	2	5	0.65
	2004	4	4	0.47	3	3	0.35
	2005	5	7	0.83	0	1	0.12
	2006	4	7	0.83	0	1	0.12
	2007	6	10	1.10	3	5	0.55
	2008	6	8	0.88	1	2	0.22
	2009	3	3	0.33	0	0	0.00
	2010	14	28	3.07	5	7	0.77
Bihar	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00

	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	1	2	3.15
Chhattisgarh	2002	1	1	0.09	25	25	2.15
	2003	1	1	0.09	21	21	1.82
	2004	5	6	0.58	16	19	1.84
	2005	1	1	0.10	17	17	1.69
	2006	3	4	0.38	15	16	1.53
	2007	2	2	0.19	19	19	1.78
	2008	4	4	0.37	11	11	1.03
	2009	0	0	0.00	14	14	1.31
	2010	1	1	0.09	6	6	0.56
Goa	2002	1	1	0.24	1	1	0.24
	2003	1	1	0.23	5	5	1.16
	2004	1	1	0.21	1	1	0.21
	2005	0	0	0.00	0	0	0.00
	2006	4	9	1.75	0	0	0.00
	2007	2	2	0.38	2	2	0.38
	2008	1	1	0.19	1	1	0.19
	2009	4	4	0.75	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Gujarat	2002	0	0	0.00	1	1	0.36
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	0	0	0.00
	2005	1	1	0.31	1	1	0.31
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	2	2	0.49
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Himachal Pradesh	2002	2	5	5.50	0	0	0.00
	2003	1	3	3.45	1	1	1.15
	2004	1	1	0.86	0	0	0.00
	2005	1	1	0.83	0	0	0.00
	2006	2	3	2.68	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	1	1	0.94	1	1	0.94

	2010	0	0	0.00	0	0	0.00
Haryana	2002	2	2	0.50	0	0	0.00
	2003	1	2	0.51	0	0	0.00
	2004	1	1	0.24	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	2	2	0.44	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Jharkhand	2002	11	12	0.92	17	17	1.30
	2003	2	2	0.16	11	11	0.86
	2004	7	8	0.61	12	12	0.92
	2005	5	5	0.42	7	7	0.59
	2006	3	3	0.21	9	9	0.63
	2007	5	5	0.35	2	3	0.21
	2008	4	5	0.35	9	11	0.77
	2009	5	7	0.49	6	6	0.42
	2010	3	3	0.21	7	8	0.56
Jammu & Kashmir	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	1	1	7.94	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Karnataka	2002	2	2	0.15	67	67	5.09
	2003	5	5	0.37	53	54	3.95
	2004	1	1	0.07	54	57	4.04
	2005	3	3	0.21	21	21	1.48
	2006	4	4	0.29	11	12	0.86
	2007	2	2	0.14	6	17	1.16
	2008	3	3	0.21	10	10	0.68
	2009	3	5	0.34	22	23	1.57
	2010	5	6	0.41	13	13	0.89
Kerala	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00

	2004	1	1	0.55	0	0	0.00
	2005	0	0	0.00	1	1	0.54
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	1	1	0.53
	2008	4	6	3.17	0	3	1.58
	2009	3	5	2.64	0	1	0.53
	2010	0	0	0.00	1	1	0.53
Meghalaya	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	1	1	4.37
	2004	0	0	0.00	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Madhya Pradesh	2002	2	2	0.24	12	13	1.54
	2003	1	1	0.12	9	9	1.09
	2004	2	4	0.45	6	7	0.78
	2005	0	0	0.00	7	7	0.80
	2006	1	1	0.12	4	6	0.73
	2007	4	5	0.52	4	5	0.52
	2008	3	4	0.42	1	1	0.10
	2009	1	1	0.10	2	5	0.52
	2010	2	2	0.21	1	1	0.10
Maharashtra	2002	5	7	1.33	6	6	1.14
	2003	0	0	0.00	9	9	1.71
	2004	1	1	0.15	5	5	0.75
	2005	3	3	0.51	2	2	0.34
	2006	1	1	0.20	4	6	1.19
	2007	0	0	0.00	2	2	0.37
	2008	2	10	1.87	1	21	3.93
	2009	0	0	0.00	1	1	0.19
	2010	1	1	0.19	0	0	0.00
Orissa	2002	8	8	0.28	14	14	0.49
	2003	9	10	0.34	8	12	0.41
	2004	7	7	0.22	14	16	0.51
	2005	12	13	0.41	6	8	0.25
	2006	8	8	0.24	6	6	0.18

	2007	10	10	0.30	6	11	0.33
	2008	6	6	0.18	6	9	0.27
	2009	3	3	0.09	5	5	0.15
	2010	5	5	0.15	2	2	0.06
Rajasthan	2002	10	16	0.74	24	27	1.25
	2003	18	21	1.05	25	33	1.65
	2004	19	22	1.06	37	38	1.83
	2005	9	10	0.49	29	30	1.48
	2006	16	19	0.92	14	15	0.73
	2007	19	21	0.96	16	21	0.96
	2008	14	20	0.92	23	29	1.33
	2009	9	11	0.51	25	29	1.33
	2010	15	37	1.70	9	9	0.41
Tamil Nadu	2002	0	0	0.00	3	3	0.40
	2003	1	1	0.11	2	2	0.23
	2004	4	4	0.49	1	4	0.49
	2005	6	6	0.71	2	3	0.36
	2006	7	7	0.87	0	2	0.25
	2007	3	4	0.45	0	1	0.11
	2008	1	1	0.11	0	0	0.00
	2009	4	6	0.67	0	3	0.33
	2010	2	3	0.33	1	1	0.11
Uttaranchal	2002	1	1	0.78	1	1	0.78
	2003	1	1	0.78	0	0	0.00
	2004	1	1	0.67	1	1	0.67
	2005	1	1	0.58	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	2	2	1.16	0	0	0.00
	2009	1	1	0.58	0	0	0.00
	2010	0	0	0.00	0	0	0.00
West Bengal	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	0	0	0.00
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	1	1	0.27	0	0	0.00

	2010	1	1	0.27	0	0	0.00
All India	2002	50	62	0.45	174	178	1.30
	2003	51	61	0.45	147	163	1.19
	2004	55	62	0.43	150	163	1.14
	2005	47	51	0.36	93	98	0.70
	2006	54	67	0.47	63	73	0.51
	2007	53	61	0.40	63	89	0.59
	2008	50	70	0.46	63	98	0.65
	2009	40	50	0.33	76	88	0.58
	2010	49	87	0.57	46	50	0.33

* Includes seriously injured from fatal accidents also.

Note: Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.2010.

TABLE - 23

State wise details of accident statistics for Oil Mines during the year 2001-2010

State	Year	Fatal		Fatality rate per 1000 persons	No. of serious accidents	Persons seriously injured*	Serious injury rate per 1000 persons
		No. of Accidents	Persons Killed				
Andhra Pradesh	2002	0	0	0.00	2	2	4.29
	2003	0	0	0.00	3	3	4.44
	2004	0	0	0.00	1	1	4.20
	2005	0	0	0.00	2	2	3.82
	2006	0	0	0.00	1	1	1.74
	2007	0	0	0.00	2	2	2.63
	2008	1	1	1.32	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
Assam	2002	0	0	0.00	15	15	1.26
	2003	1	1	0.13	14	14	1.76
	2004	1	1	0.14	26	28	3.87
	2005	1	1	0.12	11	11	1.31
	2006	3	3	0.68	10	10	2.26
	2007	2	2	0.27	12	12	1.59
	2008	1	2	0.27	17	17	2.26
	2009	0	0	0.00	15	15	1.99
	2010	2	2	0.27	12	12	1.59
Gujarat	2002	1	1	0.13	9	9	1.13
	2003	0	0	0.00	4	5	0.58

	2004	1	1	0.10	6	6	0.59
	2005	0	0	0.00	2	2	0.24
	2006	0	0	0.00	1	1	0.14
	2007	1	1	0.11	1	1	0.11
	2008	3	3	0.32	3	5	0.53
	2009	2	2	0.21	0	0	0.00
	2010	3	3	0.32	0	1	0.11
Rajasthan	2002	0	0	0.00	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	2	2	27.03
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	2	2	2.60
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	1	1	2.26	3	3	6.77
	2010	0	0	0.00	0	0	0.00
Tamil Nadu	2002	0	0	0.00	4	4	5.43
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	1	1	1.13
	2005	0	0	0.00	0	0	0.00
	2006	1	1	2.26	1	1	2.26
	2007	0	0	0.00	1	1	2.62
	2008	0	0	0.00	0	0	0.00
	2009	1	1	2.62	0	2	5.25
	2010	0	0	0.00	0	0	0.00
Tripura	2002	1	1	1.43	0	0	0.00
	2003	0	0	0.00	0	0	0.00
	2004	0	0	0.00	2	2	6.37
	2005	0	0	0.00	0	0	0.00
	2006	0	0	0.00	0	0	0.00
	2007	0	0	0.00	0	0	0.00
	2008	0	0	0.00	0	0	0.00
	2009	0	0	0.00	0	0	0.00
	2010	0	0	0.00	0	0	0.00
All India	2002	2	2	0.09	31	31	1.39
	2003	1	1	0.05	21	22	1.13
	2004	2	2	0.10	38	40	2.09

	2005	1	1	0.05	15	15	0.78
	2006	4	4	0.29	15	15	1.08
	2007	3	3	0.16	16	16	0.83
	2008	5	6	0.31	20	22	1.15
	2009	4	4	0.21	18	20	1.04
	2010	5	5	0.26	12	13	0.68

* Includes seriously injureds from fatal accidents also.

N.A. - Employment figures not available.

Note : Data for the years 2008 to 2010 are provisional. Figures for 2010 are up to 31.12.2010.

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ANNEXURE-I

SAFETY, HEALTH & WELFARE LEGISLATION FOR MINES ADMINISTERED BY DGMS

MINES ACT, 1952

- Coal Mines Regulations, 1957
- Metalliferous Mines Regulations, 1961
- Oil Mines Regulations, 1984
- Mines Rules, 1955
- Mines Vocational Training Rules, 1966
- Mines Rescue Rules, 1985
- Mines Creche Rules, 1966
- Coal Mines Pit Head Bath Rules, 1959

ELECTRICITY ACT, 2003

- Indian Electricity Rules, 1956

ALLIED LEGISLATION

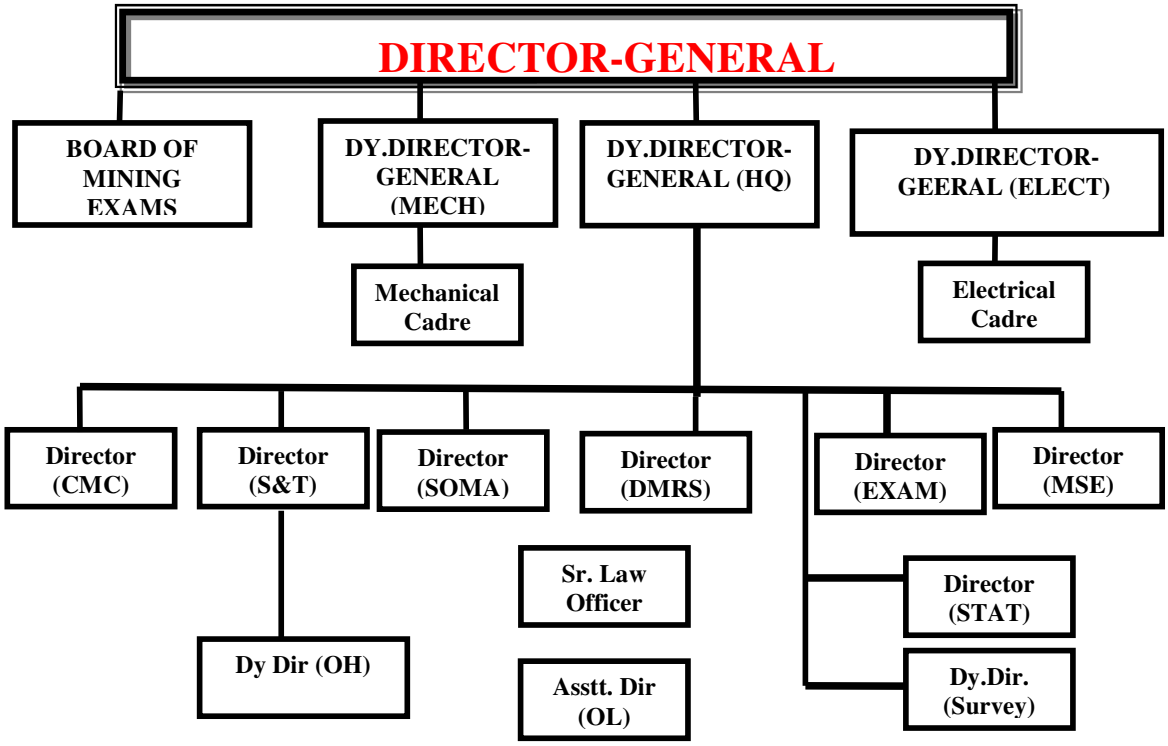
- Factories Act, 1948 : Chapter III & IV
- Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989 – under Environmental Protection Act, 1986
- Land Acquisition (Mines) Act, 1885
- The Coal Mines (Conservation & Development) Act, 1974

ANNEXURE-IA

STATUS OF ILO CONVENTIONS RELATED TO MINES

Sl.No.	Convention No.	Subject	Status
	1	Hours of work	Ratified by Government
	14	Weekly rest	-do-
	45	Underground work (women)	-do-
	89	Night work (women)	-do-
	90	Night work (young persons)	Provided in the Mines Act
	123	Minimum age for employment in underground	-do-
	127	Maximum permissible weight for carrying	Not ratified
	132	Holidays with pay (revised)	Not ratified
	139	OH hazards from carcinogens	Not ratified
	142	VT in development of human resources	Many aspects provided in the Mines Act
	148	Working environment	Not ratified. Many aspects provided in the Mines Act.
	150	Labour administration	Not ratified. Many aspects provided in the Mines Act.
	155	Occupational Health Services	Not ratified. Many aspects provided in the Mines Act.
	174	Major Industrial Accidents	Not ratified. Limited application in mining.
	175	Part time work	Not ratified
	176	OSH in mines	-do-

ORGANISATION STRUCTURE
DIRECTORATE-GENERAL OF MINES SAFETY
HEAD QUARTERS, DHANBAD



ANNEXURE-IIB

Field Organisation of
Directorate General of Mines Safety

SN	Zone	Region	Sub-Region
1.	Eastern Zone Sitarampur West Bengal	1. Sitarampur Region No.I 2. Sitarampur Region No.II 3. Sitarampur Region No.III 4. Guwahati	
2.	Central Zone Dhanbad Jharkhand	1. Dhanbad Region No.I 2. Dhanbad Region No.II 3. Dhanbad Region No.III 4. Koderma	
3.	South Eastern Zone Ranchi Jharkhand	1. Ranchi 2. Bhubaneshwar 3. Chaibasa 4. Raigarh	Ramgarh
4.	North Western Zone Udaipur Rajasthan	1. Ahmedabad 2. Udaipur 3. Surat	
5.	Northern Zone Ghaziabad Uttar Pradesh	1. Ghaziabad 2. Ajmer 3. Gwalior 4. Varanasi	
6.	Southern Central Zone Hyderabad Andhra Pradesh	1. Hyderabad Region No.I 2. Hyderabad Region No.II 3. Goa	Nellore
7.	Southern Zone Bengaluru Karnataka	1. Bengaluru 2. Bellary 3. Chennai	
8.	Western Zone Nagpur Maharashtra	1. Nagpur Region No.I 2. Nagpur Region No.II 3. Jabalpur 4. Bilaspur	Parasia

ANNEXURE-III

DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2010 UPTO DECEMBER

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
Under Coal Mines Regulations, 1957				
1.	First Class Manager's Certificate Examination held in December, 2009	1982	308	
	First Class Manager's Certificate Examination held in December, 2010	2262	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in December, 2009	1466	308	
	Second Class Manager's Certificate Examination held in December, 2010	2036	-	Result not yet declared
3.	Mine Surveyor's Certificate Examination held in December,2009	263	41	
	Mine Surveyor's Certificate Examination held in December,2010	280	-	Result not yet declared
4.	Overman's Certificate Examination held in December, 2009	1315	153	
	Overman's Certificate Examination held in December, 2010	1503	-	Result not yet declared
5.	Medical Examinations			
	(a) 5 yearly under Reg. 27(1)			
	(i) Overman	106	104	
	(ii) Mining Sirdar	140	135	
	(iii) Shotfirer	-	-	
	(iv) Winding Engine Driver 1st Class	10	10	
	(v) Winding Engine Driver 2nd Class	09	09	
	(b) Senior Medical Board under Reg. 28			
	(i) First Class Manager's	09	09	
	(ii) Second Class manager's	05	05	
	(iii) Surveyor's	07	07	
	(c) Junior Medical Board under Reg.28			
	(i) Overman	20	19	
	(ii) Mining Sirdar	10	09	
	(iii) Shotfirer	20	01	
	(iv) Winding Engine Driver 1st Class	01	01	
	(v) Winding Engine Driver 2nd Class	01	01	
6..	Exchange cases	8	-	
		Application received	Certificate/ auth. issued	
7.	Exemption cases	612	703*	*Also included cert. in respect of application recd. During 2009
Under Metalliferous Mines Regulations, 1961				
I. Un-Restricted				
1.	First Class manager's Certificate Examination held in October, 2009	133	30	
	First Class manager's Certificate Examination held in October, 2010	171	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in October, 2009	100	10	
	Second Class Manager's Certificate Examination held in October, 2010	148	-	Result not yet declared

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
3.	Surveyor's Certificate Examination held in October, 2009	05	-	
	Surveyor's Certificate Examination held in October, 2010	08	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2009	20	10	
	Foreman's Certificate Examination held in October, 2010	43	-	Result not yet declared
II. Restricted to Opencast Workings only				
1.	First Class Manager's Certificate Examination held in October, 2009	1018	168	
	First Class Manager's Certificate Examination held in October, 2010	1299	-	Result not yet declared.
2.	Second Class Manager's Certificate Examination held in October, 2009	711	87	
	Second Class Manager's Certificate Examination held in October, 2010	1000	-	Result not yet declared.
3.	Surveyor's Certificate Examination held in October, 2009	83	05	
	Surveyor's Certificate Examination held in October, 2010	78	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2009	260	56	
	Foreman's Certificate Examination held in October, 2010	541	-	Result not yet declared
III. Medical Examinations				
	(a) 5 yearly under Reg. 30(1)			
	(i) Foreman, Un-restricted	-	-	
	(ii) Foreman, Restricted	137	136	
	(iii) Mining Mate, Un-restricted	-	-	
	(iv) Mining Mate, Restricted	124	122	
	(v) Blaster, Un-restricted	-	-	
	(vi) Blaster, Restricted	14	14	
	(vii) Winding Engine Driver 1st Class	-	-	
	(viii) Winding Engine Driver 2nd Class	-	-	
	(b) Senior Medical Board			
	(i) First Class Manager's	110	108	
	(ii) Second Class manager's	51	50	
	(iii) Surveyor's	02	02	
	(c) Junior Medical Board			
	(i) Foreman	20	18	
	(ii) Mining Mate	58	55	
	(iii) Blaster	05	05	
10.	Exchange cases	03	-	Exam yet to be conducted.
11.	Exemption cases	Application received	Certificate auth. Issued	
		416	399	

ANNEXURE-IIIA

DETAILS OF JUNIOR EXAMINATION CONDUCTED IN ZONAL OFFICE DURING – 2010

Name of Zone	Under CMR 1957						Under MMR 1961									
	Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing		Blaster		Winding engine Driver 1st & 2nd class	
	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.
Central Zone	0	0	200	35	569	224	0	0	0	0	0	0	0	0	0	0
Eastern Zone	210	200	0	0	182	96	0	0	0	0	0	0	0	0	62	25
Western Zone	7	6	241	92	792	340	40	37	101	44	0	0	25	18	0	0
Northern Zone	0	0	1	1	0	0	123	123	0	0	29	11	0	0	0	0
North Western Zone	0	0	0	0	0	0	0	0	142	65	60	40	47	20	0	0
Southern Zone	0	0	0	0	0	0	0	0	325	177	24	16	183	86	0	0
South Central Zone	713	713	76	37	119	39	390	340	316	241	77	59	45	38	0	0
South Eastern Zone	0	0	88	45	431	211	0	0	142	64	0	0	157	68	13	13
TOTAL	**930**	**919**	**606**	**210**	**2093**	**910**	**553**	**500**	**1026**	**591**	**190**	**126**	**457**	**230**	**75**	**38**

ANNEXURE-IVA

LIST OF VARIOUS SEMINARS, SYMPOSIUMS, CONFERENCE, WORKSHOP ETC. ATTENDED BY DGMS OFFICERS DURING 2010.

Sl. No	**Name of the Seminar, Workshop, Symposium etc**	**Venue**	**Date**	**No. of officers attended**
1.	3rd Asian Mining Congress Conference & Exhibition.	Kolkata	05.01.2010	04
2.	Workshop on Mainstreaming Disaster Risk Reduction in Development	New Delhi	07.01.2010 to 08.01.2010	01
3.	Workshop on Rock Mechanics-Tools and Techniques	Nagpur	15.01.2010 to 17.01.2010	02
4.	Indian Mineral Conclave	ISM, Dhanbad	5.2.2010 to 6.2.2010	04
5.	Seminar on Meeting Rock Mechanics Challenge of Deep underground Mining	CIMFR, Barwa Road, Dhanbad.	22.04.2010 to 24.04.2010	04
6.	Attend the meeting regarding press report	New Delhi	26.05.2010	01
7.	Celebrate the World Environment Day in order to encourage people's awareness about Environment issues.	Vigyan Bhawan, New Delhi	05.06.2010	03
8.	International Symposium on Emerging Trends in Environment, Health and Safety Management in Mining and Mineral Based Industries.	N.I.T.K., Surathkal Karnataka	21.08.2010 to 22.08.2010	06
9.	National Seminar on 'Raw material Security for the Steel Industry-Challenges Ahead'(RMSSI-2010) on 18th Sep. 2010	Oberoi Grand, Kolkata	18.09.2010	04
10.	National Conference on Underground Coal Mining- Challenges and opportunities.	Kolkata	24.09.2010 to 26.09.2010	05
11.	SAP-IPE-Knowledge Series- workshop	Hyderabad	29.10.2010	01
12.	Australian Mining & Resources Seminar at Kolkata on 9th Nov' 2010 and IMME 2010 Exhibition and Global Mining Summit.	Kolkata	09.11.2010 to 10.11.2010	02
13.	IMME 2010 Exhibition and Global Mining Summit.	Kolkata	10.11.2010	02
14.	-do-	Kolkata	11.11.2010	02
15.	-do-	Kolkata	12.11.2010	02
16.	-do-	Kolkata	13.11.2010	02
17.	National Conference cum workshop CSECS 2010 on "Geological and Technical Facets of CBM, Shale Gas, Energy Resources and CO2 Sequestration" organized by ISM	ISMU, Dhanbad	19.11.2010 to 20.11.2010	02
18.	Short term course on Environmental Management in Mining & Allied Industries.	NIT, Rourkela	10.12.2010 to 12.12.2010	02

ANNEXURE-IVB

CARRIER MANAGEMANT AND COORDINATION TRAINING FOR THE YEAR 2010 (IN COUNTRY)

Sl.No.	Course	Venue	Period	No. of Officers attended
1.	MDP on Management Information System	NITIE, Mumbai	21.06.2010 to 23.06.2010	02
2.	Comprehensive Disaster Risk Management	SIRD, Rajasthan	09.08.2010 to 13.08.2010	02
3.	Training Course on Knowledge management	ISTM, New Delhi	16.08.2010 to 17.08.2010	01
4.	Risk Assessment & Vulnerability Analysis	NIDM, New Delhi	20.10.2010 to 22.10.2010	02
5.	94th Orientation course in Record Management	Bhubaneswar	04.10.2010 to 08.10.2010	01
6.	Comprehensive Disaster Risk Management Course	SIRD, Orissa	08.11.2010 to 12.11.2010	02

ANNEXURE-IVC

CARRIER MANAGEMANT AND COORDINATION TRAINING FOR THE YEAR 2010 (ABROAD)

Sl. No.	Course	Venue	Period	No. of Officers attended
1.	Testing of Longwall Face Machine	Germany	07.05.2010 to 22.05.2010	06
2.	Training of Trainers “Building modern & effective Labour Inspection System” ILO/ITC	Italy	30.08.2010 to 10.09.2010	01

ANNEXURE-V

National Safety Awards (Mines)

Award Winning Mines for the Year 2007

Scheme 1 : Longest Accident-Free Period (LAFP)

Type of mine	Winner	Runner
Coal Mines – Belowground with difficult mining conditions	Moonidih Project Bharat Coking Coal Ltd.	Sijua Colliery Tata Steel Ltd.
Coal Mines – Belowground (others)	Gobindpur Project Central Coalfields Ltd.	North Chirimiri Colliery South Eastern Coalfields Ltd.
Coal Mines – Opencast	Umrer Opencast Mine Western Coalfields Ltd.	Samleshwari Opencast Mine Mahanadi Coalfields Ltd.
Metal Mines – Mechanised Opencast	Balapur Hamesha, Dongri Bz. Mine Manganese Ore (India) Ltd.	Daitari Iron Ore Mine Orissa Mining Corpn. Ltd.
Metal Mines – Manual Opencast	Kaliapani Chromite Mine Orissa Mining Corporation Ltd.	Sukrangi Chromite Mine Orissa Mining Corporation Ltd.
Metal Mines- Belowground	Khetri Copper Mine Hindustan Copper Ltd.	Kolihan Copper Mine Hindustan Copper Ltd.
Oil Mines	Krishna Godavari Drilling Oil Mine Oil & Natural Gas Corporation Ltd.	Cauvery Production Oil Mine Oil & Natural Gas Corporation Ltd.

Scheme 2 : Lowest Injury Frequency Rate (LIFR)

(A) Per Lakh Manshift

Type of mine	Winner	Runner
Coal Mines – Belowground with difficult mining conditions	Kachhi Balihari 10/12 Pits Colliery Bharat Coking Coal Ltd.	Kharkharee Collliery Bharat Coking Coal Ltd.
Coal Mines – Belowground (others)	Shobhapur Collliery Western Coalfields Ltd.	Sarni Collliery Western Coalfields Ltd.
Coal Mines – Opencast	West Bokaro Opencast Quarry S/E Tata Steel Ltd.	Kakri Opencast Mine Northern Coalfields Ltd.
Metal Mines – Mechanised Opencast with manshifts >0.5 lakhs	Sukinda Chromite Mine Tata Steel Ltd.	South Kaliapani Chromite Mine Orissa Mining Corporation Ltd.
Metal Mines – Mechanised Opencast with manshifts $\leq$ 0.5 lakhs	Saruabil Chromite Mine Mishrilal Jain Mines(P) Ltd	Yerekatte Limestone Mine Mysore Cements Ltd.
Metal Mines – Manual Opencast with manshifts >0.25 lakhs	Manavalakurichi Ilmenite Mine Indian Rare Earths Ltd.	Kharia China Clay Mine Patelnagar Minerals & Ind. Pvt. Ltd
Metal Mines – Manual Opencast with manshifts $\leq$0.25 lakhs	Thirthahally Clay Mine Mysore Minerals Ltd	Thagadur Chromite Mine Mysore Minerals Ltd.
Metal Mines- Belowground	Kathpal Chromite Mine Ferro Alloys Corpn. Ltd.	Beldongri Manganese Mine Manganese Ore (India) Ltd.
Oil Mines	Ahmedabad Oil Production Mine Oil & Natural Gas Corporation Ltd.	Krishna Godavari Production Oil Mine Oil & Natural Gas Corporation Ltd.

(B) Per Million Cubic Metre of Output

Type of mine	Winners	Runners-up
Coal Mines – Opencast	Tara (East & West) Mine Bengal Emta Coal Mines	Jindal Opencast Coal Mine-I Jindal Steel & Power Ltd

ANNEXURE-VI

DGMS TELEPHONE DIRECTORY

Directorate General of Mines Safety, At & PO – Dhanbad- 826001, Jharkhand
FAX- (0326) 2221027 (DG), 2221020 (DDG-HQ), 2221043 (DDG-Elect.)
DGMS Website : www.dgms.gov.in

Sl.	Name	Designation	Office	Residence
1.	Satish Puri	Director-General	2221000	2221041/2221042
2.	R.P. Rajak	Sr. Private Secretary to DG	2221006	2206765/2204390 (P)
3.		Dy.Director-General (HQ)	2221021	-
4.	M Choudhury	Private Secretary to DDG(HQ)	2226057	2204390
5.	D Kumar	Dy.Director-General (Elect.)	2221038/02	2221170
6.	M.K.Das	Director of Mines Safety (Elect)	2226051	2206758
7.	B.P. Singh	Director of Mines Safety (MSE)	2221013	2221199
8.	R. Subramanian	Director of Mines Safety (S&T)	2221037/05	2221165
9.	V. Kalundia	Dy. Director of Mines Safety (S&T)	2226036	2221175
10.	D. K. Mallick	Director of Mines Safety(SD)	2221018	2221168
11.	Prabhat Kumar	Dy. Director of Mines Safety (SD)	2221007	2221177
12.		Director of Mines Safety (DMRS)	-	-
13.	G.N. Venkatesh	Director of Mines Safety (Mech)	2221039	2221166
14.		Director of Mines Safety (Exam)	2221036	-
15.	S.Venkatraman	Director of Mines Safety (Mech)	2221008	2221164
16.	C.B. Prasad	Dy.Director of Mines Safety (SOMA)	2221015	2221176
17.	Sanjibon Ray	Dy.Director of Mines Safety(HQ)	2221014	2221173
18.	Subhashis Roy	Dy.Director of Mines Safety (B&A)	2221016	2221180
19.	Ms. N. Chakraborty	DDO (HQ)	2226087	9234893506(P)
20.	N.K. Bhattachrjee	OS, B&A	2226087	9304052422(P)
21.	T.K.Mondal	Dy. Director of Mines Safety (Exam)	2226009	2221178
22.	M.R.Mandve	Dy. Director of Mines Safety (Exam)	2226019	2221174
23.	Murlidhar Bidari	Dy. Director of Mines Safety (Exam)	2221182	2206749
24.	J.K. Roy	Dy. Director of Mines Safety(CMC)	2221019	2206762
25.	T.R. Kannan	Dy. Director of Mines Safety(SOMA)	2226124/1040	2221172
26.	A.K. Tripathi	Director (Stat)	2221023	FAX-2221023
27.	N.K.Tudu	Jt. Dir (Stat)	2221003	2940570
28.	P. Saxena	Dy. Director (Stat)	2226120	-
29.	B.K.Srivasatava	Asstt.Director(Stat)	2226114	2201503P
30.	S.K.Sinha	Sr.Stat officer	2226118	9430476192(P)
31.	S.R. Sharma	Asstt. Director (OL)	2221004	2226123
32.	T.K. Burman	Sr.Law Officer	2221024	2206742
33.	J.P. Jha	Law Officer	2226121	9835592941(P)
34.	Ms. Ritu Srivastava	Law Officer	2226111	2206768
35.	A.K.Sinha	Law Officer	2226112	-
36.	K.K.Banerjee	Jr. Scientific Officer (S&T)	2226042	-
37.	Dr.George John	Asstt. Director (OH)	2226040	9263611891(P)
38.	D.K. Saini	Accounts Officer (PAO)	2221017	-

CENTRAL ZONE, DGMS, DHANBAD- 826001, FAX : (0326) 2221029

Sl.	Name	Designation	Office	Resid.
1.		Dy. Director-General of Mines safety	2221030	2221169
2.	Mukesh Srivastava	Director of Mines Safety(Elect)	2221031	2206768
3.	U.N.Pandey	Director of Mines Safety(Elect)	2221155	2206731
4.	R.N. Singh	Director of Mines Safety(Mech)	2221032	2206737
5.	Madhukar Sahay	Dy.Director of Mines Safety(Elect)	2221156	2221163
6.	T. Srinivas	Dy.Director of Mines Safety(Elect)	2221155	2221171
7.	A.S. Singh	Law Officer	2226004	-
8.	Monica Tudu	Asstt. Director (OL)	2226011	-

Sl.	Name	Designation	Office	Resid.
9.	Dr. K. Sarkar	Asstt. Director(OH)		

Region No. I, Dhanbad				
10	N. Rajak	Director of Mines Safety	2221033	2206735
11	Vir Pratap	Dy.Director of Mines Safety	2226003	2206766
12	B.B.Satiyar	Dy.Director of Mines Safety	2221153	2221161
Region No. II, Dhanbad				
13	A. Kumar	Director of Mines Safety	2221034	2221169
14	E.J.Kumar	Dy.Director of Mines Safety	2221157	2311840
15	B.P. Singh	Dy.Director of Mines Safety	-	2206760
Region III, Dhanbad				
16	S. M.Suthar	Director of Mines Safety	2221035	2206733
17	S. Ansari	Dy. Director of Mines Safety	2221158	2206747
18	Manoranjan Dole	Dy. Director of Mines Safety	2221154	2206753
KODERMA REGION, P.O. KARMA,(JHUMRITELAIYA), Dist. KODERMA, JHARKHAND. PIN – 825409, STD CODE – 06534, FAX No. 06534-223483.				
19	-	Director of Mines Safety	222401	222577
20	Arvind Kumar	Dy. Director of Mines Safety	222579	223288 9955354957(P)

EASTERN ZONE, SITARAMPUR, At & P.O. – Sitarampur, Dist.- Burdwan, West Bengal, Pin – 713359, FAX : (0341) 2510717, Std. Code – 0341

Sl.	Name	Designation	Office	Resid.
1	U Saha	Dy.Director-General of Mines safety	2510710 2514210	2510711 2510720
2	VK Ambasta	PS to DDG	2514211	
3	H.K.Srivastava	Director of Mines Safety (Mech.) Section	2514207 2514208	2510715
4	S.K. Thakur	Director of Mines safety(Elect) Section	2514222 2514221	2511371
5	A. Singh	Dy. Director of Mines safety(Elect) Section	2514223 2514224	2511375
6	Dr. A.K. Sen,	Asstt. Director (OH) Section	2514228 2510721	2254498(P)
7		Exam Section	2514229	-
Region No.I Section--2514206				
8		Director of Mines safety	2510712	-
9	S.S. Mishra	Dy. Director of Mines Safety	2514203	2510712
1	S. Halder	Dy. Director of Mines Safety	2514204	2511372
1	Rajib Pal	Dy. Director of Mines Safety	2514205	2511380
Region No.2 Section--2514216				
1		Director of Mines Safety	2514213	2510713
1	Malay Tikader	Dy.Director of Mines Safety	2514215	2511341
1	Subhro Bagchi	Dy.Director of Mines Safety	2514214	2511376
Region No.3 Section-- 2514220				
1	S.K. Dutta	Director of Mines Safety	2514217	2510714
1	S. Chandra Mouli	Dy.Director of Mines Safety	2514218	2510718
1	Murlidhar Mishra	Dy.Director of Mines Safety	2514219	2510719
Guwahati Region , House of Ranjit Sharma, House No. 16 Bylane-10, Ganesh Mandir Path , New Guwahati – 781020 Assam (STD -0361) FAX 2550129				
1	D.K. Sahu	Dy.Director of Mines Safety	2550129	09435674412 09577326686

SOUTH EASTERN ZONE, Ranchi, H-89 Near Kartik Oraon Chock, Harmu Housing Colony, P.O.: Doranda, Ranchi-834001 -FAX: (0651) 2341398

Sl.	Name	Designation	Office	Resid.
1		Dy. Director-General	2341407	
2	K. M. Ghosh	Director of Mines Safety(Elect)	2341585	2245687
3	P.K.Singh	Dy.Director of Mines Safety(Elect)	2341585	2360452
RANCHI REGION, RANCHI				
4	A. Biswas	Director of Mines Safety	2341571	2530270
5	Deo Kumar	Dy.Director of Mines Safety	2341673	2206515
6	Mihir Choudhary	Dy.Director of Mines Safety	2341673	2230006
RAMGRAH SUB REGION, RAMGRAH CANTT., HAZARIBAGH DISTRICT, JHARKHAND (STD – 06553)				
7	U.K. Sharma	Dy. Director of Mines Safety	222248	222168
BHUBANESWAR REGION, Plot No. L-1,Nayapalli(Near Swoti Plaza Hotel), PO RRL Campus BHUBANESWAR : 751007 FAX : (0674) 2302561				
8	D. Saha	Director of Mines safety	2302561	2300458
9	S.S. Prasad	Dy. Director of Mines Safety	2301452	2571508
CHAIBASA REGION, At & PO: CHAIBASA, Dist.- SINGHBHUM (WEST), Jharkhand, FAX: (06582) 256480				
1	Munna Tandi	Director of Mines Safety	256480	256223
1	P. K. Kundu	Dy. Director of Mines Safety	256449	256283
RAIGARH REGION, NEAR SECL GM OFFICE, KELO VIHAR, CHHOTE ATTARMUDA, RAIGARH – 496001 STD – 07762- 222114				
1	Ujjal Tah	Dy. Director of Mines Safety	222114/16	09425274788

WESTERN ZONE, DGMS
CGO COMPLEX,A-BLOCK, 6th FLOOR, SEMINARY HILLS, NAGPUR : 440006
FAX : (0712) 2511021 , PBX- 2511026, email- ddgwz@dataone.in

Sl.	Name	Designation	Office	Resid.
1	R.B.Chakraborty	Dy. Director-General of Mines Safety	2511022 2511020	2512901
2	B.K.Lama	Dy.Director of Mines Safety(Elect)	2511025	2511726
3	M.K.Malviya	Dy.Director of Mines Safety(Elect)	2513086	2511030
4	D B Naik	Director of Mines Safety (Mech)	2511024	3297098
NAGPUR REGION- I, NAGPUR				
5	Vidyapathy	Director of Mines Safety	2513133	2511027
6	C.Ramesh Kumar	Dy.Director of Mines Safety	2513134	2034220
7	Rafique Syed	Dy.Director of Mines Safety	2513134	2631620
PARASIA SUB-REGION, PARASIA, CHHINDWARA, MP (STD – 07161)				
8	M.E. Murkute	Dy.Director of Mines Safety	220048	220007
NAGPUR REGION- II, NAGPUR				
9	K.N. Rao	Director of Mines Safety	2513085	2513111
1	H.C. Yadav	Dy.Director of Mines Safety	2513084	2592280
1	Supriya Chakraborty	Dy.Director of Mines Safety	2513087	2511634
JABALPUR REGION , 1568, NAPIER TOWN, JABALPUR- 482001 FAX (0761) 2411856				
1		Director of Mines Safety	2412691	-
1	P.K.Palit	Dy.Director of Mines Safety	2412691	2407636
1	Satish Kumar	Dy.Director of Mines Safety	2408287	2429767
BILASPUR REGION, SECL CAMPUS, At & PO: BILASPUR, Chhattisgarh, PIN-495001. FAX : (07752) 246493				
1		Director of Mines Safety	246493	
1	S.D.Chhiddarwar	Dy.Director of Mines Safety	246494	211148
1	Ram Abhilash	Dy.Director of Mines Safety	246494	258035

SOUTHERN CENTRAL ZONE
APHB Complex, Gruhakalpa, Block II, (Ist floor),MJ Road, Nampally, Hyderabad- 500 001FAX-040-24602504, (PBX No.2460-2509, 2510, 2511)

Sl.	Name	Designation	Office	Resid.
1	S I Hussain	Dy. Director-General of Mines Safety	24602505	23300879
2		Director of Mines Safety(Elect.)	24602506	-
3	K.S.Yadav	Dy. Director of Mines Safety(Elect.)	24602511	25500929
4	Dinesh Pandey	Director of Mines Safety (Mech)	24602509	23524825
HYDERABAD REGION No. I				
1	P.Ranganatheeshwar	Director of Mines Safety	24602507	23004632
2	M.C.Jaiswal	Dy. Director of Mines Safety	24602510	23513670
3	B. Papa Rao	Dy. Director of Mines Safety	24602510	27176305
HYDERABAD REGION No. II				
4	S. Krishnamurthy	Director of Mines Safety	24602508	20030068
5	Neeraj Kumar	Dy. Director of Mines Safety	24602510	27732321
6	Kamlesh Sharma	Dy. Director of Mines Safety	24602510	-

NELLORE SUB-REGION, OPP.SP.BUNGLOW, DARGAMITTA, NELLORE. (STD-0861)				
7.	G.Vijay Kumar	Dy. Director of Mines Safety	2327363	2322472
GOA REGION, FATIMA BLDG, 2 FLR BERNARDO COSTA RD, MARGAO :403601 FAX-0832 - 2702335				
8.	A.K. Meghraj	Director of Mines Safety	2730985	2735050
9.	S.K.Das	Dy. Director of Mines Safety	2702335	2741132

SOUTHERN ZONE, BANGALURU
NO. 27, 24TH MAIN ROAD, NEXT TO IDBI BANK, J.P. NAGAR, V-PHASE, BANGALURU
FAX N0. (080) 26593349

Sl.	Name	Designation	Office	Resid.
1.	D. Sengupta	Dy.Director-General of Mines Safety	26593345	26846666
2.	B. K. Panigrahi	Director of Mines Safety (Elect.)	26593347	09448040753
BANGALURU REGION (FAX-08026593346)				
1.	P C Rajak	Director of Mines Safety	26593346	26830287
2.	R A M Parekh	Dy. Director of Mines Safety	26593348	-
BELLARY REGION, At & PO: BELLARY, Karnataka (STD 08392)FAX 08392-240064/245308				
1.	V.Laxminarayan	Director of Mines Safety	240614	240491 09449087811
2.	M.Narsaiah	Dy.Director of Mines Safety	-	09449008549
CHENNAI REGION, No.46(OLD)/5(New), 2nd Street, Block 'AA' ANNA NAGAR, CHENNAI- 600 040 (TN), FAX-044-26206770				
10	B.P.Ahuja	Director of Mines Safety	26206771	26206717
11	SK Gangopadhya	Dy. Director of Mines Safety	26206772	26153716
12	R.T.Mandekar	Dy. Director of Mines Safety	26206772	26206718

NORTHERN ZONE
ROOM.NO.201&203,CGO COMPLEX, HAPUR RD,
GHAZIABAD (UP), FAX : (0120) 2705365

Sl.	Name	Designation	Office	Resid.
1.	P.K. Sarkar	Dy.Director-General of Mines Safety	2705364/65/66	2766287
2.	G.L. Kanta Rao	Director of Mines	2705367	2764204

Sl.	Name	Designation	Office	Resid.
		Safety(Elect)		
3.	Radhey Shyam	Dy. Director of Mines Safety(Elect)	2705368	2764170
GHAZIABAD REGION				
1.	Dr.A.K.Sinha	Director of Mines Safety	2711597	2703413
2.	Mohan Singh	Director of Mines Safety	-	-
3.	A.K.Porwal	Dy. Director of Mines Safety	2783963	2962904
4.	U.P.Singh	Dy. Director of Mines Safety	2721894	2706219
5.	S. Satyamurthy	Dy. Director of Mines Safety	2789483	26263338
AJMER REGION, ANNA SAGAR LINK ROAD, AJMER : 305001, FAX : (0145) 2425781				
1.	D.K. Saxena	Director of Mines Safety	2425537	2627261
2.	S K Mandal	Dy. Director of Mines Safety	2425792	2629373
3.	Ramwatar Meena	Dy. Director of Mines Safety	2622043	2432571
VARANASI REGION, HOUSE NO. s-2/639-36, VARUNA VIHAR COLONY, NEAR J P MEHTA INTER COLLEGE, CENTAL JAIL ROAD, VARANASI – 221 002 STD-0542 FAX-2284911				
1.	R Kulshrestha	Director of Mines Safety	2284911	2282088/ 09389946999
2.	N Murawat	Dy.Director of Mines Safety	2284912	2506004/ 09580992425

GWALIOR REGION, HOUSE NO. 3, SITE NO. 1, CITY CENTRE, GWALIOR – 474 001(MP)(FAX-07512239656)				
1.	A K Jain	Director of Mines Safety	2239656 2284911/12	09425114244

NORTH WESTERN ZONE
MAIN JHAMAR KOTRA ROAD,SECTOR 6, UDAIPUR – 313002,
PHONE 0294-2461925& 2461926 FAX: (0294) 2461925

Sl.	Name	Designation	Office	Resid.
1	Rahul Guha	Dy.Director-General of Mines Safety	2461926 2465516/17	2460517
2	B. S Nim	Director of Mines Safety (Elect)	2465515	2461773/ 09414027749
UDAIPUR REGION,				
1		Director of Mines Safety	2465513	-
2	P.K.Maheshwari	Dy. Director of Mines Safety	24 61926	2465508
3	B.L.Meena	Dy. Director of Mines Safety	24 61926 2465514	2470094
AHMEDABAD REGION, NO. 30, SAHAJANAND VILL-II, NEAR ONGC COMPLEX, NEW C.G. ROAD, CHANDKHERA, AHMEDABAD – 882424 STD(079) FAX – 23290611				
1	N. Sharma	Dy. Director of Mines Safety	23290061	23290470
SURAT REGION, 3RD FLOOR CROSS CORNER BUILDING OPPOSITE SILICON SHOPERS, UDHANA UDYOG NAGAR, UDHANA MAIN ROAD, SURAT – 394210 (GUJARAT) STD(02612)				
1	U K SAHA	Dy. Director of Mines Safety	730857	08141405750

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