

23

STANDING COMMITTEE ON  
COAL AND STEEL (2015-2016)  
SIXTEENTH LOK SABHA

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**MINISTRY OF COAL**

**"SAFETY, HEALTH AND EDUCATION FACILITIES FOR  
INHABITANTS/WORKERS IN COAL/LIGNITE MINING AREAS"**

**[Action Taken by the Government on the Observations/Recommendations  
contained in the Fourteenth Report of the Standing Committee on Coal and Steel  
(Sixteenth Lok Sabha)]**



**TWENTY-THIRD REPORT**

**LOK SABHA SECRETARIAT  
NEW DELHI  
August, 2016/ Sravana, 1938(Saka)**

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INHABITANTS/WORKERS IN COAL/LIGNITE MINING AREAS"**

**[Action Taken by the Government on the Observations/  
Recommendations contained in the Fourteenth Report(16th Lok Sabha) of the  
Standing Committee on Coal and Steel (Sixteenth Lok Sabha)]**

**Presented to Lok Sabha on 10.08.2016**

**Laid in Rajya Sabha on 10.08.2016**



**LOK SABHA SECRETARIAT  
NEW DELHI  
August, 2016/ Sravana 1938(Saka)**

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## **COMPOSITION OF THE STANDING COMMITTEE ON COAL AND STEEL(2015-16)**

**Shri Rakesh Singh - Chairperson**

### **Name of the Member**

#### **Lok Sabha**

2. Shri A Arunmozhithevan
3. Shri Kalyan Banerjee
4. Shrimati Jyoti Dhurve
5. Shri Godam Nagesh
6. Shri Fagga Singh Kulaste \$
7. Shri Shailesh Kumar
8. Dr. Banshilal Mahato
9. Shri Devji Mansingram Patel
10. Shrimati Riti Pathak
11. Shrimati Ranjit Ranjan
12. Dr. Ravindra Kumar Ray
13. Shri Neiphiu Rio
14. Shri Tamradhwaj Sahu
15. Shri Tathagata Satpathy
16. Shri Janardan Singh "Sigriwal"
17. Shri Pashupati Nath Singh
18. Shri Rama Kishore Singh
19. Shri Sunil Kumar Singh
20. Shri Sushil Kumar Singh
21. Shri Krupal Balaji Tumane

#### **Rajya Sabha**

22. Shri M.J. Akbar@
23. Shri Ali Anwar Ansari
24. Dr. Pradeep Kumar Balmuchu
25. Shri Md. Nadimul Haque
26. Shri B.K Hariprasad
27. Dr. Satyanarayan Jatiya
28. Shri Jugul Kishore#
29. Shri Avinash Pande#
30. Shri Sanjay Raut#
31. Shri Dilip Kumar Tirkey
32. Shri Narayan Lal Panchariya\*
33. Shri Beni Prasad Verma\*

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\$ Ceased to be a Member of the Committee w.e.f. 05.07.2016 on his induction in the Council of Ministers.

@ Ceased to be a Member of the Committee w.e.f. 17.06.2016 after his resignation from Membership of Rajya Sabha

# Ceased to be a Member of the Committee w.e.f. 04.07.2016 after his retirement from Rajya Sabha

\*Nominated w.e.f. 25.07.2016.

(ii)

## **SECRETARIAT**

- |                         |   |                     |
|-------------------------|---|---------------------|
| 1. Shri U.B.S. Negi     | - | Joint Secretary     |
| 2. Shri Ajay Kumar Garg | - | Director            |
| 3. Shri Arvind Sharma   | - | Additional Director |
| 4. Ms. Miranda Ingudam  | - | Deputy Secretary    |

(iii)

## **INTRODUCTION**

I, the Chairperson, Standing Committee on Coal and Steel having been authorised by the Committee to present the Report on their behalf, present this Twenty-Third Report (Sixteenth Lok Sabha) on Action Taken by the Government on the observations/recommendations contained in the Fourteenth Report of the Standing Committee on Coal and Steel (Sixteenth Lok Sabha) on "Safety, Health and Education Facilities for Inhabitants/Workers in Coal/Lignite Mining Areas" relating to the Ministry of Coal.

2. The Fourteenth Report (Sixteenth Lok Sabha) of the Standing Committee on Coal and Steel was presented to Lok Sabha on 12.08.2015. Replies of the Government to all the observations/recommendations contained in the Report were received on 11.07.2016.

3. The Standing Committee on Coal and Steel considered and adopted this Report at their sitting held on 09.08.2016.

4. An analysis on the Action Taken by the Government on the observations/recommendation contained in the Fourteenth Report (Sixteenth Lok Sabha) of the Committee is given at **Annexure-II**.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Chapter-I of the Report.

**NEW DELHI;  
09 August, 2016  
18 Sravana, 1938(Saka)**

**RAKESH SINGH  
Chairperson  
Standing Committee on Coal and Steel**

(iv)

## **REPORT**

### **CHAPTER – I**

This Report of the Standing Committee on Coal and Steel deals with Action Taken by the Government on the Observations/Recommendations contained in the Fourteenth Report (Sixteenth Lok Sabha) of the Standing Committee on Coal and Steel on "Safety, Health and Education Facilities for Inhabitants/Workers in Coal/Lignite Mining Areas" relating to the Ministry of Coal which was presented to Lok Sabha/laid in Rajya Sabha on 12.08.2015.

2. The Report contained 17 Observations/Recommendations. Action Taken Replies have been received from the Ministry of Coal in respect of all the 17 Observations/Recommendations contained in the Report on 11.07. 2016. These have been categorized as follows:

- (i) Observations/Recommendations that have been accepted by the Government:

Sl. Nos. 1, 2, 3, 4, 5, 6, 7, 8,9, 12, 15 and 16	Total – 12 (Chapter II)
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- (ii) Observations/Recommendations which the Committee do not desire to pursue in view of the replies of the Government:

Sl. No. 13	Total – 01 (Chapter III)
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- (iii) Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee:

NIL	Total – NIL (Chapter IV)
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- (iv) Observations/Recommendations in respect of which final replies of the Government are still awaited:

Sl. Nos. 10, 11, 14 and 17	Total-04 (Chapter V)
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**3. The Committee trust that utmost importance would be given to implementation of the Observations/Recommendations accepted by the Government. In case, where it is not possible for the Ministry to implement the recommendations in letter and spirit for any reason, the matter should be reported to the Committee with reasons for non-implementation. The Committee desire that further Action Taken notes on the Observations/Recommendations contained in Chapter-I and Final Action Taken Replies to the Recommendations contained in Chapter-V of this Report be furnished to them at an early date.**

4. The Committee will now deal with the Action Taken by the Ministry on some of their observations/recommendations made in the Fourteenth Report.

## **NEED FOR REVIEW OF STATUTES GOVERNING SAFETY IN COAL MINES**

### **Recommendation Serial No. 2**

5. The Committee observed that some of the statutes governing safety in Coal Mines viz. Mines Act, 1952; Electricity Act, 2003; Explosive Act, 1884; Employee Compensation Act, 2009; Factories Act, 1948; Indian Boiler Act, 1923 etc. were framed decades back in a totally different work atmosphere and therefore calls for an urgent holistic review based on the challenges being faced in carrying out the present day mining operations. In this context the Committee were happy to note that the Ministry of Labour and Employment (MOL&E) had proposed to amend the provisions of Mines Act, 1952 and bring out new Coal Mines Regulations-2015 with a view to address modern day challenges. The Ministry had informed the Committee that the Mines Act (Amendment) Bill, 2011 and draft Coal Mines Regulations, 2015 had been prepared after due deliberations with all stake holders and had been notified in the Gazette of India. The Committee appreciated the initiatives taken so far by the Government in reviewing the old statutes governing mines safety to cater to the present day needs. The Committee, therefore, recommended that comprehensive review of all the relevant statutes may be under



taken by the Ministry so that obsolete and redundant provisions might be weeded out and appropriate amendments, whenever necessary might be brought out in the statutes/Rules/Regulations. The Committee further recommended that the entire exercise might be carried out in a time bound manner and the Committee might be apprised of the action taken in the matter.

6. In its action taken reply, the Ministry of Coal has stated as under :

"DGMS under aegis of the Ministry of Labour & Employment (MOLE) is the regulatory body responsible for enforcement of various statutes applicable to the mining industry. They constantly review the said statutes in so far as their applicability is concerned to cater to the needs of the technological and other developments in the mining industry as well as safety and health aspects of the employees. The Mines Act -1952, the Coal Mines Regulation- 1957, the Mines Rules-1955 and the Mine Vocational Training Rules- 1966 are under process of amendment."

**7. With reference to the recommendation of the Committee for a comprehensive review of all relevant governing statutes on safety in Coal Mines, the Ministry in its action taken reply has stated that the regulatory body, namely, the Directorate General of Mines Safety (DGMS) under the aegis of the Ministry of Labour and Employment constantly review the applicability of various statutes. The Committee note that the stated review takes into consideration the needs of the technological and other developments in the mining industry as well as safety and health aspects of the employees. According to the Ministry of Coal, Mines Act, 1952; the Coal Mines Regulations, 1957; the Mines Rules, 1955; and the Mines Vocational Training Rules, 1966 are under process of amendment. However, the Ministry's reply is silent on the aspect of the time frame within which this review is to be completed. The Committee, therefore, reiterate their earlier recommendation and desire that the entire**

**exercise may be carried out in a time bound manner and they be apprised of the final outcome in the matter.**

## **SAFETY MONITORING MECHANISM IN CIL**

### **Recommendation Serial No. 3**

8. The Committee noted that an elaborate safety monitoring mechanism existed at different levels in CIL viz. Mine Level; Area Level; Head Quarter Level; CIL Head Quarter Level; and Ministerial/National Level which had resulted in continued and sustained improvement in CIL's safety performance. It was evident from the fact that the trend of five yearly average fatalities of 196 in the years 1975-1979 in CIL had come down to 62 in the year 2010-2014 as also the five yearly average serious injuries in CIL from 1278 in the years 1975-1979 to 228 in the years 2010-2014. The Committee had been apprised of various actions being taken for improvement in safety in mines viz. continuous review of safety status of mines through the multi-disciplinary Internal Safety Organization (ISO); issue of directives/guidelines on corrective measures for prevention of recurrence after detailed analysis of fatal accidents; preparation and implementation of risk assessment based Safety Management Plan (SMP) for every mine; mine safety audit by external independent agencies; technology up-gradation for improving safety in mining operation; better strata management; prevention of spontaneous heating; fire and explosion in mines; mine safety inspections; safety R&D initiatives at CIL, Head Quarter level; prevention of accidents in Open Cast Mines; emergency response systems; safety awareness programme; etc. Statedly, new initiatives for adoption of a system approach for overall improvement of safety standards viz. adoption of globally established technique of WRAC (Workplace Risk Assessment and Control) compliant with Coal Mines Rules (CMR) 2011; uniform system of documentation of all mining operation activities; adoption of Risk Assessment based Safety Management in all mines of CIL; etc. were being put in place. The Committee, however, noted with concern that during the last five years, the trend of fatalities in CIL showed only a marginal reduction from 62 in 2009 to 58 in 2013, while for serious injuries, from 290 in 2009, it increased to 308 in 2010 and came down to 178 in 2013. In this

regard, the Committee had emphasized that every single life was precious and all out efforts must be made to bring the fatality rate to zero on utmost priority basis. The Committee appreciated that laudable initiatives at par with global standards were being put in place in CIL Mines to further boost the safety parameters and standards in these mines. The Committee, however, at the same time desire that the reasons for each instance of fatality as well as serious injury that had occurred must be properly analyzed and appropriate remedial mechanism be accordingly devised to avoid recurrence of such circumstances to bring down the fatality rate as well as the trend of serious injuries. The Committee hoped that the preventive measures being put into place as well as the new initiatives would translate into a zero tolerance level for fatalities as well as serious accidents in these mines. The Committee would like to be apprised of the tangible results gained from these initiatives and measures being put in place in CIL Mines.

9. In its action taken reply, the Ministry of Coal has stated as under:

"The law enforcing agency / regulatory authority under the Mines Act- 1952 i.e. the Directorate General of Mine safety (DGMS) under the aegis of Ministry of Labour & Employment (MOLE) conducts statutory inquiry / investigation to analyze the causes and circumstances leading to all fatal accidents and suggests remedial measures to avoid recurrence of such accidents.

Apart from inquiry conducted by DGMS, all fatal and serious accidents are also being inquired / investigated by the Mine Manager or any Asst. Manager authorized by the Mine Manager and the Safety Officer of the respective mine as per provisions made under the Coal Mines Regulations- 1957.

Apart from the above investigations / inquiries made under various provisions of statutes, the Internal Safety Organization (ISO) of each subsidiary company also conducts inquiry in case of any fatal accident to analyze the root causes and recommend corrective and preventive measures to be taken to prevent recurrence of such accidents.

**Tangible results of safety initiatives in mines of CIL:** There is substantial reduction in both fatal and serious accidents in the mines of CIL in last four years since adoption of risk assessment tool of Workplace Risk Assessment and Control (WRAC)for preparation safety Management Plans(SMPs)and implementation of control measures in mines, which is evident from the table given below:

Sl. No.	Accident Statistical Parameters	4 yearly average (from 2008 to 2011) prior to implementation of WRAC based SMPs	4 yearly average (from 2012 to 2015) since implementation of WRAC based SMPs	% Reduction
1	Nos. of fatal accidents	60	48	20%
2	Nos. of fatalities	70	50	29%
3	Nos. of serious accidents	294	182	38%
4	Nos. of serious injuries	304	187	38%"

**10. The Committee are happy to observe that there is a substantial reduction in both fatal and serious accidents in the mines of CIL during the last four years since adoption of risk assessment tool of Workplace Risk Assessment and Control (WRAC)for preparation of safety Management Plans(SMPs)and implementation of control measures in mines. This is evident from the fact that since implementation of WRAC based SMPs, the accident statistical parameters of fatal accidents, fatalities, serious accidents and serious injuries have shown a significant reduction of 20%, 29%, 38% and 38% respectively during 2012 to 2015 as compared to the period from 2008 to 2011 i.e. prior to implementation of WRAC based SMPs. While appreciating the apparent tangible reduction that have taken place in accident statistical parameters, the Committee reiterate their expectation that the preventive measures put in place as well as the other new initiatives would translate into a zero tolerance level for fatalities as well as serious accidents in these Mines.**

## **SAFETY INSPECTION OF MINES**

### **Recommendation Serial No. 8**

11. The Committee found that the Mines Rules, 1955 stipulated for a monthly inspection of Mines with a view to assess various aspects like dangers in relation to mining operations such as condition of Roof & Sides, adequacy of supports, safety aspects in haulage and travelling roadways, ventilation, sealed off area, escape route, machinery etc., compliance to various statutory provisions, status of functioning of different safety system installed/commissioned in the Mines; compliance to safety checklists prescribed; etc. Undoubtedly, a robust inspection was the sine qua non for effective implementation of safety monitoring mechanism. The Committee, therefore, desired that this important aspect should be given utmost priority and the findings and recommendations made by inspection teams be meticulously followed and implemented in letter and spirit.

12. In its action taken reply, the Ministry of Coal has stated as under:

"As per the Mines Rules 1955, Workmen Inspectors and Safety Committee members inspect their respective mines. Observations/ Recommendations based on the inspections made by the Safety Committee during their inspections are discussed in the monthly meeting.

The compliance of recommendations / suggestions of the Safety Committee are scrutinized by DGMS officials during their visit to mines. The compliance report is also being checked by the Internal Safety Organization (ISO) and senior Area level executives.

Besides the above, the officers from Directorate-General of Mines Safety (DGMS) regularly inspect mines to oversee the compliance of statutes related to mine safety. DGMS has well established structure for conducting inspection of mines. There are total eight zones, each under the charge of a Deputy Director-General of Mines Safety. There are three to four Regional offices under each zonal office. Each Region is under the charge of a Director of Mines Safety. There are in all 29 such Regional offices. There are four to five Dy. Director of Mine Safety (DDMS) under one Director of Mines Safety. Each Zone, besides having inspecting officers of mining disciplines has officers in electrical & mechanical engineering and occupational health disciplines. During inspection, DGMS officers review all safety parameters of the mines.

**SCCL:** Inspections are done regularly and findings/ violations / recommendations are acted upon and corrective action is taken. It also get uploaded to Web and is monitored by ISO.

**NLC:** In order to ensure thorough inspection, following agencies / bodies undertake inspection on time bound basis as follows:

- (i) Daily
  - Safety Related issues are being deliberated at Mine Level Production Review Meeting.
  - Inspection of the Mine workings by Manager/ Mines and other statutorily qualified personnel.
  - Area wise Inspection / Supervision is being carried out by the concerned experienced Under Managers , Mechanical Engineers and Electrical Engineers.
  - Hand over and take over of charge exists in all Mining operations in every shift and being followed by statutorily qualified Mining Personnel to ensure safety of Men, Machineries and Materials.
- (ii) Weekly
  - Weekly Review Meeting is being conducted by the Mine Manager to discuss the issues related to Mine working plans / operations, Safety Related Activities etc.
  - Safety Status / Safety Performance of the Mine is monitored / reviewed under the statutory frame work.
  - Regular Inspection by the Statutory Personnel and Officials at Corporate Level to monitor standards maintained as per statute.
- (iii) Monthly
  - Safety Status / Safety Performance are monitored by the Sectional / Departmental Safety Committee constituted under the Pit Safety Committee Mine wise.
  - Pit Safety Committee Meetings are conducted regularly once in a Month. Mine wise Mock drills at vulnerable locations to assess the preparedness on emergency response.
  - Central Safety Committee Meeting in every unit in cyclic order.
  - A Safety Audit Team comprising of Engineers of various disciplines inspect the Safety features such as 'Fail Safe System' incorporated in the Specialized Mining Equipments / Conveyor etc., to ensure Safe/Reliable operation and to achieve total loss control over Men / Materials / Machineries.
- (iv) Quarterly
  - Inter Unit Safety Assessment are being carried out to assess the Safety Standards maintained as per statute.
  - 'Safety Performance Appraisal' for NLC Units is being submitted to NLC Board for every Quarter and the Board - Observations / Suggestions are being implemented.
  - Safety Status / Safety Performance of every Mines is monitored / reviewed under the statutory frame work.
- (v) Periodical / Annually
  - Safety Action Plan is being prepared and reviewed every year.

- Training Calendar is prepared every year and training on Safety Related Topics is being imparted to all the Employees.
- Well laid 'Pre Monsoon Action Plan' in detail is prepared and revised and reviewed for every year to take care of any emergency situation.
- Cyclone Alert Squad swing into action whenever heavy rainfall / heavy wind velocities warnings received in advance through a well established Weather Warning System, net worked with Regional Meteorological offices.
- Periodical Environmental studies by the CARD (Internal) and NIMH (External) on Occupational Health Hazards (Dust / vibration / noise)
- Slope Stability / Stabilization / rehabilitation of slope are being carried out by engaging accredited Mining Experts (Scientific and Research Institutions NIRM / KGF / CMRI / TANU and their recommendations are being implemented.
- Risk Assessment and Safety Audit once in 2 years by accredited External Agencies.
- DGMS officials make inspection of the Mine periodically and point out deficiencies for necessary corrective measures and the remedial measures are being undertaken and the status report is being submitted to the Inspectorate.
- Periodical study is being conducted to identify and to detect emerging Occupational Health Hazards like silicosis and Pneumoconiosis, but no such cases were identified so far, at NLC during Periodical Medical Examinations being conducted as per statute.

The recommendations given by the above inspection team are meticulously implemented in letter and spirit."

**13. The Committee are happy to note that an elaborate inspection mechanism has been put in place in Neyveli Lignite Corporation (NLC) ensuring thorough inspection on daily, weekly, monthly, quarterly and annual basis. The Committee observe that recommendations given by the inspection team are meticulously implemented in letter and spirit. The Committee, however, find that in respect of SCCL, the reply given by the Ministry merely stated that inspections are done regularly and the findings, violations and recommendations are acted upon and corrective action taken. The Committee feel that the periodicity of inspections have to be laid down specifically in governing statutes/guidelines so that the intended purpose of carrying out periodic inspections is achieved. The Committee also observe that inspections are carried out at**

**various levels in the hierarchy and also by various authorities viz. Safety Committee; Directorate General of Mine Safety; Internal Safety Organisation; etc. The Committee desire that there should be a robust functional cooperation and coordination amongst all these inspection authorities so that the findings, observations and recommendations are coherently analysed and implemented upon effectively. The Committee would like to be apprised of the action taken in the matter.**

## **ZERO HARM POTENTIAL**

### **Recommendation Serial No. 12**

14. The Committee note that a Roadmap had been prepared to achieve 'Zero Harm Potential (ZHP) in CIL mine Areas. In the year 2010, a training programme was arranged by CIL on Safety in Mines, Testing and Research Station (SIMTARS) at Australia which was recognized as the best in the world to develop trainers with an objective to improve safety standards in Mines. The Committee had been apprised that the initiative was a continuous process with 1488 and 1341 executives already trained in the first and second phase of the training programme respectively. To achieve 'Zero Harm Potential' in mines, CIL had taken up a numbers of additional measures viz implementation of SMPs and Take-5, an informal risk assessment tool before starting of any operation; up-gradation of knowledge to cope with technology change; Risk Management System for Project Planning Stage, Restructuring/Re-organization of relatively small Mines to bigger Mines for adoption of Mass Production Technology, acquisition of land for OCPs in one go so that operations in Mines could be done as per approved plan and all mining areas be permanently fenced; deployment of higher capacity equipment in OCPs for faster excavation; effective training and feedback system and weeding out of incompetent and physically unfit workman from operational activities, etc. The Committee appreciated the ongoing initiatives towards 'Zero Harm Potential' and hoped that this target would be achieved in a time bound manner. The Committee



at the same time recommended that such training programmes must also be organized for non-executives also who were engaged in actual mining operations. The Committee also desired SCCL and NLC to work out such training programmes for their executives as well as non-executives. The Committee would like to be apprised of the progress in the matter.

15. In its action taken reply, the Ministry of Coal has stated as under:

"Safety is always the highest priority. Safety is embedded in the mission statement and is one of the most important factors in the overall business strategy. CIL has framed a well-defined safety policy to ensure safety in our mines and establishments. CIL has well established multi-disciplinary internal safety organization in all subsidiaries for implementation of Safety Policy. All operations, systems and processes are meticulously planned and designed with due regard to safety, conservation and sustainable development. CIL always encourages employees' participations at all levels so as to promote proactive safety culture and to improve safety awareness at grass root level.

With consistent efforts, continuous improvement in safety standards is achieved which is reflected in reduction of fatalities and serious injuries. To achieve further improvement, initiatives are being taken in various spheres which include the following:-

A. **Mining Operation:** Adoption of the state-of-the art technology in suitable geo-mining locales.

1. Adoption of Mass Production Technology in more number of UG mines.
2. Deployment of more number of surface miners to eliminate blasting operation in O.C.Ps.
3. Deployment of relatively higher capacity HEMM in more number of O.C.Ps .
4. Mechanisation of UG drilling.
5. Phasing out manual loading in UG mines.

B. **Strata Management:** Thrust on prevention of roof & side fall accidents.

1. Dedicated Strata Control Cell in each company.
2. Roof bolting as an integral part of support system in UG mines.
3. Switching over to use of resin capsules from cement capsules in phased manner.
4. Monitoring of strata by strata monitoring devices.

C. **Prevention of Spontaneous heating:**

1. Expedite construction of sectionalisation stoppings.
2. Pressure Quantity(PQ) Survey for checking efficacy of ventilation standards at regular intervals.

3. Use of more number of Gas Chromatographs for mine air sampling.
4. Use of Local Methane Detector (LMD) for early and accurate detection of methane.
5. Environmental Tele-Monitoring System (ETMS) in degree III & fiery UG mines.

**D. Training :**

1. Skill up-gradation training to frontline officials and workmen.
2. Behavioral based training for all employees.
3. One Week Training to all front line supervisors .
4. Training of Dumper Operators on Simulators.

**E. Others:**

1. Slope monitoring devices in O.C.Ps for prediction of bench/dump failure.
2. Digitization of mine plan.
3. Introduction of LED type light weight cap lamps in u/g mines.
4. Man Riding System (MRS) for u/g mines having long and arduous travel.

In an endeavor to achieve "**Zero Harm Potential**", the safety system of CIL is analyzed in depth vis-a-vis other coal producing countries. It was revealed that safety standard of Australia has been by far the best amongst leading coal producing countries. Australia has achieved almost zero fatality in their mines consistently during last decade. They are doing risk assessment in all mine operations based on which they are preparing Safety Management Plan(SMP) for all mines and the same are being implemented in true spirit.

To achieve "**Zero Harm Potential**", CIL having explored all possibilities has finally adopted the safety management system of Australia which is now recognized as the best in the world.

In the above backdrop, a group consisting of twenty executives have been trained in Australia in Risk Management system. These trained executives are being deployed for imparting training to other executives responsible for implementing the safety management system in mines of CIL. They are further giving training to the grass root level workers for preparation of Risk assessment based Safety Management Plan(SMP).

SMPs for all mines of CIL have been prepared and are being reviewed on regular basis. SMP is a continuous process which need regular review and updation with the dynamics of mines. However due to differences in technological and socio-economic conditions prevailing in India, the progress in implementation the same is slow.

Upon in-depth study, comparison of our mining system with the same of the other advanced coal producing countries, the following contrasting differences are observed:

<b>System</b>	<b>Coal mines of Advanced Countries</b>	<b>Coal mines of CIL</b>
Mechanization	All Underground as well as OC workings are highly mechanized. Very few manpower is deployed in mining activities. In underground mines, requirement of workmen to enter the area under green roof is minimum. Hence exposure to risk of workmen is minimum. Mostly UG mineface machinery are remotely operated.	UG mines are highly labour intensive and low productivity. In OCPs relatively low capacity HEMMs are deployed due to limited working area.
Working space	Land is not a constraint.	Due to delay in land acquisition, many mines especially OCPs are working in constricted space. Risk increases many fold due to poor mine shape. Non-availability of land for dumping has resulted in many unstable dumps.
Vicinity of mines	Mining Areas are far away from dwellings/habitation.	Mining Area are generally having dwelling/habitation and other surface constraints. People do not vacate land even after receiving compensation. Many habitants make a living on coal picking from dumps and theft of coal from mines, which increases the risk of accidents.
Legacy Problem	There is no legacy problem	CIL was formed after taking over mines from erstwhile private owners. These mines are even more than hundred years old. Most of these mines are having multi seam working contained water and fire in upper sections which are abandoned long back leading to transference of danger to present sections.
Workforce	Workforce appointed solely on basis of job requirement and competency. Hence all employees are highly educated, skilled and competent. Labour laws are flexible, "hire and fire rule" is practiced for incompetent workmen.	Mostly land oustees are appointed who are generally semi educated/uneducated.

To achieve "**Zero Harm Potential**" in mines of CIL following additional measures are envisaged to be implemented.

1. Implementation of SMP in true spirit and continual review and updation the same.
2. Implementation of Take-5 as an informal risk assessment tool before starting of any operations.
3. Up-gradation of knowledge to cope with the technological changing scenario.
4. Risk Management system shall be ingrained right at the project planning stage, itself.
5. Restructuring/Re-organization of relatively small mines into bigger mines shall be done for adoption of Mass Production Technology.
6. Land for O.C.Ps shall be acquired in one go and all the mining areas shall be fenced by permanent fencing so that operations of mine can be done as per approved plan.
7. High capacity equipment shall be deployed in O.C.Ps for faster excavation. After mining, land shall be restored back to its original shape.
8. Effective Training and feedback system shall be introduced and incompetent and physically unfit workmen shall be debarred from operational activities.

**NLC:** NLC is working out strategy to impart training to achieve Zero Harm Potential (ZHP) covering its executives and non executives in time bound manner. NLC has taken up a numbers of additional measures viz implementation of Safety Management Plan, and informal risk assessment tool before starting of any operation; up-gradation of knowledge to cope with technology change; Risk Management System for Project Planning Stage, effective training and feedback system and weeding out of incompetent and physically unfit workman from operational activities. It is proposed to impart training to SME & CME operators through simulators for which procurement action is being initiated.

**SCCL :** Training programmes are organized on actual mining operations to both Executives and Non-executives."

**16. The Committee find that consistent and continuous efforts towards achievement of Zero Harm Potential' (ZHP) are being made by CIL. However, the Committee are concerned to note that though trainings are being imparted to grass root level workers for preparation of Risk Assessment Based Safety Management Plan(SMP), the progress of implementation was slow due to differences in technological and socio-economic conditions**

**prevailing in the country. The Committee, however, find that the reply was silent on the aspect of a time frame for achievement of 'ZHP'. The Committee, therefore, reiterate that the ongoing initiatives towards achieving the ZHP be further augmented and accelerated so that the targets set are achieved in a time bound manner. To this end, the Committee desire that the Ministry should set a time frame for accomplishing the goals of ZHP.**

#### **PRIVATE SCHOOLS FINANCED BY CIL AND ITS SUBSIDIARIES**

##### **Recommendation Serial No. 17**

17. While observing that there was no employer- employee relationship between the teachers employed by the management of privately managed schools and CIL/Subsidiaries companies which had been confirmed by the Hon'ble Supreme Court Order dated 21st August, 2007, the Committee appreciated the enhanced rate of grants-in-aid of Rs. 5000/- per undergraduate teacher to Rs. 7000/- per graduate teacher with B. Ed. qualification per month being granted by the CIL. The Committee, however, desired that management of CIL should ensure that these privately managed collieries schools are imparting quality education to the children of miners and workmen of the collieries. The Committee also desired that the management of these privately managed schools which were getting grants-in-aids from CIL and its subsidiaries were implementing the wage structure for different categories of teachers as approved by the respective State Government/State Education Board.

18. In its action taken reply, the Ministry of Coal has stated as under:

"To improve the quality of education in the operational area of Subsidiary Companies, National skill Development corporation will be engaged for conducting a survey of the existing privately managed school, which are getting grant-in -aids.

The subsidiary companies have been advised to ensure that payment of grant-in-aid to privately managed school is released in time."

**19. The Committee are happy to note that to improve the quality of education in the operational area of Subsidiary Companies, CIL will engage the National Skill Development Corporation for conducting a survey of the existing privately managed school which are getting grants-in-aids. However, on the aspect of the Committee's recommendation that the management of privately managed schools getting grants-in-aid from CIL and its subsidiaries should implement the wage structure for different categories of teachers as approved by the respective State Government/State Education Board, the Ministry has merely stated that the subsidiary companies have been advised to ensure the payment of grant-in-aid to privately managed school be released in time. The Committee observe that the Ministry has not replied on the important aspect of implementation of wage structure. The Committee, therefore, reiterate their earlier recommendation that the wage structure for different categories of teachers as approved by the respective State Governments/State Education Board be implemented by the management of privately managed schools which are getting grants-in-aid from CIL and its subsidiaries. The Committee desire that they be apprised of the action taken in the matter.**

## CHAPTER – II

### RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

#### Recommendation No. 1

Committee recommended that the Government should go for a sustainable mining policy with a commitment to Safety, health and education facilities for these miners.

#### Action Taken

For sustainable mining policy with a commitment to Safety, health and education facilities, following steps are being taken by CIL.

1. **Safety Policy:** CIL has framed "Safety Policy" for safe operation of all mining activities for sustainable development.
2. **Internal Safety Organization (ISO):** CIL has established a multi-disciplinary Internal Safety Organization (ISO) in all subsidiaries to assist the line management at various levels in matters related to Safety and sustainable mining operations.
3. **Risk Assessment & Safety Management Plan:** Risk assessment based Safety Management Plans have been prepared for all mines of CIL. It is an on-going process for continuous improvement of safety standard in mines for sustainable development.
4. **For improving safety in mining operation:** Adoption of the following state-of-the art technology in suitable geo-mining locales with view conservation and safety.
  - Adoption of Mass Production Technology in more number of UG mines.
  - Deployment of more number of surface miners to eliminate blasting operation in OCPs.
  - Deployment of relatively higher capacity HEMM in more number of OCPs.
  - Mechanisation of UG drilling.
  - Phasing out manual loading in UG mines.
5. **Occupational Health Surveillance System:** CIL has well-established Occupational Health Surveillance System for checkup of Occupational diseases and conducting Initial Medical Examination (IME) & Periodical

Medical Examination (PME) of its employees including contractor's workers as per provisions of the Mines Rules -1955.

6. **Educational facilities:** The Educational facilities are being provided for the surrounding population also through CSR activities, besides taking care of the children of the mine employees.
7. **Resettlement and Rehabilitation Policy (R&R) Policy of CIL:** CIL has formulated a Policy for the resettlement and rehabilitation of people affected by coal mining projects (PAPs).
8. **Corporate Social Responsibility (CSR) Policy:** CIL has framed well-defined CSR policy for sustainable development with an objective to enhance welfare measures of the society based on short term and long term social and environmental consequences of mining activities. As part of its Corporate Social Responsibility (CSR) efforts, Coal India Limited and its subsidiary companies regularly undertake various community development activities in and around the coalfield areas for the benefit of the local people.

Works under Community Development Programme include:-

- Installation/Repairing of Hand Pumps.
- Digging/renovation of Wells/Ponds/Dam etc.
- Water Supply through pipelines.
- Construction/Renovation and repair of Community Centre/building.
- Construction/repair of Roads/Culverts.
- Construction/repair of school building.
- Organizing Medical Camps.
- Organizing Sports and cultural activities.
- Miscellaneous works.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **NEED FOR REVIEW OF GOVERNING STATUTES ON SAFETY IN COAL MINES**

### **Recommendation No. 2**

The Committee observe that some of the statutes governing safety in Coal Mines viz. Mines Act, 1952; Electricity Act, 2003; Explosive Act, 1884; Employee Compensation Act, 2009; Factories Act, 1948; Indian Boiler Act, 1923 etc. were framed decades back in a totally different work atmosphere and therefore calls for an urgent holistic review based on the challenges being faced in carrying out the present day mining operations. In this context the Committee are happy to note that the Ministry of Labour and Employment (MOL&E) have proposed to amend the provisions of Mines Act, 1952 and bring out new Coal Mines Regulations-2015 with a view to address modern day challenges. The Ministry have informed the Committee that the Mines Act (Amendment) Bill, 2011 and draft Coal Mines



Regulations, 2015 have been prepared after due deliberations with all stake holders and have been notified in the Gazette of India. The Committee appreciate the initiatives taken so far by the Government in reviewing the old statutes governing mines safety to cater to the present day needs. The Committee, therefore, recommend that comprehensive review of all the relevant statutes may be under taken by the Ministry so that obsolete and redundant provisions may be weeded out and appropriate amendments, whenever necessary may be brought out in the statutes/Rules/Regulations. The Committee further recommend that the entire exercise may be carried out in a time bound manner and the Committee may be apprised of the action taken in the matter.

### **Action Taken**

DGMS under aegis of the Ministry of Labour & Employment (MOLE) is the regulatory body responsible for enforcement of various statutes applicable to the mining industry. They constantly review the said statutes in so far as their applicability is concerned to cater to the needs of the technological and other developments in the mining industry as well as safety and health aspects of the employees. The Mines Act -1952, the Coal Mines Regulation-1957, the Mines Rules-1955 and the Mine Vocational Training Rules- 1966 are under process of amendment.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

### **Comments of the Committee (Please see para 7 of Chapter I of the Report)**

## **SAFETY MONITORING MECHANISM IN CIL**

### **Recommendation Serial No. 3**

The Committee note that an elaborate safety monitoring mechanism exists at different levels in CIL viz. Mine Level; Area Level; Head Quarter Level; CIL Head Quarter Level; and Ministerial/National Level which has resulted in continued and sustained improvement in CIL's safety performance. It is evident from the fact that the trend of five yearly average fatalities of 196 in the years 1975-1979 in CIL has come down to 62 in the year 2010-2014 as also the five yearly average serious injuries in CIL from 1278 in the years 1975-1979 to 228 in the years 2010-2014. The Committee have been apprised of various actions being taken for improvement in safety in mines viz. continuous review of safety status of mines through the multi-disciplinary Internal Safety Organization (ISO); issue of directives/guidelines on corrective measures for prevention of recurrence after detailed analysis of fatal accidents; preparation and implementation of risk assessment based Safety Management Plan (SMP) for every mine; mine safety audit by external independent agencies; technology up-gradation for improving safety in mining operation; better strata management; prevention of spontaneous heating; fire and explosion in mines; mine safety inspections; safety R&D initiatives at CIL, Head Quarter level; prevention of accidents in Open Cast Mines; emergency response systems; safety

awareness programme; etc. Statedly, new initiatives for adoption of a system approach for overall improvement of safety standards viz. adoption of globally established technique of WRAC (Workplace Risk Assessment and Control) compliant with Coal Mines Rules (CMR) 2011; uniform system of documentation of all mining operation activities; adoption of Risk Assessment based Safety Management in all mines of CIL; etc. are being put in place. The Committee, however, note with concern that during the last five years, the trend of fatalities in CIL showed only a marginal reduction from 62 in 2009 to 58 in 2013, while for serious injuries, from 290 in 2009, it increased to 308 in 2010 and came down to 178 in 2013. In this regard, the Committee need not emphasize that every single life is precious and all out efforts must be made to bring the fatality rate to zero on utmost priority basis. The Committee appreciate that laudable initiatives at par with global standards are being put in place in CIL Mines to further boost the safety parameters and standards in these mines. The Committee, however, at the same time desire that the reasons for each instance of fatality as well as serious injury that had occurred must be properly analyzed and appropriate remedial mechanism be accordingly devised to avoid recurrence of such circumstances to bring down the fatality rate as well as the trend of serious injuries. The Committee hope that the preventive measures being put into place as well as the new initiatives would translate into a zero tolerance level for fatalities as well as serious accidents in these mines. The Committee would like to be apprised of the tangible results gained from these initiatives and measures being put in place in CIL Mines.

### **Action Taken**

The law enforcing agency / regulatory authority under the Mines Act- 1952 i.e. the Directorate General of Mine safety (DGMS) under the aegis of Ministry of Labour & Employment (MOLE) conducts statutory inquiry / investigation to analyze the causes and circumstances leading to all fatal accidents and suggests remedial measures to avoid recurrence of such accidents.

Apart from inquiry conducted by DGMS, all fatal and serious accidents are also being inquired / investigated by the Mine Manager or any Asst. Manager authorized by the Mine Manager and the Safety Officer of the respective mine as per provisions made under the Coal Mines Regulations- 1957.

Apart from the above investigations / inquiries made under various provisions of statutes, the Internal Safety Organization (ISO) of each subsidiary company also conducts inquiry in case of any fatal accident to analyze the root causes and recommend corrective and preventive measures to be taken to prevent recurrence of such accidents.

**Tangible results of safety initiatives in mines of CIL:** There is substantial reduction in both fatal and serious accidents in the mines of CIL in last four years since adoption of risk assessment tool of Workplace Risk Assessment and Control (WRAC) for preparation safety Management Plans (SMPs) and implementation of control measures in mines, which is evident from the table given below:

Sl. No.	Accident Statistical Parameters	4 yearly average (from 2008 to 2011) prior to implementation of WRAC based SMPs	4 yearly average (from 2012 to 2015) since implementation of WRAC based SMPs	% Reduction
1	Nos. of fatal accidents	60	48	20%
2	Nos. of fatalities	70	50	29%
3	Nos. of serious accidents	294	182	38%
4	Nos. of serious injuries	304	187	38%

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

**Comments of the Committee**  
**(Please see para 10 of Chapter I of the Report)**

**SAFETY MONITORING MECHANISM IN NEYVELI LIGNITE CORPORATION (NLC) MINES**

**Recommendation No. 4**

The Committee note that in NLC Mines during the last ten years, the number of fatal accidents has come down from 6 in the year 2006-2007; to just one in the year 2013-14 and the serious injuries accidents reported from 10 in the year 2009-10 to 4 in the year 2013-14. The Committee also note that most of these accidents had occurred more on account of individual's fault rather than due to any system failure or unsafe conditions of mines or machinery. The Committee, therefore, feel that there is a heightened need for sensitization and awareness programmes for mine workers for adherence to safety standards and such programme are needed to be accorded top priority. At the same time, the Committee express their satisfaction that NLC have taken a number of steps to avoid accidents in Lignite Mines which include provision for personal protective equipments specific to job requirement; systematic in-depth accident analysis; accident counseling system to avoid recurrence and for behavioural transformation; area wise responsibility for enforcement of safety in all mine operational/maintenance activities; exhibition of code of safety practices at appropriate locations; inter unit safety assessments of every quarter; risk assessment and safety audit for mines by accredited external agencies once in two years; inculcation of safety awareness for all categories of employees including contract employees before deployment; and continuous monitoring of behavioral sense/attitude/commitment of employees towards safety.

The Committee expect that the NLC will further augment their safety initiatives so that the fatality figure comes down to zero. To this end, the Committee recommend that the NLC's ongoing initiatives for adherence to safety standards and also inculcation of safety awareness to all workers including contract workers be carried on with full vigour so that the overall target of zero tolerance for fatal accidents or serious accidents be achieved. The Committee may be apprised of the action taken in the matter.

### **Action Taken**

In order to sensitize and create awareness the following actions are taken in NLC:

- i) Public Address System – Safety messages are given in every shift to improve safety.
- ii) Hoardings
- iii) Poster
- iv) Slogans etc.,
- v) Vocational Training – Safety performance is reviewed in pit safety meetings conducted every month in all the divisions/zones. Based on the recommendations, specific job training, Refresher/Need based training are imparted. Safety is my responsibility is made as part of training.
- vi) Team Talk.

Apart from the above, various safety committee are formed at different level to monitor and propagate safety awareness, like;

- a) Zonal wise safety committee
- b) Pit Safety Committee at Mine Level
- c) Bipartite Committee at Mine Level
- d) Inspection by Workmen Safety Inspectors
- e) Inter Unit Safety Committee assessment arranged by Corporate Level.
- f) Tripartite meet at (Management, DGMS, Union) level.
- g) Safety performance appraisal at Board Level.

In order to achieve Zero Tolerance for fatal accident, awareness is propagated across the hierarchy of safety for inculcation of safe work practices by all concerned. 'Safety is my Responsibility' awareness card launched during 11<sup>th</sup> Safety Conference by DGMS was issued to improve the safety performance amongst the workman.

To motivate workmen for ensuing safety measures at all levels awards are given during Safety Week Celebration, National Safety Day etc. for the best practicemen.

Apart from the above, Risk Assessment and Safety Audit at Mine Level is done by engaging accredited External Agency to review the safety management and Safety Management plan reviewed accordingly.

Swachh Bharath is also implemented in Mines to improve housekeeping, cleanliness and hygiene.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **SAFETY MONITORING MECHANISM IN SINGERENI COALFIELDS COMPANY LIMITED (SCCL)**

### **Recommendation No. 5**

The Committee note that the highest number of fatalities in SCCL in the last five years stands at 12 during each of the years 2010, 2012 and 2013 with the highest number of serious accidents of 369 during the year 2013. The Committee have been apprised that the highest fatality rate per 3 lakh man shifts occurred in the year 2013 which stands at 0.24 while the highest serious injuries per 3 lakh man shifts stands at 7.43 during the same year. The Committee also note that a number of measures have been taken to improve the safety status in SCCL mines which inter-alia include gradual phasing out of hand sections to be replaced by Side Discharge Loaders (SDL) and Load Haul Dump (LHD); Strata Monitoring Cell; utilization of services of scientific institutions viz. Central Institute of Mining and Fuel Research (CIMFR), National Institute of Road Mechanism (NIRM) etc for designing panels and strata Management System; critical analysis of accidents for subsequent action plan for prevention; mandatory safety clearance certificate and DGMS permission before depillaring panels; effective functioning of pit safety committees; mandatory inspection before issue of safety clearance certificate; monsoon audit inspection; propagation of awareness amongst workers for safety; organization of monthly and quarterly Risk Management Committee meetings; night shift inspections at least once in a fortnight by mine managers to improve safety and discipline in the mine; compliance of recommendations of the 11th conference on safety (employer's responsibilities in contractor works); formulation of area level team for review and monitoring of safety management plans of mines; etc. The Committee express their happiness at such an elaborate safety mechanism being put into place by SCCL and hope that vigorous and strict adherence to all such safety measures would ensure significant reduction in the overall fatality rate as well as the number of serious accidents in the near future. The Committee, however, at the same time like to recommend that periodic inspections at the Mines level be made more stringent with provisions for mandatory follow up at the highest level and the instances of any kind of negligence or slackness either by Workers or Managers are needed to be reviewed seriously. The Committee would like to be apprised of action taken in the matter.

### **Action Taken**

**SCCL:** Periodical inspections including back shift inspections are made stringent and being monitored and followed at ISO, Corporate and the inspections are recorded in web application and circulated.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **NEED FOR FUNCTIONAL CONNECT AMONGST THE VARIOUS SAFETY MONITORING MECHANISM EXISTING AT ALL VERTICAL AND HORIZONTAL LEVELS.**

### **Recommendation No. 6**

The Committee note that apart from the statutory monitoring by Director General of Mines Safety (DGMS), the status of safety is also monitored by various Safety Committees existing at different levels viz. Mine Level; Area Level; Subsidiary Level; Company Level and Ministry Level. The Committee have been apprised that there exist a functional connect amongst these different safety monitoring mechanisms by means of interactions/discussions of their findings as well as recommendations made; evaluation of activities of various mine level safety bodies during co-ordination meetings; taking up of unresolved issues at the lower levels to higher levels for compliance; free horizontal and vertical communication between various safety monitoring bodies; etc. The Committee also note that safety monitoring reports of these bodies are circulated as minutes for compliance and action taken report/compliance reports are also prepared and submitted. Moreover, depending on the nature of issues, the timelines are also stipulated for speedy and effective implementation of the various safety recommendations. The Committee, however, desire that the Ministry should ensure that the existence of numerous safety monitoring mechanism at various levels should not result in duplicity of efforts or becoming a hurdle in sorting out the problems or in the matter of fixing responsibility and accountability. The Committee also recommend for strengthening of the existing co-ordination mechanism for ensuring a vibrant functional connect amongst all these monitoring bodies.

### **Action Taken**

**CIL**–Various Safety Monitoring Bodies / Agencies are operating independently and effectively in their respective domains. However, observations and recommendations made by different committees'/ monitoring bodies are complied at mine level and action taken report (ATR) is discussed and reviewed. Un-resolved issues at the lower levels of monitoring bodies are brought to the knowledge of higher / competent authority for compliance. Apart from this, Internal Safety Organization (ISO) of each subsidiary reviews the status of compliance of such recommendations on regular basis.

Further, appropriate actions shall be taken for strengthening of existing co-ordination and ensuring effective functional relationship amongst all these Monitoring agencies.

**NLC** -Apart from statutory monitoring by DGMS, various other committees undertake safety monitoring at Mine Level, Corporate level and Ministry of Coal level.

At Mine Level, safety meeting reports and Form-U reports of Workmen Inspectors and action taken reports are circulated and reviewed during monthly safety

meeting. The time for complying with the reports is 15 days; for works requiring more time, deadlines are fixed and reviewed every month until the pending points are rectified. This monitoring does not result in duplicity or overlap; rather it acts as an interaction mechanism for strengthening and co-ordination of the system of monitoring as a vibrant functional connect.

Committee members like Workmen Inspector, Safety Committee Member, ISO Member have well defined inspection schedules. All of them work together to achieve the goal of Zero Harm. The Mine Manager, Sr. Asst. Managers and Safety Officer coordinate all the activities related to the safety for ensuring a vibrant functional connect amongst all these monitoring bodies.

**SCCL:** The Safety monitoring mechanism works at various levels to monitor the safety activities, minutes are circulated and all ISO remain present in all such meetings.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **SAFETY MANAGEMENT PLAN**

### **Recommendation No. 7**

The Committee note that one of the main functions of safety committee is to prepare, review and implement Safety Management Plans (SMP) which are prepared at the unit level, reviewed by the Internal Safety Organization (ISO) at corporate level and subsequently approved by Director General of Mines Safety. The Committee further note that the review of SMP is done monthly by the Safety Committee at Mine Level; Quarterly by the Area Level; Half-yearly by the Subsidiary Level and Annually by the Company level. The Committee find that during the process of formulation for approval of the SMP, workers at the ground level are involved in identification of safety needs of the Mine and recommendation of the Safety Operating Procedure to minimize risks, while officials of ISO and DGMS are involved in its scrutiny and approval. While observing that effective formulation and implementation of SMP at each Mines is crucial for safety, the Committee recommend that SMP of each Mine be meticulously formulated and then implemented with total involvement of all stakeholders across the hierarchy so that the target of zero tolerance fatalities is achieved. The Committee would like to be apprised of the action taken in the matter.

### **Action Taken**

**CIL:** All Risk assessment based Safety Management Plans (SMP)s have already been prepared for all mines of CIL by adopting the technique of "Workplace Risk Assessment and Control (WRAC)". The said documents are reviewed periodically at different levels for updating. Efforts are made to make the said document more comprehensive and mine specific, by involving all the stake holders which includes

grass roots level employees of the mine. The suggested control measures will be relevant to the context which can be practically implemented.

**NLC :** Safety Management Plan (SMP) is reviewed every month in Safety Meeting. The SMP is prepared by Zones/Divisions by incorporating the views of floor level workmen. In this regard all Zone/Division formed independent committees from grass root level workmen to skilled person, Supervisor and Executive for making preparation of SMP. All the Zonal/ Division Heads submit individual plans which is complied by Safety Department. This is reviewed every month and are available in each department executive and Supervisor for implementation. Thus involvement of all stakeholders across the hierarchy is ensured.

**SCCL:** SMP is reviewed periodically modified if necessary and implemented. DGMS is also informed.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **SAFETY INSPECTION OF MINES**

### **Recommendation No. 8**

The Committee find that the Mines Rules, 1955 stipulate for a monthly inspection of Mines with a view to assess various aspect like dangers in relation to mining operations such as condition of Roof & Sides, adequacy of supports, safety aspects in haulage and travelling roadways, ventilation, sealed off area, escape route, machinery etc., compliance to various statutory provisions, status of functioning of different safety system installed/commissioned in the Mines; compliance to safety checklists prescribed; etc. Undoubtedly, a robust inspection is the sine qua non for effective implementation of safety monitoring mechanism, the Committee, desire that this important aspect should be given utmost priority and the findings and recommendations made by inspection teams be meticulously followed and implemented in letter and spirit.

### **Action Taken**

As per the Mines Rules 1955, Workmen Inspectors and Safety Committee members inspect their respective mines. Observations/ Recommendations based on the inspections made by the Safety Committee during their inspections are discussed in the monthly meeting.

The compliance of recommendations / suggestions of the Safety Committee are scrutinized by DGMS officials during their visit to mines. The compliance report is also being checked by the Internal Safety Organization (ISO) and senior Area level executives.

Besides the above, the officers from Directorate-General of Mines Safety (DGMS) regularly inspect mines to oversee the compliance of statutes related to mine safety. DGMS has well established structure for conducting inspection of mines.



There are total eight zones, each under the charge of a Deputy Director-General of Mines Safety. There are three to four Regional offices under each zonal office. Each Region is under the charge of a Director of Mines Safety. There are in all 29 such Regional offices. There are four to five Dy. Director of Mine Safety (DDMS) under one Director of Mines Safety. Each Zone, besides having inspecting officers of mining disciplines has officers in electrical & mechanical engineering and occupational health disciplines. During inspection, DGMS officers review all safety parameters of the mines.

**SCCL:** Inspections are done regularly and findings/ violations / recommendations are acted upon and corrective action is taken. It also gets uploaded to Web and is monitored by ISO.

**NLC:** In order to ensure thorough inspection, following agencies / bodies undertake inspection on time bound basis as follows:

(vi) Daily

- Safety Related issues are being deliberated at Mine Level Production Review Meeting.
- Inspection of the Mine workings by Manager/ Mines and other statutorily qualified personnel.
- Area wise Inspection / Supervision is being carried out by the concerned experienced Under Managers , Mechanical Engineers and Electrical Engineers.

- Hand over and take over of charge exists in all Mining operations in every shift and being followed by statutorily qualified Mining Personnel to ensure safety of Men, Machineries and Materials.

(vii) Weekly

- Weekly Review Meeting is being conducted by the Mine Manager to discuss the issues related to Mine working plans / operations, Safety Related Activities etc.
- Safety Status / Safety Performance of the Mine is monitored / reviewed under the statutory frame work.
- Regular Inspection by the Statutory Personnel and Officials at Corporate Level to monitor standards maintained as per statute.

(viii) Monthly

- Safety Status / Safety Performance are monitored by the Sectional / Departmental Safety Committee constituted under the Pit Safety Committee Mine wise.
- Pit Safety Committee Meetings are conducted regularly once in a Month. Mine wise Mock drills at vulnerable locations to assess the preparedness on emergency response.
- Central Safety Committee Meeting in every unit in cyclic order.
- A Safety Audit Team comprising of Engineers of various disciplines inspect the Safety features such as 'Fail Safe System' incorporated in the Specialized Mining Equipments / Conveyor etc., to ensure Safe/Reliable operation and to achieve total loss control over Men / Materials / Machineries.

(ix) Quarterly

- Inter Unit Safety Assessment are being carried out to assess the Safety Standards maintained as per statute.
  - 'Safety Performance Appraisal' for NLC Units is being submitted to NLC Board for every Quarter and the Board - Observations / Suggestions are being implemented.
  - Safety Status / Safety Performance of every Mines is monitored / reviewed under the statutory frame work.
- (x) Periodical / Annually
- Safety Action Plan is being prepared and reviewed every year.
  - Training Calendar is prepared every year and training on Safety Related Topics is being imparted to all the Employees.
  - Well laid 'Pre Monsoon Action Plan' in detail is prepared and revised and reviewed for every year to take care of any emergency situation.
  - Cyclone Alert Squad swing into action whenever heavy rainfall / heavy wind velocities warnings received in advance through a well established Weather Warning System, net worked with Regional Meteorological offices.
  - Periodical Environmental studies by the CARD (Internal) and NIMH (External) on Occupational Health Hazards (Dust / vibration / noise)
  - Slope Stability / Stabilization / rehabilitation of slope are being carried out by engaging accredited Mining Experts (Scientific and Research Institutions NIRM / KGF / CMRI / TANU and their recommendations are being implemented.
  - Risk Assessment and Safety Audit once in 2 years by accredited External Agencies.
  - DGMS officials make inspection of the Mine periodically and point out deficiencies for necessary corrective measures and the remedial measures are being undertaken and the status report is being submitted to the Inspectorate.
  - Periodical study is being conducted to identify and to detect emerging Occupational Health Hazards like silicosis and Pneumoconiosis, but no such cases were identified so far, at NLC during Periodical Medical Examinations being conducted as per statute.

The recommendations given by the above inspection team are meticulously implemented in letter and spirit.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

**Comments of the Committee**  
**(Please see para 13 of Chapter I of the Report)**

**RISK ASSESEMENT AND SAFETY AUDIT**

**Recommendation No. 9**

The Committee are happy to note that CIL have initiated Risk Management by adoption of the Globally Established Technique of Work Place Risk Assessment and Control (WRAC). With this mechanism in place tangible benefits accrued there from inter-alia include sensitization of workers to identification of hazards and associated risk; need to adopt control measures for elimination and reduction of

risks; enhancing ability of workers to perform their tasks safely and consequent reduction in the numbers of both fatal and serious accidents in last three years in CIL. As regards NLC, the Committee find that NLC carries out Risk Assessment and Safety Audit of Mines by deploying Accredited External Agencies once in two years, the major recommendations of which include preparation of SMP; Emergency preparedness; Plan/Pre monsoon Action Plan for every Mine; Certification for stipulated quality Norms; etc. and scrupulous action is taken on the recommendations made by such agency. The Committee, while appreciating the importance and significance of a comprehensive, dedicated and objective Risk assessment and safety audit, conducted periodically by an External Accredited Agency, desire that the system put in place at NLC be replicated in all other coal companies/PSUs so that absolute safety of workers/miners/inhabitants is ensured throughout. The Committee would like to be apprised of action taken in the matter.

### **Action Taken**

CIL has adopted the internationally recognized technique of WRAC (Workplace Risk Assessment and Control) for risk mapping and prioritizing action based on Risk score and ranking. For the above purpose, 20 executives of CIL have already been trained and accredited by M/s SIMTARS, Australia. They are imparting training to mine level executives in all mines of CIL. These trained executives in turn impart training to the executives in their functional areas.

Further, steps are being taken to impart the said training to the non-executive members of the Safety Board, Safety Committee and grass root level employees for their sensitization regarding hazard awareness and associated risks. In this process, all the employees will get trained in a phased manner.

In this regard, 20 more executives are being sent to M/s SIMTARS for training in Risk Management.

CIL has adopted the aforesaid system of Safety Management which contributes to Safety Audit in all its mines with continuous mapping of hazards and associated risks in different mining operations and under varying geo-mining conditions prevailing at different mines. Tangible benefits have been derived which are given below:

Sl. No.	Accident Statistical Parameters	4 yearly average (from 2008 to 2011) prior to implementation of WRAC based SMPs	4 yearly average (from 2012 to 2015) since implementation of WRAC based SMPs	% Reduction
1	Nos. of fatal accidents	60	48	20%
2	Nos. of fatalities	70	50	29%
3	Nos. of serious accidents	294	182	38%

4	Nos. of serious injuries	304	187	38%
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Besides, Safety Audit of all mines of CIL is being regularly conducted by inter Area teams formed by Internal Safety Organization (ISO) of different Subsidiaries of CIL.

**NLC-** NLC is carrying out Risk Assessment and Safety Audit for its Mines at Neyveli with periodicity of once in two years. The same is an ongoing process at Neyveli Lignite Mines.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **ZERO HARM POTENTIAL**

### **Recommendation No. 12**

The Committee note that a Roadmap has been prepared to achieve 'Zero Harm Potential (ZHP) in CIL mine Areas. In the year 2010, a training programme was arranged by CIL on Safety in Mines, Testing and Research Station (SIMTARS) at Australia which is recognized as the best in the world to develop trainers with an objective to improve safety standards in Mines. The Committee have been apprised that the initiative is a continuous process with 1488 and 1341 executives already trained in the first and second phase of the training programme respectively. To achieve 'Zero Harm Potential' in mines, CIL has taken up a number of additional measures viz implementation of SMPs and Take-5, an informal risk assessment tool before starting of any operation; up-gradation of knowledge to cope with technology change; Risk Management System for Project Planning Stage, Restructuring/Re-organization of relatively small Mines to bigger Mines for adoption of Mass Production Technology, acquisition of land for OCPs in one go so that operations in Mines can be done as per approved plan and all mining areas be permanently fenced; deployment of higher capacity equipment in OCPs for faster excavation ; effective training and feedback system and weeding out of incompetent and physically unfit workman from operational activities, etc. The Committee appreciate the ongoing initiatives towards 'Zero Harm Potential' and hope that this target would be achieved in a time bound manner. The Committee at the same time recommend that such training programmes must also be organized for non-executives also who are engaged in actual mining operations. The Committee also desire SCCL and NLC to also work out such training programmes for their executives as well as non-executives. The Committee would like to be apprised of the progress in the matter.

### **Action Taken**

Safety is always the highest priority. Safety is embedded in the mission statement and is one of the most important factors in the overall business strategy. CIL has framed a well-defined safety policy to ensure safety in our mines and establishments. CIL has well established multi-disciplinary internal safety

organization in all subsidiaries for implementation of Safety Policy. All operations, systems and processes are meticulously planned and designed with due regard to safety, conservation and sustainable development. CIL always encourages employees' participations at all levels so as to promote proactive safety culture and to improve safety awareness at grass root level.

With consistent efforts, continuous improvement in safety standards is achieved which is reflected in reduction of fatalities and serious injuries. To achieve further improvement, initiatives are being taken in various spheres which include the following:-

**A. Mining Operation:**

Adoption of the state-of-the art technology in suitable geo-mining locales.

Adoption of Mass Production Technology in more number of UG mines.

Deployment of more number of surface miners to eliminate blasting operation in O.C.Ps.

Deployment of relatively higher capacity HEMM in more number of O.C.Ps

Mechanisation of UG drilling.

Phasing out manual loading in UG mines.

**B. Strata Management:** Thrust on prevention of roof & side fall accidents.

Dedicated Strata Control Cell in each company.

Roof bolting as an integral part of support system in UG mines.

Switching over to use of resin capsules from cement capsules in phased manner.

Monitoring of strata by strata monitoring devices.

**C. Prevention of Spontaneous heating:**

Expedite construction of sectionalisation stoppings.

Pressure Quantity(PQ) Survey for checking efficacy of ventilation standards at regular intervals.

Use of more number of Gas Chromatographs for mine air sampling.

Use of Local Methane Detector (LMD) for early and accurate detection of methane.

Environmental Tele-Monitoring System (ETMS) in degree III & fiery UG mines.

**D. Training :**

Skill up-gradation training to frontline officials and workmen.

Behavioral based training for all employees.

One Week Training to all front line supervisors .

Training of Dumper Operators on Simulators.

**E. Others:**

Slope monitoring devices in O.C.Ps for prediction of bench/dump failure.

Digitization of mine plan.

Introduction of LED type light weight cap lamps in u/g mines.

Man Riding System (MRS) for u/g mines having long and arduous travel.

In an endeavor to achieve "**Zero Harm Potential**", the safety system of CIL is analyzed in depth vis-a-vis other coal producing countries. It was revealed that safety standard of Australia has been by far the best amongst leading coal producing countries. Australia has achieved almost zero fatality in their mines consistently during last decade. They are doing risk assessment in all mine operations based on which they are preparing Safety Management Plan(SMP) for all mines and the same are being implemented in true spirit.

To achieve "**Zero Harm Potential**", CIL having explored all possibilities has finally adopted the safety management system of Australia which is now recognized as the best in the world.

In the above backdrop, a group consisting of twenty executives have been trained in Australia in Risk Management system. These trained executives are being deployed for imparting training to other executives responsible for implementing the safety management system in mines of CIL. They are further giving training to the grass root level workers for preparation of Risk assessment based Safety Management Plan(SMP).

SMPs for all mines of CIL have been prepared and are being reviewed on regular basis. SMP is a continuous process which need regular review and updation with the dynamics of mines.

However due to differences in technological and socio-economic conditions prevailing in India, the progress in implementation the same is slow.

Upon in-depth study, comparison of our mining system with the same of the other advanced coal producing countries, the following contrasting differences are observed:

System	Coal mines of Advanced Countries	Coal mines of CIL
Mechanization	All Underground as well as OC workings are highly mechanized. Very few manpower is deployed in mining activities. In underground mines, requirement of workmen to enter the area under green roof is minimum. Hence exposure to risk of workmen is minimum. Mostly UG mineface machinery are remotely	UG mines are highly labour intensive and low productivity. In OCPs relatively low capacity HEMMs are deployed due to limited working area.

	operated.	
Working space	Land is not a constraint.	Due to delay in land acquisition, many mines especially OCPs are working in constricted space. Risk increases many fold due to poor mine shape. Non-availability of land for dumping has resulted in many unstable dumps.
Vicinity of mines	Mining Areas are far away from dwellings/habitation.	Mining Area are generally having dwelling/habitation and other surface constraints. People do not vacate land even after receiving compensation. Many habitants make a living on coal picking from dumps and theft of coal from mines, which increases the risk of accidents.
Legacy Problem	There is no legacy problem	CIL was formed after taking over mines from erstwhile private owners. These mines are even more than hundred years old. Most of these mines are having multi seam working contained water and fire in upper sections which are abandoned long back leading to transference of danger to present sections.
Workforce	Workforce appointed solely on basis of job requirement and competency. Hence all employees are highly educated, skilled and competent. Labour laws are flexible, "hire and fire rule" is practiced for incompetent workmen.	Mostly land oustees are appointed who are generally semi educated/uneducated.

To achieve "**Zero Harm Potential**" in mines of CIL following additional measures are envisaged to be implemented.

Implementation of SMP in true spirit and continual review and updation the same.

Implementation of Take-5 as an informal risk assessment tool before starting of any operations.

Up-gradation of knowledge to cope with the technological changing scenario. Risk Management system shall be ingrained right at the project planning stage, itself.

Restructuring/Re-organization of relatively small mines into bigger mines shall be done for adoption of Mass Production Technology.

Land for O.C.Ps shall be acquired in one go and all the mining areas shall be fenced by permanent fencing so that operations of mine can be done as per approved plan.

High capacity equipment shall be deployed in O.C.Ps for faster excavation. After mining, land shall be restored back to its original shape.

Effective Training and feedback system shall be introduced and incompetent and physically unfit workmen shall be debarred from operational activities.

**NLC:** NLC is working out strategy to impart training to achieve Zero Harm Potential (ZHP) covering its executives and non executives in time bound manner. NLC has taken up a numbers of additional measures viz implementation of Safety Management Plan, and informal risk assessment tool before starting of any operation; up-gradation of knowledge to cope with technology change; Risk Management System for Project Planning Stage, effective training and feedback system and weeding out of incompetent and physically unfit workman from operational activities. It is proposed to impart training to SME & CME operators through simulators for which procurement action is being initiated.

**SCCL :** Training programmes are organized on actual mining operations to both Executives and Non-executives.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

**Comments of the Committee  
(Please see para 16 of Chapter I of the Report)**

**ESTABLISHMENT OF MEDICAL COLLEGE IN TALCHER, ODISHA**

**Recommendation No 15**

The Committee note that Mahanadi Coalfields Ltd. have given in principle approval for setting up of Medical College at Talcher, Odisha in association with the Government of Odisha. The Committee, however, note that no steps have yet been initiated towards establishment of the Medical College. The claim that upgradation of the existing 115 bedded MCLs Central Hospitals (NSCH) to a 500 bedded hospital is noted. While appreciating this laudable initiative taken by the MCL, the Committee express serious concern that in spite of long standing assurance for the establishment of the Medical College by MCL, it has not been materialized so far. The Committee desire that the Ministry of Coal, Coal India Ltd. and MCL in



particular are to revert to the Committee about the concrete steps taken in setting up of the medical college at the earliest.

### **Action Taken**

Coal India Limited

1. In the 117th Meeting of Board of Directors of MCL held on 4th March'2010 has given in principal approval for setting up of a Medical College at Talcher.
2. MCL in its 160th Meeting of Board of Directors held on 06/08/2014 accorded approval to engage M/s NBCC (National Building Construction Company) to set up the Medical College namely "Mahanadi Institute of Medical Science Research (MIMSR)" with intake capacity of 100 per year including conversion of 115 bedded existing Nehru Satabdi Central Hospital (NSCH) to 500 hundred bedded multi-specialty hospital at Talcher, Angul at a cost of Rs. 492.62 Crores.
3. An MOU between MCL and M/s NBCC was signed on NBCC 14/08/2015 to set up the Medical College project from 'concept to commissioning'.
4. On 03/09/2015, the Foundation Stone was laid by the Hon'ble Chief Minister of Odisha in presence of the Hon'ble Minister of State (IC) for Coal, Power & N&RE, Govt. of India, the Hon'ble Minister of State (IC) for Petroleum & Natural Gas, Govt. of India, the Hon'ble MP (Dhenkanal) and the Hon'ble MLA (Talcher) along with other Dignitaries.

The tentative time period for completion of the project has been scheduled to be 30 months at an estimated cost of Rs. 492.62 Crores.

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### **EDUCATION FACILITIES FOR INHABITANTS/WORKERS IN COAL/LIGNITE MINING AREAS**

#### **Recommendation No. 16**

The Committee note that as part of Corporate Social Responsibility (CSR), the subsidiary companies of CIL have been providing financial assistance by way of grant-in-aid and infrastructure facilities to certain schools and other recognized educational institutions including some privately managed schools. In all there are 681 schools in and around coalfields areas of CIL and its subsidiaries with a total number of 74135 students. The Committee are happy to note that in the year 2013-14, CIL had sanctioned an amount of Rs. 1,58,38,520 to 11792 students as Merit/General Scholarships and Rs. 1,36,71,428/- to 604 students who were admitted in Government Medical and Engineering Colleges; an amount of Rs. 51,000/- as special cash award to meritorious children of employees of CIL, as well on other awards. Besides, CIL provided infrastructural and periodical financial

support to 330 project schools and also sanctioned an amount of Rs. 9647.97 lakh as grant to schools including privately managed schools. The Committee further note that NLC also runs 10 schools through a Common School Committee in Neyveli Township with a total of 6501 students as of June, 2015. Besides, NLC issues free school uniforms to 480 students, cash awards to meritorious students; sponsors Hindi teaching in which 400 students have so far been benefited; gives infrastructural and periodical financial support; and had established an Industrial Training Institution in Barsingsar village in Rajasthan. As a result of such initiatives, there has been remarkable improvement in literacy level and the overall proficiency of the workers/inhabitants of coal bearing areas which was reportedly reflected by their performance in various examinations of reputed institutes and also employment in different Government and private sector companies. The Committee note with appreciation that efforts are also being made to incorporate vocational education and skill development by CIL. Considering that education is key to upliftment and a better future, the Committee recommend that educational facilities extended to Coal and Lignite Mines workers and inhabitants of Coal/Lignite Mining areas are needed to be further augmented with special emphasis on imparting vocational education and skill development training so that the target of full literacy and enhancing capacity building for better prospects of employment could be achieved. The Committee further recommend that basic facilities be extended to poor students by way of provisions of mid-day meals; school uniforms; Text Books and requisite stationery items by the sponsoring Coal Companies. The Committee may be apprised of the action taken in the matter.

### **Action Taken**

#### **Coal India Limited**

As recommended by the committee , all subsidiaries have been advised to extend and spread educational facilities to the employees as well as inhabitants of surrounding areas of collieries situated in the remote area of the country. The emphasis would be given for establishment of training centre for imparting vocational education and skill development so that literacy rate reaches 100% and the opportunity of employment is widened.

#### **Neyveli Lignite Corporation Limited**

##### **(i) Imparting Vocational Education:**

NLC Schools are offering the following Vocational Education Courses at Higher Secondary School level.

- a. General Mechanic
- b. Electronic Equipment

- c. Type Writing
- d. Draftsman civil
- e. Auditing and Accounting

In addition to the above, to enable the students to have Practical Knowledge NLC is permitting these students to make frequent study visits to the following NLC's factories and other establishments which are related to the field of study:

- 1. Central Electric Repair Shop
- 2. Central Workshop

(ii) Skill Development Training:

- 1. NLC is conducting Computer coaching classes in batches free of cost for the benefit of students, every year.
- 2. To improve the Teaching & Presentation Skills, training is being imparted to the teachers of NLC Schools & Private Schools.
- 3. Motivational and Skills Development Training Programmes are being conducted free of cost periodically to the students. The training includes Presentation skills, Reading skills, Facing the Exam skills, Communication skills, Team building skills.....and so on.

NLC Limited is running 10 schools through a Common School Committee in Neyveli Township. These schools are being run with the AID of Tamil Nadu Government.

(i) Mid-Day Meals:

State Government is providing Mid-day meals to the school students from 1st standard to 10th standard students only. The State Government is not providing mid-day meals for the 11th and 12th standard students. And hence, NLC is initiating action to provide

mid-day meals to the 11th standard and 12th standard students (Total No. of students 1898, Boys-507, Girls-1391).

The State Government is providing only the mid-day meals. The students are forced to take the meals in their respective class rooms during the rainy season. This is spoiling the learning environment.

And, hence NLC is constructing dining hall to enable the students to have their lunch in a better atmosphere.

(ii) School Uniforms:

State Government is providing School uniforms to the students from 1st standard to 10th standard only. 11th and 12th standard students are not provided school uniforms by the State Government.

Hence, NLC has already initiated action to provide 2 sets of uniforms each to 1898 students of 11th standard and 12th standard (Boys-507, Girls-1391). The total cost works out to Rs.21.16 lakhs. These uniforms will be distributed to the students within a period of one month.

NLC is sponsoring Rs.7.65 lakhs for the Neyveli District Scouts & Guides Camp expenditure for this year. Scouts & Guides are being provided with 2 sets of Uniforms and Shoes. The cost works out to Rs.3.41 lakhs.

(iii) Text Books And Requisite Stationery Items:

The State Government is providing Text Books free of cost to all the Tamil medium students and to a limited extent to the English Medium students.

Hence, NLC provided Text Books free of cost to all the remaining English Medium students from 6th standard to 12th standard. The cost works out to Rs.8,51,380/-.

Every year NLC sponsors Rs.1.5 lakhs for the purchase of Books for School Libraries and Teaching Kits.

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### **CHAPTER III**

#### **RECOMMENDATIONS/ OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES**

##### **SAFETY MECHANISM IN CAPTIVE MINES/ PRIVATE MINES**

###### **Recommendation No. 13**

The Committee find that there have been negligible cases of fatalities and serious injuries in the mines operated by Captive Mines holders and Private Players as compared to the Public Sector Coal Companies during the years 2012, 2013 and 2014 respectively. The Committee note with appreciation that in the private sector coal mining companies namely Integrated Coal Mining Ltd. (ICML), Jindal Power Ltd. (JPL) and Monnet Ispat and Energy Ltd. (MIEL) there was not a single fatal accident reported in all these three years. This raises serious question mark over the safety policy being followed by public sector coal mining companies vis-a-vis captive mines holders and private players and the Committee feel that there is a need for serious introspection on the part of Public Sector Coal Companies and recommend the Government to seriously undertake a comparative study of the safety standards and good practices being followed by Captive Mines Holders and Private Players and issue requisite guidelines/orders for replicating them in the Public Sector Coal Companies also. The Committee may be apprised the action taken in the matter.

###### **Action Taken**

Director General of Mines Safety (DGMS) supervise and monitor all the safety aspects and status in all mines and organizes Annual Safety Week every year for all mines. During this event all the mines including private mines are being inspected by the officials of Public Sector Undertaking (PSU) and Private Mines together. During this interaction knowledge sharing about good safety practices are being learnt and implemented therefore.

Meetings of the Standing Committee on Safety in Coal Mines are held regularly under the chairmanship of Minister of Coal comprising the representatives of National level Trade Unions, CEOs of all Coal and Lignite companies, DGMS, Ministry of Labour & Employment and officials of Ministry of Coal to reviews and recommend measures for improving the safety aspects in all coal mines. The Coal Companies have established the mechanism for safety arrangements in all opencast and underground mines.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **CHAPTER IV**

### **RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE**

**NIL**

## **CHAPTER V**

### **RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWAITED**

#### **SUBSIDENCE PROBLEM**

##### **Recommendation No. 10**

The Committee note that un-scientific, unsystematic and illegal mining are the primary causes of fires resulting into subsidence. Steps are being taken by Government/Coal PSUs to ensure implementation of the Master Plan for Jharia and Raniganj Coalfields dealing with fire, subsidence and rehabilitation and diversion of surface infrastructure. The Committee find that the Master Plan which was approved on 11.8.2009 with an estimated investment of Rs. 7112.11 crore for Jharia Coalfields and Rs. 2661.73 crore for Raniganj Coalfields, is being implemented by the Jharia Rehabilitation and Development Authority for Jharia Coalfields and Asansol Durgapur Development Authority for Raniganj Coalfields with fire survey being done by the National Remote Sensing Centre (NRSC), ISRO, Hyderabad since August, 2013 and overall monitoring by High Power Central Committee (HPCC) headed by Secretary (Coal). The Committee are happy to note that the initial surface fire in Jharia Coalfields that stood at 8.9 Sq. Km have since been reduced to 2.18 Sq. Km as in July, 2015. The Committee however, desire that the implementation of the Master Plan be further accelerated and enhanced so that the subsidence problem is rooted out completely. The Committee would like to be apprised of the progress made in the matter.

##### **Action taken**

Under Master Plan, total 28 Fire schemes have been proposed in Phase-I to be formulated /& implemented for dealing with 67 fires sites spread in 41 collieries. 11 fire schemes have been approved by Board and implemented, out of which 4 schemes have been completed. Now, for expediting the fire dealing process, excavation methods has been resorted to by deploying Hired HEMM at various mines of BCCL successfully, resulting in reduction of fire area.

The coal mine fire survey/ study was instituted by BCCL through National Remote Sensing Centre (NRSC), ISRO, Deptt. of Space, Hyderabad in Aug., 2013 for delineation of surface coal fires in Jharia Coalfield. NRSC has submitted their report in April' 2014, in which they have concluded that the present fire area in the coalfield is only 2.18 sq.km. which includes both over burden dump fire and active fire. NRSC has deduced these findings from the State of Art, Satellite based technology.

Action is being taken by BCCL for dealing with fire as stipulated in the Approved Master Plan. NRSC has been requested to repeat the satellite TIR survey. NRSC has confirmed for survey in June 2016. Once the finding of NRSC are submitted after the survey is completed, BCCL would improvise the fire action plan for speedier liquidation of fire area. In meeting on 18.12.2015 Secretary agreed in principle that a Fire Resource Center be established at The Indian School of Mines Dhanbad (ISM,) for monitoring networking and research on fire mitigation measures at Jharia. ISM, Dhanbad has been contacted to give their advice/comment. ISM required some document regarding previous fire studies which has been submitted by BCCL.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **COMPENSATION PACKAGE POLICY FATAL ACCIDENTS AND SERIOUS CASES FOR REGULAR AS WELL AS CONTRACT WORKERS**

### **Recommendation No. 11**

The Committee note that the payment of compensation is governed by the Employees' Compensation (Amendment) Act, 2009. The Committee find that in CIL, a Special Relief Package of Rs. 5 Lakh is given to a departmental employee in addition to the amount payable under the Employees' Compensation Act and the company also release immediate payment for funeral expenses and transport etc. to the family of the deceased. Besides this, monetary benefits under Life Cover Scheme (LCS) of Rs. 1,12,800 w.e.f. 01.02.2012, ex-gratia amount of Rs. 84,600 in case of death or permanent total disablement; gratuity on the basis of length to service; encashment of Earned Leave and Payment of Pensions as per CMPS, 1998 are also provided to the deceased family. Further, there is provision for offer of employment to eligible kin of deceased departmental employee and provision for monetary compensation per month paid to family if there is no eligible person for employment. The Committee also observe that in case of serious bodily injury, due compensation under the Employees' Compensation (Amendment) Act, 2009 is paid to serious bodily injured person impaired with permanent disability after due assessment of the percentage of permanent disability by an approved Medical Board. An additional ex-gratia amount of Rs. 84,600/- (w.e.f. 01.02.2012) is also given in case of permanent total disablement resulting on account of accident out of and in course of employment for departmental employee. Besides salaries/wages during period of absence and extensive medical treatment facilities are also provided either in Company's Hospital or any other referred Hospital during the injury period and beyond. As regards contract workers are concerned, the Committee find that compensation in case of fatal accidents and serious bodily injury while on duty is paid by the Contractor as per the provisions made under the Workmen Compensation Act, 2009. CIL as the Principal Employer ensure that payment of compensation to the next kin of the deceased contract worker is paid by the respective contractor. The Committee further find that in SCCL, similar



compensation package and benefits exists with ex-gratia of Rs. 84,300/- and special ex-gratia of Rs. 5,00,000/- paid to regular employees while in case of contract employee, the offloading agencies are liable to pay with their payment ensured by the principal employer. The Committee are however, happy to note that in NLC, in the case of death of a contract workman due to accident, a family relief of Rs.5,100/- per month is given vis-a-vis Rs. 8,500/- per month paid to a regular employee. The Committee feel that matter of death cases should be treated compassionately whether it is a contract or a regular employee. Taking into consideration the rising cost of livelihood, the Committee recommend that the quantum of various compensation amounts being provided to the deceased to family/injured person are needed to be reviewed periodically. The Committee further recommend that the Government may explore the feasibility of extending a comprehensive Life and Health insurance cover to all workers including contract workers so that their lives and health are duly secured. Similarly, the Committee desire that the current compensation package for contract workers may also be periodically reviewed and the Coal Companies as well as the Principal Employer may consider to contribute in the compensation package. The

Committee would also like to emphasize that all due compensation package are always released within the prescribed period whether it is for a departmental employee or a contractual worker. As regards redressal of grievances related to compensation/relief, the Committee desire that all such issues are taken up at the highest level and a robust and responsive mechanism be put in place for redressal of such grievances. The Committee may be apprised of the action taken in the matter.

### **Action Taken**

**CIL-** Suggestions of the Committee on the other issues are noted. The proposal is being worked upon for appropriate consideration.

### **NLC**

- As far as NLC concerned a family relief of ₹5,100/- per month is given to a contract workmen in case of fatal accident and vis-a-vis ₹8,500/- per month is given to regular workmen.
- Comprehensive life and health insurance coverage is made to both contractual and regular worker and the same is reviewed periodically.
- For expediting the process of payment compensation / relief redressal of grievances is rested with highest authority in the hierarchy across the line and hence compensations are released in time.

**SCCL:** Payments to contract employees of the off loading agencies are ensured by SCCL.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

## **HEALTH FACILITIES FOR INHABITANTS/WORKERS IN COAL/LIGNITE MINING AREAS**

### **Recommendation No.14**

The Committee note with concern that workers and inhabitants in the coal mining areas faces a number of major occupational health hazard caused due to sustained exposure to dust, vibration, noise, light, electricity, heat, pressure, machinery etc. Notably, other occupational hazards include chronic backache, chronic bronchitis, dermatitis and in OCMs deafness, vibrational syndrome, cataract due to poor light, etc. The Committee note that CIL and its subsidiaries have made available extensive medical facilities to the employees and their families through various medical establishments beginning from the dispensary level and going up to the central and apex hospitals in different parts of the coalfields. Such infrastructure includes 79 hospitals with 5709 beds, 418 dispensaries, 212 empanelled corporate hospitals and medical colleges, 589 ambulances, 1445 doctors including specialists and 3278 paramedical staff to provide medical services to CIL employees. Besides, 11 Ayurvedic dispensaries also run by CIL subsidiaries provide indigenous system of treatment to workers. The Committee have been given to understand that besides preventive health care for detection of occupational health diseases, workers are also provided with protective gears such as helmet, cap lamps, masks, boots etc. The Committee are happy to note that due to the initiatives taken up by the Ministry and Coal PSUs, the number of cases of pneumoconiosis has reportedly come down drastically in CIL areas in the recent years and continuous biological and environmental monitoring has resulted in better health conditions of coal mine workers. The Committee further note with satisfaction that modernization and expansion of medical facilities have been accorded priority in CIL areas with many modern gadgets and medical equipments provided and made available for workers/inhabitants in these areas. Similarly, NLC also provides healthcare facilities through its General Hospital with 355 beds to all inhabitants of the Neyveli township and its surrounding villages including comprehensive medical treatment to contract workers and their family members. Notably, the Occupational Health Services (OHS) under the Preventive Health Care Programme in NLC is integrated with the overall hospital care delivery system of the company. Major components of Preventive Health Care include Periodic Medical Examination (PME) of miners conducted once in 3 years for those in the age brackets of 45 years and above and once in 5 years in the case of those who are below 45 years of age; Metalliferous Mining Medical Examination Programme; First Aid Training Programme; Community Health Screening; etc. The Committee observe that health issues of workers as well as inhabitants should be given paramount importance. Taking into consideration the various occupational health hazards being faced in Coal Mines by Miners, the Committee desire that the Ministry should holistically review the working conditions in Mines with special aspects to hazardous conditions and come forth with a time

bound robust mechanism for ensuring up to date technology up-gradation and mechanization in the mining operations to reduce these hazards to the minimum possible level. The Committee further desire that workers must mandatorily be made to wear protective gears in Mines so that exposure to occupational hazards is minimized. The Committee also desire that a mechanism be put into place to ensure that workers mandatorily take periodic preventive health checkups with regular follow up which may include Periodical Medical Examination of all miners once in 3 years instead of 5 years in the case of miners who are below the age of 45 years. Also provision be made for facilitating immediate change of workplace where necessary for those workers who are affected with some particular kind of working conditions. The Committee also recommend that requisite health care provisions by way of giving advances, treatment as well as easy and hassle free settlement of cost of such treatments; etc. may also be incorporated. The Committee may be apprised of the action taken in the matter.

### **Action Taken**

#### Coal India Limited (CIL)

The Mine Rules, 1955 in the rule 29B (b) mandates Periodical Medical Examination (PME) of every person employed in the mine at interval of not more than five years. However, the PME of persons employed in the mines of CIL who are about 45 years is done at interval of three years as a measure of close preventive health checkup of ageing employees.

As the Committee desires to put in place a mechanism to ensure that PME of all workmen is done once in 3 years instead of 5 years, necessary amendment in the provisions of rule 29B of the Mine Rules 1955 should be incorporated so that it is uniformly implemented in all mines and accordingly requisite infrastructure in respect of doctors, paramedical staff and equipment is set up in addition to the existing ones.

Technology up-gradation and mechanization programme:

CIL has adopted the following technology up-gradation and mechanization programme in its mining operations:

- Adoption of the state-of-the art technology in suitable geo-mining locales.
- Phasing out manual loading in UG mines.
- Adoption of Mass Production Technology in more number of UG mines.
- Mechanization of UG drilling and roof bolting operation.
- Deployment of more number of surface miners to eliminate blasting operation in O.C.Ps.
- Deployment of relatively higher capacity HEMM in more number of O.C.Ps .

CIL has undertaken a study on "Technology Development and Modernization of its mines" for formulation of Roadmap for further mechanization.

#### Personnel Protective Equipment:

CIL provides the following Personnel Protective Equipment (PPE) to all employees as per their job requirements.

1. Mining Shoes
2. Gumboot
3. Helmet
4. Hand Gloves
5. Ear muff
6. Safety Goggles
7. Dust masks
8. Safety Hooks / Belts
9. Full Body Harness / Reflective Harness
10. Fluorescent Jacket / Vest / Strap

Change of work place (substitution) is the part of treatment for persons detected with CWP (Coal Workers' Pneumoconiosis). Work person affected with critical disease are also rehabilitated in a suitable work environment for speedy recovery of the disease.

CIL has already empanelled 243 hospitals all over India. In most of the cases, employees and their dependent family members referred for treatment are provided cashless facility. Otherwise CIL and its subsidiary companies are giving medical advance on estimate as submitted by treating hospital.

Neyveli Lignite Corporation Limited (NLC)

At present the occupational health centre at NLC is catering to the needs of its employees as per the guidelines given by Director General of Mines Safety. As per previous guidelines, Periodical Medical Examination of miners above the age of 45 is taken up once in 3 years and in the case of miners below the age of 45 years it is taken up once in 5 years. Observations and recommendations of the parliamentary committee 2015 to take up PME once in 3 years covering all age groups will be taken up with the NLC top management for implementation of the Committee's suggestion.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

#### **PRIVATE SCHOOLS FINANCED BY CIL AND ITS SUBSIDIARIES** **Recommendation No. 17**

While observing that there is no employer- employee relationship between the teachers employed by the management of privately managed schools and CIL/Subsidiaries companies which has been confirmed by the Hon'ble Supreme

Court Order dated 21st August, 2007, the Committee appreciate the enhanced rate of grants-in-aid of Rs. 5000/- per undergraduate teacher to Rs. 7000/- per graduate teacher with B. Ed. qualification per month being granted by the CIL. The Committee, however, desire that management of CIL should ensure that these privately managed collieries schools are imparting quality education to the children of miners and workmen of the collieries. The Committee also desire that the management of these privately managed schools which are getting grants-in-aids from CIL and its subsidiaries are implementing the wage structure for different categories of teachers as approved by the respective State Government/State Education Board.

### **Action Taken**

Coal India Limited

To improve the quality of education in the operational area of Subsidiary Companies, National Skill Development Corporation will be engaged for conducting a survey of the existing privately managed school, which are getting grant-in-aids.

The subsidiary companies have been advised to ensure that payment of grant-in-aid to privately managed school is released in time.

[O.M. No. 54012/05/2013-CRC-II(Pt) dated 11/07/2016 of Ministry of Coal]

### **Comments of the Committee (Please see para 19 of Chapter I of the Report)**

**NEW DELHI;  
09 August, 2016  
18 Sravana, 1938(Saka)**

**RAKESH SINGH  
Chairperson  
Standing Committee on Coal and Steel**

**ANNEXURE-I**

**MINUTES OF THE SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL HELD ON 9th August, 2016 IN ROOM NO. '112', FIRST FLOOR, PARLIAMENT HOUSE ANNEXE, NEW DELHI.**

The Committee sat from 1500 hrs. to 1530 hrs.

**PRESENT**

**Shri Rakesh Singh                      -                      Chairperson**

**Lok Sabha**

2. Shri A. Arunmozhithevan
3. Shri Kalyan Banerjee
4. Smt. Jyoti Dhurve
5. Shri Shailesh Kumar
6. Shri Devji M. Patel
7. Smt. Riti Pathak
8. Smt. Ranjit Ranjan
9. Dr. Ravindra Kumar Ray
10. Shri Tamradhwaj Sahu
11. Shri Tathagata Satpathy
12. Shri Janardan Singh "Sigriwal"
13. Shri Pashupati Nath Singh
14. Shri Sunil Kumar Singh
15. Shri Sushil Kumar Singh
16. Shri Krupal Balaji Tumane

**Rajya Sabha**

17. Dr. Pradeep Kumar Balmuchu

**SECRETARIAT**

- |                         |   |                     |
|-------------------------|---|---------------------|
| 1. Shri U.B.S. Negi     | - | Joint Secretary     |
| 2. Shri Ajay Kumar Garg | - | Director            |
| 3. Shri Arvind Sharma   | - | Additional Director |
| 4. Ms. Miranda Ingudam  | - | Deputy Secretary    |

2. At the outset, Chairperson welcomed the Members to the sitting of the Committee.

3. The Committee thereafter took up for consideration the following Draft Reports:-

(i)	**	**	**	**
(ii)	**	**	**	**

(iii) Draft Action Taken Report on the Observations/Recommendations contained in the Fourteenth Report on "Safety for Inhabitants/Workers in Coal/Lignite Mining Areas" of the Ministry of Coal.

4. The Committee also considered the letter of dissent dated 09.08.2016 given by Shri Tathagata Satpathy, M.P. in respect of certain recommendations contained in its draft Report relating to "Research & Development in Iron and Steel Sector" of the Ministry of Steel.

5. The Committee adopted the Reports with minor changes/modifications in Draft Report on "Research and Development in Iron and Steel Sector". The Committee decided that a copy of the aforesaid letter of dissent given by Shri Tathagata Satpathy be appended to the Report in terms of Rule 331I.(3) of Rules of Procedure and Conduct of Business in Lok Sabha. The Committee then authorized the Chairperson to finalise the Reports on the basis of factual verification from the concerned Ministries and present the same to both the Houses of Parliament.

***The Committee then adjourned.***

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\*\*Do not pertain to this Report.

## ANNEXURE-II

(Vide Para IV of Introduction)

### ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/RECOMMENDATIONS CONTAINED IN THE FOURTEENTH REPORT OF THE STANDING COMMITTEE ON COAL AND STEEL

I.	Total No. of Recommendations made	17
II.	Recommendations that have been accepted by the Government ( <i>vide</i> recommendation at Sl. Nos. 1,2,3,4,5,6,7,8,9,12,15 and 16) Percentage of total	12 70.58%
III.	Recommendations which the Committee do not desire to pursue in view of the Government's replies ( <i>vide</i> Recommendation at Sl. No. 13) Percentage of total	01 5.88 %
IV.	Recommendations in respect of which replies of the Government have not been accepted by the Committee ( <i>vide</i> recommendation at Sl. Nos. NIL) Percentage of total	00 0%
V.	Recommendations in respect of which final replies of the Government are still awaited ( <i>vide</i> recommendation at Sl. No. 10,11,14 and 17) Percentage of total	04 23.54 %