

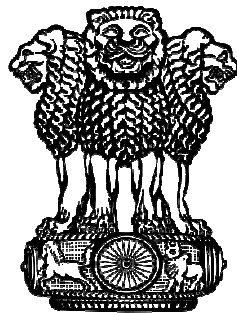
**AGENDA FOR 42ND MEETING OF
THE STANDING COMMITTEE ON
SAFETY IN COAL MINES**

On

26TH FEBRUARY, 2018

AT

NEW DELHI



सत्यमेव जयते

**GOVERNMENT OF INDIA
MINISTRY OF COAL**

**42ND MEETING OF THE STANDING COMMITTEE ON
SAFETY IN COAL MINES**

INDEX

Agenda Sl. No.	Agenda Items	Page Nos.
I	In Memoriam.	3-5
II	Confirmation of the minutes of the 41st meeting of Standing Committee on Safety in Coal Mines.	6-11
III	Action Taken Report on the recommendations of the 41st meeting of Standing Committee on Safety in Coal Mines held on 21.12.2016.	12-31
IV	Accident Statistics for last three years	32-57
V	Accident comparison between 41th& 42st Standing Committee Meeting.	58-59
VI	Analysis of Major Accidents that occurred during last one year.	60-65
VII	Risk Assissment and Management	66-71
VIII	Rationalization of Statutory Manpower	72-75
IX	Safety Budget and its utilization	76-77
IX	Occupational Health Hazards and Health Risk	78-82
X	Any other matter with permission of the Chair.	83

AGENDA ITEM NO. I

In Memoriam

In memory of all those who laid down their lives in furtherance of coal mining in the country since last meeting of the Standing Committee.

STANDING COMMITTEE ON SAFETY IN COAL MINES DEEPLY MOURNS THE SAD DEMISE OF THE FOLLOWING EMPLOYEES AND PAY HOMAGE TO ALL THOSE WHO SACRIFICED THEIR PRECIOUS LIVES FOR THE CAUSE OF THE NATION DURING THE PERIOD BETWEEN 41 ST & 42 ND MEETING OF THE STANDING COMMITTEE ON SAFETY IN COAL MINES.							
ECL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Hari Kishore Yadav Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	861120	Paid	NE
2.	Javed Akhtar Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	896000	Paid	NE
3.	Rajendra Yadav Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	847160	Paid	NE
4.	Brijesh Kumar Yadav Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	879800	Paid	NE
5.	Sanjay Kumar Sahi Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	778560	Paid	NE
6.	Md. Noorul Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	861120	Paid	NE
7.	Jai Prakash Rai Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	758240	Paid	NE
8.	Nageshwar Paswan Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	839680	Paid	NE
9.	Ajit Patel Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	854280	Paid	NE
10.	Sakil Akthar Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	861120	Paid	NE
11.	Vikash Patel Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	839680	Paid	NE
12.	Sunil Bhengra Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	839680	Paid	NE
13.	Kuleswar Kumar Contractor Dozer Operator	29.12.2016	Rajmahal OCP	Rajmahal	896000	Paid	NE
14.	Md. Julfakar Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	867640	Paid	NE
15.	Md. Jameer Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	847160	Paid	NE
16.	Rajkamal Goswami Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	867640	Paid	NE
17.	Sanjeet Kumar Viswakarma Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	867640	Paid	NE
18.	Laddu Prasad Contractor Excavator Operator	29.12.2016	Rajmahal OCP	Rajmahal	831920	Paid	NE
19.	Bhim Ram Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	854280	Paid	NE
20.	Bhimani Mudhurshyam Contractor Supervisor	29.12.2016	Rajmahal OCP	Rajmahal	747600	Paid	NE
21.	Gagan Kumar Singh Contractor Supervisor	29.12.2016	Rajmahal OCP	Rajmahal	854280	Paid	NE
22.	Lallu Khan Contractor Supervisor l/c	29.12.2016	Rajmahal OCP	Rajmahal	758560	Paid	NE
23.	Parwej Alam Contractor Tipper Driver	29.12.2016	Rajmahal OCP	Rajmahal	839680	Paid	NE
24.	Dev Karan Kole Contractor Driver	07.04.2017	Chitra Colliery	S P Mines	190000	NE	NE
25.	Pradip Kr. Bumwal Contractor Tipper Operator	10.06.2017	Sonepur Bazari OCP	Sonepur Bazari	300000	Paid	NE
26.	Ramesh Prasad Contractor Continuous Miner Operator	03.07.2017	Jhanjra Colliery	Jhanjra	2500000	2287788	NE
27.	Biswanath Bouri SDL Operator	25.07.2017	Kuardi- Tirat Colliery	Satgram	84600	Paid	Provided (Son)

28.	Ramyadi Prasad Multi Skill Worker	06.08.2017	Shyamsundarpur Colliery	Bankola	84600+LCS 112000	Details of Bank A/c not provided	Provided (Wife)
29.	Firoj Ahmad Khan Electrician	24.08.2017	Bonjemihari Colliery	Salanpur	Advance 30000 + LCS 112800	Dependent yet to apply	Provided (Son)
30.	Azad Khan Contractor Worker	06.09.2017	Bejdih Colliery	Sodepur	725480	Paid	NE
31.	Ranjit Bouri Looseman	16.11.2017	Narsamunda Colliery	Sodepur	556520	Paid	Provided (Son)
32.	Rajeev Kr. Singh Dozer Operator	17.11.2017	Rajmahal OCP	Rajmahal	112800	Paid	Provided (Wife)
BCCL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Vijay Kumar Rout General Mazdoor	25.02.2017	Damagoria OCP	C V Area	806640	Paid	No Claim (Unmarried)
2.	Bishnu Rawani Timber Mazdoor	21.09.2017	Phularitand Colliery	Barora	736680	Paid	Provided (Son)
CCL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Sadhan Kr. Singh Dozer Operator	20.02.2017	AKK OCP	B & K	484000	Paid	Provided (Daughter)
2.	Ramesh Manjhi Contractor Blasting Helper	05.04.2017	Bhurkunda OCP	Barka-Sayal Area	830680	NE	NE
3.	Bhola Prasad Mahto Contractor Worker	19.04.2017	Jharkhand OCP	Hazaribagh	815400	NE	NE
4.	Birendra Singh Contractor Munshi	22.05.2017	Ashoka OCP	Piparwar	680090	NE	NE
5.	Ashok Kumar Pump Khalasi	16.08.2017	Sayal-D Colliery	Barka-Sayal Area	652280	Paid	Provided (Son)
6.	Parvesh Nonia Trammer / Pump Khalasi	16.08.2017	Sayal-D Colliery	Barka-Sayal Area	527800	Paid	Provided (Son)
NCL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	B. Mahalaxmi Naidu Contractor Supervisor	03.01.2017	Dudhichua	Dudhichua	823800	NE	NE
2.	R Dayal Kushwaha Water Tanker Driver	11.02.2017	Nigahi	Nigahi	657280	Paid	Provided (Son)
3.	Jashwant Choubey Contractor Water Tanker Driver	10.06.2017	Khadia	Khadia	670160	NE	NE
WCL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Dilip Tandekar General Mazdoor	19.02.2017	Tawa – 1 UG	Pathakhera	823800	Paid	Under Process
2.	Tulsiram General Mazdoor	20.02.2017	Sami UG	Pathakhera	484200	Paid	Provided (Son)
3.	Nirsu Jha Dozer Operator	24.11.2017	Telwasa OC	Majri	513320	Paid	Under Process
SECL							
Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Ram Bahor Pandey Sub-ordinate Engineer (Excv.)	27.12.2016	Amlai OC	Sohagpur	489200	Paid	Provided (Son)
2.	Sahdeo Support Mistry	01.02.2017	Baherabandh UG	Hasdeo	713960	Paid	Under process
3.	Besahu Driller	01.02.2017	Baherabandh UG	Hasdeo	570720	Paid	Under process
4.	Rambahrose Driller	01.02.2017	Baherabandh UG	Hasdeo	570720	Paid	Provided (Son)
5.	Maiku Dresser	18.03.2017	Nawapara UG	Bhatgaon	741000	Paid	Under process
6.	Roshanlal Contractor Worker	04.05.2017	Chirimiri OCP	Chirimiri	702000	NE	NE
7.	Budhwar Das Driller	25.06.2017	Dhelwadiah UG	Korba	677760 (deposited to ALC)	Under process	Not yet nominated.

							Identification of dependent is under sub-judice
8.	Raj Hathgen Contractor Continuous Miner Operator	06.07.2017	Rani Atari UG	Chirimiri	806640	NE	NE
9.	Sangram Gochhyat Contractor Tipper Driver	21.10.2017	Dipka OCP	Dipka	747600	NE	NE
10.	Bhola Support Mistry	19.11.2017	Bhatgaon Colliery	Bhatgaon	503800	Paid	Under Process
11.	Rajesh Kumar Contractor Continuous Miner Helper	13.01.2018	Vijay West Colliery	Chirimiri	Under process	NE	NE
12.	Trupati Ranjan Sahu Contractor Surface Miner Operator	24.01.2018	Gevra OCP	Gevra	806640	NE	NE

MCL

Sl	Victim's Name & Designation	Accident Date	Mine	Area	Compensation (in Rs.)	Spl. Relief (Rs. 5.0 Lakhs)	Employment
1.	Krishna Chatter Contractor Water Tanker Operator	11.01.2017	Kaniha OCP	Kaniha	793240	Cheque ready (Not claimed)	NE
2.	R Singh Hembram Contractor Surface Miner Operator	13.02.2017	Samaleswari OCP	IB Valley	758240	NE	NE
3.	Gelu Majhi Contractor Tipper Driver	21.03.2017	Samaleswari OCP	IB Valley	725480	NE	NE
4.	Jagdish Bhutia Contractor Tipper Driver	30.03.2017	Kaniha OCP	Kaniha	823800	NE	NE
5.	Dhananjaya Singh Contractor Supervisor	06.12.2017	Bhubaneswari OCP	Jagannath	639200	250000	NE

SCCL Employees:

Sl No	Area	Mine	Date of Accident	Victim's Name (Sri)	Design.	Cause	Compensation paid (Rs.)
1	MNG	PKOC	25-12-2016	S Konda Reddy	EP Operator	Hit by Dumpers	570720
2	MNG	MNGOC	18-04-2017	D Raghupal Reddy	General Mazdoor	Bunker collapse	806640
3	MNG	MNGOC	18-04-2017	M Pavan Kumar	Badli Worker	Bunker collapse	823800
4	RG2	RGOC3	23-06-2017	V Rajendra Prasad	Overman	Ran over by Dumper	570720
5	SRP	RKNT	14-07-2017	B Vijaya Kumar	Shotfirer	Side fall	831920
6	SRP	SRP3	19-08-2017	R Rajaiah	Coal filler	Rope haulage	513320
7	RG2	GDK7LEP	12-08-2017	K Narsaiah	Hauler Operator	Rope haulage	498800
8	SRP	RK5	19-08-2017	D Lachanna	General Mazdoor	Rope haulage	542240

Contract Workmen:

Sl No	Area	Mine	Date of Accident	Victim's Name	Design.	Cause	Compensation paid (Rs.)
1	RG3	RGOC2	23-02-2017	Bhagwandeem	Contract Driver	Run over by Volvo	1100000
2	KGM	GKOC	01-03-2017	Raju Singh	Contract Driver	Tractor toppled	200000
3	SRP	Area Stores	03-05-2017	A Shankaraiah	Contract Driver	Fall of object	Under process
4	KGM	GKOC	09-05-2017	Gnan Chand	Contract Driver	Hit by Drill m/c	200000
5	MNG	MNGOC	21-05-2017	Pyla Malleswara Rao	Contract Workman	Run over by Dozer	788240

Confirmation of the minutes of 41st meeting of Standing Committee on Safety in Coal Mines

Minutes of the 41st Meeting of the Standing Committee on Safety in Coal Mines under the Chairmanship of Hon'ble Minister of Coal held on 21st December, 2016

The 41st meeting of the Standing Committee on Safety in Coal Mines was held on 21st December, 2016 in New Delhi under the Chairmanship of Shri Piyush Goyal, Hon'ble Minister of State (IC) Power, Coal, NRE and Mines.

2. The List of the participants is enclosed at Annexure.
3. At the outset, Chairman and members of the Committee paid homage to those who laid down their lives in discharging their duties in Coal Mining Industry since the last meeting of the Standing Committee on Safety in Coal Mines.
4. Welcoming the members of the Standing Committee on Safety in Coal Mines, Secretary Coal requested Adviser (P) to make brief presentation covering the agenda that was circulated.
5. Confirmation of the minutes of the 40th Meeting: The minutes of the 40th Meeting of the Standing Committee on Safety in Coal Mines held on 22nd February, 2016 were confirmed unanimously.
6. Adviser (Projects), MOC made a PowerPoint presentation on the status of safety, action taken report (ATR) on the recommendations of the previous meeting and the progress made in different aspects of safety issues since the last meeting of the Committee. During the presentation, the members discussed at length the root causes of the fatal accidents and steps required to avoid recurrence of such accidents.

(a) Root cause analysis of mine accident :

- Dr. B K Rai, representative of BMS, mentioned that recurrence of mine accidents is due to inadequate root cause analysis. He suggested that actual cause of accident needs to be identified through proper enquiry by the competent authority without any bias.
- Shri Nathulal Pandey, representative of HMS, mentioned that actual root causes are rarely revealed in the accident enquiry system. He suggested that the aim of accident enquiry should be fact-finding rather than responsibility fixing so that root cause of mine accident is identified and properly analysed to avert recurrence.
- Shri Manas Mukherjee, representative of CITU, mentioned that all near-miss incidents should also be thoroughly enquired to find out the root causes. He further mentioned that solution rests on proactive risk management and strengthening of Safety Committee at mine level. This needs involvement of all employees, both departmental and contractual, in assessing the risk management process.
- Shri C J Joseph, representative of AITUC, mentioned that risk assessment based Safety Management Plan (SMP) needs to be formulated and implemented in true spirit to find out root causes of a mine accident. He reiterated the need for strengthening Pit Safety Committee and Workman Inspectors for improving safety in mines.
- Shri V P Singh, representative of Coal Mines Officers Association of India (CMOAI), also reiterated

the need for strengthening of Pit Safety Committee institution to improve safety in mines. He mentioned that for identifying the root cause the enquiry should focus on fact finding instead of fixing responsibility.

- Dr. P.K. Sarkar, DDG (HQ), representing DGMS, mentioned that DGMS conducts accident enquiry of all fatal accidents as per requirement of statute and also certain types of serious accidents involving explosives and some major unsafe incidents. He agreed that during fatal accident enquiry facts are not revealed by the concerned for identifying the root cause of the accident. The accidents do not happen overnight and there is often, a history, which can be corroborated only through recording and analysing the near miss incidents and the circumstances prevailing prior to and during the course of accident. He further mentioned that present emphasis is on self-regulation; therefore, enquiry of serious accidents should be conducted by respective International Safety Organisations (ISOs).
- Secretary (Coal) desired to know whether such enquiries could be held through third party agencies having expertise in safety matters.
- Director (Tech), CIL mentioned that Safety Committee and Workman Inspectors shall be utilized for conducting enquiry into serious accidents and near miss incidents to prevent recurrence of mine accidents instead of engaging third party agencies. TU representatives also reiterated the views expressed by Director (T), CIL.
- Secretary (Coal) concluded that root cause analysis of all mine accidents should not only be a mere ritual rather it should be done more seriously by officials of DGMS and ISOs of coal companies. He further emphasized that the Pit Safety Committees must be strengthened and serious accidents and near-miss incidences should also be enquired into thoroughly by the members of Safety Committee and Workman Inspectors of respective mines in order to understand the root causes of accidents and to inculcate the safety culture in the workforce.

(Action: DG, DGMS/Chairman CIL/CMD's All Coal Companies)

(b) Safety of contractor workers& Vocational Training:

- Dr. B K Rai, BMS, mentioned that safety of contractor workers is not given due importance by the management; proper training is not being imparted to them. In response it was mentioned that adequate care is being taken for imparting training to contractor workers by coal companies however, due to frequent change in the contractors, it cannot be ensured that same workers are engaged by the new contractor.
- Shri M K Mukherjee, CITU, pointed out that frequent change of contractual workers is the root cause of mine accidents.
- Shri Nathulal Pandey, HMS, mentioned that Initial Medical Examinations (IME) / Periodical Medical Examinations (PME) of contractual employees are not being done properly and they are not imparted proper training.
- Shri C J Joseph, AITUC, desired that quality training should be imparted to contractor workers.
- All TU members emphasized the need for revamping of existing vocational training (VT) centres for imparting quality training to employees for enhancement of their knowledge, skill and safety awareness keeping in view advancement in level of mechanization. They requested the management

of coal companies to post competent officers who can take interest in training and improving safety of the workers and working conditions. It was also proposed that all the Vocational Training Centres (VTC) should be equipped with simulator based training of workers for improving safety consciousness.

- Shri C J Joseph, AITUC, mentioned that the existing Mine Vocational Training Rules (MVTR) - 1966 are outdated and does not suit the requirement of the present day mining operations. Therefore, these rules need to be amended by DGMS at the earliest. In response Dr. Sarkar, DDG mentioned that a review of VTR is under process.
- It was noted that there is a considerable delay in the formulation of new Vocational Training Rules. Secretary (Coal) desired that DGMS should formulate a draft proposal in this context and send the same to all stakeholders for finalization of new VT Rules. He further desired that all the existing VTCs should be strengthened for imparting quality training to employees. CIL Chairman was asked to extend all possible help required by DGMS in the formulation of the draft of Vocational Training Rules.

(Action : DG,DGMS/Chairman CIL)

(c) Improvement of Medical facilities in coal companies:

- Dr. B.K. Rai, BMS, mentioned that most of company's hospitals are defunct and there is a huge shortage of trained nurses and other paramedical staff. He also desired that medical facilities being provided to employees of coal companies need to be improved.
- Shri S.K.Pandey, BMS, mentioned that coverage of diseases under purview of PME should be revised and new diseases being caused due to vibrations of the machines, stress generated due to work environment etc. should also be considered for inclusion in the context of PME. He further mentioned that basic equipment for carrying out PME and IME is also not being maintained properly in the hospitals of coal companies in spite of repeated requests.
- Shri C.J. Joseph, AITUC desired that section 25(1) of the Mines Act-1952 should be modified and list of notified diseases should be amended so that suitable changes in forms P & P-1 regarding IME & PME respectively could be made.

(Action :Chairman CIL/CMD's All Coal Companies)

(d) Shortage of statutory manpower:

- Shri Nathulal Pandey, HMS, mentioned that accidents are increasing due to shortage of statutory manpower. In CIL there is a shortage of 21% considering in all categories of executives and supervisors. This includes a shortage of about 20% in the category of over men and 21% in mining sirdar. He requested that the available statutory qualified persons should be engaged against the vacancies in order to reduce the shortage in short term.
- Shri C J Joseph, AITUC, mentioned that shortage of competent persons as per statute should be filled up for safe operation in mines.
- Secretary (Coal) desired to know from DGMS, about the level of mechanization of mining methods considered for assessing the requirement of statutory supervisors to be deployed at mine. Since, it was on the basis of low level of mechanization in the past, he desired that the statutory norms of the requirement of statutory manpower should be revisited taking into account the advancement in mining technology particularly in opencast mines and mechanized underground mines.
- Dr. Sarkar, DDG (HQ), mentioned that the Coal Mines Regulation-1957 is under amendment which

will take into account the requirement of statutory manpower keeping in view the present level of mechanization.

(Action :Chairman CIL/CMD's All Coal Companies)

(e) Man Riding System:

- Shri S K Pandey mentioned that installation of man riding systems should be expedited as the same is pending for a long time.

(Action :Chairman CIL/CMD's All Coal Companies)

(f) Expenditure on R&D:

- In regard to the utilization of safety budget, it was observed that though there is no shortage of resources for safety purposes, however, only 72% of the budget provision was spent by CIL in 2015-16. Shri C J Joseph, mentioned that expenditure on R&D projects on safety and conservation aspects should be enhanced. Also coal companies were directed to look into the safety budgets and their proper utilization.

(Action :Chairman CIL/CMD's All Coal Companies)

(g) Strata Management:

- Shri S K Pandey, BMS, observed that roof and side fall accidents are increasing because of improper implementation of the strata control techniques. He desired that all strata control cells should be strengthened for preventing mine accidents due to roof and side fall.

(Action :Chairman CIL/CMD's All Coal Companies)

(h) First Aid Competition:

- Shri C J Joseph, AITUC, mentioned that training of workmen in first aid is highly important in saving the life of a person involved in any accident. It is therefore necessary to revive the first aid training in mines and also to have a national level competition for updation of knowledge and skill of employees in this area.

- Dr. P.K. Sarkar also endorsed the views on strengthening first-aid training in mines.

(Action :DG,DGMS/Chairman CIL/CMD's All Coal Companies)

(i) Security of explosive magazines:

- Shri S K Pandey, BMS, pointed out that Protocol in this regard is not being implemented in true spirit. He desired that the matter may be taken up for enhancing security of explosive magazines by all the coal companies.

(Action :CMD'sAll Coal Companies)

(j) Parallel Police enquiry in case of mine accident:

- Shri V P Singh, CMOAI, referred to harassment of mining officials by local Police in the event of any mine accident. In this context, he mentioned that verdict of different high courts are being deliberately overlooked by Police. He requested Secretary (Coal) to intervene in this matter so that double enquiry for same offence under the Mines Act and Indian Penal Code (IPC) is avoided and harassment of mining officials is stopped.

- Shri C J Joseph, AITUC, desired that local authority should take requisite permission and/or intimate MoC before prosecuting any coal mine owner and permission of respective CMD for prosecuting Agent and/or Manager, who are held responsible for any mine accident.

- Adviser (P) mentioned that this issue was discussed earlier a number of times in the meetings of the Standing Committee on Safety and Ministry of Coal had written to the Chief Secretaries of Coal Mining States for appropriate action in the matter. However, a view was expressed by many of the States that Mines Act and IPC are two different statutes and they cannot stop taking action as requested by MoC.

- Citing the judgments of Hon'ble Odisha & Jharkhand High Court, Shri Nathulal Pandey, HMS,

expressed that parallel enquiry in the event of any mine accident should be discontinued. In this regard, he requested Secretary (Coal) to intervene in this matter for redressal of harassment of mining officials by Local Police.

(Action :MOC)

7. In regard to improving the hospital management system Hon'ble Minister directed that:

- A Committee shall be constituted with two CMDs (Shri Gopal Singh, CMD, CCL & BCCL, Shri R R Mishra, CMD, WCL & ECL), Chief Medical Superintendent (CMS), CIL and two TU members for suggesting modalities for improving medical facilities in the existing hospitals and dispensaries of CIL and its subsidiaries. In this context, he directed that the said committee shall visit Narayana Hridayalaya Hospital, Bengaluru to get first-hand experience regarding efficient management of health care system with low cost. Further, a protocol may be developed in consultation with AIIMS, New Delhi and the same should be implemented in a time bound manner.

(Action :Chairman CIL)

- Hon'ble Minister directed that no compromise shall be made on health issues of employees for providing better health care facilities; the possibility of augmentation of health care services through expert outsourced agencies may also be explored.

(Action: Chairman CIL/CMD's All Coal Companies)

- Hon'ble Minister directed CIL to examine the demand of TUs for extension of additional ex Gratia benefit of Rs. five lakh to the dependent of deceased contractor worker in line with the payment made to dependent of departmental employees.

(Action: Chairman CIL/CMD's All Coal Companies)

- Hon'ble Minister expressed his concern regarding air born dust in mines. He was of the view that even in the opencast mines of Australia the air born dust in mines is an issue and it is being tackled through effective water spraying and proper maintenance of haul roads. He directed all CMDs of coal companies to pay special attention in controlling the air borne dust in mining areas for improving the environment conditions.

(Action :Chairman CIL/CMD's All Coal Companies)

- Hon'ble Minister further expressed his concern about the sustenance of coal mining operations particularly in view of the low demand situation for coal globally. He mentioned that it is imperative to go into the issue of cost effectiveness of production of coal.

(Action :Chairman CIL/CMD's All Coal Companies)

8. Concluding the discussions, Secretary (Coal), emphasized that concerted and sustained efforts are required for enhancement of safety standards in coal mines. He drew the attention to the safety status in the coalmines of Australia for adopting them as benchmark by CIL and other coal companies for improving safety in their mines. He urged upon the CMDs of CIL and other subsidiaries to pay more attention to the safety matters as discussed in the meeting and put all sincere efforts in improving the situation in mines.

9. The meeting ended with Vote of thanks to the Chair.

**List of the participants of the 41st meeting of Standing Committee on Safety in Coal Mines held on
21.12.2016 in New Delhi.**

MINISTRY OF COAL

1. **Minister of State (I/C) for Coal Chairman**
2. Shri Sushil Kumar Secretary
3. Shri Suresh Kumar Additional Secretary
4. Shri D.N. Prasad Adviser (Projects)
5. Shri Peeyush Kumar Director (Technical)
6. Shri Satyajeet Ojha Sr. Manager (Mining), CIL/MOC
7. Shri Ashish Kumar Sr. Manager, CIL/MOC

TRADE UNION REPRESENTATIVES

8. Dr. B.K. Rai BMS
9. Shri Manas Kumar Mukherjee AICWF (CITU)
10. Shri Nathulal Pandey HMS
11. Com. C.J. Joseph AITUC
12. Shri Surender Kumar Pandey BMS
13. Shri V. P. Singh, GM(MM) CMOAI

MINISTRY OF LABOUR & EMPLOYMENT, DGMS

14. Shri Suresh Singh Director, MOLE
15. Shri P.K. Sarkar Dy. DG , DGMS, Dhanbad
16. Shri C. Ramesh Kumar Director, DGMS

COAL INDIA LIMITED

17. Shri S. Bhattacharya Chairman CIL
18. Shri Mohan Das Director (P&IR), CIL
19. Shri Shekhar Saran CMD, CMPDIL (Addl. Charge) & Dir (Tech.), (CIL)
20. Shri Gopal Singh CMD, CCL
21. Shri Rajiv R Mishra CMD, ECL/WCL
22. Shri T.K. Nag CMD, NCL
23. Shri Anil K. Jha CMD, MCL
24. Shri J.P. Singh Director (O), MCL
25. Shri K. Prasad Director(O), SECL
26. Shri Subir Das Director (Mines), NLC
27. Shri D. Gangopadhyay Director (Tech), CIL & CMD BCCL
29. Shri C.B. Sood E.D. (S&R), CIL
30. Shri A.K. Sangh GM (S&R), BCCL
31. Shri D.D. Tripathi GM (S&R), CIL
32. Shri Debdulal Sarkar Sr. Manager (Mining), CIL
33. Shri N. Bhaskar R.O. SCCL

TATA STEEL

34. Shri S.K. Singh GM, Tata Steel Ltd.
35. Shri Sanjay Rajoria GM (Jharia) Tata Steel

AGENDA ITEM NO. III

Action Taken Report on recommendations of 41st meeting of Standing Committee on Safety in Coal Mines held on 21.12.2016 at New Delhi

Point No. 5: Confirmation of the minutes of the 40th Meeting: The minutes of the 41st Meeting of the Standing Committee on Safety in Coal Mines held on 22nd February, 2016 were confirmed unanimously.

Point No. 6: Adviser (Projects), MOC made a power Point Presentation on the status of safety, action taken report (ATR) on the recommendations of the previous meeting and the progress made in different aspects of safety issues since the last meeting of the Committee. During the presentation, the members discussed at length the root causes of the fatal accidents and steps required to avoid recurrence of such accidents

a): Root cause analysis of mine accident

(i) Dr. BK Rai, representative of BMS, mentioned that recurrence of mine accidents is due to inadequate root cause analysis. He suggested that actual cause of accident needs to be identified thorough proper enquiry by the competent authority without any bias.

(ii) Shri Nathulal Pandey, representative of HMS, mentioned that actual root causes are rarely revealed in the accident enquiry system. He suggested that the aim of accident enquiry should be fact finding rather than responsibility fixing so that root cause of mine accident is identified and properly analyzed to avert recurrence.

(iii) Shri Manas Mukherjee, representative of CITU, mentioned that all near-miss incidents should also be thoroughly enquired to find out the root causes. He further mentioned that solution rests on pro-active risk management and strengthening of Safety Committee at mine level. This need involvement of all employees both departmental and contractual in assessing the risk management process.

(iv) Shri C J Joseph, representative of AITUC, mentioned that risk assessment based Safety Management Plan (SMP) need to be formulated and implemented in true spirit to find out root causes of mine accident. He reiterated the need for strengthening Pit Safety Committee and Workman Inspectors for improving Safety in mines.

(v) Shri V.P. Singh, representative of Coal Mines Officers Association of India (CMOAI), also reiterated the need for strengthening of Pit Safety Committee institution to improve safety in mines. He mentioned that for identifying the root cause the enquiry should focus on fact finding instead of fixing responsibility.

(vi) Dr. P.K. Sarkar, DDG (HQ), representing DGMS, mentioned that DGMS conducts accident enquiry of all fatal accidents as per requirement of statute and also certain types of serious accidents involving explosives and some major unsafe incidents. He agreed that during fatal accident enquiry facts are not revealed by the concerned for identifying the root

cause of the accident. The accidents do not happen overnight and there is often a history, which can be corroborated only through recording and analyzing the near miss incidents and the circumstances prevailing prior to and during the course of accident. He further mentioned that present emphasis is on self-regulation; therefore, enquiry of serious accidents should be conducted by respective International Safety Organizations (ISOs).

(vii) Secretary (Coal) desired to know whether such enquiries could be held through third party agencies having expertise in safety matters.

(viii) Director (Tech), CIL mentioned that Safety Committee and Workman Inspectors shall be utilized for conducting enquiry into serious accidents and near miss incidents to prevent recurrence of mine accidents instead of engaging third party agencies. TU representatives also reiterated the views expressed by Director (T), CIL.

(ix) Secretary (Coal) concluded that root cause analysis of all mine accidents should not only be a mere ritual rather it should be done more seriously by officials of DGMS and ISOs of coal companies. He further emphasized that the Pit Safety Committees must be strengthened and serious accidents and near-miss incidences should also be enquired into thoroughly by the members of Safety Committee and Workman Inspectors of respective mines in order to understand the root causes of accidents and to inculcate the safety culture in the workforce.

Action Taken :

Coal India Ltd. (CIL): All serious accidents, dangerous occurrences and near miss incidents are thoroughly enquired to find out the root cause of the accidents and the recommendations thereof are circulated and enforced to prevent recurrence of accidents of same nature.

Inquiry & Root cause analysis of serious and near miss accidents conducted in 2017:

Sub.	ECL	BCCL	CCL	NCL	WCL	SECL	MCL	TOTAL
Nos.	20	13	05	10	18	36	06	108

DGMS: Instruction has been issued for the Inquiry Officer to address effective control strategies that will not only eliminate or reduce the deficiencies due to specific direct and indirect causes of the accident /incidence but also propose system deficiencies or inadequate safety system components (root causes) that has contributed to the accident/incident.

SCCL: All accidents and near miss incidences are being enquired in to thoroughly by Internal Safety Organisation to understand the root causes of accidents.

Near miss incidents are also enquired thoroughly and root cause is being identified involving Pit Safety committee and Union representatives. Safety Management Plan (SMP) based on Risk Assessment is being prepared and updated and implemented and all risk factors are being monitored through monthly follow up meetings and quarterly review meetings.

As part of compliance to the recommendations of 9th& 10th Conferences, SCCL has imparted training to 10 Executives at SIMTARS, Australia on SAFETY MANAGEMENT

SYSTEM for providing further training to the trainers at operational level. Steps being initiated to establish “Safety Management Training Centres” each at RG and MMR areas for imparting training to the Risk Management Teams of mines by SIMTARS Accredited Trainers (SATs).

Pit Safety Committee and Workmen Inspectors are working as per statute and being strengthened. During Annual Safety Week 2017 in SCCL, workers participation in safety management through Pit Safety Committee (PSC) has also been identified as a thrust area and the PSCs that are functioning effectively will be rewarded.

NLCIL: All near miss incidents are also thoroughly enquired to find out root causes. Risk management plans are made operational in which WMI and Safety Committee members are involved

All Serious and fatal accidents as well as near miss incidents are thoroughly enquired by multi disciplinary team consisting of senior executives of concerned Mines for finding out the root causes besides Internal Safety Organisation.

Circulars on findings/ recommendations/ precautions to be taken to avert similar incidents are issued. Also discussed in safety forums and meetings.

In all NLCIL Mines, Risk assessment based Safety Management Plans (SMP) are prepared and made operational.

Workmen Inspector (WI) and Safety Committee members position in NLCIL Mines

WI/SCM	Required	Available
Workmen’s Inspector	26	29
Safety committee membe	15	17

All efforts being made to strengthen the safety committee.

The unsafe acts and unsafe conditions attended the accidents are thoroughly enquired to find out any system failures

b) Safetyofcontractorworkers & vocational training:

(i) Dr. B.K. Rai, BMS, mentioned that safety of contractor workers is not given due importance by the management; proper training is not being imparted to them. In response it was mentioned that adequate care is being taken for imparting training to contractor workers by coal companies however, due to frequent change in the contractors, it cannot be ensured that same workers are engaged by the new contractor.

(ii) Shri M K Mukherjee, CITU, pointed out that frequent change of contractual workers is the root cause of mine accidents.

(iii) Shri Nathulal Pandey, HMS, mentioned that Initial Medical Examinations (IME)/Periodical Medical Examinations (PME) of contractual employees are not being done properly and they are not imparted proper training.

(iv) *Shri C.J. Joseph, AITUC, desired that quality training should be imparted to contractor workers.*

(v) *All TU members emphasized the need for revamping of existing vocational training (VT) centres for imparting quality training to employees for enhancement of their knowledge, skill and safety awareness keeping in view advancement in level of mechanization. They requested the management of coal companies to post competent officers who can take interest in training and improving safety of the workers and working conditions. It was also proposed that all the Vocational Training Centres (VTC) should be equipped with simulator based training of workers for improving safety consciousness.*

(vi) *Shri C.J. Joseph, AITUC, mentioned that the existing Mine Vocational Training Rules (MVTR) -1966 are outdated and does not suit the requirement of the present day mining operations. Therefore, these rules need to be amended by DGMS at the earliest. In response Dr. Sarkar, DDG mentioned that a review of VTR is under process.*

(vii) *It was noted that there is a considerable delay in the formulation of new Vocational Training Rules. Secretary (Coal) desired that DGMS should formulate a draft proposal in this context and sent the same to all stakeholders for finalization of new VT Rules. He further desired that all the existing VTCs should be strengthened for imparting quality training to employees. CIL Chairman was asked to extent all possible help required by DGMS in the formulation of the draft of Vocational Training Rules*

Action Taken :

DGMS:The following actions have been taken by DGMS in this regard:

- Constitution of committee comprising of stakeholder from various coal, metal and oil mining companies for formulation of draft Mines Vocational Training Rules.
- First draft has been circulated to stakeholders and Zonal offices of DGMS for submission of comments.
- After receipt of comments from the stakeholders and after due consideration, a final draft will be prepared to be presented before the Committee constituted under Section 12 of Mines Act, 1952 as required by the said Act.

CIL:

- Contractors' workers are given initial basic training as per the Mine Vocational Training Rules- 1966 in the respective VTCs.
- Contractor workers are also given sensitization training for improving their safety consciousness and awareness. It is an on-going process.
- SOPs for all mining contractual operations are formulated and enforced.
- Surprise checks of I-Card, Validity of Driving License, Gate Pass of contractual workers/operator, use of PPEs etc. are ensured.
- Safety posters are prominently displayed at conspicuous places of contractor camps.
- Special Safety Drives are conducted from time to time for enhancement of skill & competency level of contractor workmen.

Training and sensitization programs imparted to contractual workmen in 2017:

Sub.	ECL	BCCL	CCL	NCL	WCL	SECL	MCL	TOTAL
Nos.	2340	1462	3229	6000	5276	8032	5482	31821

SCCL: Safety of the contractor workers is being ensured on par with the departmental employees. Training on par with the employees of SCCL is being imparted to the contract workmen as per the statute. Contract workmen are only being deployed after imparting training as per rule.

Basic training is being imparted to contract workers before deployment for work. On the job training is being imparted to the contract workmen before being deployed on machinery by the OEM at their factory.

Imparting training at revamped training centers with the help of OEM, Technical Training Centre etc. by posting competent executives to improve job knowledge, skill, safety consciousness etc. of the employees concerned.

Working models have been developed. It is proposed to procure Simulators for SCCL workmen. Upgradation of the training facilities is under process. Infrastructure is being upgraded at all MVTCS.

c) Improvement of Medical facilities in coal companies:

(i) Dr. B.K. Rai, BMS mentioned that most of company's hospitals are defunct and there is a huge shortage of trained nurses and other paramedical staff. He also desired that medical facilities being provided to employees of coal companies need to be improved.

(ii) Shri S.K. Pandey, BMS, mentioned that coverage of diseases under purview of PME should be revised and new diseases being caused due to vibrations of the machines, stress generated due to work environment etc. should also be considered for inclusion in the context of PME. He further mentioned that basic equipment for carrying out PME and IME is also not being maintained properly in the hospitals of coal companies in spite of repeated requests.

(iii) Shri C.J. Joseph, AITUC desired that section 25(1) of the Mines Act-1952 should be modified and list of notified diseases should be amended so that suitable changes in forms P&P-1 regarding IME & PME respectively could be made.

Action Taken :

CIL: Upgradation of hospitals is a continuous process. CMSs of all subsidiary companies have formulated a comprehensive recommendation for restructuring and upgradation of hospitals & dispensaries. In the meanwhile, following subsidiaries have adopted upgradation of their respective hospitals:

ECL: Blood Bank Refrigerator, Boyel's Apparatus (Anaesthesia machine). ELISA plate reader & washer, Hospital equipment & furniture, Aqua guard Storage cooler cum water purifier, GI video endoscope, High precision water bath, Capital items for Surgery dept., HF X-ray machine, Complete Dental Unit, Computerized Radiography system and HD Endo-vision system have been installed an operational in Sanctoria Hospital.

ELISA plate reader & washer, Multipara monitor, Blood donor couch, Blood collection Monitor, Blood Bank Refrigerator, Ophthalmic Instruments, 3D Color Doppler. Anaesthesia Workstation,

Spare Lamp Xenon Light Source, HF X-ray machine, Laparoscopic hand instruments, Computerized Radiography system & Binocular Microscope have been installed and operational in Central Hospital, Kalla. X-ray machine installed at Jhanjra Area Hospital.

BCCL: 250 hospital beds procured. 10 multi-channel 24 hrs. Monitors have been installed at Central Hospital, Dhanbad. Water Coolers procured. Fibre-optic Gastro scope & Colonoscopy, flexible URS with LASER & CR system, Colour Doppler machine, Anaesthetic Work Station are in final stages of procurement. Renovation and reopening of pathological laboratory of Munidih Hospital. X-ray machine is going to be procured. Procurement of Spirometer & Audiometer for all PME centres is also under process.

CCL: Procurement of equipment -Refraction Unit, Operating microscope, haemodialysis and advanced training of doctors at AIIMS for Phaco-emulsion technique, pulmonology and critical care etc.

NCL: Upgradation of Haemodialysis unit – 4 no of haemodialysis machines are now working. Lithotripsy machine installed & working. Urodynamic machine with uroflometry installed. Fully Automatic Analyzer for haematology & Biochemistry, Mercury Analyzer & ELISA reader installed in Pathology Dept. Total indoor wards, OT complex, labour room & CCU renovated. A critical care ambulance procured for transportation of seriously ill patients to Varanasi. 6 nos. of air-conditioned ambulances have been also procured. Roof top RO plant with capacity of 1000 litres of water for drinking purpose of Nehru Shatbadi Chilkitsalaya. Arthroscopy unit is functional for Joint Replacement Surgery.

WCL: Medical treatment is provided to the employees either in Company Hospital or empaneled to outside hospitals.

- All PME Centres are equipped with adequate infrastructure and manpower as per statutory requirement. IME and PME records are maintained.
- The shortage of trained nurses and other para-medical staff is filled up by outside recruitment as well as thorough departmental selection process.

SECL: Dialysis facility is functional at Central Hospitals. 24 employees selected as Staff Nurse and paramedical staff through Departmental examination.

MCL: MCL is in the process of commissioning two 50 bedded hospitals, one at Lakhanpur and other at Basundhara Area. NSCH, Talcher, a 115 bedded hospital is being converted to 500 bedded hospitals which will function as Hospital of the proposed Medical College.

- Two nursing schools, one in Talcher Coalfields & another in Ib Coalfields of MCL are in operation.
- Construction work for full fledged Medical College in Talcher coalfields is in progress. Commencement of this medical college will facilitate future absorption of fresh doctors & para medical staff in MCL.

NEC: OPD complex renovated, sitting arrangements, drinking water, TV & Air conditioning (AC) have been provided in patient waiting area. Pathological Laboratory & radiological facilities improved. Super Specialty Health Care Services is being provided by renowned outside doctors for Dermatology, Cardiology & Orthopaedics.

SCCL: SCCL is maintaining its hospitals in good condition. The shortage of trained Nurses and other Paramedical staff etc. is being fulfilled through hiring for various hospitals of SCCL which is under way. Medical facilities like CT Scanners, defibrillators, ICCU Ambulances installed with ventilator facilities, Infusion pumps, central line Oxygen delivered systems, all emergency medicines have been provided. ICCU ambulances equipped with ventilator facilities are provided at dispensaries/mines also that are located away from the Main Hospital/Area Hospitals. In PME, detailed examination is being conducted by OHS Medical Officer to detect any disease, which are caused by vibrating machines/tools and the general mental status is also examined during the course of IME/PMEs. The infrastructure is well maintained at all OHS centres in SCCL.

NLCIL:

- 369 bedded General Hospital is maintained.
- Apart from 369 bedded General Hospital, 02 no. dispensary, 01 no. Ayurvedic Hospital are being maintained.
- 67 nos. of Qualified Medical Practitioners, 213 Para medical staff are working in above said hospitals and dispensaries.
- Critical cases are referred to Corporate hospitals located at Chennai/Pondicherry.
- All Mine employees are undergoing IME/PME.
- NLCIL is maintaining a department of equipped Department of Industrial Hygiene and Occupational Diseases(DIHOD) with adequate equipments and manpower.
- A Master Health check-up is being conducted for all the employees who crossed 45 years of age.

(d) Shortage of statutory manpower:

i) Shri Nathulal Pandey, HMS, mentioned that accidents are increasing due to shortage of statutory manpower. In CIL there is a shortage of 21% considering in all categories of executives and supervisors. This includes a shortage of about 20% in the category of overmen and 21% in mining sirdar. He requested that available statutory qualified persons should be engaged against the vacancies in order to reduce the shortage in short term.

ii) Shri C.J. Joseph, AITUC mentioned that shortage of competent persons as per statute should be filled up for safe operation in mines.

iii) Secretary (Coal) desired to know from DGMS, about the level of mechanization of mining methods considered for assessing the requirement of statutory supervisors to be deployed at mine. Since, it was on the basis of low level of mechanization in the past, he desired that the statutory norms of the requirement of statutory man power should be revisited taking into account the advancement in mining technology particularly in opencast mines and mechanized underground mines.

iv) Dr. Sarkar, DDG (HQ), mentioned that the Coal Mines Regulation-1957 is under amendment which will take into account the requirement of statutory manpower keeping in view the present level of mechanization.

Action:ChairmanCIL/CMD'sAllCoalCompanies)

Action Taken :

CIL: Present status of Statutory Manpower is as below: (as on 31.01.2018)

Design	Status	ECL	BCCL	CCL	NCL	WCL	SECL	MCL	NEC	Total
Overman	Strength	893	627	637	377	669	1229	471	22	4925
	Req.	982	816	654	534	979	1355	646	51	6017
Mining Sirdar	Strength	1137	464	534	136	1525	1814	264	58	5932
	Req.	1281	797	745	172	1450	2074	548	88	7155
Electrical Supervisor	Strength	357	391	404	26	344	911	240	10	2683
	Req.	565	472	437	148	529	1060	429	13	3653
Surveyor	Strength	186	129	94	30	218	190	110	5	962
	Req.	197	132	93	54	213	182	160	6	1037

- However, re-assessment of requirement of Statutory man power is being done taking into cognizance of advancement in mining technology particularly in OCP and mechanized UG mines as well as modified provisions made under CMR-2017 (recently enforced).
- Further, the mines are being reorganized and unsafe & unviable mines are being closed leading to optimization and redeployment of statutory manpower in other operating mines.
- Efforts are on for fulfilling the shortages through external recruitment, internal transfer, departmental promotion after imparting training for competency examination qualification.

Further actions taken in this regard and status there of:

SI No.	Items	Status
1	Steps taken for promotion of departmental candidates having requisite statutory certificate to fill up statutory shortage	To encourage & equip internal candidates to fill up statutory posts, a committee headed by CGM (Environment), CIL was constituted to design a training scheme with a purpose to create a pool of candidates in the company who can clear the statutory examination. The committee has prepared the draft scheme which after competent approval shall be circulated for implementation. The salient features of the Draft Scheme are as under: - Selection of Candidates- Subsidiaries will invite applications from employees who are having requisite qualification for appearing in the statutory examination and select potential candidates for training. Training: -Mining Sirdar- Candidate on selection would undergo training for 3 Years in Underground Mine Overman- On selection candidate would go structured training for 30 Days in Underground Mine Surveyor- On selection would undergo training for a period of 2

		<p>Years in Underground Mine</p> <p>Electrical Supervisor- On selection would undergo structured training for 30 days</p> <p>Cash incentive-</p> <p>Rs. 10,000/- would be given to all candidates acquiring the statutory certificates in first attempt.</p> <p>Rs. 7500/- in second attempt</p> <p>Rs. 5000/- in third attempt</p>
2	<p>Steps taken to fill up shortage of Electrical Supervisors as per the Sub-Committee recommendations</p>	<p>The cadre schemes with regard to Electrical Supervisor were not attractive compared to the responsibilities associated with the Job. Different subsidiaries used to adopt different modus-operandi during filling up of vacancies/promotion for the post. Therefore, many departmental employees possessing valid statutory certificates were unwilling to take up the statutory responsibility despite large no. of vacancies pointed out by DGMS.</p> <p>In view of the above, to suggest suitable reforms in the existing policy for filling up shortage in the statutory post of Electrical Supervisors in mines of CIL a Sub-Committee was constituted under the CIL Board which came out with the following recommendations:</p> <p>A) Reforming the existing policy/cadre scheme for filling up shortage in the</p> <p><u>Statutory post of Electrical Supervisor in mines of CIL :</u></p> <ul style="list-style-type: none"> • Departmental employees (non-Diploma holders) working in non-supervisory grade, irrespective of their present category/designation/grade, who pass Supervisory Certificate valid for working as Electrical Supervisor in mines under Electricity Rules, shall be placed in <u>T&S Grade 'C'</u> on production of such Certificate at any point of time. However, they may be <u>promoted to T&S Grade 'B' after one year of experience.</u> • Departmental employees (Diploma holders) working in non-supervisory grade, irrespective of their present category/designation/grade, who pass Supervisory Certificate valid for working as Electrical Supervisor in mines under Electricity Rules, shall be placed in <u>T&S Grade 'B'</u> on production of such Certificate at any point of time. • Departmental employees (Diploma holders/Non-Diploma holders) working in non-supervisory grade, irrespective of their present category/designation/grade, who pass Electrical Supervisory Certificate without mining part valid for working as Supervisor under Electricity Rules, shall be inducted in <u>T&S Grade 'C'</u> on production of such Certificate at any point of time and

		<p>shall be deployed in establishments other than mining like Coal Washeries, Ropeways, CWS, Colonies, Hospitals, etc. However, they may be <u>promoted to higher grade only on acquiring Supervisory Certificate for mining part.</u></p> <ul style="list-style-type: none"> • Fresh recruitment may be done in <u>T&S Grade 'C' having Diploma in Electrical & Supervisory Certificate of Competency without mining part also, who shall be promoted to higher grades only after acquisition of Certificate for mining part</u> or else, they shall remain in same grade till they pass and possess Certificate for mining part. <p><i>Further career growth of the above employees shall be governed, as per the existing cadre scheme.</i></p> <p>The aforesaid recommendations were approved by the Standardization Committee under JBCCI.</p> <p>Accordingly, an order dated 27.07.2016 was issued to all concerned for reforming the existing Policy for filling up shortage in the statutory post of Electrical Supervisors in mines of CIL.</p> <p>The matter was further discussed in the meeting of Apex JCC consisting of representatives of Management & Central Trade Unions and another Office Order dated 03.10.2017 was issued in modification to the Office Order dated 27.07.2016 wherein it was inserted <i>the above shall be made effective subject to the availability of vacancy on the basis of DGMS requirement.</i></p>																
3	<p>Promotion of Departmental candidates to Executive cadre to hold statutory post</p> <p>Recruitment of Statutory Executives in last 3 years and current year (MT Mining/E&M/Excav.)</p>	<p>Selection process for promotion from Non-Executive to Executive cadre in Mining discipline is under process.</p> <p>Verification of 2nd Class MMCC Certificates are submitted to DGMS Dhanbad in Oct-2017. The same is still awaited. On receiving the same, DPC will be conveyed.</p> <p>Figures of recruitment of MT (MINING, E&M, Excav.) are as follows</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Mining</th> <th>E&M</th> <th>Excavation</th> </tr> </thead> <tbody> <tr> <td>2015</td> <td>50</td> <td>85</td> <td>91</td> </tr> <tr> <td>2016</td> <td>74</td> <td>150</td> <td>35</td> </tr> <tr> <td>2017</td> <td>243</td> <td>87</td> <td>129</td> </tr> </tbody> </table>	Year	Mining	E&M	Excavation	2015	50	85	91	2016	74	150	35	2017	243	87	129
Year	Mining	E&M	Excavation															
2015	50	85	91															
2016	74	150	35															
2017	243	87	129															

SCCL :

Mining Executives:

Category	Requirement (2017-18)	MOR as on 30.11.17	Variance (+/-)
Mining Executive (I class)	409	516	+107
Mining Executive (II class)	508	366	-142
Mining Executive (I & II) Total	917	882	-35

Mining Executives (IInd Class):- Internal and External selection of 61 Mining graduates is in Process.

Mining Supervisory Staff

Category	Requirement (2017-18)	MOR as on 30.11.17	Variance (+/-)
Overman	1055	892	-163
Mining sirdar	558	708	+150
Shot firer	1109	1193*	-84
MS+SF	1667	1901	+234
Total	2722	2793	+71

* MOR includes 640 JMET (MS/SF) who have completed one year training and have applied for Overman statutory certificate and 154 JMETs (MS/SF) who are undergoing necessary one year training in UG mines.

NLC:

Mine are having statutory personnel required under statute. Further Mining Diploma holders are inducted and they are deputed for underground training (in phased manner) to obtain Overman Statutory Certificate of Competency.

Mine are having statutory personnel required under statute. Further Mining Diploma holders are inducted and they are deputed for underground training (in phased manner) to obtain Overman Statutory Certificate of Competency.

Efforts are being made to comply the new Coal Mines Regulations 2017. Experiences required for restricted certificate to be clarified.

(e) Man Riding System:

Shri S.K. Pandey mentioned that installation of Man Riding Systems should be expedited as same is pending for a long time.

Action Taken :

CIL: Subsidiary-wise status of installation of man riding system in UG mines having arduous travel is given below.

Subsidiary Company	ECL	BCCL	WCL	SECL	MCL	Total
Man riding system operational in Jan 2018	05	02	12	15	04	38
Man riding system operational in Nov. 2016	02	01	08	11	06	28

Subsidiary-wise and mine-wise status of installation of man riding system in UG mines having arduous travel is given in *Annexure-1 (Page-84-86)*.

SCCL:All underground mines in SCCL are provided with Man Riding Systems. Total Eleven mine car systems and forty one Chair lift systems have been installed in SCCL.

NLC: Not applicable.

(f) Expenditure on R&D:

In regard to the utilization of safety budget, it was observed that though there is no shortage of resources for safety purposes, however, only 72% of the budget provision was spent by CIL in 2015-16. Shri C J Joseph, mentioned that expenditure on R&D projects on safety and conservation aspects should be enhanced. Also coal companies were directed to look into the safety budgets and their proper utilization.

(Action: Chairman CIL/CMD's All Coal Companies)

Action Taken :

CIL: Expenditure on R&D projects on safety and conservation.

- CIL R&D Board headed by Chairman, CIL is functioning. CMPDI acts as the Nodal Agency for processing the proposals for approval, preparation of budget estimates, disbursement of fund, monitoring the progress of implementation of the projects, etc. So far, 79 projects have been taken up under the fund of CIL R&D Board, out of which 61 projects have been completed till 31.03.2017.
- Moreover, individual subsidiary company also takes up several scientific studies as well as R&D projects in collaboration with Scientific Institutions such as CIMFR, Dhanbad, IIT-ISM, Dhanbad, IIT, Kharagpur, NIT, Rourkela, CMPDI, Ranchi, NRSC, Hyderabad etc.
- Expenditure under R&D Projects by CMPDI up to 31.01.2018 is as below:
CIL R&D Projects: Rs.1800.00 lakh
MOC S&T Projects:Rs. 141.61 lakh
Total: Rs. 1941.61lakh
The details of R&D Projects are in *Annexure 2 (Page-87)*

SCCL: Expenditure towards scientific studies in SCCL by R&D Department

Year	No of studies	Amount (Rs. Lakhs)
2016-17	16	242.70
2017-18 (upto Dec 2017)	13	164.29
Expected during 2017-18	30	315.00

NLC: Adequate Safety budget is provided at NLCIL and is fully utilized for the benefit of workmen employed in the Mine.

- Sufficient budget is allocated for R&D projects on Safety and conservation aspects and the same is fully utilized.
- A separate Unit called Center for Applied Research and Development (CARD) is functioning for NLCIL Mines and safety related R& D initiatives are being carried out regularly.

(g): Strata Management:

Shri S.K. Pandey, BMS, observed that roof and side fall accidents are increasing because of improper implementation of the strata control techniques. He desired that all strata control cells should be strengthened for preventing mine accidents due to roof and side fall.

(Action: Chairman CIL/CMD's All Coal Companies)

Action Taken :

CIL:

- Strata control cells have been established at Subsidiary HQ level under Geo-Technical Cell strengthened through posting of Geologist.
- Strata control cells are also functional in all Areas having UG mines.
- Modern gadgets such as Tale-Tell, Load Cell, Borehole Extnsometer, Convergence recorder etc. are being provided in the UG mines for better strata control.
- Sensitisation of supporting personnel for better Strata Management.
- The RMR determination and accordingly revision of support system is regularly done.
- Use of UDM, mechanised roof drilling machines and resin bolting has been adopted in phases for better strata management

SCCL:At present, three strata control cells are working in SCCL, one cell in each region viz. Kothagudem, Ramagundam and Bellampalli regions. Each cell is provided with one suitable qualified Engineer. They are assisting the mine managers in determining the RMR, preparation of support plans, instrumentation plans of depillaring districts, guiding in geotechnical studies and data analysis to find the site specific warning levels for strata monitoring instruments.

At Corporate R&D dept. Numerical Modeling Cell is constituted and the cell is equipped with FLAC-2D&3D software and provisioned with one qualified mining Engineer to conduct the numerical modeling.

(h) First Aid Competition:

i) Shri C.J. Joseph, AITUC, mentioned that training of workmen in first aid is highly important in saving the life of a person involved in any accident. It is therefore necessary to revive the first aid training in mines and also to have a national level competition for updation of knowledge and skill of employees in this area.

ii) Dr. P.K. Sarkar also endorsed the views on strengthening first-aid training in mines.
(Action: DG, DGMS/Chairman CIL/CMD's All Coal Companies)

Action Taken:

DGMS:The following initiative have been taken by DGMS to promote First Aid in the mines:

i) In the recent meeting of the Board of Mining Examinations, decision has been invite organization and institutes having facilities similar to that of St. Johns Ambulance Association (India) for imparting of training in First Aid to apply for permission to issue First Aid Certificates which will be recognized by the Board. The notification on this matter ws issued by DGMS on 6.9.2017.

ii) Competition in First Aid is one of the events in all Mines Safety Week Celebration.

iii) Competition in First Aid 'theory' and 'practical' are also integral parts of every Zonal Mines Rescue Competitions and All India Mines Rescue Competitions which are organized every year by the mine managements under the aegis of DHGMS. During these competitions, every year, the First Aid knowledge of more than 500 persons get refreshed and their skills tested,

CIL: First Aid Training in mines and holding of National Level First Aid Competition for updating of knowledge and skill.

- First Aid certificate is issued by St. John Ambulance (India), Indian Red Cross Society based on their Manuals and Guidelines.
- All Mining Competent officials have obtained mandatory first-aid certificates from St. John Ambulance (India).
- First aid training is imparted to the employees at VTCs periodically. Further, employees undergoing rescue training are also imparted basic first-aid training.
- Furthermore, in the proposed VTC modules, imparting First Aid training has become mandatory for all trades.
- Inter-Area First Aid Competition is being held on regular basis to enhance theoretical & practical knowledge of the employees.

SCCL: Imparted First Aid training through audio, visual and practical classes to all Front line supervisors, Mech. & Ele. Supervisors, tradesmen and other category of employees to make

available more no. of first aid trained persons to render first aid in needy situation as per the rule 45 of Mines Rules, 1955.

Mines Rescue Team participates in National and International rescue and First aid competitions and secured first and second prizes in both National and International competitions.

In December 2017, SCCL teams secured First best and second Best in first aid in the 48th All India Mines rescue Competitions held at Jamadoba, Jharkhand.

NLCIL: First Aid training to all the Employees of mines are imparted by Industrial Medical Centre, NLCIL GH with the association of St. John Ambulance.

First Aid Training rendered during last three Years

Year	No. of persons trained
2015-16	675
2016-17	529
2017-18(till date)	329

“State level First Aid workshop & hands on training for mine employees-2017” was conducted by NLCIL management in association with St. John ambulance during the month of October 2017.

(i) Security of explosive magazines:

Shri S.K. Pandey, BMS, pointed out that Protocol in this regard is not being implemented in true spirit. He desired that the matter may be taken up for enhancing security of explosive magazines by all the coal companies.

(Action: CMD’s All Coal Companies)

Action Taken:

CIL: All explosive magazines are having valid license issued by PESO and all rules and regulations of PESO are complied.

- Manned round the clock and guarded by security personnel and CISF personnel.
- Security Protocol of explosive magazine has been prepared and implemented.
- CCTV surveillance provided at some places as measures of strengthening of security of explosive magazine.
- Barbed wire/concertina coil fencing has been done at explosive magazines.
- Motorized Alarm installed at some Magazines.

SCCL: Adequate security arrangements have been made for the magazines with proper fencing around the explosive magazines.

CISF personnel are guarding main Explosive Magazines of Srirampur, Mandamarri and Bellampalli areas.

Armed Reserve Police Forces are guarding the magazines at Ramagundam.

SCCL's S&PC personnel are guarding at the remaining magazines (Kothagudem, Yellandu & Manuguru areas).

NLCIL: All available explosive magazines are well guarded by CISF.

(j): Parallel Police enquiry in case of mine accident:

i) Shri V P Singh, CMOAI, referred to harassment of mining officials by local Police in the event of any mine accident. In this context, he mentioned that verdict of different high courts are being deliberately overlooked by police. He requested Secretary (Coal) to intervene in this matter so that double enquiry for same offence under the Mines Act and Indian Penal Code (IPC) is avoided and harassment of mining officials is stopped.

ii) Shri C J Joseph, AITUC, desired that local authority should take requisite permission and/or intimate MoC before prosecuting any coal mine owner and permission of respective CMD for prosecuting Agent and/or Manager, who are held responsible for any mine accident.

(iii) Advisor (P) mentioned that this issue was discussed earlier a number of times in the meetings of the Standing Committee on Safety and Ministry of Coal had written to the Chief Secretaries of Coal Mining States for appropriate action in the matter. However, a view was expressed by many of the States that Mines Act and IPC are two different statutes and they cannot stop taking action as requested by MoC.

iv) Citing the judgements of Hon'ble Odisha & Jharkhand High Court, Shri Nathulal Pandey, HMS, expressed that parallel enquiry in the event of any mine accident should be discontinued. In this regard, he requested Secretary (Coal) to intervene in this matter for redressal of harassment of mining officials by Local Police.

Action Taken:

MOC: In past, MOC had written a letter to the State Government in this regard. Coal Companies are also taking up this issue with State Government.

POINT NO. 7

In regard to improving the hospital management system Hon'ble Minister directed that:

i) A Committee shall be constituted with two CMDs (Shri Gopal Singh, CMD, CCL&BCCL, Shri R R Mishra, CMD, WCL & ECL), Chief Medical Superintendent (CMS), CIL and two TU members for suggesting modalities for improving medical facilities in the existing hospitals and dispensaries of CIL and its subsidiaries. In this context, he directed that the said committee shall visit Narayana Hridayalaya Hospital, Bengluru to get first-hand experience regarding efficient management of health care system with low cost. Further a protocol may be developed in consultation with AIIMS, New Delhi and the same should be implemented in a time bound manner.

(Action: Chairman CIL)

ii) *Hon'ble Minister directed that no compromise shall be made on health issues of employees for providing better health care facilities; the possibility of augmentation of health care services through expert outsourced agencies may also be explored.*

• (Action: Chairman CIL/CMDs All Coal Companies)

Action Taken:

CIL:

- The Committee constituted for the above purpose had visited Narayana Hrudayalaya Hospital, Bengaluru to get first-hand experience regarding efficient management of health care system with low cost.
- A protocol has been prepared in consultation with AIIMS, New Delhi and circulated to all subsidiaries for compliance. The said protocol is under implementation.

CIL and Subsidiaries are in constant endeavour of ensuring availability of appropriate medical facilities to its employees:

- **CIL:** Multi-speciality & single speciality private hospitals are being empanelled at CIL-HQ. This is an ongoing process. As of now, 311 private hospitals are empanelled all over India. Other than Govt. hospitals, speciality & super speciality services of these hospital are availed by employees and their dependent family members on referral by the subsidiary companies.
- **ECL:** Employees and their dependent family members are referred to Super speciality hospitals empanelled by CIL for those ailments, treatment of which are not available in company hospitals. Moreover, retired employees and their spouses are getting treatment at company's hospitals as well as at empanelled hospitals of CIL under CPRMS scheme of CIL.
- **BCCL:** At present, no medical services through expert outsourced agency. Medical treatment is provided to the employees either in Company Hospital or empanelled to outside hospitals.
- **NCL:** Doctors from empanelled hospitals and reputed Govt. hospitals are being invited to hold camps and workshops. Joint Replacement surgeries of knee & hip are being done for last three years since 2015.
- **WCL:** Medical treatment is provided to the employees either in Company Hospital or empanelled to outside hospitals.
- **SECL:** Providing Dialysis facility through outsourced agency. Medical treatment is provided to the employees either in Company Hospital or empanelled to outside hospitals.
- **MCL:** MCL is well equipped with two nos. of Central Hospitals; one at Talcher Coalfield and another at IB Valley Coalfield over and above Regional Hospitals functioning in each operative Area & Dispensary in each mine providing health care facilities to its employees. With view to augmenting the existing health care system, some alternative arrangements in the form of outsourcing health care facilities is also being done in PPP mode.

- **NEC:** Augmentation of health care services through expert doctors from renowned hospital are being done. Super Specialty Health Care Services are being provided by renowned outside doctors from Dibrugarh, Yashoda Hospital, Hyderabad for Dermatology, Cardiology & Orthopaedics.

SCCL: In SCCL, a High Power Committee consisting GM (Material Procurement), GM (Finance & Accounts), GM (Per.) Welfare & CSR, GM (Management Systems) and Chief Medical Officer has been constituted in SCCL for suggesting further improvement in the medical and health facilities.

- Addition of certain advanced medical equipment has been done and Air Conditioning of wards is being done. Further, improvement is in the process.
- Recently, Director (PA&W) of the company has inspected the hospitals of the company to review the medical facilities and proposed for up-gradation wherever required.
- SCCL is providing best available medical facilities to its employees. In this regard, 55 Super Specialty Hospitals have been identified and empanelled located at Hyderabad, Mumbai, New Delhi and Vellore cities.

NLCIL:

- 369 bedded General Hospital is maintained.
- Apart from General Hospital, 02 no. dispensary, 01 no. Ayurvedic Hospital are being maintained.
- 67 nos. of Qualified Medical Practitioners, 213 Para medical staff are working in above said hospitals and dispensaries.
- Critical cases are referred to Corporate hospitals located at Chennai/Pondicherry.

iii) *Hon'ble Minister directed CIL to examine the demand of TUs for extension of additional ex-gratia benefit of Rs. Five lakh to the dependent of deceased contractor worker in line with the payment made to dependent of departmental employees.*

CIL: Examination of payment of Ex-gratia to dependent of the deceased Contractual employees in line with departmental employees:

- The matter was discussed in the 114th Meeting of CMDs held on 24.06.2017 at Kolkata wherein it was decided to constitute a committee under Chairmanship of Director (Pers.), ECL.
- The committee held its meeting on 9th August 2017 at New Delhi and prepared a report which was shared to all the members for views/suggestions for finalization.
- The next meeting of the committee was held and the Committee has finalized the Report for placing in CIL Board.
- Further, as per the decision taken in the 3rd Meeting of JBCCI-X, a committee consisting of Management & Central Trade Unions visited SCCL to examine the payment of compensation to the dependents of the contractors' workers in case of Fatal Mine Accidents.

iv): *Hon'ble Minister expressed his concern regarding air born dust in mines. He was of the view that even in the opencast mines of Australia the air born dust in mines is an issue and it is being tackled through effective water spraying and proper maintenance of haul roads. He directed all CMDs of coal companies to pay special attention in controlling the air borne dust in mining areas for improving the environment conditions.*

(Action: Chairman CIL/CMD's All Coal Companies)

Action Taken:

CIL:

- Water spraying systems by mobile water sprinklers / tankers in all haul roads and transport roads.
- Continuous water spraying in coal stock, CHPs and surface roads with the help of jet sprinkling systems / rain guns / fixed type and mobile water mist sprays etc.
- Wet drilling arrangement / dust extractor provided with drill machines.
- Plantation of trees in and around colony and around sources for enhancing green coverage.
- Substantial improvement road conditions for reducing generation of dust in transport road.
- Mechanical Road Sweeping machines at some places.
- Fortnightly Survey for assessing dust concentration at different places is being done.

The status of Dust Suppression System in OC mines of CIL is given as *Annexure-3(Page88-90)*

SCCL: Steps taken to mitigate the air pollution in the mines of SCCL are furnished hereunder:

- Effective water spraying arrangements with sensors arranged at coal loading bunkers at pit head on surface and at coal transfer points in the mines and coal handling plants.
- All the roads connecting mines, CHP's, Workshops and colonies are black topped in the SCCL mining areas to prevent dust getting airborne.
- SCCL has deployed 28KL mobile water sprinklers in opencast mines for dust suppression on haul roads and coal transport roads.
- Wet-drilling is being practiced in all the opencast mines.
- Dust generation from the OB dump due to wind are controlled significantly by planting grasses on slopes and plants on dump top soon after their formation.
- Avenue plantation is raised along roads for dust control. Plantation is done around the quarry and OB dumps, which serves as a barrier to prevent the dispersion of air borne dust.
- Mist spray arrangements at coal loading and transfer points.

NLC:

- NLCIL Mines are working with BWE- Conveyor Technologies comes under Green Mining.
- However mines are equipped with piped water sprinklers along the belt transfer points, stock yards etc. besides mobile water sprinklers.
- Surveillance is conducted for assessment of Air borne respirable dust besides online continuous monitoring of environment at strategic locations.

(v) *Hon'ble Minister further expressed his concern about the sustenance of coal mining operations particularly in view of the low demand situation for coal globally. He mentioned that it is imperative to go into the issue of cost effectiveness of production of coal.*

(Action: Chairman CIL/CMD's All Coal Companies)

Action Taken:

SCCL: High end technology and higher capacity machinery are being used to make the production of coal cost effective. Continuous Skill development through training is being done.

NLC: Operation efficiencies are augmented with re-organisation of layouts, such as conveyor systems, pumping etc.

POINT NO. 8

Concluding the discussions, Secretary (Coal), emphasized that concerted and sustained efforts are required for enhancement of safety standards in coal mines. He drew the attention to the safety status in the coal mines of Australia for adopting them as benchmark by CIL and other coal companies for improving safety in their mines. He urged upon the CMDs of CIL and other subsidiaries to pay more attention to the safety matters as discussed in the meeting and put all sincere efforts in improving the situation in mines.

Action Taken:

SCCL: SCCL is conscious, responsible and proactive as regards Safety in its operations. SCCL's prime objective is to ensure that coal mines are operated in a safe manner that protects the employees and the people around the mines as also the environment during mining.

SCCL has a clear Safety policy approved by its Board. SCCL operates coal mines as per the provisions of Mines Act, 1952, Coal Mines Regulations, 1957 (Now CMR 2017) and rules and orders made there under. SCCL is developing safety activities/practices and is continuously reviewing, improving and updating them as and when the changed circumstances demand.

NLC: Apart from above, NLCIL Mines are planned to equip with the following State-of-Art technology for improved Safety:

- **CCTV Surveillance at Specialised Mining Equipment(SME) :** SMEs are equipped with CCTV Surveillance systems to avert inadvertent entry of workforce into accident prone areas. Phase-I completed, phase-II will be taken up.
- **Slope Stability Monitoring Radars:** Procurement of Slope Stability Monitoring Radars for pre-warning of slope/rock mass movement is in progress.
- **Simulator :** Procurement of SIMULATOR for imparting training on real-time basis to SME operators etc. is in progress.
- **Belt Ripping Machines** are introduced to avert injuries to the persons.

AGENDA ITEM NO. IV

Accident statistics for last three calendar years from 2015 to 2017 and current year up to 31.1.2018 in comparison to same period last year & between 41ST & 42ND Standing Committee Meeting.

SAFETY STATISTICS:

1. DGMS:

(i) Accident Trend in coal mines in India

Sl. No.	Parameters	2015	2016	2017	2018
1	Number of fatal accidents	54	67	52	2
2	Number of Fatalities	55	93	57	2
3	Number of Serious Accidents	302	268	180	8
4	Number of Serious Injuries	316	277	185	10

Note :Serious injuries of fatal accidents are also considered in computation of number of serious injuries.
Figures updated as on 31.01.2018 and figures for the year 2018 are provisional.

(ii) Company-wise fatal accidents/ fatalities, serious accidents & serious injuries during 2015-2018

Owner	Fatal Accidents				Fatalities				Serious Accidents				Seriously Injureds*			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
BCCL	7	12	2	0	7	13	2	0	12	6	5	0	15	6	5	0
CCL	3	6	6	0	3	6	7	0	9	7	3	0	9	7	3	0
ECL	8	10	9	0	8	32	9	0	21	19	6	1	22	19	6	1
MCL	3	2	5	0	3	2	5	0	4	4	2	0	4	4	2	0
NCL	1	4	4	0	1	4	4	0	12	9	6	0	13	11	6	0
SECL	10	9	8	2	10	10	10	2	33	23	10	0	36	24	10	2
WCL	7	6	5	0	7	6	6	0	17	17	7	0	20	17	7	0
GMDC	3	0	0	0	3	0	0	0	0	1	0	0	1	3	0	0
IISCO	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0
NLC	1	2	1	0	1	2	1	0	3	1	0	0	3	1	0	0
SCCL	7	12	11	0	7	14	12	0	187	176	135	7	187	178	140	7
TISCO	0	2	0	0	0	2	0	0	3	1	5	0	3	3	5	0
ELCALTD	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
VSLPL	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0
SASAN	1	1	0	0	2	1	0	0	0	0	1	0	1	0	1	0
HINDALCO	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
PRISM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
JPASSOC	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0
SOVA	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TOTAL	54	67	52	2	55	93	57	2	302	268	180	8	316	277	185	10

* Serious Injuries of fatal accidents are also included.

Note : Figures as on 31.01.2018 and figures for the year 2018 are provisional.

(iii) Companywise causewise fatal accidents & fatalities during 2015-2018 in Coal Mines

Owner	Year	Roof fall/Side fall		Haulage, Winding, Conveyor		Truck, Dumpers		Non-Transport Machinery		Explosives		Electricity		Others		Total	
		A	F	A	F	A	F	A	F	A	F	A	F	A	F	A	F
BCCL	2015	1	1	0	0	2	2	1	1	0	0	1	1	2	2	7	7
	2016	1	1	0	0	4	5	1	1	0	0	1	1	5	5	12	13
	2017	0	0	1	1	1	1	0	0	0	0	0	0	0	0	2	2
CCL	2015	0	0	0	0	1	1	1	1	0	0	0	0	1	1	3	3
	2016	0	0	0	0	4	4	1	1	0	0	0	0	1	1	6	6
	2017	0	0	0	0	2	2	1	1	1	1	1	1	1	2	6	7
ECL	2015	2	2	2	2	2	2	1	1	0	0	0	0	1	1	8	8
	2016	1	1	3	3	2	2	2	2	0	0	1	1	1	23	10	32
	2017	2	2	0	0	4	4	0	0	0	0	1	1	2	2	9	9
MCL	2015	0	0	0	0	1	1	2	2	0	0	0	0	0	0	3	3
	2016	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2	2
	2017	0	0	0	0	3	3	2	2	0	0	0	0	0	0	5	5
NCL	2015	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	2016	0	0	0	0	4	4	0	0	0	0	0	0	0	0	4	4
	2017	0	0	0	0	3	3	1	1	0	0	0	0	0	0	4	4
SECL	2015	3	3	0	0	2	2	3	3	0	0	1	1	1	1	10	10
	2016	5	6	0	0	3	3	1	1	0	0	0	0	0	0	9	10
	2017	2	4	0	0	2	2	1	1	1	1	0	0	2	2	8	10
	2018	1	1	0	0	1	1	0	0	0	0	0	0	0	0	2	2
WCL	2015	0	0	1	1	1	1	3	3	0	0	0	0	2	2	7	7
	2016	0	0	2	2	1	1	0	0	0	0	0	0	3	3	6	6
	2017	3	3	0	0	0	0	1	2	0	0	0	0	1	1	5	6
CIL	2015	6	6	3	3	10	10	11	11	0	0	2	2	7	7	39	39
	2016	8	9	5	5	18	19	6	6	0	0	2	2	10	32	49	73
	2017	7	9	1	1	15	15	6	7	2	2	2	2	6	7	39	43
	2018	1	1	0	0	1	1	0	0	0	0	0	0	0	0	2	2
GMDC	2015	0	0	0	0	2	2	0	0	0	0	0	0	1	1	3	3
IISCO	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
NLC	2015	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
	2016	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2
	2017	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
SCCL	2015	2	2	0	0	2	2	0	0	0	0	0	0	3	3	7	7
	2016	4	6	2	2	3	3	1	1	0	0	0	0	2	2	12	14
	2017	1	1	2	2	3	3	3	4	0	0	0	0	2	2	11	12
TISCO	2016	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2	2
VSLPL	2015	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	2017	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
SASAN	2015	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2
	2016	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
PRISM	2015	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
SOVA	2015	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1

A = NO. OF ACCIDENTS

F = NO. OF FATALITIES

Note : Figures as on 31.01.2018 and figures for the year 2018 are provisional.

(iv): Companywise and causewise serious accidents & serious injuries during 2015-2018

Owner	Year	Roof fall/Side fall		Haulage, Winding, Conveyor		Truck, Dumpers		Non-Transport Machinery		Explosives		Electricity		Others		Total	
		A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I
BCCL	2015	1	1	1	1	1	1	0	0	1	3	0	0	8	8	12	14
	2016	0	0	0	0	1	1	1	1	0	0	0	0	4	4	6	6
	2017	1	1	0	0	0	0	1	1	0	0	0	0	3	3	5	5
CCL	2015	0	0	1	1	0	0	2	2	0	0	0	0	6	6	9	9
	2016	0	0	0	0	0	0	1	1	0	0	0	0	6	6	7	7
	2017	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	3
ECL	2015	2	3	2	2	0	0	2	2	0	0	0	0	15	15	21	22
	2016	5	5	2	2	1	1	2	2	1	1	0	0	8	8	19	19
	2017	0	0	1	1	1	1	1	1	0	0	0	0	3	3	6	6
	2018	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
MCL	2015	0	0	0	0	1	1	0	0	1	1	0	0	2	2	4	4
	2016	0	0	0	0	1	1	1	1	0	0	0	0	2	2	4	4
	2017	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2	2
NCL	2015	0	0	0	0	5	5	0	0	0	0	0	0	7	8	12	13
	2016	0	0	0	0	4	4	0	0	0	0	0	0	5	5	9	9
	2017	0	0	0	0	0	0	1	1	0	0	1	1	4	4	6	6
SECL	2015	3	3	5	5	2	2	5	5	2	3	2	2	14	14	33	34
	2016	5	5	3	3	2	2	1	1	0	0	1	1	11	11	23	23
	2017	4	4	0	0	0	0	1	1	1	1	0	0	4	4	10	10
WCL	2015	1	1	1	1	3	3	1	1	0	0	0	0	11	11	17	17
	2016	5	5	4	4	1	1	2	2	2	2	0	0	3	3	17	17
	2017	1	1	0	0	0	0	2	2	0	0	1	1	3	3	7	7
CIL	2015	7	8	10	10	12	12	10	10	4	7	2	2	63	64	108	113
	2016	15	15	9	9	10	10	8	8	3	3	1	1	39	39	85	85
	2017	6	6	1	1	2	2	6	6	1	1	3	3	20	20	39	39
	2018	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
GMDC	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	3
IISCO	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
NLC	2015	0	0	0	0	0	0	2	2	0	0	0	0	1	1	3	3
	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
SCCL	2015	10	10	25	25	2	2	6	6	1	1	1	1	142	142	187	187
	2016	2	2	23	23	2	2	8	8	0	0	5	5	136	137	176	177
	2017	9	11	13	13	4	4	4	4	2	5	1	1	102	102	135	140
	2018	1	1	1	1	0	0	0	0	0	0	0	0	5	5	7	7
TISCO	2015	2	2	0	0	0	0	0	0	0	0	0	0	1	1	3	3
	2016	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
	2017	3	3	0	0	0	0	0	0	0	0	0	0	2	2	5	5
ELCALTD	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
SASAN	2017	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
HINDALCO	2015	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1

A = NO. OF ACCIDENTS

I = NO. OF SERIOUSLY INJURED

Note :Figures as on 31.01.2018 and figures for the year 2018 are provisional.Serious injuries from fatal accidents are not included.

(v) : Company-wise Place-wise fatal accidents during 2015-2018 in Coal mines

Owner	Underground				Opencast				Aboveground				Total			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
BCCL	2	1	1	0	5	7	0	0	0	4	1	0	7	12	2	0
CCL	0	0	1	0	1	5	5	0	2	1	0	0	3	6	6	0
ECL	5	6	4	0	2	2	3	0	1	2	2	0	8	10	9	0
MCL	0	1	0	0	3	1	5	0	0	0	0	0	3	2	5	0
NCL	0	0	0	0	1	4	4	0	0	0	0	0	1	4	4	0
SECL	5	6	3	1	4	3	4	0	1	0	1	2	10	9	8	2
WCL	4	2	3	0	1	2	1	0	2	2	1	0	7	6	5	0
CIL	16	16	12	1	17	24	22	0	6	9	5	2	39	49	39	2
GMDC	0	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0
IISCO	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
NLC	0	0	0	0	1	2	1	0	0	0	0	0	1	2	1	0
SCCL	4	8	4	0	2	0	5	0	1	4	2	0	7	12	11	0
TISCO	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0
VSLPL	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0
SASAN	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0
PRISM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
SOVA	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0

Note : Figures as on 31.01.2018 and figures for the year 2018 are provisional.

(vi): Company-wise Place-wise fatalities during 2015-2018 in Coal mines

Owner	Underground				Opencast				Aboveground				Total			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
BCCL	2	1	1	0	5	7	0	0	0	5	1	0	7	13	2	0
CCL	0	0	2	0	1	5	5	0	2	1	0	0	3	6	7	0
ECL	5	6	4	0	2	24	3	0	1	2	2	0	8	32	9	0
MCL	0	1	0	0	3	1	5	0	0	0	0	0	3	2	5	0
NCL	0	0	0	0	1	4	4	0	0	0	0	0	1	4	4	0
SECL	5	7	5	1	4	3	4	0	1	0	1	2	10	10	10	2
WCL	4	2	3	0	1	2	1	0	2	2	2	0	7	6	6	0
CIL	16	17	15	1	17	46	22	0	6	10	6	2	39	73	43	2
GMDC	0	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0
IISCO	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
NLC	0	0	0	0	1	2	1	0	0	0	0	0	1	2	1	0
SCCL	4	10	4	0	2	0	5	0	1	4	3	0	7	14	12	0
TISCO	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0
VSLPL	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0
SASAN	0	0	0	0	2	1	0	0	0	0	0	0	2	1	0	0
PRISM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
SOVA	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0

Note : Figures as on 31.01.2018 and figures for the year 2018 are provisional.

(2) COAL INDIA LTD

In-depth Analysis of Fatalities & Serious Injuries from Jan- 2015 to Dec- 2017

A. Subsidiary-wise, Mine-type-wise break up of fatalities

Company	Fatalities in UG	% of UG fatalities	Fatalities in OC	% of OC fatalities	Total	% of total fatalities
ECL	18	32.73	29	35.80	47	34.56
BCCL	4	7.27	11	13.58	15	11.03
CCL	2	3.64	10	12.35	12	8.82
NCL	0	0.00	9	11.11	9	6.62
WCL	10	18.18	6	7.41	16	11.76
SECL	20	36.36	8	9.88	28	20.59
MCL	1	1.82	8	9.88	9	6.62
NEC	0	0.00	0	0	0	0
CIL	55	100	81	100	136	100

(UG- 40.44% & OC- 59.56%)

B. Cause-wise – UG mine

Cause	Fatalities in UG	% of UG fatalities	Company
1.Roof Fall/ Side Fall	24	43.64	ECL-6,BCCL-1,SECL-13,WCL-3,MCL-1
2.Non Transport M/c	7	12.73	ECL-3,WCL-2,SECL-2
3.Fall of Object/ Person	5	9.09	ECL-3,WCL-1, SECL-1
4.Haulage/Winding	7	12.73	ECL-3, BCCL-2, WCL-1,SECL-1
5.Electricity	3	5.45	ECL-1,SECL-2
6.Explosive	2	3.64	WCL-1, SECL-1
7.Miscellaneous	7	12.73	ECL-2, BCCL-1, CCL-2, WCL-2
Total	55	100	

Misc. includesinrush of water, drowning and dead body found at haulage road.

C. Cause-wise – OC mine

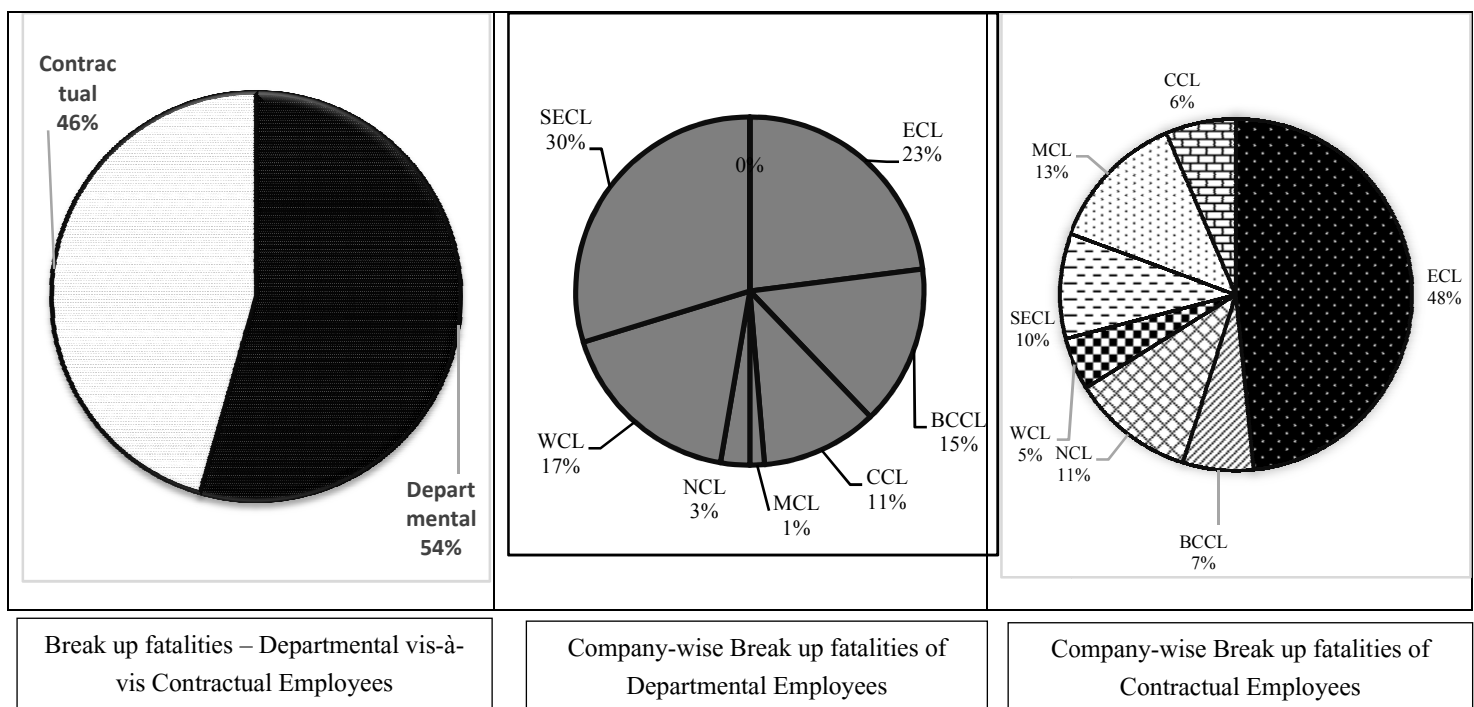
Cause	Fatalities in OC	% of OC fatalities	Company
Tippers & Dumpers	29	35.80	ECL-3,BCCL-4,CCL-5,NCL-7,WCL-3, SECL-3,MCL-4
OB Dump Slide	23	28.40	ECL-23
Non Transport M/Cs	16	19.75	ECL-2,BCCL-4,CCL-3,NCL-1,WCL-1,SECL-1, MCL-4
Fall of Person / Object	3	3.70	BCCL-1, WCL-1, SECL-1
Electricity	3	3.70	ECL-1, BCCL-1, CCL-1
Explosive	1	1.23	CCL-1
Miscellaneous	6	7.41	BCCL-1, NCL-1,WCL-1, SECL-3
Total	81	100	

Misc. includesburied under OB, fiery coal & OB and toppling of explosive van.

Fatalities of Departmental vis-à-vis contractual Employees - Detailed Analysis from January, 2015 to December, 2017

A. Company-wise break-up of Fatalities of Departmental vis-à-vis Contractual Employees

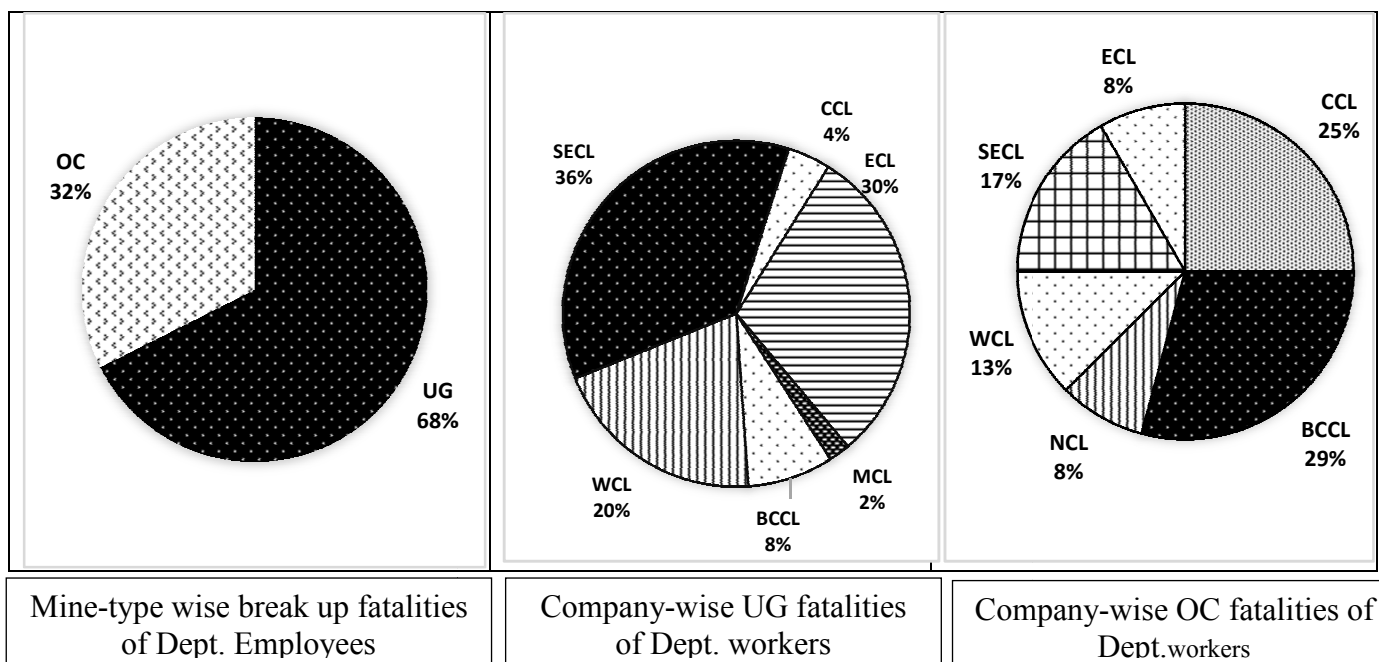
Company	Departmental Employees	Contractual Employees	Total
ECL	17	30	47
BCCL	11	4	15
CCL	8	4	12
NCL	2	7	9
WCL	13	3	16
SECL	22	6	28
MCL	1	8	9
NEC	0	0	0
CIL	74	62	136



B. Fatalities of Departmental Employees

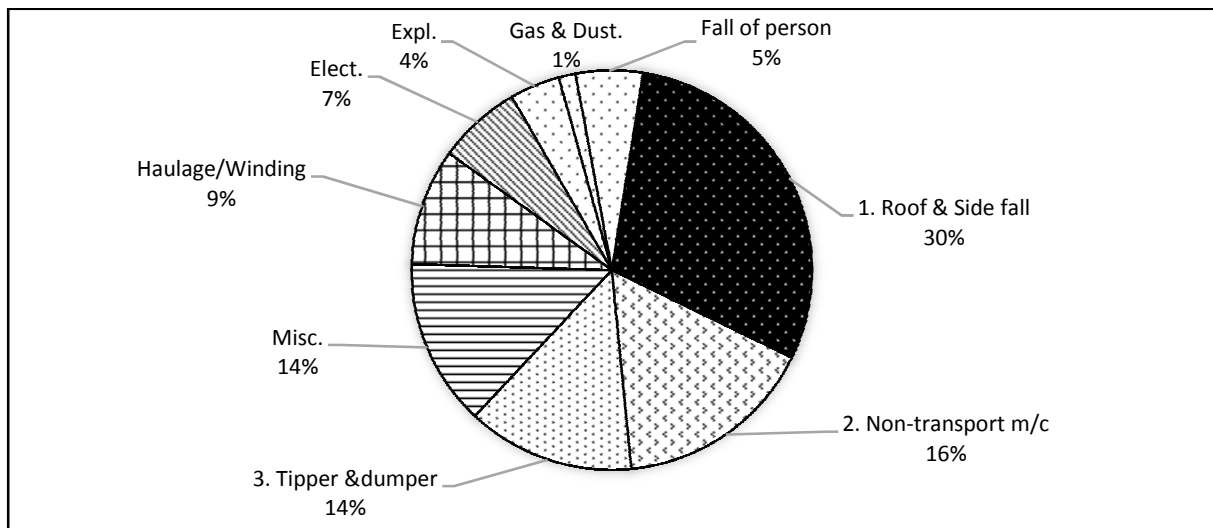
B.1 Company-wise, Mine-type-wise break-up from January, 2015 to December, 2017

Company	Fatalities in UG	% of UG fatalities	Fatalities in OC	% of OC fatalities	Total	% of total fatalities
ECL	15	30.00	2	8.33	17	22.97
BCCL	4	8.00	7	29.17	11	14.86
CCL	2	4.00	6	25.00	8	10.81
NCL	0	0.00	2	8.33	2	2.70
WCL	10	20.00	3	12.50	13	17.57
SECL	18	36.00	4	16.67	22	29.73
MCL	1	2.00	0	0	1	1.35
NEC	0	0.00	0	0	0	0
CIL	50	100.00	24	100.00	74	100.00

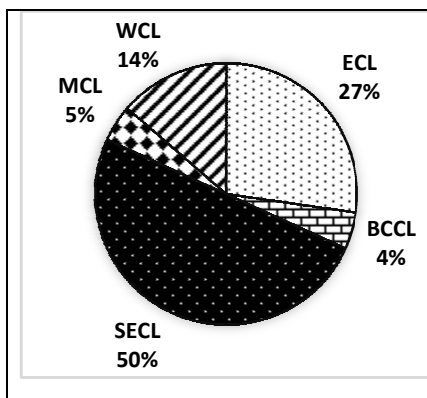


B2. Cause-wise break up of fatalities of Dept. employees from Jan- 2015 to Dec- 2017

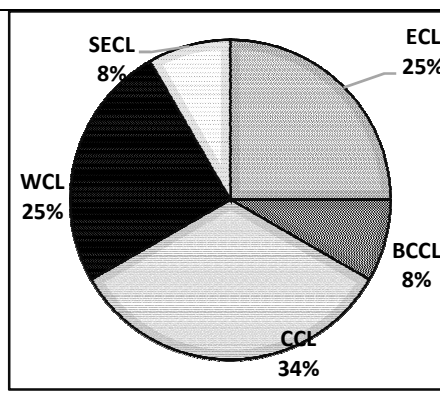
Cause	Fatalities of Dept. employees	% of Dept. fatalities	Company
1.Roof /Side Fall	22	29.73	ECL-6,BCCL-1, SECL-11,WCL-3, MCL-1
2.Non Transport M/Cs	12	16.22	ECL-3,BCCL-1,CCL-4,WCL-3,SECL-1
3.Tippers & Dumper	10	13.51	BCCL- 3, CCL-3,NCL-2,WCL-1, SECL-1
4.Haulage/Winding	7	9.46	ECL-3, BCCL-2,WCL-1, SECL-1
5.Electricity	5	6.76	ECL-2, BCCL-1,SECL-2
6.Fall of Person/object	4	5.41	ECL-1,BCCL-1, WCL-1, SECL-1
7.Explosive	3	4.05	WCL-1, CCL-1, SECL-1
8.Gas, Dust etc.	1	1.35	BCCL-1
9. Miscellaneous	10	13.51	ECL-2,BCCL-1,CCL-2,WCL-3,SECL-2
TOTAL	74	100.00	



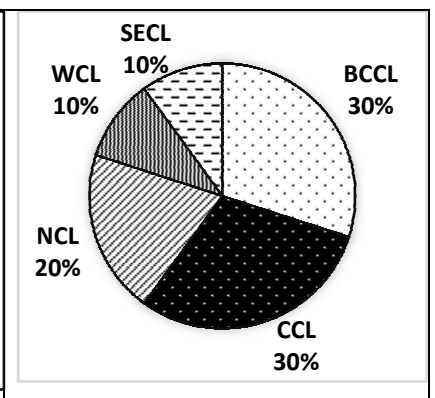
Cause-wise Break up of fatalities of Departmental Employees



Major Cause-1: Roof / Side fall - Company-wise Break up



Major Cause-2: Non-transport m/c - Company-wise Break up

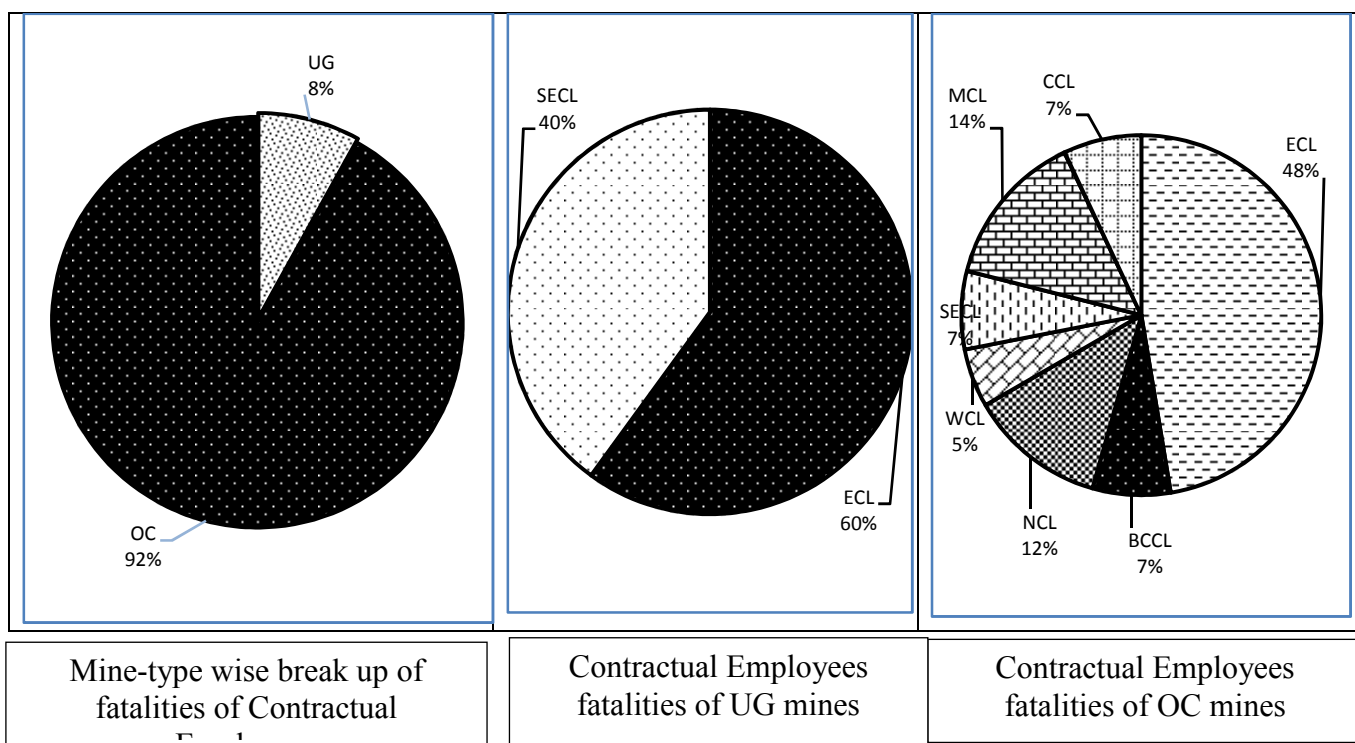


Major Cause-3: Tipper & Dumper - Company-wise Break up

C. Fatalities of Contractual Employees:

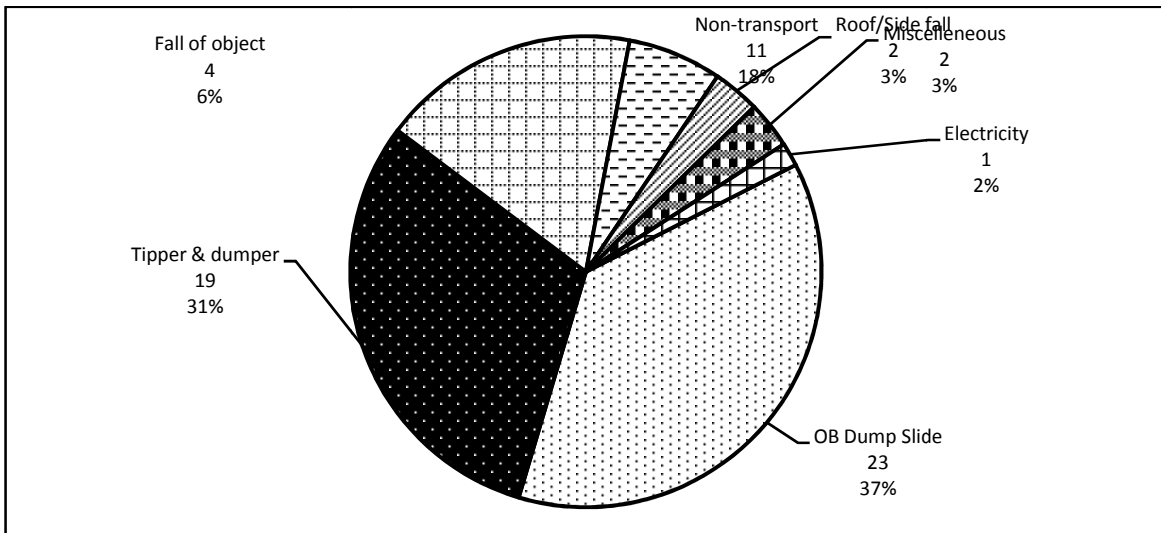
C1 Company-wise, Mine-type-wise break up from January, 2015 to December, 2017

Company	Fatalities in UG	% of UG fatalities	Fatalities in OC	% of OC fatalities	Total	% of total fatalities
ECL	3	60	27	47.37	30	48.39
BCCL	0	0	4	7.02	4	6.45
CCL	0	0	4	7.02	4	6.45
NCL	0	0	7	12.28	7	11.29
WCL	0	0	3	5.26	3	4.84
SECL	2	40	4	7.02	6	9.68
MCL	0	0	8	14.04	8	12.90
NEC	0	0	0	0.00	0	0.00
CIL	5	100	57	100.00	62	100.00

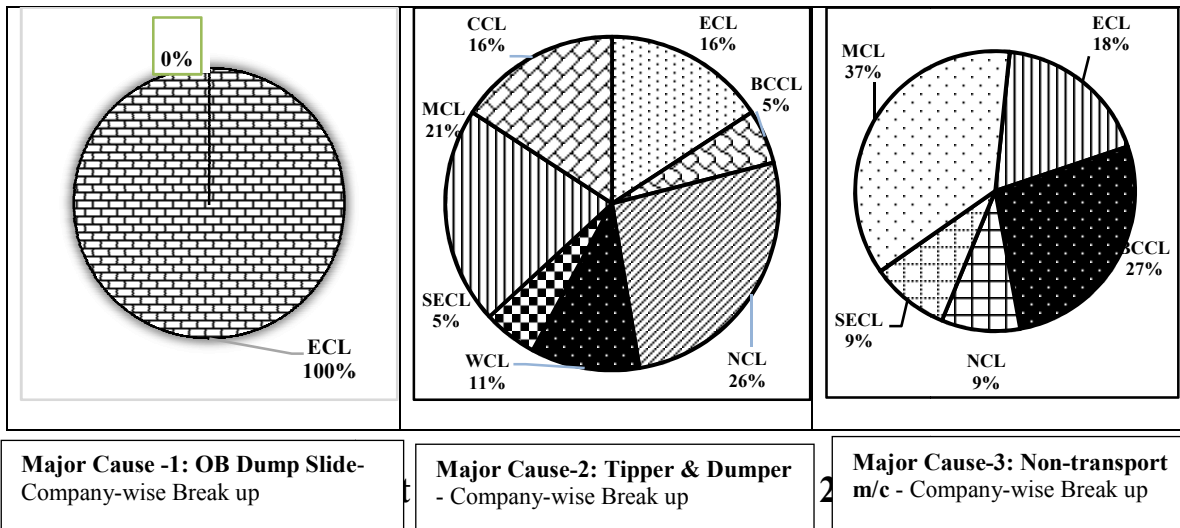


C2 Cause-wise break up of contractual fatalities from January, 2015 to December, 2017

Cause	Fatalities of contractual employees	% of contractual fatalities	Company
OB Dump Slide	23	37.10	ECL-23
Tipper & Dumper	19	30.65	ECL-3, BCCL-1, CCL-3, NCL-5, WCL-2, SECL-1, MCL-4
Non Transport M/Cs	11	17.74	ECL-2, BCCL-3, NCL-1, SECL-1, MCL- 4
Fall of Object	4	6.45	ECL- 2, WCL-1, SECL-1
Roof /side Fall	2	3.23	SECL-2
Electricity	1	1.61	CCL-1
Miscellaneous	2	3.23	NCL-1, SECL-1
TOTAL	62	100	



Cause-wise Break up of fatalities of Contractual Employees



COMPANY	TOTAL SERIOUS INJURIES-2015 TO 2017						
	DEPT		CONT		Total		Grand Total
	UG	OC	UG	OC	DEPT	CONT	
ECL	99	5	0	0	104	0	104
BCCL	13	12	2	0	25	2	27
CCL	9	9	0	0	18	0	18
NCL	0	29	0	14	29	14	43
WCL	31	24	1	6	55	7	62
SECL	73	25	0	3	98	3	101
MCL	4	12	0	1	16	1	17
NEC	0	0	0	0	0	0	0
CIL	229	116	3	24	345	27	372

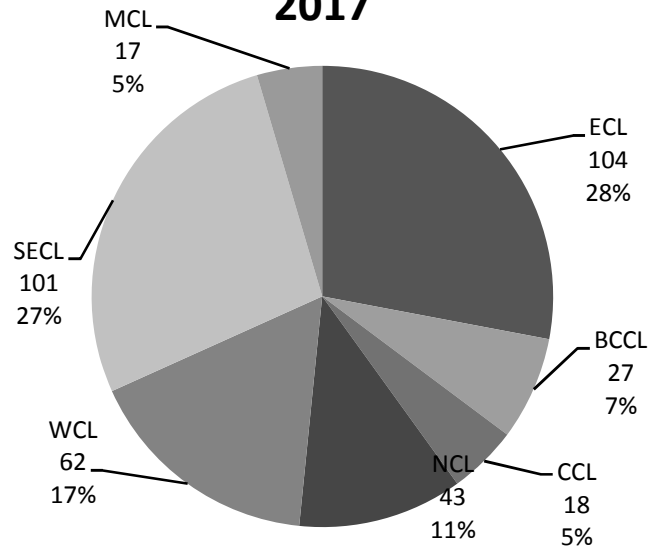
Mine-type- wise serious Injuries

Company	UG	OC	Total
ECL	99	5	104
BCCL	15	12	27
CCL	9	9	18
NCL	0	43	43
WCL	32	30	62
SECL	73	28	101
MCL	4	13	17
NEC	0	0	0
CIL	232	140	372

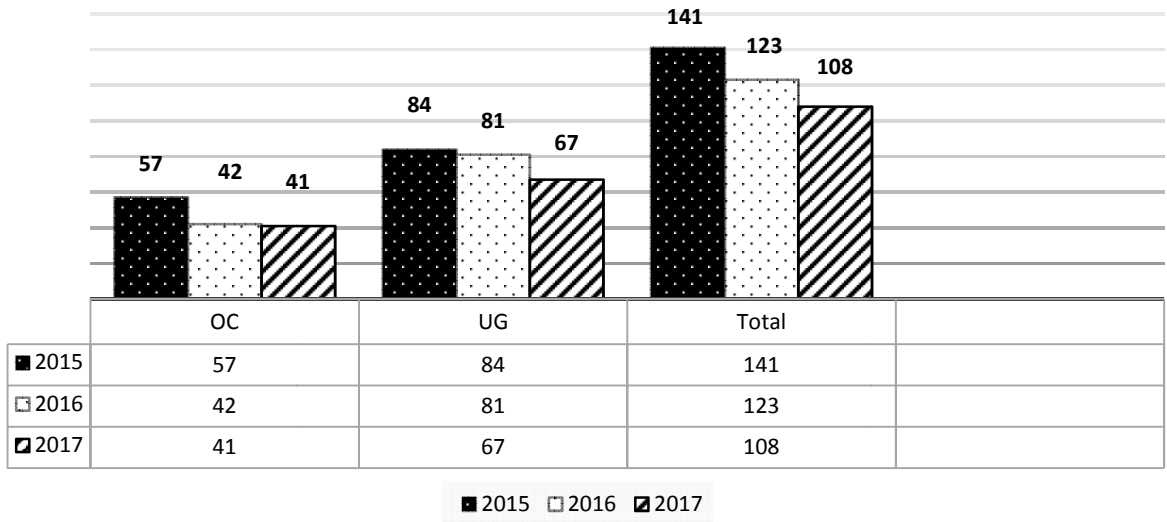
Year-wise, Mine-type-wise serious Injuries

Year	2015	2016	2017
OC	57	42	41
UG	84	81	67
Total	141	123	108

Company-wise Serious injuries from 2015 to 2017



Serious injuries for last three years OC & UG



Concise Facts:

- For the period Jan 2015 to Dec, 2017, 40.44% of fatalities have occurred in UG mines and 59.56% in OC mines.
- In OC mines, major three causes are:
 - (i) Truck-Dumpers -35.8% of total OC fatalities
 - (ii) OB Dump failure- 28.4% of total fatalities (Rajmahal, ECL Major Accident)
 - (iii) Non-transport Machinery- 19.75%
- In UG mines, major three causes are:
 - (i) Roof/Side fall- 43.64 % of total UG fatalities

- (ii) Non-transport M/c- 12.73%
- (iii) Haulage and Winding-12.73%

- Contractual Workmen- 45.6% of total fatalities (ECL, MCL & NCL)
- Departmental Workmen- 54.4% of total fatalities (SECL, WCL, ECL)

Severity of Causes:

- Major Accident i.e. Dump slide at Rajmahal OCP caused 16.9% of total fatalities

Mitigative measures being adopted:

1. Preparation and implementation of Risk assessment based Safety Management Plans (SMPs) for all OC mines of CIL.
2. Preparation and implementation of Risk assessment based site specific Standard Operating Procedures (SOPs) for various operations related to OB Dumping.
3. Preparation and implementation of “Principal Hazard Management Plan (PHMP)”.
4. Preparation and implementation of “Triggered Action Response Plan (TARP)”.
5. Use of suitable device for monitoring the stability of OB Dump.
6. Establishment of Geo-Technical Cell for monitoring efficacy of safety in OB Dump.

- Man-Machine interface (Tipper/Dumper, Non-transport Machinery, Electricity)- 47.7% of total fatalities

Mitigative measures being adopted:

1. Formulation and implementation of Mine-specific Traffic Rules.
2. Training of Contractor’s Workers involved in Coal & OB HOE jobs.
3. Training on Simulators to dumper & tipper operators.
4. Lighting arrangement using high mast towers for increasing level of illumination.
5. Fitment of Proximity Warning Devices, Rear view mirrors and camera, Audio-Visual Alarm (AVA), Automatic Fire Detection & Suppression system etc in Dumpers / Tippers.
6. Ergonomically designed seats & AC Cabins for operators’ comfort.
7. GPS based Operator Independent Truck Dispatch System (OITDS) in large OCPs for tracking movement of HEMMs inside OC mine for avoiding queuing / decongestion.

- Roof & Side fall in UG mines caused 17% of total fatalities

Mitigative measures being adopted:

1. Elimination of manual loading.
2. Adoption of Mass Production Technology(CM&PSLW) in amenable underground mines.
(Annexure-4 Page-91)
3. Scientifically determined Rock Mass Rating (RMR) based Support System.
4. Strengthening of Strata Control Cell for monitoring efficacy of strata support system.
5. Roof bolting by using mechanized Drilling for Roof Bolting.
6. Use of Resin capsules in place of Cement capsules.
7. Use of modern Strata Monitoring Instruments such as Convergence recorder, Tale-Tell, Borehole Extensometer, Loadcell etc.
8. Imparting quality training to support crews & front-line mine officials

3. SCCL:

Details of fatal and serious accidents for last three years in SCCL:

(i) Overall Fatality Rate & Serious Injury rate per million tonne of Coal production and per 3 lakh manshifts deployed during last 3 years:

Sl No	Parameters	2015	2016	2017	2018*
1	Fatal Accidents	7	10	11	-
2	Fatalities	7	12	12	-
3	Serious Accidents	245	216	212	15
4	Serious Injuries	245	218	218	16
5	Fatality rate per Mt. Of Coal Production	0.12	0.20	0.20	-
6	Fatality rate per 3 lakh manshifts deployed	0.14	0.25	0.24	-
7	Serious Injury rate per Mt. of Coal production	4.05	3.66	3.58	2.50
8	Serious Injury rate per 3 lakh manshifts deployed	4.98	4.54	4.38	3.97

* Note: Figures are up to 31st January.

(ii) Fatal Accidents, Fatalities, Serious Accidents & Serious Injuries during last 3 years:

Company	Fatal Accidents				Fatalities				Serious accidents				Seriously injured			
	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*
SCCL	7	10	11	-	7	12	12	-	245	216	212	15	245	218	218	16

*Note: Figures are up to 31st January.

(iii) Cause-wise Fatal accidents & Fatalities during last 3 years:.

Company	Year	Roof Fall/ side fall		Haulage, Winding, Conveyor		Trucks, Dumpers		Non- Transport M/c.		Explosives		Electricity		Others		Total	
		A	F	A	F	A	F	A	F	A	F	A	F	A	F	A	F
		SCCL	2015	2	2	-	-	2	2	-	-	-	-	-	-	3	3
2016	4		6	2	2	1	1	1	1	-	-	-	-	2	2	10	12
2017	1		1	2	2	3	3	2	2	-	-	-	-	3	4	11	12
2018*	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Note: Figures are upto 31st January, 2018

A = Accident F = Fatality.

(iv) Cause-wise Serious accidents & Serious Injuries during last 3 years:

Company	Year	Roof Fall/ side fall		Haulage, Winding, Conveyor		Trucks, Dumpers		Non- Transport M/c.		Explosives		Electricity		Others		Total	
		A	I	A	I	A	I	A	I	A	I	A	I	A	I	A	I
SCCL	2015	15	15	39	39	3	3	6	6	1	1	-	-	181	181	245	245
	2016	7	7	35	35	1	1	7	8	-	-	1	1	165	166	216	218
	2017	15	18	20	20	6	6	8	8	1	2	-	-	162	164	212	218
	2018*	1	1	2	2	-	-	1	1	-	-	-	-	11	12	15	16

* Note: Figures are up to 31st January, 2018

A = Accident I = Injured.

(v) Place-wise rate of Fatalities per million tonne of coal production & 3 lakh manshifts deployed during the last 3 years:

Company	Per M. Te.								Per 3 lakh manshifts							
	Underground				Opencast				Underground				Opencast			
	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*
SCCL	0.37	0.99	0.47	-	0.04	0.04	0.13	-	0.14	0.35	0.15	-	0.12	0.13	0.37	-

*Note: Figures are up to 31st January, 2018

(vi) Place-wise rate of Serious Injuries during the last 3 years:

Company	Per M. Te.								Per 3 lakh manshifts							
	Underground				Opencast				Underground				Opencast			
	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*	2015	2016	2017	2018*
SCCL	18.37	17.38	21.09	19.69	0.68	0.59	0.50	-	6.72	6.10	6.51	6.45	2.07	1.83	1.37	-

*Note: Figures are up to 31st January, 2018.

(vii) Place-wise Fatal accidents & Fatalities during the last 3 years:

Year	Underground		Opencast		Surface		Total	
	Accident	Fatality	Accident	Fatality	Accident	Fatality	Accident	Fatality
2015	4	4	2	2	1	1	7	7
2016	8	10	1	1	1	1	10	12
2017	4	4	6	7	1	1	11	12
2018*	-	-	-	-	-	-	-	-

* Note: Figures are up to 31st January, 2018

(viii) Details of fatal and serious accidents after 41st meeting((Till 17.02.2018):

Sl.No.	Parameters	Number
1	No. of Fatal accidents	12
2	No. of fatalities	13
3	No. of Serious accidents	238
4	No. of Serious injuries	245

4. NLC:

(i) Details of fatal and serious accidents for last three years

Mine		2015	2016	2017
Mine I	Fatal	-	-	-
	Serious	-	-	-
	Reportable	-	-	-
Mine IA	Fatal	1	-	1
	Serious	-	-	-
	Reportable	-	-	-
Mine II	Fatal	-	2	-
	Serious	3	1	-
	Reportable	-	-	-
BLMP	Fatal	-	-	-
	Serious	-	-	-
	Reportable	-	-	-

(ii) Details of fatal and serious accidents after 41st meeting

Mine	Fatal	Serious	Reportable
Mine I	-	-	-
Mine IA	1	-	-
Mine II	-	-	-
BLMP	-	-	-

5 TATA STEEL (JHARIA):

(i) Overall fatality rate and serious injury rate per million tonne of coal production and per 3 lakh man shift deployed in Tata Steel.

Sl. No.	Parameters	Tata Steel – Jharia Underground			Tata Steel – West Bokaro Opencast		
		2015	2016	2017	2015	2016	2017
1	Number of fatal accidents,	0	1	0	0	1	0
2	Number of fatalities	0	1	0	0	1	0
3	Number of serious accidents	3	1	5	1	1	0
4	Number of serious injuries	3	1	5	1	2	0
5	Fatality rate per Mt. of coal production	0	0.745	0	0	0.198	0
6	Fatality rate per 3 lakh man shifts deployed	0	0.193	0	0	0.311	0

7	Serious injury rate per Mt. of coal production	2.112	0.745	4.119	0.213	0.394	0
8	Serious injury rate 3 lakh man shifts deployed.	0.390	0.193	1.103	0.314	0.633	0

(ii) Company-wise fatal accidents, fatalities, serious accidents & serious injuries during last three years and the current year (upto 31.12.17)

Company	Fatal Accidents			Fatalities			Serious Accidents			Serious Injuries		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Tata Steel (Jharia – U/G)	0	01	0	0	01	0	03	01	05	03	01	05
Tata Steel (West Bokaro – O/C)	0	01	0	0	01	0	01	01	0	01	02	0

(iii) Company-wise cause-wise fatal accidents & fatalities during last 3 years and the current year (upto 31.12.17)

Mine	Year	Roof fall / side fall		Haulage, Winding, Conveyor		Trucks, Dumpers		Non-Transport M/C		Explosives		Electricity		Others		Total	
		A	F	A	F	A	F	A	F	A	F	A	F	A	F	A	F
(Jharia – U/G)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	01	01	0	0	0	0	0	0	0	0	0	0	01	01
	2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(West Bokaro – O/C)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A= Accident, F= Fatality

(iv) Company-wise cause-wise serious accidents & serious injuries during last three years and the current year (upto 31.12.17)

Mine	Year	Roof fall / side fall	Haulage,	Winding,	Conveyor	Trucks,	Dumpers	Non-Transport M/C	Explosives	Electricity	Others	Total
------	------	-----------------------	----------	----------	----------	---------	---------	-------------------	------------	-------------	--------	-------

		A	I	A	I	A	I	A	I	A	I	I		A	I	A	I	A	I	A	I
(Jharia – U/G)	2015	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3
	2016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	2017	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	5	5
(West Bokaro – O/C)	2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	2016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
	2017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A= Accident I= Injury

(v) Company-wise place-wise rate of fatalities per million tonne of coal production & 3 lakh manshifts deployed during the last three years and the current year (upto 31.12.17)

Mine	Per M.Te						Per 3 lakh man shifts					
	Underground			Opencast			Underground			Opencast		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Tata Steel (Jharia – U/G)	0	0.745	0	NA	NA	NA	0	0.193	0	NA	NA	NA
Tata Steel (West Bokaro – O/C)	NA	NA	NA	0	0.198	0	NA	NA	NA	0	0.311	0

Mine	Underground			Opencast			Surface			Total		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Tata Steel (Jharia – U/G)	0	0	0	NA	NA	NA	0	1	0	0	1	0
Tata Steel (West Bokaro – O/C)	NA	NA	NA	0	1	0	0	0	0	0	1	0

(vi). Company-wise place-wise rate of serious injuries during the last three years and the current year (upto 31.12.17)

Company	Per M.Te						Per 3 lakh manshifts					
	Underground			Opencast			Underground			Opencast		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Tata Steel (Jharia)	2.112	0.745	4.119	NA	NA	NA	0.390	0.193	1.103	NA	NA	NA
Tata Steel (West Bokaro – O/C)	NA	NA	NA	0.213	0.394	0	NA	NA	NA	0.314	0.622	0

(vii) Company-wise place-wise fatal accidents during last 3 years and the current year (upto 31.12.17) with details

A. FATAL ACCIDENTS FOR THE YEAR – 2015 : Nil

B. FATAL ACCIDENTS FOR THE YEAR – 2016

S.No.	Name	Design.	Age in Yrs	Dept	Date	Shift	Time	Location	Part of Body Injured	Cause
1.	Sri Rahul Kumar	Dumper Helper	19	Jamadoba Colliery	08.09.16	B	10 PM	2 pit Surface Conveyor	Stomach	At about 10pm it was seen that injured person was laying, entangled between edge of the discharge pulley and cover at the discharge point of the belt# 1501. The belt discharges coal from underground to top of a bunker at surface of 2 incline area. The discharge end is located at a height of about fifty feet from the ground level. The IP was a helper of the dumper bearing registration number JH10AF-3378. There was a chute located at a height of about 15 feet from the ground level for facilitating loading from the bunker to bunker to the dumper which is placed below the chute.
2.	Sri Gurudyal Sao	Contractor worker	43	Coal Beneficiation (West Bokaro)	23.09.16	G	11.35 AM	EF ropeway Tower#11	Neck & Head	Fall of ropeway Tower

C. FATAL ACCIDENTS FOR THE YEAR – 2017 : NIL

(viii) Company-wise place-wise Serious accidents during last 3 years and the current year (upto 31.12.17) with details

A. SERIOUS ACCIDENTS FOR THE YEAR 2015

S.No.	Name	Design.	P.NO	Age in Yrs	Dept	Date	Shift	Time	Location	Part of Body injured	Cause
1.	Abdul Aziz	LHD Crew	220827	41	6&7 Pits BA Colliery	18.02.15	B	7.30 PM	4th level x-cut face. Tata Steel (Jharia – U/G)	Chest	<p>Sri Abdul Aziz along with 3 other coworkers were engaged at 4th level x-cut face as LHD crew. After doing dressing at face they started doing roof bolting under supervision of Mining Sirdar. They had provided one indicating prop before starting of roof bolting. After jamming of two bolts from dip side, they were pushing third roof bolt in hole (after inserting resin capsule) manually. During pushing of the 3rd bolt one piece of stone (approx size 3'X2'X3") fell from the roof from rise side of the gallery and had hit the shoulder of Mr Aziz and he fell down on the ground got injured. Supervisor with other face crew and LHD operator rescued him from the site and gave them first aid treatment.</p>

2	Ramjan Ansari	Associate SDL Crew	222256	38	Sijua Colliery	05.05.2015	C	12.35 AM	2 nd Dip/12 level face. Tata Steel (Jharia – U/G)	Right foot and right hip	Mr. Ramjan Ansari, was deployed at 2nd dip/12 level face as SDL crew, while he was handling trailing cable of SDL machine at about 12.30 am(End of the shift), a lump of coal fell from side in between two side bolts from a height of about 1.00 m from floor & hit him resulting in injury to his right foot and right hip. He had been given first aid at site and sent to feeder hospital, Bhelatand where after preliminary treatment he was sent to TCH, Jamadoba. X-Ray report revealed that there was fracture in his right foot and right hip and subsequently he was referred to TMH, Jamshedpur.
3	Sudhir Kumar Majhi	PR SDL Crew	219424	49	Jamadoba Colliery	24.7.15	A	4:30 PM	3 rd Level of 11 seam 1S. Tata Steel (Jharia – U/G)	Fracture of upper portion of left femur	After maintenance, SDL 117 was being marched towards 3rd level(S)/-5th rise at around 4:15 pm, for cleaning of 3rd level gallery between -5th rise and -6th rise, for belt conveyor installation. All the SDL crew of SDL 117 (including Sri. Sudhir Kumar Manhji) were

											walking towards the face(3rd level(S)/-5th rise). While walking Sri. Sudhir Kumar Manjhi fell down . He had complained of pain in the thigh region of left leg. There was no visible external injury. He was sent to the surface on a stretcher and from there he was taken to Tata Central Hospital, Jamadoba for further treatment and management. X-ray was done, which revealed that there was fracture on the upper portion of left femur below the femur head.
4.	Sri Jageshwar Mahto	Contractor employee (Voltas)	-	40	CMC	19.02.2015	“B”	08.45 PM	Quarry-SE. (West Bokaro – O/C)	Collar Bone fracture	Toppling of Bolero

B. SERIOUS ACCIDENTS FOR THE YEAR 2016

S.No.	Name	Design.	P.NO	Age in Yrs	Dept	Date	Shift	Time	Location	Part of Body Injured	Cause
-------	------	---------	------	------------	------	------	-------	------	----------	----------------------	-------

1	Sri Raju Ram	Maintenance Helper	Nil	37	6&7 Pits Colliery	07.02.2016	A	11:45 AM	8 Seam	Right Hand	Sri Raju Ram, Contractor workers of M/S Manoj Brothers got injured on 7.02.16 at around 11:45 a.m. while he was engaged in skat dismantling job at 0 dip/ OL Junction of 8 seam panel. After disconnecting chain-flight and ramp pan, they were engaged in dismantling gear boxes and motors from skat drive head frame. Subsequently after dismantling one set (From rise side) of gear box and motor while they proceeded for other set, in the meantime drive head structure got unbalanced and hit his right hand arm. He was brought to surface by stretcher and sent to TCH for further treatment immediately. X-Ray report shows there is fracture at his right arm bone-humerus.
2	Khemlal Saw	Contractor employee	G630(1)	29	Coal Beneficiation	23.09.2016	G	11.35 AM	EF ropeway Tower#11	Left Leg Fracture	Fall of ropeway Tower
3	Sandeep Singh	Contractor employee	G630(2)	25	Coal Beneficiation	23.09.2016	G	11.35 AM	EF ropeway Tower#11	Chest Injury	Fall of ropeway Tower

C. SERIOUS ACCIDENTS FOR THE YEAR 2017

S.No.	Name	Design.	P.NO	Age in Yrs	Dept	Date	Shift	Time	Location	Part of Body Injured	Cause
1.	Sri Sahdeo Mandal	SDL Crew	215 675	56	Digwadih Colliery	16.01.2017	A	05:30 PM	8 Seam North	Right Foot	At around 5:30 P.M in A shift (10.00 a.m to 6.00 p.m) on 16/01/2017 Shri

											Sahdeo Mandal P/R SDL Crew had sustained injury in his right feet from a piece of stone, which fell from a SDL's Bucket while the SDL was carrying back with loaded blasted material from face and Sri Sahdeo Mandal along with his co-worker were handling Trailing Cable in 8 Seam north. He was sent to TCH Jamadoba hospital where X-Ray revealed fracture at his right feet.
2.	Sri Mukhtar Alam	SDL Crew	217 749	52	Digwadih Colliery	20.02.2017	A	1:20 PM	8 Seam South	Right Hand	Shri Mukhtar alam who was deployed in 8 seam of Digwadih colliery, felt pain in his right arm while he was stacking the loose trailing cable of LHD along with fellow crew members at around 1:20pm on 20.02.2017.He was given first aid at underground and brought to surface then he was sent to TCH Jamadoba .X-Ray revealed Fracture in humerus bone of his right arm
3.	Sri Maharam Ali	SDL Crew	211 674	57	6&7 Pits Colliery	12.06.2017	B	11:00 PM	9 Seam 1S Panel	Left Foot	Sri Maharam Ali, P. No 211674 , T/R SDL Crew of 6&7 Pits Colliery was engaged in dressing operation after face blasting at 2 nd L dip face (TRF 16 machine) of 9 Seam 1S Panel. During this course of operation, at around 11:00 p.m., a stone piece

											suddenly rolled from the rise side of the face (around 5' behind the face) and hit on his left leg causing injury at his left foot. He was brought to the surface by stretcher and immediately sent to TCH Jamadoba. X-ray report reveals that fracture at his left foot and he is referred to TMH Jamshedpur for further medical care.
4.	Sri Dhananjay Mahto	Dresser	Nil	47	6&7 Pits Colliery	01.07.2017	A	09:30 AM	14 Seam	Right Foot	Mr Dhananjay Mahato, Contractors Employee of M/S Maa Vindhya washini Ent. was deployed in A shift at "B" dip at 6&7 pits colliery for supporting job of roof and sides . During dressing a piece of coal rolled from the side and hit the person. He got injury to his right wrist and right ankle. He was immediately brought to surface and sent to TCH Jamadoba where X ray revealed fracture in his right wrist and ankle.
5.	Sri Sadanand Roy	SDL Crew	221 75	43	Jamadoba Colliery	01.12.2017	B	10:50 PM	11 Seam/ 3S Panel	Right Knee	Sri Sadanand Roy (SDL crew) while assessing the quantity of blasted coal left in face for face measurement ,a lump of coal rolled down from the heap of blasted coal at the face. After first aid

												at site he was sent to TCH jamadoba. Where Doctor revealed after X-ray that he have fracture in his right knee.
--	--	--	--	--	--	--	--	--	--	--	--	---

5. GIPCL: OVERALL FATALITY RATE & SERIOUS INJURY RATE PER MILLION TONNE OF COAL PRODUCTION AND PER 3 LAKH MAN SHIFTS DEPLOYED IN M/S GIPCL, (VALIA and VASTAN LIGNITE MINES)

Sl. No.	Parameters	2015	2016	2017
1	Number of fatal accidents,	NIL	NIL	NIL
2	Number of fatalities	NIL	NIL	NIL
3	Number of serious accidents	NIL	NIL	NIL
4	Number of serious injuries	NIL	NIL	NIL
5	Fatality rate per Mt. of coal production	NIL	NIL	NIL
6	Fatality rate per 3 Lakhs man shifts deployed	NIL	NIL	NIL
7	Serious injury rate per Mt. of coal production	NIL	NIL	NIL
8	Serious injury rate 3 Lakhs man shifts deployed.	NIL	NIL	NIL

AGENDA ITEM NO. V

Details of fatal and serious accidents after 41st meeting

1. COAL INDIA LIMITED

1.1 Total fatalities between 41st meeting of standing committee on safety in coal mines and 42nd meeting of standing committee on safety in coal mines (upto 31.01.2018)

Company	DEPT		CONT		TOTAL DEPT	TOTAL CONT	TOTAL UG	TOTAL OC	GRAND TOTAL
	UG	OC	UG	OC					
ECL	3	2	2	25	5	27	5	27	32
BCCL	1	1	0	0	2	0	1	1	2
CCL	2	1	0	3	3	3	2	4	6
NCL	0	1	0	2	1	2	0	3	3
WCL	2	1	0	0	3	0	2	1	3
SECL	6	1	2	3	7	5	8	4	12
MCL	0	0	0	5	0	5	0	5	5
NEC	0	0	0	0	0	0	0	0	0
CIL	14	7	4	38	21	42	18	45	63

1.2 Serious Injuries in between 41st& 42nd Standing Committee on safety in Coal mines (up to 31.01.2018)

Company	Departmental			Contractual			Grand Total
	UG	OC	Total	UG	OC	Total	
ECL	24	1	25	0	0	0	25
BCCL	10	2	12	1	0	1	13
CCL	2	4	6	0	0	0	6
NCL	0	8	8	0	3	3	11
WCL	12	6	18	0	1	1	19
SEL	25	11	36	0	2	2	38
MCL	0	5	5	0	2	2	7
NEC	0	0	0	0	0	0	0
CIL	73	37	110	1	8	9	119

Company	UG	OC	Total
ECL	24	1	25
BCCL	11	2	13
CCL	2	4	6
NCL	0	11	11
WCL	12	7	19
SEL	25	13	38
MCL	0	7	7
NEC	0	0	0
CIL	74	45	119

2. SCCL:

Details of fatal and serious accidents after 41st meeting of standing committee on safety in coal mines (Up to 17.02.2018):

Sl.No.	Parameters	Number
1	No. of Fatal accidents	12
2	No. of fatalities	13
3	No. of Serious accidents	238
4	No. of Serious injuries	245

3. NLCIL:

There was one fatal accident during the last calendar year 2017, due to human failure. Disciplinary action was taken against the responsible officials.

4. TATA STEEL (JHARIA) : Nil

AGENDA ITEM NO. VI

Analysis of major accidents that occurred during last one year

1. COAL INDIA LIMITED:

A. Fatal accident occurred on 01.02.2017 at Baherabandh UG Project, Hasdeo Area, SECL.

Site of Accident: 80 Rise / 37 Level West at a distance of about 1 m from face in 40 LW Dev. District.

Brief description of the of accident: On 01/02/2017 in Relay / 1st Shift, Late Besahu- Driller & Late Rambharose- Support Mistry working as Driller, carried the drill machine into the face and Late Sahdeo- Support Mistry working as Dresser carried a small local made spade into the 80 R / 37 LW face. Shri Lakhan- Driller of that face drilling gang was some distance behind them. Suddenly, a massive sandstone piece measuring about 4.2 m X 3.07 m X 0.25 m fell down from roof in the face at about 1.50 PM. Late Besahu, Late Rambharose and Late Sahdeo got trapped under the massive sandstone piece and succumbed to their injury.

Technical analysis of the accident:The following facts and contributory factors were established:

- a. Five rounds of blasting were carried in different faces including 80 R / 37 LW which were completely unsupported.
- b. Support of these faces was not done before five rounds of drilling and blasting were carried. Neither the roof bolts were jammed in the holes drilled in roof in 80 R / 37 LW.
- c. On receiving instruction of Colliery Manager, either fencing of 80 R / 37 LW face or stopping the victims from entering 80 R / 37 LW was not ensured.
- d. General Shift Overman supervises the roof bolts supporting job regularly. On the fateful day, the supporting work started quite late. UDM operators were directed for drilling roof holes as required but steps were not taken to fence the places which were unsupported till then.
- e. There was practice of drilling holes as soon as any face becomes empty without waiting for necessary instructions. Roof fall has occurred that time and the victims got trapped.
- f. Normally, Dresser moves along with Mining Sirdar for thorough inspection and dressing of all work places. If the instruction of Colliery Manager had been communicated to face drilling gang and the Dresser, at least the Dresser would not have gone to remove the small quantity of coal left in the toe of the face with the small spade.
- g. Implementation of SSR in all the shifts were not put into practice in the mine.
- h. Knowing about supports lag of about 30 m in total, sufficient nos. of roof bolt packing persons were not provided.

Status of enquiry: Enquiry is completed.

Action taken:

1. R B Shrivastava, Overman. Stoppage of one increment without cumulative effect vide letter No. 304 dt. 11/07/17.
2. Premshankar Singh, Mining Sirdar. Stoppage of one increment without cumulative effect vide letter No. 303 dt. 11/07/17.
3. Chandrakanth Maratha, Overman (N/ shift -31.2.17). Stoppage of one increment without cumulative effect.
4. Indrajit Pal, Overman (G/shift). Stoppage of one increment without cumulative effect.
5. Mahesh Sukhram Tiwade (90309881), Asst. Manager (Min). Imposed minor penalty of “Censure” vide No. SECL/BSP/EE/R-31/17/3253 Dt. 20/07/2017.
6. Deepak Rc Khewale, Dy. Manager (Min). Imposed minor penalty of “Censure” vide No. SECL/BSP/EE/R-31/17/3251 Dt. 20/07/2017.
7. Vishal Sonwane (90301508), Asst. Mgr (Min). Exonerated vide No. SECL/BSP/R-13/17/2679 Dt. 21/06/2017.
8. D C Rai (90129149), Sr. Manager (Min). Imposed a minor penalty of “Censure” vide no. SECL/BSP/EE/R-31/17/3555 Dt. 03.08.2017. (Memorandum was issued vide No. SECL/BSP/R-13/17/2677 Dt. 21/06/2017).
9. K K Tripathi, Sr. Mgr (Min)/ Colliery Mgr. Warning letter issued.

B. Fatal accident occurred on 25/07/2017 at Kuardi-Tirat UG Mine, Satgram Area, ECL.

Site of accident: 11 Dip / 23 West Level pumping station.

Brief description of accident: On 25.07.2017, the Nonia Jore, a tributary to the Damodar River, was overflowing above withdrawal level and even after 11:00 AM it was above danger level. The deployment of mine workers was ceased by mine management. The team of three persons; namely Overman, Sri Chandi Charan Chatterjee, Explosive Carrier, Sri Maniruddin Mia & SDL Operator Sri Bishwanath Bouri went down the mine at about 05:45 PM. After inspecting the pump at 44L/7Dip, they were returning back. Suddenly, huge inrush of water from the rise side took place causing tumbling of all three persons. Sri Chandi Charan, Overman & Sri Maniruddin Mia, Explosive carrier any how managed to hold the power cable & escaped from there having little bit injury but Sri Bishwanath Bouri, SDL Operator couldn't be able to manage himself & got flown away by the major force of incoming water current.

Technical analysis of the accident: The following facts and contributory factors were established:

- a. There was heavy rain in the area since last two to three days. On the day i.e. 25.07.2017, the authority of Panchet & Maithon Dam (situated on the upstream side of Damodar River) released huge water in the order of about one lac Cusec. The Nonia Jore which was already saturated with heavy rain could not be able to discharge

it quickly to the Damodar River. Therefore, back flushing of water from Damodar River took place which caused the sudden rise of water level in the Nonia Jore.

- b. In the morning of 25.07.2017, water level in the Nonia Jore was above withdrawal level & accordingly coal production was totally suspended by the mine management barring anybody to go down the mine as there was apprehension of danger of inrush of water to the mine workings.
- c. In the meantime, it was reported that one big tree near 5 No. colony was uprooted & water was in rushing to the mine through this cracks/pothole. The same was filled by mine authority till 02:00 PM through JCB. Inspection of the low lying areas were continued by the mine management for search of waterlogging & repeated potholing.
- d. At about 04:45 PM, there was discussion between the Agent, Colliery Manager & Safety Officer about the condition of the pump located belowground near 44L/7Dip & they all were concerned about drowning of the said pump. Ultimately, decision was taken by local mine management to inspect & assess the condition of the said pump belowground.
- e. Accordingly, Assistant Manager of the mine arranged to have inspection & assessment of the said pump by a team of overman, Sri Chandi Charan Chatterjee, explosive Carrier, Sri Maniruddin Mia, & SDL operator, Sri Bishwanath Bouri. The aforesaid team went down the mine at about 05:45 PM (2nd Shift). At about 06:20 PM, it was reported by banks man, Islam Mian that huge inrush of water to the belowground workings took place.

Status of enquiry:

Enquiry is completed.

Action taken:

Warning will be issued to the executives, Sri S. Kundu, Colliery Manager, S. Sarkar, Asst. Manager & B K Singh, Safety Officer.

2. **SCCL :** Analysis of major accidents that occurred during last 1 year:

There was no any major accidents during last 1 year.

3. **NLCIL:**

Analysis of major accidents that occurred during last one year.

There was one fatal accident during the last calendar year 2017, due to human failure. Disciplinary action was taken against Overman and truck operator.

4. **TATA STEEL (JHARIA):**

Sl. No.	Particulars of Victim and Location	Details of Accident	Remedial Measures Suggested and Action Taken to Prevent Recurrence
1	At around 5:30 P.M	Sustained injury in his right	• SOP of SDL operation in

	in A shift (10.00 a.m to 6.00 p.m) on 16/01/2017 Shri Sahdeo Mandal P/R SDL Crew (SERIOUS)	feet from a piece of stone, which fell from a SDL's Bucket while the SDL was carrying back with loaded blasted material from face and Sri Sahdeo Mandal along with his co-worker were handling Trailing Cable in 8 Seam north. He was sent to TCH Jamadoba hospital where X-Ray revealed fracture at his right feet.	face and statutory compliance shall be ensured
2	Shri Mukhtar alam who was deployed in 8 seam of Digwadih colliery	felt pain in his right arm while he was stacking the loose trailing cable of LHD along with fellow crew members at around 1:20pm on 20.02.2017.He was given first aid at underground and brought to surface then he was sent to TCH Jamadoba .X-Ray revealed Fracture in humerus bone of his right arm	<ul style="list-style-type: none"> Standard Medical examination (PME is not adequate to identify the hidden disease)
3	Sri Maharam Ali, P. No 211674 , T/R SDL Crew of 6&7 Pits Colliery	Sri Maharam Ali, P. No 211674 , T/R SDL Crew of 6&7 Pits Colliery was engaged in dressing operation after face blasting at 2 nd L dip face (TRF 16 machine) of 9 Seam 1S Panel. During this course of operation, at around 11:00 p.m., a stone piece suddenly rolled from the rise side of the face (around 5' behind the face) and hit on his left leg causing injury at his left foot. He was brought to the surface by stretcher and immediately sent to TCH Jamadoba. X-ray report reveals that fracture at his left foot and he is referred to TMH Jamshedpur for further medical care.	<ul style="list-style-type: none"> Refresher training of employee to be ensured Hazard and Risk to be identified identified by supervisor and other personnel A system is in place to engage and involve employees in the audit process and to contribute to continuous improvement of their process
4.	Mr Dhananjay Mahato, Contractors Employee of M/S Maa Vindhya washini Ent.	was deployed in A shift at "B" dip at 6&7 pits colliery for supporting job of roof and sides . During dressing a piece of coal rolled from the side and hit the person. He got injury to his right wrist and right	<ul style="list-style-type: none"> Site Safety Supervisor who was authorised by the department to be trained as per CSM requirement (6 days training module). Identified all such critical position's job done by vendor employee and

		ankle.He was immediately brought to surface and sent to TCH Jamadoba where X ray revealed fracture in his right wrist and ankle.	<p>deploy only after proper competency based assessment & authorization</p> <ul style="list-style-type: none"> • The risk assessed with respect to hazard of access control must be address in HIRA document & control system shall be developed & Implement • Ensure CSM requirement by implementing CFA, CAPA for star rating improvement. • To ensure the presence of Company Supervisor and to assess job related hazard prior to commencement of the job the modified work permit form system shall be recommended. This form will be will be applicable to all mining contractor's & Own mining employee working in out bye area. Dept. SO shall draft a new work permit & put it to AIC for formal approval
5.	Sri Sadanand Roy (SDL crew)	while assessing the quantity of blasted coal left in face for face measurement ,a lump of coal rolled down from the heap of blasted coal at the face.After first aid at site he was sent to TCH jamadoba. Where Doctor revealed after X-ray that he have fracture in his right knee.	<ul style="list-style-type: none"> • Leaders engage in clear, two-way communication with employees, contractors and others on health and safety matters. • Information about regulations and industry codes and practices is communicated to appropriate personnel
6	Sri Khemlal Saw Contractor Employee- G630(1) Coal Benificiation On 23.09.2016 at 11.35 AM at .	On 23.9.16, in general shift (at 11.35 AM), the contractor crew of M/s Gangadhar Construction Co was engaged in EF ropeway tower dismantling job at Tower#11. During the job, suddenly the tower tilted and fell down causing injury to three persons. They were immediately shifted to Tata Steel Central Hospital and after necessary treatment, all were airlifted to TMH, Jamshedpur for further	<ul style="list-style-type: none"> • Before proceeding for any dismantling of tower .proper study of load dynamics & stabilization With the suitable supports& in sequence manner • Competent supervision to be ensured during such type of operation based on the risk assessment. • Site specific Sequence procedure of

		treatment. A team of specialists from TMH also visited West Bokaro and attended the patients before they were airlifted	dismantling must be prepared in line with the safety standard of demolition(SS/Eng.-04) <ul style="list-style-type: none"> • Person involved in the job must undergo the training of safety standard of demolition(SS/Eng.-04)
7	Sri Sandeep Singh Contractor Employee- G630(1) Coal Beneficiation On 23.09.2016 at 11.35 AM at .	On 23.9.16, in general shift (at 11.35 AM), the contractor crew of M/s Gangadhar Construction Co was engaged in EF ropeway tower dismantling job at Tower#11. During the job, suddenly the tower tilted and fell down causing injury to three persons. They were immediately shifted to Tata Steel Central Hospital and after necessary treatment, all were airlifted to TMH, Jamshedpur for further treatment. A team of specialists from TMH also visited West Bokaro and attended the patients before they were airlifted	<ul style="list-style-type: none"> • Before proceeding for any dismantling of tower .proper study of load dynamics & stabilization With the suitable supports& in sequence manner • .Competent supervision to be ensured during such type of operation based on the risk assessment. • Site specific Sequence procedure of dismantling must be prepared in line with the safety standard of demolition(SS/Eng.-04) • Person involved in the job must undergo the training of safety standard of demolition(SS/Eng.-04)

AGENDA ITEM NO. VII

Risk assessment & Management

1. Coal India Limited

(i) No of Mines Covered:

Subsidiary	Total No of Active Mines	No of Mines Covered
ECL	83	83
BCCL	40	40
CCL	43	43
NCL	10	10
WCL	66	66
SECL	73	73
MCL	20	20
NEC	4	4
TOTAL	339	339

(ii) Major Activities Completed & (iii) Action Taken

ECL:

a) Total producing Mines = 83.

Training and workshop on Safety Management Plan (SMP) has been conducted in all the underground and opencast mines of ECL by SIMTARS trained executives posted in ECL and CIL.

b) Risk assessment exercise has been done in all mines of ECL and SMP has been prepared by the mine officials as per DGMS Tec. Circular 5 of 2016.

c) The mine officials are updating the Safety Management Plan (SMP) as per Coal Mines Regulation 2017 and the same will be completed by April 2018.

d) Training is being imparted to Mine Officials and PSC members on continual basis by SIMTARS accredited Trainers of CIL and ECL.

BCCL:

a) Name of mines for which SMP already submitted to DGMS

- Barora Area (2 mines, Muraidih and Phularitand)
- Block-II Area
- Bastacolla Area (3 mines, Bastacolla, Dobari & Kuya)
- Sijua Area (one mine, Sendra- Bansjora)

b) Name of mines for which SMP's already approved by DGMS- Bastacolla (3 mines, Bastacolla, Dobari & Kuya)

c) Name of In other mines for which SMP's are yet to be submitted are:

Sl.no.	Area	Mine	Type OC / UG / Mixed
1.	Western Jharia	Moonidih	UG
2.		Lohapatti	UG
3.	Bastacolla	Roep	OCP
4.		Ghanoodih	OCP
5.		Amalgamated EB- Simlabahal	UG
6.	Kusunda	NGKC	OCP
7.		GKKC	OCP
8.		ADIC	OCP
9..		East Bassuria	OCP
10.	Govindpur	New AkashKinari Colliery	Mixed
11.		Amalgamated Block-IV Govindpur	Mixed
12.		Jogidih	UG
13.		Kharkhari	UG
14.		Maheshpur	UG
15.	Eastern Jharia	Amal.SP colly	OCP
16.		Bhowra (south)	Mixed
17.		Bhowra(N)	UG
18.	<u>PB</u>	Gopalichuck	UG
19.		Bhagaband	UG
20.		KB 10/12 Pit	UG
21.		PB Project Colly	UG
22.	CV	Dahibari OCP	OCP
23.		Basantimata-Dahibari	Mixed
24.	Lodna	Amal.NT-ST-JG	OC
25.		Amal. Joyrampur	OC
26.		Kujama	OC
27.	Sijua	Tetulmari	Mixed
28.		Nichitpur	OCP
29.		Kankanee	OCP
30.		Mudidih	UG
31.	Katras	AKWMC	Mixed
32.		AGKCC	OC
33.		SPC	UG

d) Training is being imparted to Mine Officials and PSC members on continual basis by SIMTARS accredited Trainers of CIL and ECL.

CCL:

Safety Management Plan prepared for all 43 working mines of CCL.Safety Management plan duly accepted by Area General Managers have been submitted to DGMS for all 43

working Mines of CCL. Training is being imparted to Mine Officials and PSC members on continual basis by SIMTARS accredited Trainers of CIL and ECL.

NCL: Safety Management plan have been submitted to DGMS for all Mines of NCL. Training is being imparted to Mine Officials and PSC members on continual basis by SIMTARS accredited Trainers of CIL and ECL.

WCL:

a) Total producing Mines = 66. (Underground = 27; Opencast = 37; Mixed = 2)

Training and workshop on Safety Management Plan (SMP) has been conducted in all the underground and opencast mines of WCL by SIMTARS trained executives posted in WCL and CIL.

b) Risk assessment exercise has been done in all mines of WCL and SMP has been prepared by the mine officials as per DGMS Tec. Circular 5 of 2016.

c) The mine officials are updating the Safety Management Plan (SMP) as per Coal Mines Regulation 2017 and the same will be completed by April 2018.

SECL:

(i) Risk assessment based SMP has been prepared all 73 working mines of SECL as DGMS Technical Circular 5/2016.

(ii) & (iii) Major Activities completed: SMPs submitted to DGMS for approval. The mine officials are updating the Safety Management Plan (SMP) as per Coal Mines Regulation 2017.

Training is being imparted to Mine Officials and PSC members on continual basis by SIMTARS accredited Trainers of CIL and SECL.

MCL:

a. Safety Management Plan (SMP) of all the mines of MCL have been prepared as per DGMS Tech.(S&T) Circular no. 05 of 2016 by Manager of each mine after taking into account findings of core team and co-opted members, who are experienced supervisors & Workmen, for every task, which may involve Hazard, after consultation with all Stake Holders and by visiting risk locations.

b. The SMP is continuously reviewed at various level by Agent of the mine and authenticated by Area Safety Officer, General Manager and subsequently recommended by ISO, MCL.

- c. In view of the above, separate committee was formed for Ib Valley Coalfield and Talcher Coalfield of MCL to review SMP.

Action Taken

- a. Principal Hazards are: Inundation, Poor Illumination, Slope stability, Dust, Transportation, Fire, etc.
- b. During Monsoon, drains are cleaned, new drains are made. Moreover, the embankments are strengthened substantially.
- c. Illumination standards has been improved by providing additional light fittings, light towers etc.
- d. OB dump slopes are made stable by forming benches as per need. Monitoring of dump stability is done regularly by putting pillars and taking their R.L.
- e. Dust is suppressed by mobile and fixed water sprinkler with mist spraying mechanism.
- f. Haul roads are widened with one way traffic. Berms are provided on the haul road to prevent fall of vehicles.
- g. Sensitization of work persons on fire and fire safety through theory talk and demonstration on fire fighting.

NEC:

Sl.No	No. of Mines covered	Major activities	Action Taken
(i)	4 (3OCP and 1U/G)	<ul style="list-style-type: none"> • Risk from Fire 	Adequate precautions for OC mines as well as UG are being taken to eliminate the danger of risk from fire.
		<ul style="list-style-type: none"> •Risk from excess height OB dump from stability point of view. 	The job for conducting the Scientific Study for Slope stability of OB dump of NEC has been awarded to CMPDI. However, physical monitoring of OB dumps are being done with the help of conventional pegging system, total station etc. by the concerned supervisor & Mine officials. A register for the same is also maintained in the colliery level
		<ul style="list-style-type: none"> •Risk from Pit Geometry i.e. excess Height & width of bench, haul road width & its gradient etc. 	<ul style="list-style-type: none"> • Adequate precautions are being taken to lower the height of bench working from top down wards as well as to keep the width of the bench within permissible limit. (ii) Width & gradient of haul road at places wherever required are being widened with its gradient within the permissible limit.

2. SCCL

- a) **Number of Mines covered:** All Mines covered.

- b) **Major Activities completed:** SCCL has imparted training to 10 Executives at SIMTARS, Australia on SAFETY MANAGEMENT SYSTEM for providing further training to the trainers at operational level. Further, meetings on the new CMR 2017 have also been conducted in the Areas with particular reference to Risk Assessment based Safety Management Plan.
- c) **Action Taken:** Steps initiated to establish “Safety Management Training Centres” each at Ramagundam and Mandamarri areas for imparting training to the Risk Management Teams of mines by SIMTARS Accredited Trainers (SATs).

Further, as per the directive of the MoC, SCCL conducted workshop on Safety at various levels to improve safety awareness, skill development of workmen of safety management plan vis-a-vis trainers training program at SIMTARS in all areas.

3. NLCIL:

- a) Number of Mines covered: 4
- b) Major Activities completed: Safety Management Plans prepared and strategies to implement the same circulated.
- c) Action Taken: Safety Audits are being conducted as a follow up for implementation.

4. TATA STEEL (JHARIA):

- a. No. of Mines Covered - Risk Assessment and hazard identification has been done as per DGMS guideline in all the 5(five) Underground Mines of Jharia Division as well as Open Cast mines of West Bokaro. Safety management plan has been made.
- b. Major activities completed - Critical areas and critical activities were identified and action taken. Hazards associated with them were evaluated and action plans drawn to de-risk the activities.
- LHD have been introduced to replace SDL machined to reduce the exposure of the persons at hazardous place. One LHD machine replaced 2 SDL machines. Manual loading have been replaced with SDL machines.
 - Manriding has been installed to reduce the fatigue of the employees.
 - New higher capacity booster fan has been installed, and staples pits were made to improve the ventilation.
 - Nitrogen plants have been installed in all the mines.
 - Telemonitoring have been installed in all the collieries.
 - Cable bolting have been started in some of the depillaring districts to improve the support.
 - Pucca pathway have been made in traveling roadway to prevent slip/fall of persons.

- Also, actions have been taken in the areas of fall of persons, Operation and Maintenance of HEMM, Fly rock during blasting , Belt Conveyor, Dump yard and transportation of material, as these were identified as major risk .
- UDM machines have been deployed for face drilling and roof bolting.
- Use of synthetic wire mesh has been started for side bolting. 2.4 mtr long roof bolts is being used in depillaring districts where strata condition is not good.
- Air conditioning plant is under installation in one of our mines.
- Chair lift type man riding system has been installed at Sijua Colliery.

5. GIPCL:

i) Number of Mines coveredGIPCL's both Mines i.e. VALIA and VASTAN LIGNITE MINES covered.

i) Major activity completed.

Safety Management Plan (SMP) of Valia and Vastan Lignite mines were reviewed on 20/02/2017 & 21/02/2017 respectively. as per the guidelines of DGMS Officials SMP were further reviewed on 19/01/2018 & 20/01/2018, for re-assessment of risks and accordingly SMP were revised and control measures plans prepared.

ii) Action taken:

Workshops on SMP were carried out with a view to communicate and bring awareness amongst the grass root level workers and implementation of SMP in better way.

AGENDA ITEM NO. VIII

Rationalization of Statutory Manpower

1. CIL:

Status of shortage of statutory manpower as on 31.01.2018:

Design	Status	ECL	BCCL	CCL	NCL	WCL	SECL	MCL	NEC	Total
Overman	Strength	893	627	637	377	669	1229	471	22	4925
	Req.	982	816	654	534	979	1355	646	51	6017
Mining Sirdar	Strength	1137	464	534	136	1525	1814	264	58	5932
	Req.	1281	797	745	172	1450	2074	548	88	7155
Electrical Supervisor	Strength	357	391	404	26	344	911	240	10	2683
	Req.	565	472	437	148	529	1060	429	13	3653
Surveyor	Strength	186	129	94	30	218	190	110	5	962
	Req.	197	132	93	54	213	182	160	6	1037

Appointment of Statutory Manpower in last three years:

Category		ECL	BCCL	CCL	NCL	WCL	SECL	MCL	Total
Overman	2014-15	04	69	187	11	-	-	-	271
	2015-16	-	-	46	-	-	-	-	46
	2016-17	-	04	-	142	-	-	-	146
	2017-18	-	94	-	-	-	-	26	120
Mining Sirdar	2014-15	06	58	91	06	02	258	-	421
	2015-16	0	15	60	0	424	328	14	841
	2016-17	304	20	102	43	377	52	5	903
	2017-18	36	52	-	-	-	240	-	328
Electrical Supervisor	2014-15	39	-	27	-	-	-	-	66
	2015-16	-	-	29	15	-	-	27	71
	2016-17	-	-	-	20	-	-	-	20
	2017-18	10	-	-	119	-	79	37	245
Surveyor	2014-15	02	16	19	06	04	-	-	47
	2015-16	-	04	02	-	27	03	-	36
	2016-17	23	03	-	01	52	58	-	137
	2017-18	06	-	-	-	-	-	-	6

*Elect. Supervisor in ECL were placed under extended service from ex-employees in 2014-15, 2015-16, 2016-'17 & 2017-18 as 48, 60, 15 and 02 heads respectively

Appointment of 2nd class Managers & Recruitment of MTs:

(a) Selection process for promotion from Non-Executive to Executive cadre in Mining discipline is under process. Verification of 2nd Class MMCC Certificates submitted to DGMS Dhanbad in Oct-2017. On receipt of the same, DPC will be convened.

(b) Figures of recruitment of MT (MINING, E&M, Excv.) are as follows

Year	Mining	E&M	Excavation	Total
2015	50	85	91	226
2016	74	150	35	259
2017	243	87	129	459

Steps taken to fill up the shortage:

- Re-assessment of statutory manpower as per the CMR-2017.
- Gainful re-deployment of existing statutory manpower of Unsafe & Unviable mines.
- Incentivize Cadre scheme for Electrical Supervisors for selection of eligible Departmental candidates.
- Drive for promotion of eligible Departmental candidates having statutory certificate of competency along with Cash incentive.
- Direct recruitment of MTs of Mining, E&M and Excavation.

2. SCCL: Requirement of Statutory manpower and steps taken to fill up the shortage:

A. MINING EXECUTIVES :

Category	Requirement (2017-18)	MOR as on 31.01.2018	Variance (+/-)
Mining Executive(I class)	409	514	105
Mining Executive (II class)	508	365	-143
Mining Executive (I & II) Total	917	879	-38

➤ Mining Executive (II Class):- Internal selection of 33 Mining graduates is in Process.

B. MINING SUPERVISORY STAFF:

Category	Requirement (2017-18)	MOR as on 31.01.2018	Variance (+/-)
Overman	1055	895	-160
Mining Sirdar	558	697	139
Shot firer	1109	1188**	79
Total	2722	2780	58

**MOR is including 640 JMET (MS/SF) who have completed one year and applied for Overman statutory certificate and 153 JMET (MS/SF) who are undergoing required one year training in Underground mines.

C. SURVEYOR:

Category	Requirement	MOR as on	Variance
----------	-------------	-----------	----------

	(2017-18)	31.01.2018	(+/-)
Surveyor	210	228	18*

- Including recent selection of **80** Surveyor Trainees (External)

D. E&M SUPERVISORS:

Category	Requirement (2017-18)	MOR as on 31.01.2018	Variance (+/-)
Electrical supervisors	377	283	-94#
Mechanical supervisors	421	236	-185@

Against shortage of 94 AFM(Elec), 52 AFM (Elec) have completed on the job training at Mines. They will be posted to mines, on acquiring and submission of Electrical Supervisory certificate (Mines installation).

Recruitment of 24 AFM (Electrical) through External diploma holders and 12 AFM(Electrical) through internal diploma holders is under process at Recruitment cell, Corporate.

E. E&M SUPERVISORS:-

- @ 73 AFM(Mech) have completed one year training and waiting for posting.
 Advance action for selection of 137 Mechanical supervisors is under process.
 69 AFM(Mech) diploma holders External is in process.
 33 AFM(Mech) diploma holders Internal is in process.
 35 AFM(Mech) diploma holders from internal which has held up due to court case.

3. **NLCIL:** Mine are having statutory personnel required under statute.

4. TATA STEEL LIMITED, JHARIA DIVISION:

Requirement of statutory manpower and steps taken to fill up the shortage of tata steel limited , jharia division:

category	Appointment made during 2016-17	Existing as on 31.3.2017	Requirement as on 31.12.17	Existing strength as on 31.12.17
Asst. Mgr. (1-st class)	0	15	15	15
Asst. Mgr. (2-nd class)	0	26	20	20
Over man	0	103	103	103
Mining Sirdar	10	187	187	17
Surveyor	0	9	9	9

Requirement of statutory manpower and steps taken to fill up the shortage of tata steel limited , west bokaro division

Category	Appt. made during 2016-17	Existing as on 31.12.2016	Requirement as on 31.12.2017	Existing strength As on 31.12.2017
Asst. Mgr. (1-st class)	00	11	05	07
Asst. Mgr. (2-nd class)	02	15	08	17
Over man	03	29	40	30
Mining Sirdar	00	33	30	30
Surveyor	02	04	04	04

5. GIPCL:

Category	Existing as on 22/02/2018	Requirement as on 22/02/2018	Shortage
Asst. Manger – 1st Class	07	07	NIL
Asst. Manger- 2nd Class	13 +01*	13	NIL
Overman	22+1**	22	NIL
Surveyor	05	04	Nil
*Denotes the Graduate Mining Engineer but 2 nd class certificate is awaited			
**Denotes the Diploma Mining Trainee but Overman certificate is awaited			

AGENDA ITEM NO. IX

SAFETY BUDGET

CIL: Safety Budget and its utilization

(Figures in Rs Lakh)

Parameters	Company-wise Capital Expenditure (CAPEX) in Safety															
	ECL		BCCL		CCL		NCL		MCL		SECL		WCL		Total in CIL	
	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL	Amount	% TOTAL
BUDGET PROVISION	6805	100	2417	100	1000	100	3495	100	748.98	100	2751	100	500	100	17716.98	100
ACTUAL CAP EXPENDITURE TILL 31/01/2018	4872	71.59	538.42	22.28	534.1	53.41	262	7.50	534.75	71.40	416	15.12	149.66	29.93	7266.20	41.01
LIKELY FORECAST OF CAPITAL EXPENDITURE FEB 2018-MARCH 2018	1000	14.70	1572.69	65.07	0#	0.00	3133	89.64	175	23.37	818.97	29.77	350.34	70.07	7083.16	39.98
LIKELY CAPITAL EXPENDITURE BY MARCH 2018	5872	86.29	2111.11	87.34	534.10	53.41	3395	97.14	709.75	94.76	1234.97	44.89	492.43	98.49	14349.36	80.99
FORECASTED CAPITAL FUND THAT WILL REMAIN UNUTILISED BY MARCH 2018	933	13.71	305.89	12.66	465.90	46.59	100	2.86	39.23	5.24	1516.03	55.11	7.57	1.51	3367.62	19.01

- Proposal of procurement of ETMS of value Rs 2.33 Crores (approx.) for Swang UG (Deg-III) was dropped in view of closure of the said mine.

Proposal for procurement of LED cap lamps of value of Rs 2.5 Crores (approx.) was dropped due to closure of 10 UG mines.

2. SCCL:

- Safety Budget under Capital head and its utilization for the year 2014-15 & 2015-16 & 2016-17 and for the year 2017-18 (Upto January 2018)

(In Rs. Lakhs)

Year	Capital		Revenue	
	Budget	Actual Expenditure	Budget	Actual Expenditure
2014-15	804	767.14	45703	74600
2015-16	1111	1214	--	72910
2016-17	--	145	--	77743
2017-18 (Upto Jan, 2018)	--	767	---	60839

- Requirement of funds is reviewed periodically.

3. NLC : Safety Budget and its utilization:

(Amount in Rs. Lakhs)

Year	Capital		Revenue	
	Budget	Actual Expenditure	Budget	Actual Expenditure
2014-15	181.25	70.00	500.00	500.00
2015-16	200.00	65.00	585.00	577.56
2016-17	1419.00	592.00	550.00	512.23
2017-18	1700.00	275*	552.00	374.00*

* Commitment up to Jan 2018.

* The committed targets will be reached at the end of March 2018

4. TATA STEEL LIMITED, JHARIA DIVISION : There is no budgetary restriction on expenditure for safety. Whatever is necessary for safety is being spent without any limitation.

AGENDA ITEM NO. X

Occupational Health Services

1. CIL: Occupational Health hazards and health Risk-

CIL has adequate infrastructure to monitor occupational health and for remedial measures against any health risk. The health risk of mining is mitigated by ensuring safe work condition like dust control by water sprinkling, noise control by ergonomically designed cabins of dumper, shovel, drills and similar other measures. Apart from distribution of Mining shoes and helmets as per the provisions of CMR, the workmen are also provided with dust masks, earmuff/plugs etc. The status of PME Centers and cases of notified diseases identified in last three years is as below:

As on 31/01/2018	ECL	BCCL	CCL	WCL	SECL	MCL	NCL	NEC	CMPDIL	TOTAL
PME Centres	16	9	4	10	13	2	13	1	1	69
Radiologists	3	3	2	1	1	1	1	1	-	13
CWP on roll	1	9	1	0	2	4	0	-	-	17
CWP Detection in last 3 years			0	0	0	3	0	-	-	3

2. The overall infrastructure of CIL to care for the health issues of employees, contractual workmen as well as persons of those settlements residing in the vicinity of mines is as below:

As on 31.01.2018	ECL	BCCL	CCL	WCL	SECL	MCL	NCL	NEC	CMPDIL	CIL	TOTAL
Dispensary	101	61	63	38	56	14	11	4	1	1	350
Hospital	9	12	19	10	11	6	3	2	0	0	72
Central Hospital	2	1	4	0	3	2	1	1	0	0	14
Area Hospital	7	2	10	9	0	3	1	0	0	0	32
Regional Hospital	0	9	5	1	8	1	1	1	0	0	26
Beds	822	827	892	630	845	309	200	112	0	0	4637
Doctors	156	142	210	131	211	92	86	13	2	4	1047
Specialist	27	40	44	39	49	24	23	7	0	0	253
GDMO	116	82	138	86	142	56	63	6	0	2	691
GDMO with specialisation	15	20	28	6	20	12	7	0	2	2	112
Ambulance	108	56	82	80	129	34	29	0	0	2	520
Owned	9	0	15	16	66	28	27	5	0	0	166
Hired	102	56	67	64	63	6	2	2	0	2	364
Ayur vedic Dispensary	1	0	0	0	0	1	0	0	0	0	2
Mobile Medical Van	1	0	0	1	0	2	1	0	0	0	5

Staff Nurse	183	251	243	167	280	115	124	14	0	1	1378
Pharmacist	77	72	104	64	99	54	34	7	1	1	513
Lab Technician	32	32	52	27	56	29	33	1	1	0	263
X-ray Technician	24	22	27	12	37	17	13	1	0	0	153
ECG Technician	6	13	26	6	16	10	7	0	0	0	84
Dresser/ OT Tech	203	161	119	38	87	22	41	7	0	0	678
Optometrician	0	7	2	2	3	3	3	0	0	0	20
Audiometrician	1	9	1	0	0	2	1	0	0	0	14
Physiotherapist	0	5	4	1	1	5	3	0	0	0	19
Dental Tech	0	3	1	0	0	1	1	0	0	0	6
Dietician	2	4	2	0	0	2	1	0	0	0	11
BLS Ambulances	2	56	0	0	63	3	0	0	0	2	126
300 mA X-ray machine	12	14	0	7	16	6	5	1	0	0	61
500 mA X-ray machine or >	3	2	16	4	1	2	1	0	0	0	29
Portable x-ray	3	3	6	4	10	2	2	1	0	0	31
Colour Doppler	1	1	1	1	4	2	0	1	0	0	11
USG	2	3	4	3	9	2	3	1	0	0	27
CT Scan	1	1	0	0	1	1	1		0	0	5
Spirometers	13	7	15	11	14	5	11	1	0	0	77
Audiometers	14	7	15	10	13	3	11	1	0	0	74
12 lead ECG machine	22	9	13	19	55	9	26	1	0	0	154
Haemodialysis	6	4	3	0	3	0	4	0	0	0	20
Temp. Pacing	0	0	1	0	0	0	2	0	0	0	3
Laparoscope	3	7	2	0	7	2	2	0	0	0	23
GI Endoscope	1	0	1	0	2	2	1	1	0	0	8
Colonoscope	1	0	1	0	3	1	1	0	0	0	7

3. IME & PME for the persons working in the mines are conducted according to the recommendations of 11th National Conference for Safety in Mines by incorporating X-Ray Chest, Audiometry, Spirometry and 12-Lead ECG.

4. Further Mitigation measures undertaken against Occupational Health hazard and Risk in subsidiaries of CIL:

a) Air Pollution control measures:

- The dust is controlled at source by installation of fixed sprinklers at CHPs, coal stock yards, weighbridges and along transportation roads. In major CHPs, fixed sprinklers have been provided at the transfer points and bunkers.
- Mobile water sprinkler are also deployed along the haul roads;
- In addition, effective dust suppression has been achieved through water sprinkling by mobile water tankers along the coal transportation roads and haul roads. Further, effective plantation in the mine lease area has been done to arrest the propagation and dispersion of dust significantly.

- CIL and subsidiaries are having drills fitted with wet drilling and dust extractors in order to control generation of dust.
- More & more efforts for more coal being transported by conveyors / rails to minimise generation of dust by reducing road transportation.
- The quality of ambient air in and around the mine is monitored every fortnight as per Environment (Protection) Amendment to ensure minimum adverse health risk to mine employees and settlement in the vicinity.
- Roads are black-topped, coal carrying trucks are optimally loaded and covered with tarpaulin. Further, road side plantation is also carried out.

b) Water pollution Control measures:

- The Effluent from the mines is treated in settling tank before discharging in natural course. The treated effluent is used for supply of water to the residential areas, adjoining villages and industrial uses like water sprinkling in coal transfer points and other places of dust generation, good housekeeping and plantation for overall improvement of the environment.
- Oil & grease traps are installed and operated in workshop to separate & collect oil & grease from workshop effluent.
- Effluent treatment plants (ETP) are installed and operated efficiently for treatment of workshop effluent & CHP effluent.
- Sewage treatment plant (STP) is installed and operated for treatment of large domestic sewage.
- The quality of the final effluent is monitored in terms of the relevant Indian standards, before it is discharged to natural drainage or in open land to minimise health risks to employees and the surrounding.

c) Noise pollution Control measures:

Noise pollution is created due to operation of HEMM deployed and Workshops, CHPs and due to blasting operations. This is reduced by-

- Proper maintenance of equipment to minimize vibration;
- Green belt provided around the mine as well as residential area;
- Stress on use blasting free technology of Surface Miner in OC mines and, Continuous Miner in UG mines.
- Ear Muff or Ear Plugs provided to Workers at highly noisy areas to prevent ailment relating to hearing impairment.

d) Hazardous Waste Management –

- Storage protocols are being followed in all the stores.
- Detoxification of oil barrels is being done by pneumatic pressure/rinse/wash with solvents.

- Hazardous waste (burnt oil from machines and used batteries) is being disposed off through the registered recycling agencies of CPCB.
- Bio medical and other hazardous wastes from the medical units are being disposed as per the laid down methods /procedures.

2. SCCL:

- Injuries due to accidents constitute the greatest health hazard among mine workers and pneumoconiosis, caused by the inhalation of dust, is the major occupational disease. In addition, adverse environmental conditions such as high temperature and humidity, changes in Atmospheric pressure, poor lighting, excessive noise and vibration, poor air quality, ionizing radiation, and the accumulation of dust and poisonous gases make mining one of the most dangerous of occupations.
- In SCCL, all Periodical Medical Examination (PME) Centers have been equipped with required medical appliances and personnel. Doctors, in charge of PME centers have been trained in occupational health. Due importance is given for detection of occupational diseases at early stages and all the workers are undergoing PME. Notified occupational diseases, if any, are being reported scrupulously.
- Occupational Diseases Board was constituted, regular meetings are held and its recommendations are followed/ implemented. All the doctors working in PME centers are trained in Occupational diseases.
- There are 10 PME centers. Comprehensive health cards for each workman integrating their working conditions with their health profile are being prepared. IME is being done to all departmental and contract workmen before deploying them for duty, PME is being done to the employees below 45 years of age once in every 5 years and once in two and half years to all those employees above forty five years of age.
- A study on occupational health management was conducted in SCCL by Ex-DMS (Medical) and report submitted thereupon was circulated among Area General Managers for implementation.

3. NLC:

Periodical Medical Examination is conducted for all the employees once in three year. No occupational diseases are detected

4. TATA STEEL LIMITED, JHARIA DIVISION:

4.1. PME (Periodical Medical Examination) -

Year	Tata Steel (Jharia – U/G)		Tata Steel (West Bokaro – O/C)	
	Target	Achieved	Target	Achieved
2015	660	660	636	641
2016	907	907	598	602
2017	677	677	530	521

4.2. First – Aid training for examinees (Certificates)

Year	Tata Steel (Jharia – U/G)
	Achieved
2015	86
2016	153
2017	60

4.3 First –aid refresher Training

	Tata Steel (Jharia – U/G)	Tata Steel (West Bokaro – O/C)
Year	Achieved	Achieved
2015	103	105
2016	202	102
2017	138	114

4.4. Health awareness training programmes and no. of employees trained

Year	Tata Steel (Jharia – U/G)		Tata Steel (West Bokaro – O/C)	
	No. of programmes organized	No. of employees trained	No. of programmes organized	No. of employees trained
2015	22	1270	19	481
2016	25	1176	14	382
2017	23	1235	15	419

4.5. Notifiable diseases detected during periodical medical examination from 2015 to 2017 → Nil.

5. GIPCL:

- i) Total nos of IME & PME carried out in the calendar year 2017 as below.

IME	PME
293	67

- ii) No notified diseases noticed in GIPCL Mines (i.e. VALIA and VASTAN LIGNITE MINES)

iii) The company medical officer has been given training on “ Multi Centric Study of Dust related disease in Mines and Development of Sustainable preventive Programme” at National Institute of Miner’s Health at Nagpur in the month of January 2018, arranged by DGMS.

- iv) 05 Nos. of supervisors were given First- Aid Training in the month of August 2017.

AGENDA ITEM NO. XI

- 10. Any other point with permission of the Chair.**

Annexure- 1

STATUS OF MAN RIDING SYSTEM (MRS) (Up to January, 2018)

SN	Company	Name of mine	Operational MRS	Type	Remarks
1	ECL	Jhanjra	3	Free Steered Vehicle (Diesel)	System Operating
2	ECL	Parasea	1	Chairlift	System Operating
3	ECL	JK Nagar		Chairlift	Sche under preparation
4	ECL	Shyamsundar(Sarpi Unit)		Chairlift	Installation will be completed very soon.
5	ECL	Nimcha		Charlift	Under Installation
6	ECL	Kottadih (R-VI Seam)		Chairlift	Tendering Stage
7	ECL	Dhemomain Incline		Chairlift	Under Installation
8	ECL	Amritnagar		Chairlift	Tendering Stage
9	ECL	Bansra		Chairlift	Under installation
10	ECL	Chinakuri Mine No. 3	1	Chairlift	System is operating
11	CCL	Churi		Free Steered Vehicle (Diesel)	Scheme submitted
12	SECL	Beheraband	1	Chairlift	System is operating
13	SECL	Kurja-Sheetaldhara	1	Chairlift	System is operating
14	SECL	Kapildhara	1	Chairlift	System is operating
15	SECL	Churcha	3	Rail based	System is operating
16	SECL	Bagdeva	1	Chairlift	System is operating
17	SECL	Singhali	1	Chairlift	System is operating
18	SECL	Shiwani	1	Rail based	System is operating
19	SECL	Jhilimili	1	Rail car	System is operating
20	SECL	Pinoura	1	Chairlift	System is operating
21	SECL	Bangwar	1	Chairlift	System is operating
22	SECL	Jhiria	1	Chairlift	System is operating
23	SECL	Nawapara	2	Rail based & Chairlift	System is operating
24	SECL	Katkona		Chairlift	Under installation
25	SECL	Damini		Chairlift	Scheme submitted
26	SECL	Khairaha		Chairlift	Under tendering
27	SECL	Rajendra		Chairlift	Tendering stage
28	SECL	Dhelwadih		Chairlift	Scheme approved
29	SECL	Haldiwari			Scheme under preparation

30	SECL	Bijuri		Chairlift	Scheme submitted
31	SECL	Gayatri			Provision in PR
32	MCL	Orient Mine No. 1 & 2	1	Rail based	System is operating
33	MCL	Orient Mine No. 3	1	Chairlift	System is operating
34	MCL	Orient Mine No. 4		Chairlift	Under installation
35	MCL	Hirakhand Bundia	1	Chairlift	System is operating
36	MCL	Nandira	1	Chairlift	System is operating
37	MCL	Talcher West		Rail based	Scheme submitted
38	BCCL	Moonidih	2	Bette Loco in XVI Seam	System is operating
				Chairlift in XVI Seam	System is operating
				Chairlift	Under Installation
				Chairlift	Under installation
39	BCCL	Akashkinaree		Chairlift	Scheme submitted
40	WCL	Tandsi	1	Rail Car	System is operating
41	WCL	Mauri/Mohan	1	Rail Car	System is operating
42	WCL	Khumbarkhani	1	Rail Car	System is operating
43	WCL	Shobhapur	2	Rail Car and Chairlift	System is operating
44	WCL	Saoner-I	1	Chairlift	System is operating
45	WCL	Chhattarpur-I	1	Chairlift	System is operating
46	WCL	Ballarpur 3&4	1	Chairlift	System is operating
47	WCL	Tawa-I	1	Chairlift	System is operating
48	WCL	Adasa	1	Chairlift	System is operating
49	WCL	Nehariya	1	Chairlift	System is operating
50	WCL	Rajur	1	Chairlift	System is operating
51	WCL	Tawa-II		Chairlift	Work Order Placed
52	WCL	Saoner –II		Chairlift	Work Order Placed
53	WCL	DRC		Chairlift	Work Order Placed
54	WCL	Saoner-III		Chairlift	Work Order Placed
55	WCL	Patansaongi		Chairlift	Final TC under approval
56	WCL	Chattarpur-I		Chairlift	Tender stage
57	WCL	Sasti UG		Chairlift	Tender stage
58	WCL	Saoner-I		Chairlift	Proposal under approval
59	WCL	Tawa - II		Chairlift	Tender stage
60	WCL	Silewara		Chairlift	Under feasibility study by Area

Summarized Status of Man Riding System (MRS) in CIL

Company	Total MRS	Operative MRS	MRS- Under Installation	Future programme for MRS
ECL	12	5	2	5
BCCL	5	2	2	1
CCL	1	0	0	1
WCL	22	12	0	10
SECL	23	15	1	7
MCL	6	4	1	1
Total	69	38	6	25

Annexure – 2

S&T projects of MoC

(Rs. In lakh)

SN	Name of Project	Expenditure during 2017-18 (Till 31.01.2018)
1	Techno-economic evaluation and performance behavior of Self Advancing (mobile) Goaf Edge Supports (SAGES) (Phase - II) [MT-166] <ul style="list-style-type: none"> Implementing Agency: Indian School of Mines (ISM), Dhanbad and M/s Jaya Bharat Equipment Pvt. Ltd (JBEPL), Hyderabad 	20.00
2	Constructing structures on backfilled opencast coal mines: An attempt to suggest viable methodologies [EE- 46] <ul style="list-style-type: none"> Implementing Agency: IIT-ISM, Dhanbad & CMPDI, Ranchi 	111.62
3	Sustainable livelihood activities on reclaimed open cast coal mines: a technology enabled integrated approach in Indian coal sector [EE-44] <ul style="list-style-type: none"> Implementing Agency: TERI / TERI University, New Delhi, CMPDI, Ranchi and Bharat Coking Coal Limited (BCCL), Dhanbad 	5.71
4	On-line coal dust suppression system for opencast mines [EE-47] <ul style="list-style-type: none"> Implementing Agency: Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram & CMPDI, Ranchi 	4.28
Total		141.61

R&D projects of CIL

(Rs. In lakh)

SN	Name of Project	Expenditure during 2017-18 (Till 31.01.2018)
1	Assessment of applicability and performance of Ground based Interferometry Synthetic Aperture Radar (GbInSAR) in safety zoning of surface mining slopes [CIL/R&D/01/65/2017] <ul style="list-style-type: none"> Implementing Agency: IIT, Kharagpur and ECL, Sanctoria 	430.00
2	Optical fiber based solar illumination of pit bottom and underground mine roadways and working face [CIL/R&D/01/66/2017] <ul style="list-style-type: none"> Implementing Agency: IIT, Kharagpur and ECL, Sanctoria 	120.00
3	Development of Virtual Reality Mine Simulator (VRMS) for improving safety and productivity in coal mines [CIL/R&D/01/67/2017] <ul style="list-style-type: none"> Implementing Agency: IIT-ISM, Dhanbad, UMD, CMPDI, Ranchi, BCCL, Dhanbad, NCL, Singrauli and SIMTARS, Australia 	1250.00
Total		1800

Total Expenditure on R&D projects related to Safety and Conservation

	Expenditure during 2017-18 (Till 31.01.2018) (Rs. in Cr.)
S&T of MOC	1.41
R&D of CIL	18.00
Total	19.41

Annexure-3

COAL INDIA LTD. DUST SUPPRESSION ACTIVITY TARGET ACHEIVEMENT TILL 31st JAN 2018.						
Comp	Sl	Description of items for Dust suppression	Total Quantity	Completion target	Completed up to Jan. 2018	Remarks
ECL	1	Fixed type sprinkler	103	Mar, 2018,	NIL	Work order has been issued for 21 Nos and estimation in process for 6 Nos in Kenda area, Retendering has been done for 10 Nos in Sodepur area , tendering is in process for 20 Nos in Kunustoria area, tendering is in process for 28 Nos in Satgram area, ECL, tendering in process for 17 No's in Pandaveswar area and tendering is in process for 1 No in SP Mines area.
	2	Mobile Sprinkler	2	Mar,2018,	2 Nos of Mobile Sprinklers provided in SP Mines area, ECL.	
	3	Provision for sprinklers at tipplers point in different UG mines	4	Mar, 2018	Nil	Under tendering Process for 6 Nos in Mugma area, ECL.
	4	Mist sprayer	6	Jun, 2017	Nil	Nil
BCCL	1	Mist type-sprinkler- 10 KL Water Tanker fitted with mist spray arrangement	14	Sept. 2017	In process of Budget availability approval for 2017-2018.	
CCL	1	28 KL Mist type water Sprinkler	10	Mar, 2018	Work order placed. Supply already started. Order will be completed by 31st March 2018	Mar, 2018
	2	Retrofitting of 2no.s of Mist type Spray system on existing 28 KL water sprinklers	2	Oct, 2017	2 nos fitted in NK Area, CCL	Completed
WCL	1	Fixed Sprinklers at Coal Stock yard	5	Dec, 2017	Work in Progress	Likely to be completed by 31st March, 2018
	2	Scientific Designing, Supplying, Installation & Commissioning with AMC for One year of Mist spray fugitive Dust Suppression system (2 Nos).	2	Aug, 2017	Installation Completed and system is in operation.	Completed as scheduled

COAL INDIA LTD. DUST SUPPRESSION ACTIVITY TARGET ACHEIVEMENT TILL 31st JAN 2018.

Comp	Sl	Description of items for Dust suppression	Total Quantity	Completion target	Completed up to Jan. 2018	Remarks
	3	28 KL Water Sprinkler	11	Actual-Dec, 2017 Revised- March-2018	Completed. 9 nos of mobile sprinklers delivered.	Procurement of additional 2.nos of sprinklers is in progress and most likely to be procured by 31st March 2018.
	4	Mist Mobile Sprayer	1	Actual-Oct, 2017 Revised- Feb, 2018	Tender cancelled due to ambiguity in technical specifications	
	5	Road Sweeping Machine	1	Actual-Nov, 2017 Revised- Feb, 2018	Work order issued on 30-11-2017.	Delivery of machine expected by 31st March 2018
SECL	1	28 KL Mist type water Sprinkler	1	Jul, 2017	Nil	
	2	Fixed Sprinklers	525	Feb, 2018	134	Under Process
	3	Truck mounted mechanical road sweeping machine	5	May, 2017	5	Work Completed
	4	Truck mounted long range mist spray system	5	Dec, 2017	Nil	
	5	70 KL mobile sprinkle	1	Jul, 2017	1	Work Completed
	6	9KL mobile sprinkler	6	Aug, 2017	2	
	7	Installation of Mist Sprayer	120	Jan, 2018	Nil	
	8	Dust breaking arrangement (green netting and bamboo matting)	3 areas	Jun, 2017	7	Work Completed
MCL	1	Wheel washing facility at the exit of mine	10	Mar, 2018	<ul style="list-style-type: none"> Site location for installation of system finalized for 5 projects. Estimate under preparation in 2 projects. 	
	2	Mist Blower	23	Mar, 2018	The proposal for installation of 5 no. of Mist Blower in Bhubaneswari OCP is in HQ Finance Deptt. for FC no.	
	3	Mist Sprayer	1	Nov, 2017	Completed (The proposal was for repairing of existing system, which has been completed).	

COAL INDIA LTD. DUST SUPPRESSION ACTIVITY TARGET ACHEIVEMENT TILL 31st JAN 2018.

Comp	Sl	Description of items for Dust suppression	Total Quantity	Completion target	Completed up to Jan. 2018	Remarks
	4	Mobile mist blowers	10	Mar, 2018	1 no. completed (Mist spray arrangement was attached in existing 28KL water tanker)	<ul style="list-style-type: none"> As per the recommendation of MCL Board, 10 no. of mobile mist blowers is proposed to procure on hired basis. Pre-bid meeting held on 27/11/17. Five bidders' attended the meeting. Out of which, only one bidder has submitted the budgetary offer on 22/12/17. A team consisting of officials from E&M and Env. Deptt of MCL is visiting Karaikal port, Puduchery by the second week of Feb 2018 for seeing and understanding the operation of ground mounted mist blower as desired by D(T/P&P), MCL.
	5	Fixed sprinklers	280	Mar, 2018	128 nos. Completed	<ul style="list-style-type: none"> There is no need of installation of 05 no. of fixed sprinklers in Coal stock yard of Talcher field, as there is no stock in Coal Stock yard. The coal being mined out is in wet condition always and the coal being mined will be immediately dispatched. There is no dust generation during coal handling. Remaining under various stages of completion.
	6	Instant shower system	3	Mar, 2018	2 completed	
NCL	1	Fixed mist sprinklers	67	Feb, 2018	50	
	2	Mobile Water Tanker sprayers	6	Mar, 2018		
NEC	1	Fixed Dry fog water sprinkler system	2	Actual-Nov 2017 Revised-March 2018	Nil	

Status of UG Mine Mechanization (CM & PSLW)

1. CM Deployed			
Subsidiary Co.	Name of the mine	No. of CM	CM Capacity (Mty)
ECL	Jhanjra	2	0.95
	Sarpi	1	0.46
WCL	Tandsi(0.51)	1	0.51
SECL	Khairkha	1	0.465
	Churcha RO	2	1.00
	Halidibari	1	0.42
	Kapildhara	1	0.43
	Pinoura / Vindhya	1	0.40
	Raniatari	1	0.18
	Sheetal Dhara – Kurja	1	0.42
	Vijay West	1	0.42
Total CIL	11	13	5.655
2. CM Planned			
ECL	Jhanjra LHCM	2	0.72
	Khottadih	1	0.51
	Kumardihi-B	2	1.02
BCCL	Block-II	1	0.45
CCL	Churi / Benti	1	0.50
	Parej-East	1	0.51
	Piparwar- phase-I	2	0.87
	Amlo / Dhori	1	0.30
WCL	Jamunia	2	0.84
	Dhankasa	2	0.91
	Tawa-II	1	0.36
	Gandhigram	3	1.17
	Dhau-North	1	0.36
SECL	Ketki	1	0.42
	Vindhya	1	0.40
	Banwar	1	0.45
	Gaytri	2	0.78
	Khairakha – 2 nd set	1	0.354
MCL	Talcher West	1	0.51
	Natraj	1	0.52
Total	19	28	11.954

3. PSLW Deployed and Planned				
Subsidiary Co.	Name of the mine	No. of PSLW	Capacity (Mty)	Remarks
ECL	Jhanjra	1	1.70	In-operation
BCCL	Moonidih-XVI	1	0.70	In-operation
	Moonidih-XV	1	2.50	Planned
	Kapuria	1	1.00	Planned
	Muraidih	1	0.42	Planned
Total	4	5	6.32	
