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STANDING COMMITTEE ON  
COAL AND STEEL (2004-2005)  
FOURTEENTH LOK SABHA

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MINISTRY OF COAL

SAFETY IN COAL MINES

[Action Taken by the Government on the Recommendations contained in the  
Forty Seventh Report of the Standing Committee on Energy  
(Thirteenth Lok Sabha)]

SEVENTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

March , 2005 / Chaitra, 1927 (Saka)

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Presented to Lok Sabha on 23.3.2005

Laid in Rajya Sabha on 23.3.2005



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COMPOSITION OF THE STANDING COMMITTEE ON  
COAL AND STEEL (2004-05)

Shri Ananth Kumar - Chairman  
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27. Shri Jibon Roy
28. Shri G.K.Vasan

### **SECRETARIAT**

- |    |                   |   |                         |
|----|-------------------|---|-------------------------|
| 1. | Shri P.D.T.Achary | - | Secretary               |
| 2. | Shri N.K.Sapra    | - | Joint Secretary         |
| 3. | Shri A.K.Singh    | - | Director                |
| 4. | Shri Shiv Singh   | - | Under Secretary         |
| 5. | Shri B.D.Dhyani   | - | Sr. Committee Assistant |

## INTRODUCTION

I, the Chairman, Standing Committee on Coal and Steel having been authorised by the Committee to present the Report on their behalf, present this Seventh Report (Fourteenth Lok Sabha) on Action Taken by the Government on the recommendations contained in the Forty Seventh Report of the Standing Committee on Energy (Thirteenth Lok Sabha).

2. The Forty Seventh Report of the Standing Committee on Energy (Thirteenth Lok Sabha) was presented to Lok Sabha on 4.2.2004. Replies of the Government to all the recommendations contained in the Report were received on 14.1.2005.

3. The Standing Committee on Coal and Steel considered and adopted this Report at their sitting held on 21.3.2005.

4. An analysis on the Action Taken by the Government on the recommendations contained in the Forty-Seventh Report 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 the body of the Report.

New Delhi;  
21 March, 2005  
30 Phalguna , 1926 (Saka)

ANANTH KUMAR,  
Chairman,  
Standing Committee on Coal and Steel.

## CHAPTER - I

### REPORT

This Report of the Committee deals with the Action Taken by the Government on the recommendations contained in the Forty Seventh Report (Thirteenth Lok Sabha) of the Standing Committee on Energy on the subject "Safety in Coal Mines" which was presented to Lok Sabha on 4.2.2004.

2. Action Taken Notes have been received from the Government in respect of all the recommendations contained in the Report. These have been categorised as follows:-

- (i) Recommendations/Observations that have been accepted by the Government:  
Sl.Nos. 1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 50, 51, 52, 53, 54, 56, 57, 58, 59, 61, 64, 66, 68, 69, 71, 72 and 73.
- (ii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies;  
Sl.Nos. 2, 5, 16, 22, 23, 25, 55, 62 and 70.
- (iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee:  
Sl.Nos. 4, 17, 24, 26, 45, 60 and 63
- (iv) Recommendations/Observations in respect of which final replies of the Government are still awaited.  
Sl.Nos 28, 49, 65 and 67.

3. The Committee desire that final reply in respect of the recommendation for which only interim reply has been given by the Government should be furnished to the Committee at the earliest.

4. The Committee also desire that utmost importance should be given to the implementation of recommendations accepted by the Government. In case, where it is not possible for the Government to implement the recommendations in letter and spirit for any reasons, the matter should be reported to the Committee well in time with reasons for non-implementation.

5. The Committee will now deal with the Action Taken by the Government on some of their Recommendations/Observations.



## A. UNIFORM PERIODICITY FOR CONDUCTING SAFETY AUDIT

### **Recommendation (Sl.No.4, Para No.2.23)**

6. The Committee had observed that although safety audit was required to be conducted once in two years, yet there was no uniformity in undertaking the safety audits by the subsidiaries of Coal India Limited (CIL) and other coal companies. The Committee had found that the periodicity for conducting safety audit varied from one month to three years in coal subsidiaries. The Committee, therefore, recommended that CIL should review their orders and frame guidelines for conducting regular safety audit at uniform interval of time.

7. In their Action Taken Reply, Ministry of Coal has stated that in Coal India Limited (CIL), a uniform periodicity for all mining companies may not be a practical approach in view of the fact that whereas some companies have lesser number of mines (less than 10) and that too with only opencast workings, the number of mines in other companies is in the order of 90s with very complex underground workings in many seams.

8. Keeping this in view, it was decided in the Co-ordination Meeting of Director (Tech), CIL with Chiefs of Safety of companies on 14<sup>th</sup> May, 2002 that Safety Audits are to be conducted every year where the same is the practice and in other companies, this shall be completed every 2 year.

### **Singareni Collieries Company Limited (SCCL)**

9. Safety audit at all the mines conducted once in a year before the onset of monsoon. In addition to the above, during the year 2003, two more Special Safety Audit Inspections were carried out, one immediately after the occurrence of inundation disaster at GDK-7 LEP and the other one after the roof fall disaster at GDK-8A Inc. All the shortcomings pointed out during above inspections have been rectified. ISO coordinated all the works.

### **Neyveli Lignite Corporation (NLC)**

10. In NLC, the Safety Audit is being conducted once in a month by Safety Audit Teams which are formed exclusively for SME equipments/Conveyors and by the Pit Safety Committee in addition to the routine safety inspection at Mine level, as well as by the Central Safety at Corporate level. A part from the above, the Risk Assessment and Safety Audit was conducted in all the Mines during the year 2003 through the external expert M/s Society for Mining Research Sustainable Development and Environment, Dhanbad headed by a retired DGMS officer. It is also proposed to conduct the similar Audits once in 2 years.

11. Since there was no uniformity in undertaking the safety audits by the subsidiaries of Coal India Limited (CIL) and other companies, the Committee had

recommended that new guidelines should be framed for conducting regular safety audits at uniform intervals of time. The Ministry of Coal in its reply has stated that a uniform periodicity for all mining companies may not be a practical approach in view of the fact that whereas some companies have lesser number of mines and that too with only opencast workings, others have large number of complex underground mines. It has, however, been decided to conduct safety audit every year where the same has been the practice, and in other companies, this process would be repeated every two years. While the Committee appreciate the efforts of Neyveli Lignite Corporation (NLC) in conducting internal safety audit once in a month and external safety audit once in two years, they expect similar action on the part of subsidiaries of CIL and Singareni Collieries Company Ltd. in undertaking safety audits. The Committee also desire the Ministry of Coal to play proactive role and prepare uniform guidelines for underground and opencast coal mines in time-bound manner.

#### B. RECLAMATION OF DEGRADED LAND

##### Recommendation (Sl.No.13, Para No.3.34)

12. The Committee noted that the coal companies at times, did not pay attention to the protection of the environment, as it deserved. It had been brought to the notice of the Committee that many of the opencast mines left the land degraded after completion of the mining operations. Also Trucks/Dumpers loaded with coal pass through residential areas caused dusty conditions. In this context, the Committee desired that filling up of opencast excavation and reclamation of the degraded land should be made mandatory under the law. The Trucks/Dumpers after loading coal should be suitably covered so as to avoid dust being raised in the environment. At the same time, the Committee desired that adequate arrangements and infrastructural facilities be made available to carry out dust surveys in the mines and corrective action taken thereon.

13. In their reply, the Government stated that in Coal India Limited (CIL), during mining operation itself, all non-active external OB dumps are reclaimed and plantation is done extensively with different variety of sapling including medicinal plants. Voids are back filled with overburden simultaneously as the mine progresses. After the mine is exhausted some unavoidable void is left out which is converted into water reservoir which becomes source of water for domestic use and fisheries for the habitat who continue to live after the mine is closed. All the reclaimed land (filled with OB/ top soil) is covered with plantation.

Recently few of the reclaimed sites are being used for growing paddy/vegetable crops/medicinal plants by the Project Affected People (PAP). The provision for reclamation/restoration of the land degraded due to mining is mandatory and covered under the Environmental Management Plan (EMP), which has been approved by MoEF before a project is cleared for implementation.

14. Regarding covering of the trucks, it is to be mentioned that covering of coal loaded trucks is being practiced in some of the subsidiaries like WCL, NCL, MCL and is under process of implementation in the other subsidiaries.

15. As regards emission of dust due to mining activities is concerned, several measures such as, (i) Fixed Sprinklers along the haul roads, (ii) Mobile sprinklers, (iii) Cleaning of roads by graders as well as manually, are taken so that dust emission is kept within allowable limits set by SPCB/CPCB. Regular monitoring of dust emission is undertaken by independent approved agencies as per Air Pollution Acts/Rules.

16. Infrastructural facilities have been provided for carrying out dust surveys in mines and corrective action is taken wherever necessary.

#### **Singareni Collieries Company Limited (SCCL);**

17. Re-filling arrangement of the opencast mines and land re-claiming of the degraded land is being taken up as per approved project reports and approved environmental management plans. At the opencast mines of SCCL, during the last two years back-filling has been done in 79.30 hectares of land and 1,82,233 saplings have been planted. Loaded trucks/dumpers are being covered and position reviewed at National Dust Prevention Committee (NDPC) Meetings which are held once in months at CIL, headquarters, Kolkata. Reports of dust-surveys to take up corrective action are submitted to NDPC for review and recommended measures by the National Dust Prevention Committee are being attended.

#### **Neyveli Lignite Corporation (NLC);**

18. At NLC, after the Lignite exploitation, the excavated area is back filled with overburden soil. The area thus back filled is levelled and reclaimed by adopting latest techniques like Biological Reclamation. Soil Enrichment etc., based on the R&D study carried out by the Centre for Applied Research & Development, NLC.

19. The Committee had desired that filling up of opencast excavations and reclamation of the degraded land should be made mandatory under the law. The Ministry of Coal has stated that all the degraded land has been reclaimed and plantation done extensively over it. The provision for reclamation/restoration of land, degraded due to mining, is mandatory and covered under the Environmental Management Plan. The Committee feel that intensive efforts are

required to ensure that degraded land due to mining is reclaimed and made safe. The Committee also feel that the extant provisions in this regard should be reviewed thoroughly to further streamline and strengthen them. Meanwhile, the Committee desire that a mechanism to monitor reclamation of degraded land should be set up in the Ministry so that reclaimed land is given to the project-affected people them a permanent source of earning.

C. CONTROL OF FIRE AND SUBSIDENCE IN RANIGANJ AND JHARIA COALFIELDS

**Recommendation (Sl.No.15, Para No.3.36)**

20. The Committee noted that mine fires were a serious and widespread problem and resulted in loss of coal reserves and added to the cost of production. It was estimated that in Jharia Coalfields alone, about 1864 million tonnes of coal might have been blocked and about 37 million tonnes of coal might have been damaged due to these fires. The measures for controlling coal mine fires in Jharia Coalfields included bull dozing, levelling and covering with soil to prevent the entry of oxygen and to stabilize the land for vegetation. Efforts made so far in this regard could only prevent the spreading of fires but their complete extinction in most of the cases was not possible. The Committee were of the view that the problem of fire and subsidence control especially in Raniganj and Jharia coalfields should be treated a "National Problem" and adequate funds be allocated by the Government to tackle this problem.

21. In their Action Taken Reply, the Government has stated that in Coal India Ltd. (CIL) steps have been taken to generate an amount of Rs.395 crore per year for implementation of the action plan for shifting and rehabilitation, dealing with fire and stabilization of unstable area in ECL & BCCL. For this a separate head account would be maintained and CIL will ensure that this amount is used strictly for implementation of the action plan.

22. In Singareni Collieries Company Limited (SCCL); audit check of the mines has been taken up by a Committee headed by Director (Operations). Filling arrangements were taken up over the subsidence areas and things are monitored by CGM (Safety) regularly. Reports are being submitted to CMDs.

23. As far as Neyveli Lignite Corporation (NLC) is concerned, separate Fire Stations are available inside the Mines with sufficient number of required type of Fire Tenders with crews to quench the fire immediately without any loss of time after the fire cell is received through well Established Network Communication System. Action is also being taken then and there to procure the latest Technology for Fire fighting equipments and adopt latest trends available. In this regard adequate funds are allotted by NLC for the fire related activities.

24. At the Ministry of Coal level, the problem of fire and subsidence control in Jharia & Raniganj coalfields is receiving maximum attention of the Government at the highest level i.e. at the Cabinet Secretary level . A monitoring committee under the Chairmanship of Secretary (Coal) with representatives from the State Governments, CIL, BCCL, ECL and related Ministries/Departments of the Central Government has been constituted and is reviewing the progress of work periodically.

25. The Committee had expressed concern over the problem of fire and subsidence control especially in Raniganj and Jharia Coalfields and desired that adequate funds be allocated by the Government to tackle this problem. The Ministry in its reply has stated that steps have been taken to generate Rs.395 crore per year for implementation of the action plan and that the problems of fire and subsidence control in Jharia and Raniganj coalfields are receiving maximum attention of the Government at the highest level i.e. at the Cabinet Secretary level. A Monitoring Committee constituted under the Chairmanship of Secretary (Coal) has been reviewing the progress of work periodically. The Committee note with happiness that the Government has constituted a Monitoring Committee to address the problems of fire and subsidence in coal companies. The Committee desire that the Government should continue giving utmost importance to this problem and ensure that not only the target fixed for generating Rs.395 crore per year is achieved but also the funds so collected are utilized exclusively for the desired purpose. The Committee would like to be apprised periodically of the progress made by the Monitoring Committee and the details of the amount allocated/spent on the various measures, out of the funds to the tune of Rs.395 crore, proposed to be generated.

D. REVIEW OF EMERGENCY ACTION PLAN

### **Recommendation (Sl.No.17, Para No.3.38)**

26. The Committee had recognized the urgent need for making the emergency plan responsive, speedy and effective in each mine. The Committee, therefore, recommended that each mine should review the existing emergency plan at higher level keeping in view the risk from fire. There was also a need of stabilizing rescue rooms in coal mines having risk of fire where more than 350 persons had been employed in a shift in underground mine. The feasibility of storing oxygen type of rescuer at strategic places in underground mine with the risk of fire in an emergency situation should also be explored. The coal companies should formulate and implement structured training programmes for the miners, officials and management to develop awareness and increasing effectiveness of emergency response in case of fire.

27. In its reply, the Government has stated that in Coal India Limited (CIL), Emergency Action Plan are reviewed in the course of Inspections by Internal Safety Organisation (ISO). However, fresh directions have been issued for review of Emergency Action Plans at a higher level.

28. The present Mines Rescue Rules, 1985 require establishment of Rescue Rooms in underground mines where on an average more than 100 persons are employed daily and there is no Rescue Station within radius of 35 km. provided that it is sufficient to provide one Rescue Room for a number of mines belonging to the same owner, if the total number of persons ordinarily employed in all such mines does not exceed 5000 and the mines are situated within a radius of 35 km and connected by road.

29. The feasibility of storing oxygen type of rescuer at strategic places in underground mine with the risk of fire in an emergency situation is being examined. However, this suffers from the disadvantage that the site of storage of oxygen type self rescuers may not be accessible at the time of emergency.

30. Training programmes for executives and supervisors cover awareness about emergency response for various emergencies including fire.

#### **Singareni Collieries Company Limited (SCCL);**

31. Consultative Committee emergency organisation will review existing emergency plans on quarterly basis and modify emergency plans.

32. Fire prone mines were identified and establishment of rescue rooms would be completed within nine months.

33. 300 oxygen type self-rescuers are being procured and they would be stationed initially at rescue stations and later on, it is proposed to position them at strategic points in underground at identified fiery mines.

34. Structured training programme has been developed for officers and staff to deal with fire accidents. For miners, it is in the formulation stage and would be completed within one year. A total of 480 persons have been identified for training.

#### **Neyveli Lignite Corporation (NLC);**

35. As far as NLC is concerned, as per the recommendation of the IX Conference on Safety in Mines, a Structured Training Programme has been formulated for all the Miners, front line supervisory officials etc, in NLC Mines on Fire Prevention to develop awareness and increasing effectiveness of emergency in case of fire. The duration of the Structured Training Programme has been programmed for a week during the Training Calendar 2004-05 in addition to Fire Prevention Mines Act, Rules & Regulations. Mine Operations, Identification of Hazards, First Aid, Worker's Participation in Safety Management etc.

36. The Committee had earlier recommended that the existing Emergency Action Plan in every mine should be thoroughly reviewed keeping in view the risk from fire. The Committee had, therefore, desired that in underground mines, the feasibility of storing oxygen type self rescuers at strategic places with the risk of fire should be explored. Ministry of Coal has informed the Committee that the Emergency Action Plan in the mines of Coal India Ltd. (CIL) is reviewed in the course of Inspections by Internal Safety Organisation (ISO). As regards the feasibility of storing oxygen type self-rescuers, at strategic places in underground mines with the risk of fire, is being examined. However, this suffers from the disadvantage that the site of storage of oxygen type self rescuers may not be accessible at the time of emergency. The Ministry has further stated that in Singareni Collieries Company Ltd., 300 oxygen type self-rescuers are being procured and they would be stationed initially at rescue stations. It is proposed to

position them at strategic points in identified underground fiery mines later on. The Committee are indeed surprised to note the contradictory stand taken by the Ministry regarding positioning of oxygen type self rescuers in respect of mines of Coal India Ltd. and SCCL. It is beyond comprehension as to how it may not be possible to place oxygen type self rescuers at strategic points in underground mines of Coal India Ltd. The Committee considered the oxygen self type rescuers as extremely vital safety devices and, therefore would like to reiterate their earlier recommendation in this regard.

#### E. SCIENTIFIC PREPARATION AND UPDATING OF MINE MAPS

##### **Recommendation (Sl.No.20, Para No.4.12)**

37. The Committee had observed that there existed an elaborate system for preparation and updating of mine maps and plans. Detailed directions had been given in this regard in the Coal Mines Regulations, 1957. Besides, DGMS issued circulars from time-to-time for preparing and updating the mine maps for working under some specific conditions. The Committee had been apprised that modern surveying instruments were being introduced for acquiring survey data and for preparing Mine Maps with the help of information technology. Further, Mines Act, 1952 empowered the DGMS to examine and take possession of any plan, section, register, other records etc. The Committee were perturbed to note that despite all these initiatives, the ground reality had not changed. At times, the maps and plans were prepared using scientific and unreliable old methods. Moreover, where such maps and plans were prepared, their updation, as required under Coal, Mines Regulations, was not undertaken regularly. The Committee took a serious view of this. The Committee were of the opinion that accurate and scientific survey of mine maps were pre-requisite for mining coal safely. Unscientific and wrong mapping could lead to disasters. Bagdigi tragedy was a glaring example in this regard. The Committee, therefore, desired that mine maps and plans should be prepared scientifically and updated as required under the statute using modern techniques like satellite imageries, global positioning system, etc. and also with the help of trained manpower/surveyors to ensure the correctness of such maps and plans. At the same time, check and recheck survey be undertaken to ensure correctness of maps and plans. The Committee also desired that Government should fix personal responsibilities of top management in the event of failure to ensure correctness of maps and their updation. The Committee were of the view that until and unless the plans were approved by DGMS, no mining activities should be carried out.



38. In its reply, the Government has stated that in Coal India Ltd (CIL), mine plans are prepared and updated as required under the statute using proper survey equipment by Mine Surveyors possessing mine surveyor's certificate issued by DGMS. Subsidiary companies like BCCL, CCL, NCL, & WCL have introduced modern instruments like Total Stations, EDMs, Electronic Theodolites, etc. At the same time, check and recheck surveys are undertaken to ensure correctness of maps and plans as required by the statutes. External agencies like CMPDIL/MECL are also being engaged to conduct check surveys in some cases.

39. Coal mining activities are carried in accordance with the Mines Act and Rules & Regulations framed thereunder and DGMS approval is obtained wherever required under the above statutes.

#### **Singareni Collieries Company Ltd (SCCL)**

40. As per Reg. No. 58 to 65 of CMR, 1957, mine plans are being prepared and submitted to the DGMS. It is proposed to procure one GPS for SCCL within four months.

41. Trained manpower and Surveyors are being provided to prepare plans. As against 217 Surveyors, the existing strength is 198, meaning thereby a net shortage of 19 Surveyors.

42. Area Survey Officer is posted in each Area under the Area General Manager to take up check surveys at area level.

43. Following measures are being taken up to ensure correctness of plans.

- (a) Check survey of underground workings in relation to surface and neighbouring mines is under progress.
- (b) Check list is being followed to verify the mine plans periodically to ensure the accuracy of plans prepared under different Regulations of CMR, 1957.
- (c) It is being ensured that all the survey and levelling networks are closed to ascertain the accuracy.

44. Dy. GM (Survey) is In-charge of Survey department. He conducts meetings with all Area Survey Officers and monitors the check survey works during such meetings. CGM (Safety) oversees the works.

45. During general inspections undertaken by DGMS staff, the mine plans and records are being scrutinized by them. Shortcomings pointed out by them and deviations if any are rectified.

46. Independent survey work is taken up by Area Surveyors for verification of the survey work. Updated plans of every mine are being submitted to the DGMS before 31<sup>st</sup> October every year.

#### **Neyveli Lignite Corporation (NLC)**

47. As far as NLC is concerned, the Mine maps and Plans are prepared scientifically and updated as and when required under the Statute using modern technique, and also with the help of trained manpower/Surveyors ensure the correctness of such maps and Plans. At the same time, check and recheck surveys are also undertaken to ensure correctness of maps and plans.

48. Apart from the above, the Information Technology like GIS (Geographical Information System) is being used in Mining, Survey and Geological fields and got good results. Moreover the mining activities are carried out as per the Plans approved by the DGMS.

49. The Committee had recommended that until and unless the plans were approved by the Directorate General of Mines Safety (DGMS), no mining activities should be carried out. The Ministry in its reply has stated that in Coal India Ltd. (CIL), mine maps/plans are prepared and updated as required under the statute using proper survey equipments by mine surveyors possessing Mine Surveyor's Certificate issued by DGMS. In addition to check and recheck surveys, external agencies like CMPDIL/MECL are also engaged to conduct check surveys in some cases. For carrying out coal mining activities, DGMS approval is obtained wherever required under the statute. However, the Committee are pained to note the shortage of surveyors in SCCL and feel that in the absence of adequate number of surveyors, how could the coal company survey the mine and prepare mine maps correctly and timely. The Committee

desire that there should be no shortage, if any, of surveyors and survey equipments, so that the mine maps and plans could be prepared and updated correctly and scientifically within the scheduled time.

F. Publication of Directorate General Mines Safety (DGMS) Enquiry Reports

**Recommendation (Sl.No.24, Para No.5.21)**

50. The Committee found that Directorate General Mines Safety (DGMS) did not part with copy of enquiry report conducted by them in the aftermath of the fatal coal mine accidents either to Trade Unions or its representatives/Members of Tripartite Safety Review Committee. In fact, their Report of DGMS was never made public. On the other hand, the Internal Safety Organisation (ISO) enquiry report was made available to the management and/or trade Unions and was discussed in the Tripartite Safety Committee. The Committee were of the view that when Reports of Enquiry Committee constituted in the aftermath of Rail/Air accidents, etc. were made public, there was no justification or rationale, whatsoever, in withholding the DGMS Enquiry Committee Reports from public. The Committee, therefore, recommended that inquiry reports of DGMS should be made public and copies thereof should be made available to concerned Trade Unions.

51. In its reply, the Government has stated that the provision under Sec.10 of Mines Act 1952 restricts such reports to be made public. However, the cause portion of the enquiry reports are published in DGMS Annual Report (a public document) & also intimated to the mine management while communicating charge against them. Further, on specific requisition from any other authority as indicated under Section 10(2), which includes registered/recognized trade union, the findings of the report are furnished keeping in view of the provisions of Sec 10 of Mines Act 1952.

52. The Committee had observed that the Directorate General of Mines Safety (DGMS) enquiry report, on fatal accident in coal mines were not made available to the public and had, therefore, recommended that the Inquiry Reports of DGMS should be made public and copies thereof made available to the concerned Trade Unions. In its reply, the Ministry has inter-alia stated that the provision under Section 10 of Mines Act 1952 restricts such reports to be made public. However, the "cause portion" of the report is published in DGMS

Annual Report and also intimated to the mine management. On specific requests from recognized Trade Unions, findings of the reports are furnished to them. The Committee are not convinced with the reply of the Government and find no justification in withholding DGMS enquiry reports from making public. The Committee are fully convinced that making such enquiry reports public will not only go a long way in reducing the number of such accidents in coal mines, but will also increase awareness among workers and management towards observance of safety norms, besides fixing responsibility in cases of lapse. The Committee, therefore, recommend that the relevant provisions of the Mines Act, 1952 which restrict such reports being made public should be suitably amended.

G. EMPOWERING DGMS AS SINGLE AUTHORITY TO FIX THE RESPONSIBILITY

**Recommendation (Sl.No.26, Para No.5.23)**

53. The Committee had found that in the event of a mine accident, there was a tendency of multiple disciplinary action simultaneously emanating from different authorities like ISO/DGMS and local police. The Committee were of the view that there was need to curb disciplinary action by multiple agencies and only one authority should be authorized for taking action, as in the case of the Railways. Further, multiple outside interventions affected timely rescue operations and caused demoralization to the workers and officers. The Committee noted that in case of Railways, enquiry after accident was conducted by a single agency i.e. Commissioner of Railways, where officers were on deputation from Railway. The police or other authorities did not come into picture, except in case of sabotage. It was in this context that Committee recommended that DGMS, which was empowered by the Mines Act, 1952, to fix responsibility and prosecute persons held responsible in a Court of Law for awarding punishment, should be sole authority for fixing responsibility and awarding punishment in case of mine accidents. This was all the more important as a person appointed by the Central Government to hold Court of Enquiry has all the powers of Civil Court (Section 24 of the Mines Act, 1952. The Committee also recommended that Mines Act, 1952 be amended, if need be for ensuring protection to a miner in this regard.

54. The Ministry in their Action Taken Reply has stated that the question of parallel enquiries by police authorities into the mining accidents had earlier been

examined by Ministry of Labour and all the State Governments were requested in the year 2000 that where an Inspector of Mines had commenced an enquiry into mining accidents, no Police Officer should start a fresh enquiry until the enquiry in progress had been completed by the authorities of the DGMS.

55. On making Directorate General of Mines Safety (DGMS) the sole authority to fix responsibility/awarding punishment in case of mine accident, Government has no objection.

56. The Committee had recommended that the Directorate General of Mines Safety (DGMS) which has been empowered by the Mines Act, 1952 and has all the powers of a civil court, should be the sole authority for fixing the responsibility and awarding the punishment in case of mine accidents. The Ministry in its reply has stated that the question of parallel enquiries by police authorities into the mining accidents had earlier been examined by Ministry of Labour and all the State Governments were requested in the year 2000 that where, an Inspector of Mines had commenced an enquiry into mining accidents, no Police Officer should start a fresh enquiry until the enquiry in progress had been completed by the authorities of the DGMS. The Government also has no objection in making the DGMS the sole authority to fix responsibility/awarding punishment in case of mine accident. The Committee are anguished to note that this problem has remained unresolved since 2000 and neither the Ministry of Coal nor the Ministry of Labour has taken any positive step in this regard. The Committee strongly feel that there is a dire need to hold further discussions with the State Governments to thrash out this long pending issue. The Committee, therefore, desire the Government to act in right perspective and hold discussions with the State Governments. The Committee would like to be apprised of the action taken in the matter.

## H. NEED TO INVESTIGATE SERIOUS ACCIDENTS BY DGMS

### **Recommendation (Sl.No.27, Para No.5.24)**

57. The Committee noted that at present the Directorate General of Mines Safety's (DGMS) role was limited to investigations into fatal mine accidents only. Serious accidents were not being enquired into by DGMS. The Committee desired that DGMS should not only investigate the fatal accidents but also serious ones. They should then analyze them in detail and issue guidelines and develop appropriate legislation to keep pace with time.

58. In their Action Taken Reply, the Ministry of Labour & Employment has stated that the role of DGMS is not limited to investigation of Fatal Accidents only. The Government agree with the recommendation that all serious accidents should also be enquired to help in analysis of accidents, issue of guidelines and development of appropriate legislation. Logically this would require additional manpower or offload the DGMS from routine/check inspection.

**59. The Committee had desired that the Directorate General of Mines Safety (DGMS) should investigate not only the fatal accidents but also serious ones.**

The Government is in agreement with the recommendation of the Committee that all serious accidents should also be inquired into to help in analyzing the cause of accidents, issue of guidelines and development of appropriate legislation, but this would require additional manpower or alternatively the DGMS may be offloaded from routine checks/inspections. The Committee are unhappy to note that on the one hand, the Ministry agrees that the serious accidents should be investigated, on the other, it has made no effort to increase the manpower of DGMS as required. The Committee do not appreciate the lackadaisical reply of the Ministry and, therefore, strongly recommend that the Government should immediately augment the manpower of DGMS to enable it not only investigate the serious accidents but also facilitate the enforcement of safety measures in coal mines.

## I. STRENGTHENING RESCUE STATIONS AND RESCUE ROOMS

### **Recommendation (Sl.No.45, Para No.9.16)**

60. The Committee noted that as per the provision of Mines Rescue Rules, 1985, it was the responsibility of the owner to establish and ensure functioning of rescue room or rescue station and also to provide rescue equipment and apparatus as may be necessary for compliance of these Rules. The Committee further noted that coal subsidiaries had well elaborated and structured rescue organization manned by trained personnel and equipped with modern state-of-the-art equipments. However, the past experience had shown that whenever any accident had taken place, the rescue operations had been delayed considerably leading to loss of lives of workers which otherwise could have been saved. It had been brought to the notice of the Committee that the system of keeping rescue teams always alert was not visible and members of the Rescue Team were assigned day-to-day mine work. Further, at the time of emergency, the rescue teams had failed to counter emergency, as they were ill equipped. The Committee expressed their displeasure over this and recommended that a totally dedicated work force at the site be raised for the purpose. The Committee also desired that special perks and pre-requisite for rescue operation should be introduced. At the same time, the response time for undertaking rescue operations be further reduced from the present level of 30 minutes. The Committee also recommended that for curtailing delays in starting of rescue operations at emergency sites, periodical integrity emergency stimulation exercise be conducted at least twice a year and the reasons for delay identified and corrective action taken thereon. The Committee further recommended that the rescue equipments and accessories such as high capacity dewatering pumps, gas masks, fire extinguisher, etc., should always remain in readiness especially in underground mines and periodically checked to ensure their preparedness. The Rescue Team should be imparted extensive and rigorous training and given accommodation closer to rescue station/rescue room so that they could report at the time of emergency without loss of time.

61. In its Action Taken Reply, the Government has stated as under:-

#### **Coal India Limited (CIL)**

62. When the Committee stated that “the Rescue Team are assigned day-to-day mine work”, it appears that the Committee is referring to the Rescue Trained Persons (RTP) stationed at each underground mine, as reserves, in addition to the permanent Rescue Brigades at the Rescue Stations and Rescue Rooms. Such RTPs are permitted to perform their normal duties except when called upon to undertake Rescue work. The Committee would like to know whether there is any shortage of Rescue Team.

63. Rescue Organisation dedicated solely to undertake rescue work is always kept on alert and kept well equipped.

64. Rescue Allowance payable for each Rescue Practice has been suitably enhanced. In addition Annual rescue bonus is also paid to Rescue workers.

65. Rescue Trained persons are imparted four rigorous Rescue Practices in mines and four under simulated hot and irrespirable atmosphere in state-of-the-art Training Galleries every year.

66. Rescue Apparatus undergo rigorous periodic tests to ensure that the same are always kept in readiness.

### **Singareni Collieries Company Ltd. (SCCL)**

67. As per statute, rescue trained personnel required to be provided are 584. Over and above the requirement 20% additional rescue trained personnel have been provided among the mines of SCCL. The enhancement of perks is being done on the recommendation of JBCCI. However, in SCCL, it is proposed to enhance the existing allowances over and above the JBCCI recommendations by 35% can be in the form of risk allowance.

68. Emergency rescue vehicles fully loaded with equipment are being kept in Air-conditioned garages to reduce the response time to 10 minutes.

69. Training is being imparted in the galleries 4 time in a year. One new training gallery has been established on surface at GDK. Two more such galleries are proposed to be established one at KGM and one at BPA region at rescue stations.

70. All Rescue Stations are being equipped with rescue equipment as per statute.

71. 9 Nos. of high gallonage and low-head submersible pumps are being procured and would be installed and kept in readiness at rescue stations.

72. 30 Nos. of latest model BG4k breathing apparatus has been obtained over and above 166 Nos. of BG 174 breathing apparatus.

73. 100 Nos. of fire extinguishers are being kept in readiness at rescue stations to cater the needs of emergency.

74. As per statute, training is being imparted to all rescue trained personnel.

75. There are 6 rescue service points catering to the rescue needs of 67 mines of SCCL. Three rescue service points situated at Kothagudem,



Godavarkhani and Bhoopalpalli have been provided with accommodation to its brigade members and other essential staff within the rescue station premises.

76. At the other rescue service points, accommodation has been provided in the nearby colonies.

#### **Neyveli Lignite Corporation (NLC)**

77. The NLC is operating mechanized opencast mines. More than one route is available to all the benches for any emergency. The same are known to the employees, workmen etc. and are being monitored regularly.

78. The emergency mock drills are being conducted at required intervals and if any delay is identified, the corrective action is also taken.

79. The Committee are glad to note that the Government has accepted their recommendation and taken necessary steps by providing rescue allowance/rescue bonus, imparting rescue training, keeping the required equipments in readiness and dedicated force for rescue operations. However, the Committee note that the Ministry has not taken any measure to reduce the response time to 10 minutes from the existing 30 minutes in Coal India Ltd. The Committee firmly believe that it is the response time which is very crucial in emergency situations, particularly in underground coal mines. The Committee, therefore, desire the Government to reduce response time to 10 minutes as is being done in SCCL.

#### **J. SHORTAGE OF RESCUE EQUIPMENTS**

##### **Recommendation (Sl.No. 46, Para No.9.17)**

80. The Committee found that there was a shortage of equipment and other accessories/gadgets used for rescue operation. Further these were not of international standards. The Committee desired that shortage of these equipments and gadgets should be met and the existing equipments were upgraded/updated conforming to international standards. The Committee also desired that a promotional scheme be introduced for further upgrading the status of rescue operations.

81. In its Action Taken Reply, Ministry of Coal has stated as under:-

**Coal India Limited (CIL)**

82. Any shortage of Rescue Equipment is made upon priority basis. The company-wise status is given below:-

Company 1	Action Taken 2
ECL	There is no shortage of rescue equipment and other accessories/gadgets used for Rescue operation at Sitarampur Rescue Station. The equipment provided there are of international standards. Wherever necessary upgradation is being done.
BCCL	There is shortage of 16 nos. of Resuscitating Apparatus, 2 nos. of Universal Tester, 3 nos. of Rescue Vans, 2 nos. Ice Machines for BG-4 Self Contained Breathing Apparatus (SCBA), & 5 nos. of multi-gas detector which have been programmed to be procured.  Equipment available at Rescue Stations conform to international standards. Since there spares are not indigenously made problem exists in their procurement.
CCL	There is no shortage of equipment and other accessories/gadgets required for use in rescue operation in CCL.
WCL	Modern rescue apparatus/equipment have been provided. Sufficient budgetary provisions are earmarked for up-gradation of status of rescue services and procurement of rescue apparatus.  Further, a) Procurement of 24 nos. of resuscitating apparatus is under process. This procurement is delayed due to non-availability of DGMS approved apparatus. Budgetary allocation is made for the purpose.  b) 41 nos. of face masks in respect of Tube Apparatus are also being procured.
NEC	Making up of shortage of rescue apparatus in process.

83. The Rescue Organisation is provided with international standard equipments. State-of-the-art Self Contained Breathing Apparatus (SCBA) like BG-4 is already in use in many companies and more of such equipment are programmed to be procured. BG-174 (SCBA), which was the main SCBA, is

also of international standards. Provisions for up-gradation of Rescue Equipment is made in the Rescue Budget.

### **Singareni Collieries Company Ltd (SCCL)**

84. As per statute, required equipment are provided at rescue stations. The following equipment conforming to International standards have been provided at the rescue stations:

- BG-4 breathing apparatus
- Methanometers.
- Oxymeters
- Resuscitators
- Multi-gas Detectors
- Chemical Oxygen Self-Rescuers.

### **Neyveli Lignite Corporation (NLC)**

85. As far as NLC is concerned, there is no shortage of equipments and other accessories/gadgets used for rescue operation and it is also under the consideration for further upgrading the status of rescue operations.

86. The Committee had recommended that shortage of the equipments and gadgets should be met and the existing equipments be upgraded/updated conforming to the international standards. The Ministry has stated that equipments conforming to international standards have been provided at the rescue stations. However, the Committee are pained to note that Bharat Coking Coal Ltd. (BCCL), Western Coalfields Ltd. (WCL) and North Eastern Coalfields Ltd. (NECL) are still facing shortage of rescue equipments. The Committee express their concern over this state of affair jeopardizing the lives of the trapped workmen as in the absence of rescue equipments, the rescue teams are greatly handicapped. The Committee would like to reiterate that shortages of rescue related equipments and gadgets of international standards in the coal mines, namely BCCL, WCL and NECL should be met urgently.

K. VISITS OF COAL MINES BY THE OFFICERS OF MINISTRY OF COAL

**Recommendation (Sl.No.60, Para No.11.33)**

87. It had been brought to the notice of the Committee that senior officials from Ministry of Coal, Chairman and Managing Directors of coal subsidiaries seldom visit coal mines especially underground, as a result, they were not aware of the ground realities in coal mines. The Committee recommended that senior officials of the rank of Joint Secretary and above in the Ministry of Coal should undertake surprise visit of underground mines at least once in a month and thereby keep themselves abreast with the latest mining status in the mine. Similarly, all CMDs should also conduct surprise visit of underground mines on safety periodically.

88. The Ministry of Coal, in their Action Taken Reply, stated Coal India Limited CMDs and Singareni Collieries Company Ltd. are making visits in underground mines. However the recommendation of the Committee has been circulated for needful action.

89. As far as Neyveli Lignite Corporation (NLC) is concerned, the Senior Officials including the CMD are conducting surprise visit of the Mines periodically.

90. The Committee were further informed that Senior Officers of the Ministry of Coal do visit mines as and when required.

91. **The Committee had noticed that since the senior officers of the Ministry of Coal and Chairman and Managing Directors of Coal companies seldom visit the coal mines, they were not aware of ground realities. It is in this context, the Committee had recommended that senior officers of the rank of Joint Secretary and above of the Ministry of Coal and CMDs of coal companies should undertake surprise visits of underground mines, at least once in a month and thereby keep themselves abreast with the latest mining status in the mine. The Committee note with concern that periodicity of visits by senior officer of Ministry of Coal and CMDs of coal companies for overseeing the safety measures are not properly being maintained. The Committee further note that the senior officers of the**

Ministry visit mines as and when required and there is no periodicity of visits by CMDs in Coal India Ltd. though in SCCL and NLC surprise visits are made periodically. The Committee deprecate their attitude of officials of the Ministry and coal companies in the performance of their duties to bring about safety environment in coal mines. The Committee, therefore, desire that officers of Ministry and CMDs of coal companies should not only make surprise visits as and when required but to ensure that a time schedule is drawn up for such visits.

L. VISIT OF DGMS TO VOCATIONAL TRAINING CENTRES

**Recommendation (Sl.No.63, Para No.12.20)**

92. There was also a need to develop clear-cut curriculum for different trainings being imparted at VTCs so that the level of training could be raised. At the end of training some type of examination could be held so that miners took it seriously. Those who pass the examination could be given increments, etc., as an encouragement. The Committee also found that VTCs are not being inspected by DGMS due to shortage of staff. The Committee did not approve this and recommend that DGMS should inspect VTCs once in a year without fail.

93. In its Action Taken Reply, the Ministry of Coal has stated that in Coal India Limited (CIL), there is a clear-cut curriculum for the different trainings imparted at VTCs under the Vocational Training Rules. Also, a clear cut detailed curriculum was prepared by the DGMS as Training Modules and circulated and includes 5 modules for (1) Surface, (2) UG Workers, (3) OC workers, (4) Specific categories of OC workers/Supervisors, (5) Specific categories of UG workers/supervisors.

94. There is a provision for feed back and test for which 1-2 days have been specially allocated in the Training Modules.

95. In Singareni Collieries Company Ltd (SCCL), DGMS staff visits MVTCs occasionally.

96. Gas Testing Examination, Mining Sirdar Examinations are being held at Training Centres. These examinations are conducted by DGMS, during the time they are overseeing MVTC activities such examinations are being taken minimum 4 times in a year at each MVTC.

97. Neyveli Lignite Corporation (NLC), as far as NLC is concerned, DGMS is visiting the Group Vocational Training Centres at regular intervals at least once in a year.

98. However, the recommendation of the Committee has been circulated to DGMS for necessary action.

99. The Committee had found that the Vocational Training Centres (VTCs) were not being inspected by the Directorate General of Mines Safety (DGMS) staff due to shortage of manpower. The Committee had, therefore, recommended that DGMS should inspect VTCs once in a year without fail. The Committee note that there is no proper schedule of visits by DGMS to Vocational Training Centres in coal companies. While such visits in SCCL are occasional, it is once in a year, in NLC. The reply of the Government is silent on such visits to VTCs in Coal India Ltd. The Committee feel that when such visits can be arranged in one company, why it cannot be done in others. The Committee, therefore, strongly recommend that DGMS staff should inspect the VTCs in CIL, SCCL and NLC atleast once a year to ascertain whether the VTCs are being run as per the Mines Vocational Training Rules, 1966 and are not lacking any infrastructural facilities. The Committee desire that the manpower of DGMS should be suitably increased to accomplish the above job.

**CHAPTER – II**  
**RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN**  
**ACCEPTED BY THE GOVERNMENT**

**Recommendation (Sl.No.1, Para No.2.20)**

The Committee note that the principal responsibility for the safety of coal mine workers and all those who are directly engaged in the mining rests entirely with the management of that mine. The Committee have noted that safety system in coal mines is regularly monitored through intensive and quality inspection by DGMS, Internal Safety Organization (ISO) of Coal India and its subsidiaries and line management of coal companies. ISO not only undertakes inspection for monitoring safety status of the mines but also recommends precautionary measures to be taken to avoid dangers to the line management. Apart from these, there are also safety forum both statutory and non-statutory to monitor safety in coal mines. The Committee is unhappy to note that in spite of having a large contingent of managers and other supporting staff in each subsidiary of Coal India Ltd., no positive changes in the safety scenario are visible. The Committee note that one of the functions of the management is to ensure that mining is undertaken as per safety norms and compliance of various provisions of the Mines Act, 1952 Rules, Regulations and Orders made thereunder. The Committee have also been apprised that while conducting inspection of coal mines, the major deficiencies found by DGMS are; non-maintenance of systematic support rules, non-provision of dust suppression and coal dust treatment arrangement, non-provisions of adequate ventilation arrangement, non-maintenance of Heavy Earth Moving Machine (HEMM) in opencast mines, high benches in opencast mines and not adhering to prescribed method of work. The Committee have taken note of the deficiencies pointed out by DGMS and are not satisfied with the status of compliance of the statutes by the management. So much so that even mine plans are not being maintained, as per the Statutes. The Committee is equally concerned to note that adequate provision does not exist for ventilation and dust suppression. The deficiencies observed by DGMS clearly shows callousness on the part of the coal management in not adhering to the prescribed Rules and Regulations framed under various statutes. The Committee, therefore, recommend that Government should overhaul the safety environment in coal mines. A Study Group/Committee can also be constituted for the purpose, if nee be.

**Reply of the Government**

**Coal India Limited (CIL)**

Action Taken: During the course of inspection by DGMS, deficiencies/violations are pointed out by them. Immediate action is initiated by the mine management to rectify the deficiencies and remove the violations. Mine

plans are maintained as per CMR, 1957. DGMS officials in the course of their inspections check and examine mine plans. Deficiencies if any in this regard are rectified.

The table below gives the safety statistics of CIL at 10 years intervals. Fatalities due to accidents have come down from 233 in 1975 to 60 in 2003. Similarly, serious injuries have reduced from 1515 in 1975 to 353 in 2003. This shows that there is a marked improved in the standards of safety in Coal India Limited.

Year	Fatal Accidents		Serious Accidents		Fatality Rate		Serious Injury Rate	
	Accidents	Fatalities	Accidents	Serious Injuries	Per million tonnes	Per lakh manshifts	Per million tonnes	Per lakh manshifts
1975	177	233	1456	1515	2.62	0.52	17.03	3.41
1985	136	152	507	524	1.15	0.31	3.97	1.07
1995	107	115	575	612	0.50	0.27	2.65	1.14
2000	80	100	510	540	0.37	0.25	1.99	1.36
2003	56	60	338	353	0.20	0.17	1.18	1.00

Note: Figures for 2003 are subject to reconciliation with DGMS.

### **Singareni Collieries Company Ltd. (SCCL)**

Statutory records are being maintained at all the mines. During inspections by the Officers of DGMS, Safety Officers and area Safety Officers accompany them. However, ISO follows up identified shortcomings for their rectification. All plans are being maintained as per Regulation No.58 to 65. Recently copies of mine plans pertaining to all mines of SCCL have been submitted to DGMS for their scrutiny and examination. All systematic support rules are being submitted to Ministry of Mines for their approval. After getting approval they have been followed scrupulously. Dust suppression works are being taken up and controlled by providing water spraying arrangements at loading and unloading points at CSPs. Loaded lorries are being covered with Tarpaulin cloth to reduce the dust suppression and Personal Dust Samplers are being provided to all the departments to measure dust concentration and necessary arrangements will be done to bring down the dust concentration below to 3 mg/m<sup>3</sup>. All opencast mines are provided with water tankers. The above are being reviewed during National Dust Prevention Committee Meetings which take place once in 6 months at CIL. Ventilation cells have been constituted at SCCL one at corporate office with GM (R&D) and 3 at each region to take up and monitor and attend ventilation requirements at mines. This is one of the points taken up and reviewed at Bi-partite and Tripartite Meeting that is being held once in 6 months. Due care is being paid in maintenance of all Heavy Earth Moving Machines as per manuals supplied by manufacturers. Major equipment repairs have been taken up by taking help of Manufacturers. The issue is being reviewed



once in a month during Regional Safety Meetings (Bi-partite) in which Union Representatives are participating. Dimensions of all the benches are as per the approved standards laid down by Directorate of Mines Safety. This is also being reviewed once in a month at Regional Safety Meeting. Due care is being taken as approved conditions laid down by DGMS both in opencast and underground mines. Number of awareness programmes as well as inspection programmes have been taken up by Internal Safety Organization to inculcate awareness to adhere to the prescribed methods of work. The issue is also being taken up in the Regional Safety Meetings held once in a month.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned the following items are maintained/adhered properly:

- (a) Maintenance of Statutory Records.
- (b) Maintenance of Mine plans.
- (c) Adherence to approved method of working for various opencast Mining Operations.
- (d) Provision for dust suppression.

### **Ministry of Coal**

MoC is reviewing safety in coal mines periodically.

[Ministry of Coal O.M.NO.54012/1/04/-CRC Dated 12-1-2005]

### **Recommendation (Sl.No. 3, Para No.2.22)**

The Committee also suggest that the role of ISO, Safety Committees and Workmen's Inspector should be activated and modern management practices like safety management plan for occupational safety and health should be prepared with the risk assessment study and implemented.

### **Reply of the government**

### **Coal India Limited (CIL)**

Safety matters receive utmost importance in subsidiary companies of Coal India Ltd. with active participation of ISO. Pit safety committee members and workers' Inspectors play an important role in safety matters at Mine level. Modern practices like Risk Assessment and preparation of safety management plan is being introduced in all companies. The company-wise status is given below:

Company	Status
ECL	Risk Assessment has been done in two mines with the help of Australian experts. In another two mines this has been done with the help of DGMS officials. Risk assessment has been done in Kumardih-A.
BCCL	Risk Assessment has been done in ten mines.
CCL	Three Workshops for Risk Assessment have been organized for training people to conduct risk assessment at two areas and CCL Hq. Ranchi. Risk assessment has been done in one colliery.
NCL	Risk Assessment of 3 mines has been done.
WCL	Risk Assessment has been done in three mines.
MCL	Workshops on Risk Assessment have been conducted. Risk Assessment has been done and Safety Management Plans have been prepared in one mine in Talcher Area, all underground mines of Orient Area, and four Opencast Mines.
NEC	Risk assessment has been done in 4 mines.

### **Singareni Collieries Company Ltd. (SCCL)**

- i) All Safety Committee Members and Workmen Inspectors are being imparted required training to inculcate awareness among them and promote active participation in the safety activities.
- ii) Safety Committee Meetings are being conducted regularly on monthly basis at all the mines. Copies of minutes are being circulated among the participants and being submitted to Director of Mines Safety.
- iii) ISO is monitoring status of implementation of the minutes regularly.
- iv) Copies of the Minutes are being sent to DGMS.
- v) Counselling of the workmen is taken up through the Members of Mines Safety Committee.
- vi) Workmen Inspectors are participating in the above meetings.

- vii) Workmen Inspectors accompany the officers from Ministry of Mines during their visits.
- viii) Services of Workmen Inspectors are utilized during accident inquiries.

Risk Management plans have been prepared at 16 mines and they are under implementation. At all these mines, the activities which are to be attended immediately and which need ongoing management have been clearly identified.

At the remaining mines also, Risk Management Strategy will be implemented.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned the role of ISO, Safety Committees and Workmen's Inspectors are activated and modern management practices like Safety Management Plan for Occupational Safety and Health are prepared with the Risk Assessment Study and implemented.

[Ministry of Coal O.M.No. 54012/1/04-CRC      Dated : 12-1-2005]

### **Recommendation (Sl.No. 6, Para No.2.25)**

The Committee note that supervisory staff, surveyors, overman, mining Sirdars, etc., play very vital role in ensuring safety at the mine level and advises the management on all these aspects. The Committee are perturbed to note that on the one hand, there is an acute shortage of these staff in some of the coal subsidiaries, who are crucial for enforcing safety in coal mines and on the other hand, there are surpluses. The Committee, therefore, recommend that pending the creating of a separate Directorate, need based adequate safety staff be provided and shortages be met either by conducting open examinations or through inter-company and intra-company transfers etc.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

In the coal subsidiaries in every area , Vocational Training Centres are functioning and training is provided to the employees for appearing in the statutory examinations conducted by the DGMS for acquiring Overman, Mining Sirdars and Shot Firers Certificate of Competency. On acquiring the Certificate of Competency to work as Overman, Mining Sirdar & Shot Firer the employee is promoted/placed to work in the said statutory post subject to the vacancy/requirement and other official formalities.

In the last two years 30 inter-subsidary transfers of statutory personnel have been done out of which 8 are Overman and 22 are Mining Sirdars. The transfer of statutory surplus category employees to the subsidiaries where there is shortage is an ongoing process and every effort is being made for rationalization of manpower.

At present the employees who have acquired the Competency certificate to work as Overman, Mining Sirdars & Shot Firer are being promoted to the vacant posts of statutory personnel by the subsidiaries. After the process of placing the departmental candidates in the vacant posts the shortage/requirement will be assessed and the process of outside recruitment will be initiated if required.

### **Singareni Collieries Company Limited (SCCL )**

Filling up of the vacancies is a regular exercise. During the year 2003-04, the following vacancies were filled.

Under Managers	-36
Assistant Managers	-34
Surveyors	-12
Mining Sirdars	-49
Overman	-98

### **Neyveli Lignite Corporation (NLC )**

As far as NLC is concerned, there is no shortage of Supervisory staff and surveyors. However, NLC being a highly mechanized Mine deploying BWE(Bucket Wheel Excavator), Conveyors, Tripper and Spreader for regular production and is being the only such Mine in the Country, a need was felt to have trained Engineers in the safe operation and maintenance of these Equipments. Hence experienced Junior level Mechanical Engineers/Asstt. Engineers have been posted in place of Mining Sardars, to overcome the shortfall in this category, as utility of Mining Sardar, Overman etc. is limited for such mechanized mines operation as that of NLC.

[Ministry of Coal O.M.No. 54012/1/04-CRC      Dated: 12-1-2005]

### **Recommendation (Sl.No. 7, Para No.3.28)**

Roof and side fall accidents still continue to be major cause of fatality in underground coal mines in spite of introduction of steel supports in such workings. The Committee note that roof/side falls accounts for 35% of all the fatal accidents in underground coal mines of CIL. In SCCL, the rate of fatalities due to roof and side falls is alarming. During the last five years from 1998 to 2002, about 51% fatalities in SCCL occurred due to roof and side falls. The Committee feel that deficiencies in most of the accidents were avoidable. The Committee note that various circulars have been issued by DGMS to prevent roof/side fall from time to time. However, they are not being complied with all the seriousness, which they deserve. The Committee, therefore, strongly recommend that management of the coal companies should ensure that the guidelines issued by DGMS in this regard are followed in letter and spirit

### **Reply of the Government**

#### **Coal India Limited ( CIL)**

These recommendations of the Committee have been circulated to all subsidiary companies to ensure compliance.

#### **Singareni Collieries Company Limited (SCCL )**

All the guidelines issued by DGMS are being followed scrupulously to bring down the number of roof fall and side fall accidents. ISO are also undertaking surprise inspections on the implementation part. Copies of the Circulars issued by DGMS/Company are being issued to the Workmen Representatives or Union Representatives. The issues are being discussed in Regional Safety Review Meetings once in a month.

#### **Neyveli Lignite Corporation (NLC )**

This recommendation is not applicable to NLC.

[Ministry of Coal O.M.No. 54012/1/04-CRC      Dated : 12-1-2005]

### **Recommendation (Sl.No. 8, Para No.3.29)**

It has been brought to the notice of the Committee that roof bolting, roof stitching, triangular/square chocks, high set and steel props, are not made available and where available, are not of desired standards. Jacks of high set props run out of order frequently. The Committee desire that these should be enquired into and appropriate corrective action taken in the matter.

## Reply of the Government

### Coal India Limited (CIL)

Company-wise action taken is given below:

Company	Action Taken Status
1	2

ECL There is no deficiency in supply/quality of support material. In the budget of 2004-05 this has been taken care of.

BCCL Although efforts were made to provide adequate materials there were some occasions in the past when shortage of stock of torr steel for roof bolts or MS plates for Bearing Plates or Sq. Hollow Tubes for making Steel Chocks were faced due to liquidity cash crunch. The situation has been set right by providing enough funds in the safety budget and the material budget for above items. Improvement in quality of materials supplied has also been brought about by thorough inspection of items before use at the stores.

CCL Sufficient roof support material such as roof bolts, rope dowels for roof stitching, steel chocks, pit props, W-straps are made available.

WCL Steel supports like roof bolting, roof stitching, triangular/square chocks, high set and steel props are used in all mines of WCL, except for Rajur Incline where the low seam thickness does not permit roof/bolting stitching. Sufficient good quality support material is provided.

SECL In SECL, roof bolting roof stitching triangular/square chocks, High Set Props are made available in all mines. High set Props are in use in Churcha mine and Shield Supports are in use in Longwall Faces at Kumda 7&8 Inclines, Balarpur UG and Rajendra UG. Resin bolts are being used in Anjan Hill Mine, Pawan Incline and Rajgamar

MCL Steel support materials as per SSR are being supplied.

NEC There is no deficiency of support materials. Good quality of support materials is ensured.

### Singareni Collieries Company Limited (SCCL )

Adequate number of roof supporting materials like roof bolts, steel props are being supplied to the mines.

2002 - 9 lakhs roof bolts have been supplied.

2003 - 19 lakhs roof bolts are being supplied.

### **Neyveli Lignite Corporation Corporation (NLC)**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 9, Para No.3.30)**

The Committee further observe that vibration produced due to blasting disturbs the existing geo-mining conditions. The freshly exposed roof/green roof is most prone to the fall of roof/side. Handling of explosives/blasting is done in underground mine as per the provision of the regulation as laid down in Coal Mines Regulations, 1957 and Indian Explosive Act/Rules. As such every care should be taken to ensure that these are duly followed with all seriousness. The Supervisory staff should be made accountable for every lapse in following DGMS guidelines. Serious action may be taken against such officials for repetitions.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

DGMS guidelines regarding use of explosives are strictly followed. Action is taken against supervisory staff held accountable for any lapse in following DGMS guidelines in this regard.

#### **Singareni Collieries Company Limited (SCCL )**

SCCL has totally switched over to roof bolting activities for supporting freshly exposed roof, as approved by DGMS.

Blasting is carried out as per CMR, 169. Transit slips are being supplied and used for better management of explosives.

Corporate level Safety Committee has been constituted consisting of Director (Personnel, Administrative & Welfare), Director (P&P), Director(Operations), Chief GM(Safety) and GM (Personnel) to review and recommend action against executives and supervisors. The Committee meets once in six months to follow the uniform procedure.

## **Neyveli Lignite Corporation (NLC)**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No. 10, Para No.3.31)**

The Committee are glad to know that induced blasting is in vogue in some mines of CIL. Adequate precautions are being taken including suspension of work till falling of stone parting, where induced blasting method is being practiced to regularize the fall overlying hard strata in case of depillaring with caving.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

No action is required.

#### **Singareni Collieries Company Limited (SCCL )**

Code of practice is being established and followed at each mine. The Code of Practice is submitted to DGMS for its approval and same is being followed systematically at all caving, depillaring operations to bring down the hanging roof.

Induced blasting strategy is being followed scrupulously at all the mines.

#### **Neyveli Lignite Corporation (NLC )**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 11, Para No. 3.32)**

The Committee observe that the mixture of some inflammable gases, mainly methane, along with some other hydrocarbons can explode with disastrous consequences and result in loss of lives and considerable damage to the mine. Mine coal dust has also been responsible for explosion in the coal mines. The coal dust clouds have also been responsible for low visibility in the coal mines. The Committee, therefore, recommend that to flush out the gases from the underground coal mines, sufficient ventilation facilities with high capacity



exhaust fans should be provided in each and every mine. To monitor the presence and nature of the gases in the mines, multi gas detectors and also computerized gas/environment monitoring system should be established especially in highly gassy mines.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Adequate ventilation facilities by mechanical ventilators of adequate capacity are provided in all underground mines. Gas detectors are provided to supervisors for detecting the presence of and monitoring percentages of noxious/inflammable gases. Computerized Environmental Tele-monitoring systems have been provided in 14 highly gassy/fiery mines and more such systems will be installed in future.

#### **Singareni Collieries Company Limited (SCCL )**

All mines have been provided with adequate capacity of main mechanical ventilators and auxiliary fans. This is reviewed once in a month in the regional Safety Review Meeting. This issue is also being reviewed in the Bi-partite Meeting being conducted once in 6 months.

There are no Degree-III gassy mines in SCCL. However, continuous monitoring instruments have been installed in blasting gallery panel and long wall working.

#### **Neyveli Lignite Corporation (NLC )**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M. 54012/1/04-CRC Dated : 12-1-2005]

#### **Recommendation (Sl.No. 12, Para 3.32)**

The Committee further observe that the highly gassy mines are identified through a statistical exercise based on the accident statistics for the previous five years of each and every mine. The Committee feel that identification, merely based on the statistics, is a very primitive method to identify such mines. There is a need to develop some machines/equipments for continuous monitoring of degree-III gassy mines and those having active underground fire in a phased manner. At the same time, the Committee recommend that necessary facilities for monitoring the environmental parameters in respect of Methane and Carbon Monoxide should be provided at mines. The Committee note that to make the underground environment more eco-friendly, CIL has taken up a programme to

drain out methane (CH<sub>4</sub>) from a few working mines under the programme called CMM (Coal Mine Methane) and CBM (Coal Bed Methane). The Committee recommend that coal bed methane should be extracted and commercialized in collaboration with Gas Authority of India Limited (GAIL) and other experts/group/firms. Sufficient funds may also be provided for this purpose.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Highly gassy mines are not identified through statistical exercise based on the accident statistics for the previous five years of each and every mine. Probably the Committee is referring to Accident Prone Mines, which are thus identified.

Necessary facilities for monitoring presence /percentage of methane and carbon monoxide are provided in all underground mines as a routine matter.

Equipment for continuous monitoring of certain environmental parameters like percentage of inflammable gases/methane, noxious gases, oxygen, humidity, temperature etc. already exist. Such systems have already been installed in 14 identified mines and installation of more such systems are planned.

Coal India Limited (CIL) has already entered into the business of exploration and extraction of Coal Bed Methane. CIL has joined a consortium with ONGC to work two CBM blocks in Jharia and Raniganj Coalfields. CIL has also taken up a demonstrative project for extraction and use of CBM in Sudamdih and Moonidih mines under UNDP and GEF (Global Environmental Fund) funding.

Coal India has big coal resources in its command and it is worthwhile to explore the possibility of extraction of methane from the workings as well abandoned mines in the subsidiaries. A concept paper on the subject has been prepared for the purpose dwelling upon a policy on Coal Mine Methane (CMM) and Abandoned Mine Methane (AMM). Coal India Limited is in the process of signing a potential 'Business Areas' of co-operation with GAIL, which include the areas of jointly exploring and developing Coal Bed Methane.

#### **Singareni Collieries Company Limited (SCCL)**

There are no degree-III gassy mines in SCCL. However continuous monitoring equipment are installed among mechanised mines in Singareni Collieries Company Limited (SCCL). Methane drainage is not taken up because SCCL mines are Degree-I gassy mines and there are only two Degree-II gassy mines in SCCL.

## **Neyveli Lignite Corporation (NLC)**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No. 13, Para No. 3.34)**

The Committee note that the coal companies at times, do not pay attention to the protection of the environment, as it deserves. It has been brought to the notice of the Committee that many of the opencast mines/left the land degraded after completion of the mining operations. Also Trucks/Dumpers loaded with coal pass through residential areas causing dusty conditions. In this context, the Committee desire that filling up of opencast excavation and reclamation of the degraded land should be made mandatory under the law. The Trucks/Dumpers after loading coal should be suitably covered so as to avoid dust being raised in the environment. At the same time, the Committee desire that adequate arrangements and infrastructural facilities be made available to carry out dust surveys in the mines and corrective action taken thereon.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

During mining operation itself, all non-active external OB dumps are reclaimed and plantation is done extensively with different variety of sapling including medicinal plants. Voids are back filled with overburden simultaneously as the mines progresses. After the mines is exhausted some unavoidable void is left out which is converted into water reservoir which becomes source of water for domestic use and fisheries for the habitat who continue to live after the mine is closed. All the reclaimed land (filled with OB/ top soil) is covered with plantation. Recently few of the reclaimed sites are being used for growing paddy/vegetable crops/medicinal plants by the Project Affected People (PAP). The provision for reclamation/restoration of the land degraded due to mining is mandatory and covered under the Environmental Management Plan (EMP), which has been approved by MOEF before a project is cleared for implementation.

Regarding covering of the trucks, it is to be mentioned that covering of coal loaded trucks is being practiced in some of the subsidiaries like WCL, NCL, MCL and is under process of implementation in the other subsidiaries.

As regards emission of dust due to mining activities is concerned, several measures such as, (i) Fixed Sprinklers along the haul roads, (ii) Mobile sprinklers, (iii) Cleaning of roads by graders as well as manually, are taken so

that dust emission is kept within allowable limits set by SPCB/CPCB. Regular monitoring of dust emission is undertaken by independent approved agencies as per Air Pollution Acts/Rules.

Infrastructural facilities have been provided for carrying out dust surveys in mines and corrective action is taken wherever necessary.

### **Singareni Collieries Company Limited (SCCL)**

Re-filling arrangement of the opencast mines and land re-claiming of the degraded land is being taken up as per approved project reports and approved environmental management plans. At the opencast mines of SCCL, during the last two years back-filling has been done in 79.30 hectares of land and 1,82,233 saplings have been planted. Loaded trucks/dumpers are being covered and position reviewed at National Dust Prevention Committee (NDPC) Meetings which are held once in months at CIL, headquarters, Kolkata. Reports of dust-surveys to take up corrective action are submitted to NDPC for review and recommended measures by the National Dust Prevention Committee are being attended.

### **Neyveli Lignite Corporation (NLC)**

At NLC, after the Lignite exploitation, the excavated area is back filled with overburden soil. The area thus back filled is levelled and reclaimed by adopting latest techniques like Biological Reclamation, Soil Enrichment etc., based on the R&D study carried out by the Centre for Applied Research & Development, NLC.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Comments of the Committee**

(Please see Para 19 of Chapter I of the Report)

### **Recommendation (Sl.No. 14, Para No. 3.35)**

The Committee observe that one of the major hazards associated with the coal mining is inundation from underground water bodies and/or from surface water. Most of the mines are old. They are filled with water due to which it is dangerous to work in the underground seams or adjacent mines. Moreover, mines are provided old maps, which are not reliable. The Committee are of the view that to avoid accidents due to inundation whether major or minor, proper planning of the mines is the best solution. The Committee, therefore, desire that updated mine plans should be prepared and maintained and mining should be carried out strictly as per plan. Correlation of survey, periodical check survey, boring/drilling to connect with exact location, etc. should be carried out frequently. It has been brought to the notice of the Committee that if holes are

made at regular intervals for providing partition, then the extent of water can be known. The water can then be removed before faster working. The Committee feel that in order to minimize the accidents on accounts of inundation, latest geo-physical methods of proving barriers/partings developed and tested by CMRI, Dhanbad and NIRM, KGF should be made use of in the coal mine areas susceptible for inundations.

### Reply of the Government:

#### **Coal India Limited (CIL)**

The company-wise action taken is given below:

ECL: Updated mine plans are prepared and maintained and mining is carried out as per plan.

BCCL: Mine plans are prepared and updated at all mines. Correlation survey done in 64 pits of 38 mines by external agencies (CMPDIL) by modern instruments. Check Survey has been done in 65 out of 68 mines. In balance 3 mines work is in progress. Check survey has also been done by outside agency in five mines.

CCL: Mine plans are prepared and updated in accordance with statutory provision. Check Survey of all eleven mines, identified as having potential for inrush of water, has been done by team of Surveyors from other mines of the same Area. Also Check survey by outside agency (CMPDIL) is proposed in two mines for additional check.

NCL: Updation of mine plans are being done at regular intervals with the help of SURPAC system.

WCL: Mine plans are prepared, maintained and updated regularly. Periodic check survey by inter Sub-area teams are also done to ensure the correctness of plans. Further check survey by external agencies like MECL was done in Silwara mine mine. Such check survey is in process of being done in Sasti UG and NMC-3.

SECL: Mine plans are properly maintained and updated. Check survey is completed in all the mines and working are connected to the National Grid.

MCL: Check co-relation Survey & Joint Survey are conducted and mine plans are updated to make them more reliable. Mines are worked as per designs provided by the planners and approved by competent authority. Boring/Drilling operations are being started by Burnside Boring Apparatus.

Assessment of extent of water bodies and dewatering to minimize hazards from inundation are being done in consultation with CMRI, Dhanbad.

### **Singareni Collieries Company Limited (SCCL)**

Mine plans are being updated as per regulation No. CMR 58 to 65. Survey Department is taking all required survey work at the mines. Check survey work is in progress. All mine plans (169), which are updated, were submitted to the DGMS. Chief Survey Officer has scrutinised all mine plans keeping danger of inundation in view and CGM (Safety) also taken up similar work after disaster at GDK.7 LEP on 16.6.2003.

Area Survey Officer has been posted under each General Manager of Area to take up the work of co-relation survey as well as check survey. As on today 13 check survey teams have been constituted to take up; check survey among the mines. The work is in progress and being reviewed by Chief Survey Officer as well as GM (Safety) Drilling of Bore holes at regular intervals to prove the partition and to know the extent of water is being done as per approved conditions. SCCL is having 14 underground boring machines.

As regards utilization of Geo-physical methods for proving barrier/partitions, developed and tested by CMRI/NIRM at the coal mines susceptible for inundation, one project has already been taken up with the help of NIRM on experimental basis at GK OCP to prove this partition to avoid falling of men and machines while working over developed pillars. Help of CMRI also taken to prove the partition at underground mines.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the updated Mine Plans are prepared and maintained and the mining is carried out strictly as per the Plan. Moreover the Correlation of Survey, periodical Check Survey boring/drilling to connect with exact location etc., are carried out frequently. NLC does not have any potential source of danger in and around the Mines and it is under continuous operation round the clock throughout the year. Hence rescue/recovery operation could be started immediately without loss of time. However a well laid Pre-Monsoon Action Plan in detail has been prepared every year for every Mine to take care of any emergent situation that may arise due to heavy rains owing to monsoon. No accident has occurred so far in NLC Mines due to inundation.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 15, Para No. 3.36)**

The Committee note that mine fires were a serious and widespread problem and result in loss of coal reserves and add to the cost of production. It is

estimated that in Jharia Coalfields alone, about 1864 million tonnes of coal might have been blocked and about 37 million tonnes of coal might have been damaged due to these fires. The measures for controlling coal mine fires, in case of Jharia coalfields include bull dozing, levelling and covering with soil to prevent the entry of oxygen and to stabilize the land for vegetation. Efforts made so far in this regard could only prevent the spreading of fires but their complete extinction in most of the cases was not possible. The Committee are of the view that the problem of fire and subsidence control especially in Raniganj and Jharia coalfields should be treated a "National Problem" and adequate funds be allocated by the Government to tackle this problem.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Steps have been taken to generate an amount of Rs.395 crore per year for implementation of the action plan for shifting and rehabilitation, dealing with fire and stabilization of unstable area in ECL & BCCL. For this a separate head account would be maintained and CIL will ensure that this amount is used strictly for implementation of the action plan.

#### **Singareni Collieries Company Limited (SCCL)**

Audit check of the mines has been taken up by a Committee headed by Director (Operations). Filling arrangements were taken up over the subsidence areas and things are monitored by CGM (Safety) regularly. Reports are being submitted to CMDs.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, separate Fire Stations are available inside the Mines with sufficient number of required type of Fire Tenders with crews to quench the fire immediately without any loss of time after the fire cell is received through well Established Network Communication System. Action is also being taken then and there to procure the latest Technology for Fire fighting equipments and adopt latest trends available. In this regard adequate funds are allotted by NLC for the fire related activities.

#### **Ministry of Coal**

The problem of fire and subsidence control in Jharia & Raniganj coalfields is receiving maximum attention of the Government at the highest level i.e. at the Cabinet Secretary level. A monitoring Committee under the Chairmanship of Secretary (Coal) with representatives from the State Governments, CIL, BCCL, ECL and related Ministries/Departments of the Central Government has been constituted and is reviewing the progress of work periodically.

[Ministry of Coal' O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Comments of the Committee**

(Please see Para 25 of Chapter I of the Report)

### **Recommendation (Sl.No. 18, Para No. 3.39)**

The Committee note that like any industry, the use of machines cause many accidents in mines. In opencast mining, accidents associated with Heavy Earth Moving Machines (HEMM) and trucks, are on the rise. The Committee feel that accidents on accounts of vehicular traffic of men and machines are purely due to gross negligence. The Committee desire that coal companies should take preventive measures such as separate lane properly fenced off from haul roads for pedestrians and vehicular traffic, banning of plying of trucks and other heavy vehicles in the mine premises without valid passes issued by competent authority, checking of road worthiness of vehicles, observance of traffic rules and regulations meticulously. The Committee find that in underground mines incidents of men being trapped in fly wheels and by moving parts on Cornish pumps are common. As inclines and underground haulages are developed, men are runover, crushed and entangled. The Committee find that the major earth moving machines and transport equipments though meet the requisite standards, at the time of their procurement/installation but degrade due to lack of proper maintenance, during their use. The Committee, therefore, recommend that Heavy Earth Moving Machines (HEMM) should be used only when they are in perfect working condition. Only trained persons should be allowed to operate such machines.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Separate lanes for pedestrian and light vehicles have been provided in some mines. However, this is difficult to comply with in small patch Open Cast Mines as in case of ECL/BCCL, where most of the OCMs(Opencast mines) are small patches. Plying of unauthorized vehicles in the mine premises without permission is banned. Operators of vehicles are constantly being reminded to observe Traffic Rules by slogans displayed along the routes taken by them as well as in safety campaigns, training, slogans, discussions in Safety Committee etc. Road-worthiness of vehicles is checked by competent persons before being put into operation. Vehicles are operated by trained operators. However, the above recommendations of the Committee have also been circulated to all companies for strict compliance.



## **Singareni Collieries Company Limited (SCCL)**

Separate lanes have been provided at all open cast mines. The matter is being reviewed periodically during Tripartite meetings. Percentage of satisfaction is 100.

Valid passes are being given for the deployment of trucks, only those vehicles are permitted to enter into mine premises which have valid permit.

Checking of the vehicles for road-worthiness is being taken up once in a month. The company vehicles are tested at Base Workshops and the contractors' vehicles are being examined by authorized engineers at the mines. Proper record is maintained in a bound paged book.

Code of Practice of Traffic Rules has been established after being duly approved by DGMS. Copy of the approved Traffic Rules has been given to all concerned including Contractor Workmen for strict compliance.

Maintenance of HEMM is being taken up as per the guidelines/manuals supplied by the Manufacturers.

All the Operators have been given basic training at Technical Training Centre, Manuguru. Only after giving such training, operators are allowed to operate Heavy Earth Moving Machinery (HEMM). Refresher Training is given once in 5 years.

## **Neyveli Lignite Corporation (NLC)**

In NLC, the following preventive measures are taken:

1. Separate lane properly fenced-off from haul road for pedestrians and vehicular traffic.
2. Banning of plying of trucks and other heavy vehicles in the Mines premises without valid passes issued by competent authority.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 19, Para No. 3.40)**

The Committee, further note that a potential hazard also exists on roof bolting machines with machine controls that are not protected against unintentional activation. The Committee recommend that to prevent accidents due to roof bolting machines, the Automated Temporary Roof Support (ATRS) and other machine controls should be protected from accidental activation that

may result in the machine or machine component coming in contact with the operator.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Drilling for roof bolting is done by conventional drilling machines in most mines. However, roof-bolting machines have been introduced in some companies like WCL and SECL and more such machines will be introduced.

#### **Singareni Collieries Company Limited (SCCL)**

Code of practice has been established while using roof bolting machines and the same is being followed scrupulously for their maintenance and operational activity.

#### **Neyveli Lignite Corporation**

This recommendation is not applicable to Neyveli Lignite Corporation (NLC).

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No. 20, Para No. 4.12)**

The Committee have observed that there exists an elaborate system for preparation and updating of mine maps and plans. Detailed directions have been given in this regard in the Coal Mines Regulations, 1957. Besides, DGMS issued circulars from time to time for preparing and updating the mine maps for working under some specific conditions. The Committee have been apprised that modern surveying instruments are being introduced for acquiring survey data and for preparing Mine Models with the help of information technology. Further, Mines Act, 1952 empowers the DGMS to examine and take possession of any plan, section, register, other records etc. If the DGMS or Chief Inspector of Mines or inspector feels that the plan/map is inaccurate, he is empowered to get the plan or section prepared correctly by any other agency. The Committee are perturbed to note that despite all these initiatives, the ground reality has not changed. At times, the maps and plans are prepared using unscientific and unreliable old methods. Moreover, where such maps and plans are prepared, their updation, as required under Coal, Mines Regulations, is not undertaken regularly. The Committee take a serious view of this. The Committee are of the opinion that accurate and scientific survey of mine maps are pre-requisite for mining coal safety. Unscientific and wrong mapping can lead to disasters. Bagdigi tragedy is a glaring example in this regard. The Committee, therefore, desire that mine maps and plans should be prepared scientifically and updated as required under

the statute using modern techniques like satellite imageries, global positioning system etc., and also with the help of trained manpower/surveyors to ensure the correctness of such maps and plans. At the same time, check and recheck survey be undertaken to ensure correctness of maps and plans. The Committee also desire that Government should fix personal responsibilities of top management in the even of failure to ensure correctness of maps and their updation. The Committee are of the view that until and unless the plans are approved by DGMS, no mining activities should be carried out.

### **Reply of the Government**

#### **Coal India Ltd (CIL)**

Mine plans are prepared and updated as required under the statute using proper survey equipment by Mine Surveyors possessing mine surveyor's certificate issued by DGMS. Subsidiary companies like BCCL, CCL, NCL & WCL have introduced modern instruments like Total Stations, EDMs, Electronic Theodolites, etc . At the same time, check and recheck surveys are undertaken to ensure correctness of maps and plans as required by the statutes. External agencies like CMPDIL/MECL are also being engaged to conduct check surveys in some cases.

Coal mining activities are carried in accordance with the Mines Act and Rules & Regulations framed thereunder and DGMS approval is obtained wherever required under the above statutes.

#### **Singareni Collieries Company Ltd (SCCL)**

As per Reg. No. 58 to 65 of CMR, 1957, mine plans are being prepared and submitted to the DGMS. It is proposed to procure one GPS for SCCL within four months.

#### **Population of modern survey equipment**

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Electronic Total Stations-	25
Microptic theodolites-	119
Digital Theodolites-	6
Autoset levels-	88
Presice levels-	5
Computers-	20
Auto CAD software-	10
'AO' size Plotters-	18

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Trained manpower and Surveyors are being provided to prepare plans.

	Population of Surveyors
Required	217
Existing	198
Shortage	19

Area Survey Officer is posted in each Area under the Area General Manager to take up check surveys at area level.

Following measures are being taken up to ensure correctness of plans.

- (a) Check survey of underground workings in relation to surface and neighbouring.
- (b) Mines is under progress.
- (c) Check list is being followed to verify the mine plans periodically to ensure the accuracy of plans prepared under different Regulations of CMR, 1957.
- (d) It is being ensured that all the survey and levelling networks are closed to ascertain the accuracy.

Dy. GM (Survey) is In-charge of Survey department. He conducts meetings with all Area Survey Officers and monitors the check survey works during such meetings. CGM (Safety) oversees the works.

During general inspections undertaken by DGMS staff, the mine plans and records are being scrutinized by them. Shortcomings pointed out by them and deviations if any are rectified.

Independent survey work is taken up by Area Surveyors for verification of the survey work. Updated plans of every mine are being submitted to the DGMS before 31<sup>st</sup> October every year.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Mine maps and Plans are prepared scientifically and updated as and when required under the Statute using modern technique, and also with the help of trained manpower/Surveyors ensure the correctness of such maps and Plans. At the same time, check and recheck surveys are also undertaken to ensure correctness of maps and plans.

Apart from the above, the Information Technology like GIS (Geographical Information System) is being used in Mining, Survey and Geological fields and got good results. Moreover the mining activities are carried out as per the Plans approved by the DGMS.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005

### **Comments of the Committee**

(Please see Para 49 of Chapter I of the Report)

### **Recommendation (Sl.No. 21, Para No. 4.13)**

The Committee find that in order to ensure correctness of maps, digitisation of maps has been taken up, recently as a part of new plan scheme. The Committee welcome this and recommend that all the mine maps and plans be digitised in a phased manner, during the 10<sup>th</sup> Plan itself. The Committee also recommend that adequate funds be made available for the purpose.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Recommendations of the Committee have been circulated to subsidiary companies of CIL for the needful.

#### **Singareni Collieries Company Limited (SCCL)**

All mine plans have been digitized in SCCL.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Mine maps are being prepared only by conventional methods using Latest Technology. However, all the Mine maps and Plans will be digitalized in a phased manner and adequate funds are also made available for the purpose.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No. 27, Para No. 5.24)**

The Committee note that at present the Directorate General of Mines Safety's role is limited to investigations into fatal mines accidents only. Serious accidents are not being enquired into by DGMS. The Committee desires that DGMS should not only investigate the fatal accidents but also serious ones.

They should then analyze them in detail and issue guidelines and develop appropriate legislation to keep pace with time.

### **Reply of the Government**

#### **Ministry of Labour & Employment**

Role of DGMS is not limited to investigation of Fatal Accidents only. The Government agree with the recommendation that all serious accidents should also be enquired to help in analysis of accidents, issue of guidelines and development of appropriate legislation. Logically this would require additional manpower or offload the DGMS from routine/check inspection.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Comments of the Committee**

(Please see Para 59 of Chapter I of the Report)

#### **Recommendation (Sl.No. 29, Para No. 6.14)**

The Committee note that miners are required to wear equipments, which help them to be safe, whether they work in an opencast or in an underground mine. The surface miners wear hard hats, steel-toed boots and safety glasses. Underground miners are equipped with self-rescuers, which allow them to breath in the event of a mine fire. Underground miners also carry gas detectors, which is used to measure gases in the air. Surface miners are also required to use hearing protection when working in high noise areas. The Committee are of the opinion that the equipment, machineries, tools and materials used in mines need to be safe, robust, reliable and capable of working safely under hostile environment.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Only DGMS approved personal protective equipment, self rescuers and gas detectors are used in mines. DGMS approval is accorded after rigorous tests by CMRI or other Government laboratories like the National Test Laboratory, etc.

In underground mines only DGMS approved equipment and machinery are used.

## **Singareni Collieries Company Limited (SCCL)**

Initially any safety equipment will be procured on trial basis only. After obtaining satisfactory performance report of protective equipment, bulk order is placed for procurement. Thus supply of reliable equipment to the miners is ensured.

Shoes, belt, helmet are being provided to all workmen. Safety goggles have been provided for welders and Bit Grinders. Self Rescuers are being provided to all workmen working at identified fiery mines and at other mines during fire situation.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the equipments, machines, tools and material used in mines are checked periodically for its worthiness before its use and hence are safe, robust, reliable and capable of working safely under hazardous environment.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 30, Para No. 6.15)**

The Committee note that although sufficient arrangements are there to procure and use latest equipments such as audio-visual alarms in dumpers and tippers to give alarm while reversing, manual/automatic fire suppression systems in heavy earth moving machinery, emergency steering used in case of engine failure, parking and emergency brakes for preventing accidents, safety belt, etc., yet the number of accidents due to fall of machines, fall of persons from machines and failure of machines are on the increase. The Committee feel that major machines and equipments used by the various subsidiaries of CIL do meet requisite standards at the time of commissioning, but due to lack of proper service and maintenance, their standards degrade. Further at times, sub-standard spares are used to repair the equipments. The Committee, therefore, recommend that while placing the orders for supply of equipment especially those which are to be imported, a clause may be entered into the agreement, for supply of spares by the same manufacturer for a minimum period of five years so as to ensure the requisite quality of spares and their availability at all the times. The management of coal companies should also ensure that Annual Maintenance Contracts (AMCs) in respect of all the machines, whether imported or indigenous, be entered into with the manufacturer or its authorized distributor for rendering timely service for the smooth and fault-free functioning of the equipment.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Subsidiary companies of CIL are procuring most of vital and critical spare parts only from original equipment manufacturer who have set up spare parts depots nearer to subsidiary coal companies and are having Depot agreements with major OEM for supply of spare parts.

Regarding AMCs (Annual Maintenance Contracts), the recommendation of the Committee has been conveyed to the subsidiary companies.

### **Singareni Collieries Company Limited (SCCL)**

Most of the spares are being purchased from original manufacturers only. Especially all spares of Rescue items are being procured from original manufacturers. Annual contracts are being established both with original manufacturers as well as authorized dealers.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, while placing the orders for the supply of equipments especially those which are to be imported, a clause is being included in the agreement to supply of the spares by the same manufacturer so as to ensure requisite quality of spares and their availability at all the time, if the spares are not indigenously available. Normally the Annual Maintenance works are being carried out through the local experienced contractors under the supervision of the NLC engineers. In case the work is specialized in nature, then the work will be carried out either through the manufacturer or through the authorized distributor for the smooth and fault-free functioning of the equipments.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No. 31, Para No. 6.16)**

The Committee is unhappy to note that sometimes inordinate delay takes place while procuring the equipment. The reasons furnished for such delay are (i) non-supply of the ordered equipments within the financial year, (ii) floating of global tenders for the equipment required to be imported, (iii) late approval of DGMS to procure these equipments. The Committee, are not convinced with the reasoning adduced by the Government. The Committee, therefore, recommend that the management should streamline and simplify the procurement process in such a way so that the delivery of equipment/machineries is not delayed by the manufacturer so much that DGMS approval expire.



## **Reply of the Government**

Purchase Manual of Coal India is being updated. The recommendation of the Committee to streamline and simplify the procure process shall be taken care of in the revised and updated Manual.

### **Singareni Collieries Company Limited (SCCL)**

All out efforts have been put in to procure the equipment before expiry of DGMS approval.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, there was no such delay in procuring the equipments/machineries and now all the procedures are streamlined and simplified for the procurement of the equipments/machineries in such a way that the delivery is not delayed by the manufacturer.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.32, Para No. 6.17)**

The Committee find that many of the activities have been outsourced. For instance, over burden removal, coal/sand transportation activities are outsourced by hiring of equipment. The Committee desire that for any lapse in safety of the persons deployed by the agencies engaged for hiring of equipments, a suitable penal provision against such agencies should be provided in the agreement.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Tender documents for coal/OB/sand transportation contract incorporate provisions that the contractor has to take full precautions and work in accordance with the Mines Act, Coal Mines Regulations and other Rules and regulations framed under the Mine Act. Section 2(I) (I) of the Mines Act states that "any contractor or sub-lessee for the working of a mine or any part thereof shall be subject to this Act in like manner as if he was an owner, but not so as to exempt the owner from any liability."

Therefore, the contractor is liable to penal action for lapses in compliance with the Mines Act and rules, regulations made thereunder.

### **Singareni Collieries Company Limited (SCCL)**

The practice is existing in SCCL for imposing said clause for contractual work.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the over burden removal is not outsourced by hiring of equipments. But only the Lignite transportation is outsourced by entering into agreement with the private parties temporarily. However, suitable penal provision is made available in the agreement for any lapse in the safety of the persons deployed by the agencies engaged for hiring of lorries/trippers.

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.33, Para No. 6.18)**

The Committee are also not satisfied with the standard/quality of machines /equipments used by contractors. They are not up to the mark and lack safety devices. The Committee, therefore, recommend that a panel at CIL level may be established to study/review afresh the norms for the safety requirements to hire equipments and machines and deployment of contractor labour in coal mining activities. This will avoid procurement of sub-standard quality of machines and safety equipments by contractors.

### **Reply of the Government**

Action is being taken at CIL level in this regard.

### **Singareni Collieries Company Limited (SCCL)**

Purchase department while awarding contract will obtain the list of equipment that will be deployed by Contractor only after satisfying the conditions of reliable equipment, work is awarded to Contractor.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the trippers engaged by the contractors for transporting the lignite is checked by the NLC Engineers for its worthiness for the safety point of view before use at site and reviewed by the Competent authorities to adhere strictly over the Safety Norms in all respect.

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 34, Para No. 6.19)**

Whereas it is mandatory to wear helmet in coal mines whether opencast or underground, it has been observed that in many of the coalfields, miners do not use the protective gadgets and other equipments during duty. The Committee take serious view of it and desire that nobody should be allowed to enter into mining areas without having protective wears such as helmet, safety shoes, safety belt, dust mask (wherever necessary) etc. Failure to use such safety items should be dealt with severely.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Action is taken against persons found without protective gear. However, subsidiary companies have been advised to ensure strict compliance with the recommendations of the Committee.

#### **Singareni Collieries Company Limited (SCCL)**

Every worker is being given helmet, safety shoes and safety belts. Dust masks are being provided to the needy workmen.

During inspection Supervisors will ensure wearing of safety equipment, if they found a workman not wearing them, respective workmen would not be allowed for duty. On the repetition severe disciplinary action would be initiated by the department.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, no body is allowed to enter into the mining areas without having protective wears like helmet, safety shoes, safety belt, dust mask (wherever necessary) etc., and necessary action is being taken against the persons who are not wearing the safety appliances.

[Ministry of Coal O.M.No. 545012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl. 35, Para No. 6.20)**

The Committee is glad to know that the equipments procured/used have DGMS approval and conform to European/US standards. The Committee hope and trust that the present standard would not fall below the international safety norms. It has been brought to the notice of the Committee that of late poor quality gumboots/shoes and helmets are being supplied to the miners. These are uncomfortable to wear. The wear and tear of the equipments is also very high. The Committee desire that coal companies should review the procurement

of these items. The Committee are of the view that the lowest price should not always be the criteria for procurement of safety wears. Appropriate quality/standards have to be ensured for the purpose.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Only DGMS approved and BIS marked safety shoes/helmets are provided to workers/miners. Shoes and helmets are procured from proven sources. Appropriate quality/standards are ensured before procurement.

The procurement of materials including safety materials is done as per purchase manual and Govt. guidelines.

#### **Singareni Collieries Company Limited (SCCL)**

The third party inspection is being insisted for safety wear. Inferior quality material is being rejected.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the requirements of Safety gadgets/equipments are consolidated by the Centralised Material Management Wing. The Press tenders are called for based on the value of the items. The supply order is placed on the Firm who can supply the required Safety gadgets/equipments with ISI specification and as per the norms fixed by the DGMS in order to ensure the International Safety Standards/quality. Hence the lowest price is not always the criterion for the procurement of safety wears.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

#### **Recommendation (Sl.No.36, Para NO.6.21)**

The Committee find that the quality of equipment and machinery supplied in coal subsidiaries do not conform to the desired standards. In this context, the Committee recommend that the coal companies should set up quality control cells, identify critical items which require testing for quality assurance at the time of procurement and during use and arrange testing of the same. Testing facilities should be set up wherever, it is techno-economically feasible.

## **Reply of the Government**

### **Coal India Limited (Coal India Limited)**

The equipment presently procured are of standard quality. There is a system prevalent in CIL/subsidiary companies for pre-dispatch inspection of equipment by the representative of CIL/Subsidiary Cos., at the works of various manufacturers to check the quality of the product/equipment being supplied by them against CIL orders. The original equipment manufacturers are having testing facility at their works and the representative of CIL /Subsidiary Cos. are taking help of these testing apparatus at the time of pre-dispatch inspections of the equipment.

The Committee's recommendation to set up testing facilities at the Subsidiary Cos. will be explored if it is found tech-commercial feasible.

### **Singareni Collieries Company Limited (SCCL)**

Quality control cells have been established at all Area Stores.

Help of following institutions utilized for testing of equipment:

- (a) Central Workshop, SCCL.
- (b) Regional Engineering College, Warangal.
- (c) Central Mining & Research Institute.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, one center for Applied Research and Development Department is available where all the testing facility is available to conform whether the material supplied by the supplier is as per the specification given in the supply order apart from the Experts from the field.

[Ministry of Coal O.M.No.54012/1/04 -CRC Dated: 12-1-2-005]

### **Recommendation (Sl.No.37, Para No. 7.24)**

The Committee have taken note of the State-of- the-Art Technology being used in coal sector. These include scientific support system in underground mines based on Rock Mass Rating (RMR) studies, roof bolting/roof stitching, introduction of modern drills like Universal Drilling Machine (UDM), reduced exposure of workers to mining hazards by use of SDLs & LHDs, Power Support Long Wall (PSLW), multi-gas detector, vibration analyzer, Ground Penetrating Radar (GPR) to determine the thickness state, etc. The Committee are satisfied with the level of new technologies employed. Almost all the coal subsidiaries are

in the process of up gradation of their technologies for improving production under safer environment. In this context, ECL have pleaded for upgradation of technology like proving of barrier with certainty, provision of forewarning before impending roof fall etc., and continuous monitoring system for mine gases. Similarly, BCCL, have desired further upgradation in their technologies, especially for underground mines and asked for (i) introduction of more long wall faces, (ii) introduction of continuous miners for more production and less exposure of persons, (iii) introduction of more SDLs, LHDs and roof bolter machines, and (iv) introduction of remote control SDLs. SECL and MCL wanted more continuous mining technology. In this context, the Committee recommend that Ministry of Coal should play a proactive role in inducing appropriate technologies for these coal subsidiaries. One time need based Grants should be given to them for the purpose.

### **Reply of the Government**

#### **Ministry of Coal**

Ministry of Coal has given thrust for mechanization of underground coal mines. Coal production from mechanized long wall which was about two million tonnes in 2003 is expected to reach at a level of about five million tonnes by 2006-07. Similarly, production from continuous miner is projected to increase from a level of 0.4 million tonnes to 2.3 million tonnes in the same period.

[Ministry of Coal O.M.No.54012/1/04 -CRC Dated: 12-1-2-005]

#### **Recommendation (Sl.No. 38, Para No. 7.25)**

The Committee are also perturbed to note that despite introduction of all these latest technologies/techniques in mining operation, accidents like Bagdigi in BCCL, Ramagundam in SCCL, both due to inundation and Godavarikhani (SCCL) due to roof fall are still happening. The Committee, therefore, recommend that latest technology like seismic/radar-based techniques may be developed for location of the actual parting/separation between the workings and the water bodies to further bring down the rate of accidents and fatalities. The Committee feel that zero level accident can be reached apart from increase in production and productivity with the use of latest technology and mechanization. The Committee, therefore, recommend that the workers' exposure to mining hazards should be restricted as much as it can be by maximum use of improved technology and mechanization.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Regarding application of Ground Penetrating Radar technology so far, as per a S&T Project funded by Ministry of Coal, it has been found that the technology has a limited applicability, of accuracy 90-95% a depth of 30 m for proving barriers against waterlogged workings. As per the CMR mine workings have to be stopped 60m ahead of any waterlogged workings.

Electrical Resistivity Survey methods have not shown encouraging results. For testing potential for detection of abandoned u/g coal mine workings by Seismic methods a study indicated that different combination of studies proved to be useful in different test sites.

CMPDI in consultation with subsidiary companies has submitted a report on "Mechanisation and Modernisation" of underground mines of CIL. The report envisages an investment of about Rs.680 crore during Xth plan period. Subsidiary companies have taken up implementation of the proposals. CIL has assured that fund constraint will not come into way of implementation of the programme.

Mechanisation and modernization is aimed at (manual) loader-less mining which will result in exposure of less number of persons in hazardous conditions.

### **Singareni Collieries Company Limited (SCCL)**

So far seismic survey has not been utilised in determining the water bodies and partition. It is proposed to take the help of NIRM in this regard.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, improved technology and mechanization are in maximum use in all the mines so to restrict workers' exposure to mining hazards.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 39, Para No. 7.26)**

The Committee observe that the level of technology being implemented in the Indian Coal Industry seems to be adequate since the equipments are of high capacity and safety features are incorporated in the equipment. However, the Committee feel that the process of technology upgradation should continue. The Committee further desire that coal companies should identify the thrust areas for mechanization.

## **Reply of the Government**

### **Coal India Limited (CIL)**

One of the areas where thrust is identified and implemented is reduction of exposure to workers through mechanization of loading operations through the use of SDLs/LHDs, Continuous Miner technology, Powered Support Longwall technology, etc.

Another thrust area is mechanization of roof drilling which is being introduced through Universal Drilling Machines/Roof Drilling Machines converted from SDLs etc. This will enable reduced exposure to roof bolting crew as well as allow better and easier drilling of hard roof strata.

### **Singareni Collieries Company Limited (SCCL)**

After introducing SDLs and Road Header in SCCL, now it is proposed to introduce continuous miner technology in SCCL. Upgradation of technology is a continuous process in SCCL.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the process of Technology upgradation is continued by identifying the thrust areas for mechanization and Safety Features are incorporated through "Fail Safe System" in the equipments.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12-1-2005]

### **Recommendation (Sl.No.40, Para No. 7.27)**

The Committee, however, feel that there is a need for more R&D efforts to deal with the local geo-physical conditions of mining so that appropriate type of technologies can be introduced. The Government should, therefore, earmark and spend more money on R&D efforts.

## **Reply of the Government**

### **Coal India Limited (CIL)**

For R&D work related to coal mines, disbursement of Government funds under Coal S&T Grant has been stepped up from an average annual level of Rs.4.00 crore during IX Plan to Rs.7.00 crore in 2002-03 and Rs.6.75 crore (provisional) during 2003-04.



A total of 60 research projects were underway in 2003-04 on various topics, out of which 28 were directly concerned with application of appropriate technology for improvement in production, productivity and safety in mines. In 2003-04, a significantly high number of 16 new projects were approved for funding by the government.

Some of major research projects related to safety concluded since the beginning of X Plan included (i) Application of ground probing radar for detection of old water logged working; (ii) Development of lightweight steel props for underground coal working; (iii) application of micro-seismic technique for study of roof falls in underground mines during extraction; and (iv) Establishment of mine fire gallery for simulation of mine fires and study of protective measures. The Govt. has earmarked Rs.9.88 crores under S&T programme for the year 2004-05.

### **Singareni Collieries Company Limited (SCCL)**

Adequate funds have been provided for S&T.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.41, Para No. 7.28)**

The Committee are unhappy to note that the coal producing subsidiaries of CIL especially loss making companies are facing constraints to have latest technology in underground mines like hiring of technical know-how, procurement of equipments, training of personnel in latest technology, development of infrastructure, adequate spares and their maintenance. The Committee observe that the two companies i.e., BCCL & ECL of CIL are still incurring heavy losses. The reasons attributed for such losses are old underground mines, deployment of large workforce etc. There is, thus a need for mechanization of mines for which heavy investment is required. Taking into consideration, the pruning of manpower, the Committee recommend that Power Support Long Wall (PSLW) technology should be introduced in the underground mines wherever it is technically feasible. The Committee further observe that since coal reserves from the upper seams in opencast mines are depleting fast, coal companies would be required to extract the coal from the deeper seams to meet the growing demand. As such, coal for the future needs, will have to come from underground mines. The Committee, therefore, recommend that the underground mines should be mechanized at the earliest and Ministry of Coal/Coal India Ltd. should provide adequate financial assistance for the purpose. The Committee are of the view that the administrative/procedural rigmarole should not come in the way of coal companies in introducing latest technology and its upgradation.

## Reply of the Government

### Coal India Limited (CIL)

Coal India has initiated long terms and short terms action to modernize/mechanized its mines.

CMPDIL in consultation with subsidiary companies has prepared a report on mechanisation/modernization which has been accepted for implementation during Xth plan period. Subsidiary companies have taken up implementation of the proposals. CIL has assured that fund constraint will not come into way of implementation of the programme.

### Singareni Collieries Company Limited (SCCL)

More no. of power supported long walls are proposed as given under:

Year	Proposed
2005-06	-
2006-07	-
2007-08	4
2008-09	2
2009-10	1
2010-11	1

To exploit the deeper deposits the underground mine will be mechanized. Longwall method of work is proposed to exploit deeper deposits.

Streamlining administrative formalities, procurement formalities, in introducing latest technology and its upgradation. New technology-Continuous miner, longwall, BG panel already commissioned Planning department of SCCL has already taken up introduction of mechanization. Board of Directors is streamlining Purchase formalities for procurement of equipment.

### Neyveli Lignite Corporation (NLC)

This recommendation is not applicable to NLC.

[Ministry of Coal O.M.No. 54012//1/04-CRC Dated: 12-1-2005]

### Recommendation (Sl.No.42, Para No. 7.29)

The Committee express their deep concern over disasters, which continue to take place, particularly in underground coal mines. A glance over safety

statistics reveals that fatality rate per thousand persons employed is practically constant for the last two decades i.e. 0.3 & 0.33 for the period 1981-1990 and 1991-2000 respectively. Although opencast mining operations are considered safe all over the world, accident rates in opencast coal mines, in our country, is as high as in the underground mines, inspite of the fact that only 17% of coal is extracted from underground mines and 83% from opencast. The Committee are of the considered view that contract operations are causing more accidents due to various reasons like ill trained manpower, frequent change of work force, longer working hours, use of smaller machineries, equipments and vehicles, which are not compatible to the size of opencast operations. In fact, the rate of accidents of contract workers have been reported to be much higher than regular workers. It is in this context, the Committee recommend that new initiatives like "Risk Assessment" and "Safety Management Plans" need to be introduced in all the coal mines on priority basis, in order to reduce accidents and disasters. Besides, intensive training of the contract workers, irregular and unsafe practices in contract operations, need to be strictly curbed.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

The status of conducting 'Risk Assessment and preparation of 'Safety Management Plan' has already been given in detail herein earlier (recommendation No. 3.29). These recommendations of the Committee have been circulated to all companies for compliance.

#### **Singareni Collieries Company Limited (SCCL)**

Risk assessment plans are implemented in 5 accident prone mines. 11 more mines are identified for implementation of risk management plan. Risk identification and assessment is being done by the Committee specially formed for the purpose. Initial training is imparted to all the Contractor workmen, additionally (Booster Training) is given to all contractor workmen to eliminate accidents at open cast mines.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the new initiative like Risk Assessment and Safety Audit in Mines were carried out through the External Agency, M/s Society for Mining Research, Sustainable Development and Environment, Calcutta, headed by Dr. S.K.Sarkar, Secretary General. The recommendations given in the report submitted by them, is being implemented wherever it is possible in order to reduce the accidents and disasters. Similarly intensive training is also being given to the contract workers about the irregular and unsafe practices in contract operations to make them aware of the unsafe practices and the Contractors are

also instructed to deploy only trained labours who are well versed in mining operations.

[Ministry of Coal O M .No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.43, Para No. 7.30)**

The Committee note that long and arduous journey is required to be undertaken by the miners, before they actually start extracting coal. The Committee are of the view that this not only causes undesirable fatigue, but also retards productivity of the coal miners. The Committee, therefore, recommend that where long and arduous journey is involved and working faces exist at long distances in underground mines, man riding system or any other appropriate arrangements, for transport of miners, should be introduced. This will not only improve output per man shift (OMS) but also relieve a miner from unavoidable fatigue.

### **Reply of the Government**

Man riding system are functioning in Khottadih & Chinakuri III collieries of ECL. Further CMPDIL has prepared feasibility report for installation of man riding system in three more mines viz. Parbelia, Bhanora West & Chinkuri Extension block which is under scrutiny at ECL. Part of a man riding system (750 mts ) at Tandsi Project of WCL is under commissioning which will be further extended after the trial is successful.

### **Singareni Collieries Company Ltd., (SCCL)**

Man riding system has already been installed in 14 mines. In 5 more mines it is under process of installation.

### **Neyveli Lignite Corporation (NLC)**

This recommendation is no applicable to NLC.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No. 44, Para No. 8.18)**

The Committee have taken note of various communication system installed in opencast and underground mines. The Committee are of the view that elaborate communication systems do exist but there is need to augment it further. It has been brought to the notice of the Committee by some of the Trade Unions that the communication system which exists in mines is not satisfactory and proves to be almost ineffective in case of emergency due to shortage of equipments with supervisors. In this context, the Committee desire that system of communication should be further upgraded and latest equipment be made

available with every supervisor and line manager. The Committee also desire that use of V-SAT should also be considered for introduction in underground mines at the earliest.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Telecommunication infrastructure facilities have been provided to all the underground (UG) and opencast (OC) collieries of subsidiary companies of CIL.

The UG mines are having point to point telephone, loudhailer, Central Dispatcher System (CDS) and Auto-manual exchange type of communication system for communicating within the mines as well as to the pit-top office. Out of the above, Sound Power point to point and loudhailer type of communication systems are very old type and are being gradually replaced by CDS (with dialing facility) and Auto cum Auto Manual type of communication systems.

Opencast mines have been provided with various types of radio based communication systems like VHF Radio (Simplex and Duplex), UHF Radio (10 channel system), Trunking Radio, etc. for communicating within the projects as well as to the Area Offices under the respective subsidiary companies. In addition to the above, there are Electronic Exchanges (EPAX and EPABX) with BSNL's telephone lines for communicating with the projects/ mines and pit-top officers as and when required. Under the COALNET Plan (ph II and ph III), voice and high speed data communication facilities are being extended in an integrated manner for which the respective subsidiary companies are drawing and finalizing their schemes.

#### **Singareni Collieries Company Ltd (SCCL)**

Mine Managers of all mines have been provided with Cell Phones. Supervisors and officials working at open cast mines have been provided with walkie-talkie. It is proposed to provide communication facility to all working districts in underground mines of SCCL. V-SAT communication is not feasible for use in underground mines and can be utilized only for surface communication.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, well established network system is available and only upgraded system and latest techniques are used in the communication system. The present system is adequate to meet any eventuality in an effective manner.

[Ministry of Coal O.M.No.54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.46, Para No. 9.17)**

The Committee find that there is a shortage of equipment and other accessories/gadgets used for rescue operation. Further these are not of international standards. The Committee desire that shortage of these equipments and gadgets should be met and the existing equipments are upgraded/updated conforming to international standards. The Committee also desire that a promotional scheme be introduced for further upgrading the status of rescue operations.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Any shortage of Rescue Equipment is made upon priority basis. The company-wise status is given below:

<u>Company</u>	<u>Action Taken</u>
ECL	There is no shortage of rescue equipment and other accessories/gadgets used for Rescue operation at Sitarampur Rescue Station. The equipment provided there are of international standards. Wherever necessary upgradation is being done.
BCCL	There is shortage of 16 nos. of Resuscitating Apparatus, 2 nos. of Universal Tester, 3 nos. of Rescue Vans, 2 nos. Ice Machines for BG-4 Self Contained Breathing Apparatus (SCBA), & 5 nos. of multi-gas detector which have been programmed to be procured.  Equipment available at Rescue Stations conform to international standards. Since their spares are not indigenously made problem exists in their procurement.
CCL	There is no shortage of equipment and other accessories/gadgets required for use in rescue operation in CCL.
WCL	Modern rescue apparatus/equipment have been provided. Sufficient budgetary provisions are earmarked for upgradation of status of rescue services and procurement of rescue apparatus.

Further,

- a) Procurement of 24 nos. of resuscitating apparatus is under process. This procurement is delayed due to non-availability of DGMS approved apparatus. Budgetary allocation is made for the purpose.

- b) 41 nos. of face masks in respect of Tube Apparatus are also being procured.

NEC            Making up of shortage of rescue apparatus in process.

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The Rescue Organisation is provided with international standard equipments. State-of-the-art Self Contained Breathing Apparatus (SCBA) like BG-4 is already in use in many companies and more of such equipment are programmed to be procured. BG-174 (SCBA), which was the main SCBA, is also of international standards. Provisions for upgradation of Rescue Equipment is made in the Rescue Budget.

#### **Singareni Collieries Company Ltd (SCCL)**

As per statute, required equipment are provided at rescue stations. The following equipment conforming to International standards have been provided at the rescue stations:

BG-4 breathing apparatus  
Methanometers.  
Oxymeters  
Resuscitators  
Multi-gas Detectors  
Chemical Oxygen Self-Rescuers.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, there is no shortage of equipments and other accessories/gadgets used for rescue operation and it is also under the consideration for further upgrading the status of rescue operations.

[Ministry of Coal O.M .No. 54012/1/04-CRC    Dated: 12-1-2005]

#### **Recommendation (Sl.No. 47, Para No. 9.18)**

The Committee note that there is consensus that disorientation and low visibility in the aftermath of fires and explosions are major considerations in underground escape and rescue strategies. But the practical and proven solution of these problems, with the requisite degree of flexibility to permit general application, are not readily available with the coal companies. The Committee feel that escape routes could help the trapped persons to save their life. The Committee, therefore, recommend that escape routes in all the underground mines be provided and demarcated properly and mock rehearsals conducted periodically, at least twice a year, to familiarize workmen with the same.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Escape Routes have been demarcated on plans as well as below ground and mock rehearsals are conducted periodically. However, these recommendations of the Committee have been circulated to all companies for strict compliance.

### **Singareni Collieries Company Ltd (SCCL)**

In all 55 mines, escape routes have been established. A video cassette on escape routes was also developed and displayed at all the mines and SITI CABLE to inculcate awareness among the workmen.

### **Neyveli Lignite Corporation (NLC)**

This recommendation is not applicable to NLC.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.48, Para No. 9.19)**

It has been brought to the notice of the Committee that the escape routes, wherever provided, are ill maintained. In most of the cases, jungle crop have grown and it is not possible for the trapped persons to come out through this route. The Committee take strong note of this and recommend that escape routes should be well maintained, painted with fluorescent paint and properly cleaned so as to make it fit for use by the workers at the time of emergency. Wide publicity through sign bills, banners, posters etc., should be made of the escape routes, so as to familiarize the workmen with such exit routes.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Escape routes are appropriately demarcated belowground by painted signs/whitewashing/white-washed bands/fluorescent bands on pillars etc. They are also displayed at entry to the mine. Mock rehearsals are also conducted for familiarizing workmen with such routes. However, these recommendations of the Committee have been circulated to all companies for strict compliance.



## **Singareni Colliery Company Ltd (SCCL)**

Escape routes are kept in readiness for use during emergencies. Escape route is well demarcated in underground marking with fluorescent paint for easy identification of route during emergencies.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Mines are operating on mechanized Opencast Mines. More than one route is available to all the benches for any emergency. The same are known to the Employees, Workmen etc. and are being monitored regularly.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.50, Para No. 11.23)**

The Committee note that adequate provision has been made for participation of workers in the management of safety through Workmen's Inspectors, Safety Committees at Mine level, Bipartite, Tripartite Safety Review Committees, Coal India Safety Board and Standing Committee on Safety in Coal Mines etc. The meetings of these Committees are required to be held from time to time to discuss various issues concerning occupational health and safety of workmen and also to increase production of coal safely. The Committee note that the meetings of Pit Safety Committees are required to be conducted once in a month at each Mine. Further, the meetings of the Bipartite and Tripartite Safety Review Committees are to be conducted once in six months on regular basis. It has been brought to the notice of the Committee by some of the Trade Unions that the meetings of Pit Safety Committee, Bipartite and Tripartite Safety Review Committees are not conducted regularly as required and where such meeting are conducted, the recommendations of these Committees are not implemented in letter and spirit. The Committee acknowledge the role of Pit Safety Committee and Bipartite and Tripartite Safety Review Committee in ensuring safety in Coal Mines. The Committee do not approve of this action on the part of coal subsidiaries in not conducting meetings at regular intervals and also showing scant respect to the recommendations of these Committees. The Committee, therefore, recommend that regular meetings of these Committees should be conducted and their recommendations implemented in letter and spirit. At the same time, the Committee would like to be apprised of the details of meetings of Pit Safety, Bipartite and Tripartite Safety Review Committees and the extent to which the recommendations made by the Committees were accepted by each of the coal subsidiary and SCCL during the last 5 years. The reasons for delay in conducting such meetings may also be furnished for the consideration of the Committee.

## **Reply of the Government**

### **Coal India Limited (CIL)**

The details of Pit Safety Committees meetings during last 5 years and their recommendations will be too voluminous to be given here. However, the recommendations of pit safety committees relate to shafts, inclines, mine roadways, workplaces, mine support, mine environment, dust suppression measures, equipments and machineries in underground and opencast mines, operation of HEMM in opencast mines, blasting in underground/opencast mines, prevention of accidents, safe practices in mines, etc.

The observations/recommendations of Committees and action taken to rectify the contravention are discussed in Pit Safety Committee meetings in the colliery. The manager of the colliery, in turn, issues necessary instructions for rectification/implementation.

However, subsidiary companies have been advised for strict compliance of this recommendation of the committees.

### **Singareni Colliery Company Ltd. (SCCL)**

Tripartite and Bi-partite Safety Review Meetings are being conducted twice in a year. The 28th Tripartite Safety Review Meeting was held in Jan, 2004. The Bi-partite Meetings held on:

- 23.01.2004 Morning Tripartite(Area) at MM
- 23.01.2004 Evening Bipartite at MM
- 24.01.2004 Morning Tripartite at SRP
- 24.01.2004 Evening Bi-partite at SRP
- 23.1.2004 RG(Regional) Tripartite Meeting.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Pit safety committee meetings at Unit level, Central Safety Committee meetings at Corporate level and the Bipartite Safety meetings at management level are being conducted once in a month regularly. But the Tripartite Safety Review meeting is being conducted once in 2 years at the convenience of DGMS. However, the recommendations suggested in the above meetings are implemented in letter and spirit wherever it is possible.

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.51, Para No. 11.24)**

The Committee note that the institution of workmen's inspectors has been create to promote participative management of safety in mines. The Workmen's Inspectors point out the deficiencies to the mine management and suggest remedial measures necessary to avoid the danger. The Workmen's Inspector reports about the safety status of the mine to the Manager who is responsible for production as well as safety aspects. The Committee feel that the Workmen's Inspector plays a pivotal role between the workers and the management. The Committee, therefore, desire that the services of Workmen's Inspector should be utilized adequately. The violations pointed out by him should be given due attention and rectified without any delay by the management.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Violations pointed out by the Workmen's Inspectors are being given due attention and rectified without delay. However, subsidiary companies have been requested to ensure strict compliance with the above recommendations of the Committee.

#### **Singareni Collieries Company Ltd (SCCL)**

The Workmen Inspectors submit their reports to the Managers on the violations pointed out by them are being attended immediately at mine level. In each week he will make two inspections as Workmen Inspector.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the violations pointed out by the Workmen's Inspector are given due attention and rectified without any delay by the Management.

[Ministry of Coal O.M. No. 54012/1/04-CRC Dated: 12-1-2005]

### **Recommendation (Sl.No.52, Para No. 11.25)**

The Committee find that at present Workmen's Inspector, is appointed in a mine wherein 500 or more miners are employed. The Committee feel that in view of heavy mechanization of mine, there is a need to revise this ceiling of 500. At times, there are many mechanized mines particularly opencast operations, where the total employment is not more than 500. Further, the safety committees are constituted, wherein more than 100 miners are employed. The Committee do not find any rationale/justification, in not revising the ceiling to 100. The Committee,

therefore, recommend that any mine, with 100 or more miners, should appoint a Workmen Inspector.

### **Reply of the Government**

#### **Ministry of Labour & Employment**

The Scale of appointment of Workmen's Inspector, as required under Rule 29(Q) of Mine Rules 1955, presently stipulated that such appointment is mandatory for miners having an employment size of 500 or more.

However, in view of growing mechanization, especially in opencast sector, Workmen's Inspector is appointed in all mechanized Coal & Lignite opencast mines even though the employment size is less than 500.

[Ministry of Coal O.M .No. 54012/1/04-CRC Dated: 12-1-2005]

#### **Recommendation (Sl.No.53, Para No.11.26)**

The Committee note that Workmen Inspectors have been charged with the inspections of mines from workers side. They are a link between workmen and management as far as safety is concerned. Recognizing their vital role the Government made a provision for Workmen Inspector in the year 1986 and accordingly, the Mines Rules were amended. As per statute, Workmen Inspectors are require to be appointed in all the mines and inspect all shafts, inclines, roads, workplace and the equipments and threat including the equipment for conveyance and transport of workers. They have also been assigned the duty of informing the Manager and Inspector of any urgent and immediate danger that comes to their notice and suggest the remedial measures therefore. Workmen Inspector is also required to accompany the inspector in the course of complete inspection of mine and also during such other inspections as may be considered necessary by the inspector. It has been brought to the notice of the Committee that although Workmen Inspector inspect the Mines and send his report to the Management yet DGMS is nto associated in this task. The Committee also recommend that in order to inculcate a sense of belongingness in Workmen Inspector, an award may be instituted for best Workmen Inspector at company level and a National level. This will recognize the service rendered by Workmen Inspector and motivate him to give his best for the safety. The Committee also recommend that the Workmen Inspector should be exposed to various mining methods and fields to keep him abreast with the latest development. It is in this context, the Committee recommend that the Workmen Inspector should be trained and given extensive trainings in and out side the country for different mining methods etc. The Committee feel that the Workmen Inspector should also give a copy of his report to the recognized union in the mine/area so that the workers are aware of the impending dangers and can take suitable steps to protect themselves.

## **Reply of the Government**

### **Coal India Limited (CIL)**

Institution of an award for best Workmen's Inspector may be considered by the Ministry of Labour in the lines of the National Award. Regarding institution of award at Company level, the matter is being taken up with the subsidiary companies.

Workmen's Inspectors have been and are exposed to trainings/seminars etc. Workmen's Inspectors trained in-house by subsidiary company HRD Deptt., by DGMS officers/senior mining engineers, through external agencies like Institute for Indian Mine Metal Workers' Education etc. In addition DGMS also have been conducting special seminars for roof bolting techniques where Workmen's Inspectors have been nominated for training.

As per Mines Rule, 1955 the Workmen's Inspector after making inspection of the mine records his observations/recommendations in a bound paged book kept as Form "U". The Manager, in turn, records his remarks in the register showing remedial measures taken by him. The Workers Inspector keeps one copy of his report recorded in the bound paged book.

### **Singareni Collieries Company Ltd. (SCCL)**

Workmen Inspectors are being encouraged to visit mines where different technologies are available. Workmen Inspector have been imparted training at MVTCs, but they are not being sent to foreign countries.

Copy of Workmen Inspector report is not being given to recognized union. Suggestions will be implemented in future. Necessary guidelines in this regard will be given to all GMs and Mine Manager.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Workmen Inspectors are given extensive training for different Mining methods and the copy of his report is also given to the Recognized Trade Union in the Mines so that the workers are aware of the impending danger and can take suitable steps to protect themselves.

[Ministry of Coal O.M.No.54012/1/04-CRC, Dated: 12.1.2005]

### **Recommendation (Sl.No.54, Para No.11.27)**

The Committee find that as per Rule 29-T of the Mines Rules 1955, the Safety Committees are set up in a mine wherein more than 100 persons are employed. In the opinion of the Committee, the Safety Committee can play a very

constructive and useful role in shaping safety performance of the mine. At times, it has been observed that the Safety Committees are functional only for a year and then disband. The Committee are of the view that this practice limits the effectiveness of the Safety Committees. Therefore, there is need to ensure a fixed tenure for such Committee for obtaining better results. The Committee, therefore, recommend that tenure of 2 to 3 years may be prescribed for any duly appointed Safety Committee.

### **Reply of the Government**

#### **Ministry of Labour & Employment**

The tenure of Safety Committee is not directly specified in the Mines Rules. However, since Workmen's Inspector, being a member [(Rule (U)(d))] of Safety Committee, has a minimum tenure of three years [(Rule 29 (Q)(8)]. Under normal circumstances, the tenure of Safety Committee indirectly works out to be minimum three years.

The present law has, therefore, indirectly fixed the tenure as minimum three years under normal circumstances.

[Ministry of Coal O.M.No.54012/1/04-CRC, Dated: 12.1.2005]

#### **Recommendation (Sl.No.56, Para No. 11.29)**

The Committee feel that the effectiveness of any operation increase manifold with proper monitoring. It has been seen that at times the schemes do not yield better result due to inadequate monitoring. In order to make the institution of Safety Committee more effective, strong monitoring of its function, activities and follow up measures will go a long way in improving the safety status of mines. The Committee, therefore, recommend that necessary mechanism for monitoring at various levels should be put in place by the coal companies. The Committee further desire that to improve the safety status in various Coal companies, one of the agenda for periodical Board Meetings should be "Safety Performance Appraisal" of the company concerned.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Subsidiary companies have been advised to monitor the functioning and the status of compliance of the recommendations of the Safety Committees, 'Safety Performance Review' is kept as an agenda items in some Board meetings of some companies. Other companies have been requested to do so.

## **Singareni Collieries Company Ltd (SCCL)**

Activities of the Committees are being monitored by Safety Officers and Area Safety Officers to function effectively on monthly basis. In every Board Meeting, safety performance is being monitored by the Board Members.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the "Safety Performance Appraisal" is submitted for the Board Meetings every quarter and the same is being considered as one of the agenda items in the Board Meetings and suggestions thereby are implemented then and there.

[Ministry of Coal O.M. No. 54012/1/04-CRC, Dated: 12.1.2005]

### **Recommendation (Sl.No.57, Para No.11.30)**

The Committee find that a Workmen Inspector is required to undergo orientation training before he is appointed for such a post. However, such a stipulation is not made applicable to the Members of the Safety Committee. The Committee are of the view that since the twin statutory institutions of Workmen Inspector and Safety Committees have ensured reasonable standards of safety in coal mines, there is a need to provide not only orientation training to Workmen Inspector and members of the safety committee but also refresher training programme beside need based short term training. There is also a need to develop awareness among the coal miners about the latent force of these two institutions for their greater involvement in improving safety in mines. The Committee desire that appropriate action should be taken for training of workmen inspector/members of the safety committee and awareness of workmen about the role of Workmen Inspector/Safety Committees.

### **Reply of the Government**

## **Coal India Limited (CIL)**

Regular training programmes for Workmen's Inspectors/Members of Safety Committee are being conducted to bring awareness about their role in the mine safety. Regular courses are conducted for Safety Committee Members at Supervisory Training Institute, Chhindwara for all WCL. In 2003-04, 12 courses were conducted and 205 Safety Committees members were provided structured training.

## **Singareni Collieries Company Ltd. (SCCL)**

Workmen Inspector and Safety Committee members are being imparted training and exposed to short-term training programmes.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, appropriate training is being given to the Workmen Inspectors/Members of the Safety Committee and awareness of workmen about the role of Workmen Inspector/Safety Committees.

[Ministry of Coal O.M.No.54012/1/04-CRC, Dated: 12.1.2005]

### **Recommendation (Sl.No.58, Para No. 11.31)**

The Committee observe that in order to motivate the workers for achieving best safety standards and practices, the management has already initiated various promotional schemes. Annual Safety Week is held at each subsidiary company level every year. Inter-company competitions are also conducted annually on safety & rescue operations and the best teams are awarded shields/prizes/mementoes. Safe workers are suitably rewarded, best overmen's award is given, safest area and safest mine is suitably rewarded, etc. The Committee appreciate the efforts made in this direction by CIL with the result of which CIL and its subsidiaries have been the recipient of several National Safety Awards, for best performance in the field of safety. The Committee recommend that for further improving safety in coal mines, safety incentive be enhanced suitably and implemented by the management for motivating the workers towards occupational safety and health.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Subsidiary companies of CIL have been advised to comply with this recommendation of the Committee.

#### **Singareni Collieries Company Ltd (SCCL)**

Annual Safety Weeks are being conducted regularly on yearly basis and Awards are issued to the best mines.

The mines rescue competitions are conducted once in a year and awards also being given to best members and best teams once in a year.

Safe workers are awarded/honoured twice in a year, that is, on 26<sup>th</sup> January and 15<sup>th</sup> August. In the mines where there are no fatalities, during that calendar year are awarded Safety Incentives, which has been enhanced during the last year.



### **Neyveli Lignite Corporation on ( NLC)**

As far as NLC is concerned, the safety incentive is already enhanced suitably and implemented by the management for motivating the workers towards occupational safety and health.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.59, Para No. 11.32)**

The Committee observe that code of practices for different mining operations have already been laid down by the coal companies. The Committee recommend that the workmen should observe and follow various safety practices both in letter and spirit. Surprise inspections, thus should be conducted at regular intervals and erring employees be penalized.

### **Reply of the Government**

### **Coal India Limited (CIL)**

Thrust is being maintained on surprise inspections and surprise inspections are carried out at various level and erring employees are penalized.

### **Singareni Collieries Company Ltd (SCCL)**

Senior Officers in the rank of General Managers are undertaking surprise inspections to promote discipline in safety. These visits are monitored by Corporate Office. Action is initiated against the defaulting employees.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, surprise inspections are being made at regular intervals and necessary penal action is being taken against the erring employees if any.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.61, Para No. 12.18)**

The Committee note that mines Vocational Training Rules, 1966 (MVTR) amply provide for the training and retraining of the workers and executives of coal companies. At the time of entry to the industry, the executive and Workmen including the contractual workers are imparted basic introductory training. Refresher training is also provided as per requirement of MVT Rules. The faculty imparting training at VTCs/Area Training Centres are basically Area Safety Officers or Area Training Officers, who are Mine Engineers and also are trained

under trainers' programmes. External faculty members like experienced DGMS officers are also inducted for imparting safety-oriented training to workers/supervisors/field officers. There are three categories of training that is being imparted at VTCs; namely basic training, refresher training and special/other types of training. To make the training more interesting and fruitful, facilities for audio-visual training are being provided and standardized training films are being circulated to all coal companies. The Committee are, however, sad to note that the workers and the executives are still deprived of quality training imparted in coal industry. At times there is no proper planning for training of mine workers as required under Vocational Training Rules, 1966. The Committee have been apprised that the proper infrastructural facilities do not exist in many of the vocational training centres. What is more disheartening to note is that the training to contractor's labour is just an eyewash. The Committee, therefore, recommend that quality of training should be improved. Adequate infrastructure facility should be made available to vocational training centres (VTCs). At the same time, the Committee recommend that training for contractual workers; need to be reoriented, so that the skill of the coal workers can be upgraded. Further, training programmes should also be drawn in a planned manner for the workmen and executives. It should not be merely for the sake of completing formalities. The training ought to be broad based which should permit substantial exposure to mine safety practices and technology and facilitate the development of enhanced occupational health and safety standards and procedure, codes of practices, legislative standards and mine safety information system. The Committee, therefore, recommend the deficiencies pointed out by them be rectified immediately, as to make the training programme, a meaningful and purposeful vehicle of change.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Necessary infrastructure facilities have been provided at all the VTCs for imparting quality training. Attempts are being made to provide further infrastructure as are needed.

Efforts have been made to impart need based training to the contractors workers also in our Vocational Training Centres.

Statutory training is imparted as per the new training module. Need based training programmes are also conducted for workers and officers. The entire statutory training programme has been divided into different modules and films thereon are being prepared by CIL. Some films have already been prepared on basics of safety and being shown to the trainees at the VTCs.

## **Singareni Collieries Company Ltd (SCCL)**

- (i) Training is imparted as per revised training modules approved by the DGMS during the year 1998.
- (ii) Monitoring is done by each MVTC to conduct refresher training as per the Rule No. 9 of MVTC Rules 1966 for 20% employees every year.
- (iii) The full day release system of training as per DGMS (Legis) Circular No. 2 of 1976 is implemented from Sept, 2003.
- (iv) Upgradation of MVTCs has been taken up with the following equipment to impart better training.
  - Latest model overhead projector.
  - One TV for each MVTC ( for multi media learning)
  - LCD projector provided to five (5) MVTCs. For the remaining three MVTCs it will be provided by during 2004.
  - Addition of Furniture & Fixtures. Discontinuing the benches without backrest.
- (v) Officers are posted at MVTCs on rotation basis.

Quality of training is provided as per revised schedules. Senior Officer like General Managers, Head of Departments are being called during interactive session to assess and suggest the quality of training.

In addition to the initial training, contractor workers are imparted booster training. Special care is being taken in SCCL to impart better training to improve their skills. All efforts are being put to impart better training to the workmen.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, full fledged Training Complex is available with experienced faculty members and hence quality training is imparted for all the Workers and Executives. Similarly the intensive and upgraded safety training is also given to the contract workers.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.64, Para No. 12.21)**

The Committee feel that it is important to keep abreast of current international developments in relevant specialist fields to ensure that standards guidelines and legislation are appropriate and represent the best current practice. To achieve these goal, Committee believe that it is essential to expose the Executives and Workmen to the new technologies, modern developments in mining practices and the application of computers and overall mine safety management systems employed in advanced mining environments. With the introduction of state-of-the-art technology and an increase in the level of mechanization in coal mining, the Committee recommend that CIL should focus training of Executives and Workmen in these fields and especially in the areas like long wall face support; equipment testing standards and approved procedure; underground coal mine roadway support; pillar extraction; new technology in hard rock mining; mine safety management systems and environment management.

### **Reply of the Government**

#### **Coal India Ltd. (CIL)**

To keep abreast of the current international developments relevant to Coal Mining Industry, regular special training programmes are conducted to expose the Executives and Workmen to the new Technology and to the Modern development and mining practices. Special training on longwall face, Support Equipment Testing Standards and approved procedures, underground coal mine roadway support, pillar extraction, new technology and related topics are being covered at all the Area Training Centre. Special Training programme on the above topics is conducted at all the Management Development Institutes.

#### **Singareni Collieries Company Ltd (SCCL)**

Computerization Training Programme is not being taken up at MVTCS.

However there is a separate scheme to impart computer education. During 2003-04, 759 persons have completed basic training in computers. Till now more than 3,000 persons are trained in basic computer skills. SCCL is taking help of NIRM, EPTRI, NEERI, CMRI, IIT, Kharagpur and ISM, Dhanbad to impart training on new methods of mine mechanization, environmental management and safety system. Their executives are attending courses at ISM and other reputed training institutions.

Every mine is provided with a surveyor well versed in Auto CAD. Already some mines are submitting their plans on CD to DGMS. In each OC mine at least three executives are trained in environmental management. All the executives of Environment Department have undergone training and visited

some reputed companies/institutions to know best practices in environment management. A total of 241 executives had been sent abroad during last ten years for training in Long wall and other technologies.

Wherever new technology introducing in SCCL under package tour Executives and workmen are exposed training abroad at their manufacturing units. Some times a team of suppliers impart one-month training to Executives and workmen within India even if workmen are familiar with this technology.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, training is given to expose the Executives and Workmen to the new technologies, modern developments in Mining practices and the application computers and overall Mine safety management systems employed in advanced Mining environments.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (SI.No.66, Para No. 12.23)**

It has been brought to the notice of the Committee by some of the Trade Unions that the Mining Sirdars, Overman and Safety Officers who are statutorily concerned with the safety of mines, are required to be trained on the subject of geological changes/disturbances by experts, at regular intervals. The Committee see merit, in their contention and desire that such training should be organized for them. Further, they should continue to be imparted Refresher Training at MVTCs.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Mining Sirdars, Overman and Safety Officers are being exposed to subjects like Geological changes/disturbances in VTCs. Special training programmes are being conducted by CMRI, Dhanbad to educate employees regarding Geological Changes in Underground Mines.

CMRI experts are regularly interacting with officers and supervisors in Areas where Mass Production Technology (MPT) has been introduced to educate, develop as well as up-date their technology and skill to perform better.

#### **Singareni Sollieries Company Ltd (SCCL)**

Scheme is formulated to inspect training to Safety Officers and Overmen on geological changes by the end of this year.

## **Neyveli Lignite Corporation(NLC)**

As far as NLC is concerned, the Refresher Training are imparted at regular intervals for the Mining Sirdars, Overman and Safety Officers at MVTCs.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.68, Para No. 13.20)**

The Committee also desire that CIL should set up a Occupational Disease Board/Authority/Council, consisting of Health Physicians, Radiologist and General Physician, which can deal with the cases from all subsidiaries. Such a board should detect Occupational Disease (OD) at an early stage. The Occupational Disease Board is also needed for formulating guidelines for referral, re-evaluation, and classification of cases of Occupational Disease and necessary remedial action at work place as well as rehabilitation of affected persons. The medical Officers at each Periodical Medical Examination Centre should also be trained in occupational health. The Committee also recommend that Occupational Health Surveillance – medical and Environment be set up for containing Occupational Disease in the coal mines.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

There is an Occupational Disease Board at each subsidiary company of CIL. The Board consists of General Physician, Radiologist and Occupational Health Doctor. The objective of the Board is early detection of Occupational Diseases in the company's employees. It also suggests remedial action at the work site, if necessary.

Medical officers involved in Periodical Medical Examination are trained in detection of occupational disease specially "Coal Workers Pneumoconiosis". National Dust Prevention Committee has been functioning to monitor control of dust at the work site. All these efforts have yielded good results. During past 3 years only 8 cases of Pneumoconiosis have been detected in Coal India.

#### **Singareni Collieries Company Ltd (SCCL)**

Pneumoconiosis Medical Board was constituted as per the Notification of the Government of Andhra Pradesh vide G.O.Ms. No. 197, dated 1.2.1967 of Home (Labour IV) and under the provision to rule 4 of the Workmen's Compensation (Occupational Diseases Pneumoconiosis) Rules 1965.

SCCL has one Occupational Disease Board (Apex Medical Board) in existence since 1965. Chief Medical Officer, Radiologist and a Specialist

constitute the Occupational Diseases Board. Doctors are trained in use of ILO classification of Pneumoconiosis. A total of 123 Doctors were trained in reading the X-rays as per the ILO guidelines in classification of Pneumoconiosis.

Doctors undergone PG Certificate Course in Associate fellow of Industrial Health at CLI, Mumbai and RLI, Kolkata.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, “ Department of Industrial Hygiene and Occupational Diseases” (DIHOD) is headed by Deputy General Superintendent/Medical, who is highly qualified and experienced in Industrial Safety, Occupational Health and Hygiene.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.69, Para No. 13.21)**

The Committee are not satisfied with the present facilities for treating occupational diseases in hospitals run by CIL and subsidiaries. The Committee recommend that these facilities should be augmented and hospitals which need the modern and other state-of-the-art equipments for better patient care should be identified and such items be procured in a phased manner. Adequate funds should be made available to the coal companies for the purpose.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

The main notifiable disease in coal mines is Coal Miner’s Pneumoconiosis for which all efforts are being made for prevention of the disease. The facilities for treatment and providing better care in company’s hospital are reviewed and gradually augmented.

A committee has been formed to examine the existing medical facilities in different subsidiary companies and to suggest further augmentation including equipment in each. Further action will be taken after receiving the report.

#### **Singareni Collieries Company Ltd (SCCL)**

As per guidelines of DGMS, the following state-of-the-art medical equipment are provided at all the PME Centres.

- Medispiror – a PC based by function test equipment.
- Pure Tone Eudiometry.

- Sound proof room for the audiometric examination.
- Schiller ECG machine.
- An X-ray machine with a minimum of 300 MA is provided for the PME work.

State-of-the-art equipment will be procured from time to time as per the recommendation.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, a well established "Department of Industrial Hygiene and Occupational Diseases (DIHOD)" is functioning effectively and adequate fund is also allocated for the same.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 71, Para No. 14.12)**

The Committee are constrained to note that during the year 2000-2001, the budget allocation for safety and rescue activities was Rs.53.4 crore whereas the expenditure was Rs.30.72 crore. Similarly, during the couple of the last years i.e. 2001-2002 and 2002-2003, the allocation for the same activities was Rs.69.02 crore and Rs.79.68 crore respectively whereas the corresponding expenditure was Rs.40.21 crore and Rs.41.29 crore. Likewise, CIL's subsidiaries namely, NLC, WCL, BCCL and CCL have also failed to fully utilize the capital budget allocation during the aforesaid period. It is pertinent to mention here that although the percentage of safety budget in the Capital Head of total budget allocation during the above mentioned three years has been Rs.3.00, 4.48 and 4.53 crore respectively, yet CIL has been unable to expend it. As a result, CIL and its subsidiaries are unable to procure many of the safety related equipments and machineries, in spite of the fact that these are required for safe working, simply due to under utilization of safety budget. The reasons advanced by CIL for under utilization of safety budget i.e. non-availability of indigenous equipment, cumbersome DGMS approval procedure, non-supply of the equipment in time, are not acceptable to the Committee in view of the fact that such rigmaroles can easily be overcome with simplification of the approval procedure and timely placement of orders. The Committee, therefore, impress upon the Ministry and CIL's to take measures for full utilization of budget by the management so that the very purpose of safety budget is not defeated. The Committee would like to be apprised of the action taken in this regard.

### **Reply of the Government**

#### **Ministry of Coal**

CIL has been advised to take measures for full utilization of Safety Budget.



[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

**Recommendation (Sl.No.72, Para No. 14.13)**

The Committee found that in ECL, MCL, NCL and SECL, there is separate Head of Account for Safety whereas in BCCL and SECL, it does not exist. The Committee also observe that due to non-provision of separate budget provision in some of subsidiaries of CIL, safety related equipment are not supplied on time which is a matter of regret. However, the Committee is happy to note that of late, CIL is formulating a Uniform Accounting Code for this, which will take care of the head off account for safety in all the subsidiaries. The Committee hope that it will be implemented in all subsidiaries within a year without fail as assured by CIL.

**Reply of the Government**

**Coal India Limited (CIL)**

CIL has given due consideration to safety codes while formulating the Uniform Code of Accounting and about 100 separate codes have been allotted for various expenditure concerning safety measurement and equipments. The Uniform Accounting Codes are already being used and are further in process of being implemented by the subsidiaries under the Coal Net System Application Project.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

**Recommendation (Sl.No.73, Para No. 14.14)**

The Committee note that all aspects of mining operations have a safety component. Coal India Limited had undertaken a detailed exercise under which they have identified and codified the safety components of an item to be featured in Safety Budget. The Committee note that Safety Budget plan in CIL is drawn up based on the requirement of the Annual Operation Plan and finalized when Annual Plans of subsidiary companies have been drawn up. The Committee have further found that almost all the subsidiaries of Coal India Limited have separate Budget for Safety related activities. However, there is no uniformity over booking of expenditure under this head. The Committee are of the view that when Safety Components have been separated and codified in CIL, there is a need to have uniformity in this regard in various Coal PSUs. The Committee, therefore, recommend that Coal India Limited should impress upon their subsidiaries to adhere to the codified Safety Component featuring in a Safety Budget. The Committee further find that there is no separate Safety Head in SCCL and NLC. It has been brought to the notice of the Committee that SCCL do not operate separate Head for safety on the grounds that the requirement of safety related items are being procured/obtained on priority basis. On the other hand, NCL have informed that as all the major equipments have in-built safety

devices/mechanism and the cost thereon form part of the equipment, separate head for safety has not been earmarked. NLC has further informed the Committee that operation and maintenance form part of the overall revenue expenses of the company. The Committee do not concur with the views of NLC and SCCL in regard to not having separate Safety Budget. The Committee, therefore, recommend that NLC and SCCL should undertake an extensive exercise in order to identify and codify the Safety Component of an item which can be featured in Safety Budget and have a separate budget for the purpose.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

The subsidiaries have been advised to adhere to uniform safety codes.

#### **Singareni Collieries Company Ltd (SCCL)**

SCCL will follow the recommendation and separate capital budget pertaining to safety has been made for the year 2004-05.

#### **Neyveli Lignite Corporation (NLC)**

Action is being taken now to identify and codify safety component of an item which can be featured in Safety Budget.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

## **CHAPTER III**

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

#### **Recommendation (Sl.No.1, Para No.220)**

The Committee also find that where there is lapse in respect of safety, the worker(s) and at the most, mine level officials are invariably held responsible for the same and the top management left scot-free. In the opinion of the Committee, the top management is equally responsible for such incidents. The Committee, therefore, strongly recommend that top executives of coal companies, who are solely responsible for formulation and implementation of safety policy, should also be held accountable for failure to ensure safety in coal mines. Such an action will undoubtedly improve the safety environment in the mines.

#### **Reply of the Government**

##### **Coal India Limited (CIL)**

The statutory authority for fixing responsibility for fatal accidents is the DGMS. Responsibility for accidents are fixed based on lapses in specific duties to be performed by officials, as laid down in the Mines Act, 1952 and the rules and regulations framed thereunder. Where there is a lapse by the 'Owner or Agent', for omissions in the matters for which he is specifically responsible as per the Mines Act, action is liable to be taken against him as laid down in the Mines Act.

##### **Singareni Collieries Company Limited (SCCL)**

In case of system failure, action is being initiated even against top officials in case of GDK-7 LEP inundation disaster on 16.6.2003, 4 officers were suspended from 20.6.2003 for a period of 11 months. In case of GDK-8. A roof fall disaster on 16.10.2003 three officers have been placed under suspension.

##### **Neyveli Lignite Corporation (NLC)**

The accountability and responsibility on every accident will be decided after the accident investigation/enquiry findings and also depending upon the contraventions made by the employees. It is very clear under section 18(5) of the Mines Act, 1952 that the person who contravenes will be held responsible and guilty.

[Ministry of Coal O.M.No.54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 5, Para No. 2.24)**

The Committee feel that the Coal India Limited should explore the possibility of creating a separate Directorate for conducting Safety Audit in all the subsidiaries and a separate cadre of trained personnel should man such a Directorate. It can then directly report to the Chairman, Coal India Limited.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

CIL has already established a structured multi disciplinary ISO comprising well qualified and well trained personnel who conduct inspections and monitor the implementation of safety measures in mines. The ISO is headed by an Executive Director reporting to the CMD of the company through the Director (Tech.). The Executive Director (Safety & Rescue) in CIL reports to Chairman, CIL through Director (Tech.).

The present system of conducting Safety Audits is by engaging external experts like retired DGMS officers/eminent retired mining engineers from the industry. However, in NCL, where there are no underground mines, a committee consisting of trade union representatives, departmental officers and ISO is conducting Safety Audit.

#### **Singareni Collieries Company Limited (SCCL)**

No separate Director has been posted. CGM (Safety) is heading the Safety Department under the administrative control of Director (Personnel & Projects).

#### **Neyveli Lignite Corporation (NLC)**

In NLC, the Safety Audit is being conducted once in a month by Internal Safety Audit Team and once in 2 years through the external agencies as proposed.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.16, Para No. 3.37)**

The Committee feel that very little has been done to tackle serious economic and environmental problems arising out of the coal fires. Today coal fires are mainly under control in developed countries, but effective techniques for fire fighting are missing in newly industrializing countries. It has been brought to the notice of Committee that a US Mining Engineer had invented high tech means of putting out coal fires. Under this technique, the heat resistant grout, a

mixture of sand, cement, water and foam is pumped around the burning coal and shut off its oxygen supply. This has been used to quench 25 fires in the western US. The Committee desire that the Ministry of Coal/CIL should evaluate this technology to access its effectiveness. If found suitable in terms of cost and effectiveness, it should be replicated for use in our country in phased manner in order to save further damage to the valuable coal reserves.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Applicability of the technology to Indian conditions can be examined if details of the technology/party who developed the same are available. A technique similar to the one referred to by the Committee is commonly used technique in CIL and has been used successfully for tackling fires of individual coal mines like those at New Kendra, Jharia etc.

However, how far the technology is applicable, in vast areas under fire in multiple seams which have been worked by primitive mining practices from the time of 2<sup>nd</sup> World War and whose exact location is often not known, containing areas under fire, waterlogged areas, areas containing noxious gases, in close proximity above/beneath working areas, under conditions of flat gradient, is to be examined very carefully.

#### **Singareni Collieries Company Limited (SCCL)**

Use of foam and CO<sub>2</sub> for inertisation and control of fires has been taken up in BG panels. Help of CMRI is also take upon the usage of sealant component for preventing the fires at two projects in SCCL i.e. Kothagudem and Ramagundam.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the risk of fire is only due to spontaneous heating of Lignite. The periodical inspections/checks are being carried out for any symptoms of spontaneous heating.

The following systems are maintained in NLC Mines for fire Prevention.

- (a) The Lignite stock yards are provided with fire hydrants to spray water periodically over the surface of the lignite heaps to prevent any fire hazards.
- (b) Water quenching facilities are also provided in the lignite bunker.
- (c) The height of the stored lignite in the stock yard is reduced to avoid combustion.

- (d) The fine lignite dust accumulations in the Conveyor galleries water washing is given then and there and the conveyor system is inspected at regular intervals.
- (e) Identification of gaps and bridging of gaps by up gradation of Fire Safety facilities to cope up with the present challenges and hazards.
- (f) In addition to the above, Fire tenders exclusively for the lignite Mines are provided and these Fire Tenders are well equipped and maintained round the clock.
- (g) Spray Lines are provided along the Lignite Carrying Conveyor and in the Lignite cut face also spraying is done wherever needed.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12.1.2005]

#### **Recommendation (Sl.No. 22, Para No. 4.14)**

The Committee express its concern over the fact that updated maps are not displayed at the prominent places and also are not made available to the supervisors, inspectors, mine sirdars and trade unions on the plea that mining safety statutes, as embodied in the Mines Act, 1952 and the Coal Mines Regulations, 1957 framed thereunder, do not specifically provide for display of mining maps at prominent places. The Committee recommend that updated maps should be displayed at the prominent places and given to representatives of Trade Unions as a number of Trade Unions working in various subsidiaries have desired the same before this Committee. If need be, the amendment of Mines Act, 1952 may be carried out for the purpose.

#### **Reply of the Government**

##### **Coal India Limited (CIL)**

Mine Plan like Systematic Support Rules, Escape Routes, Plan showing manner of extraction, etc. are displayed at prominent places. Updated plans are made available to supervisors, mining Sirdars and workmen's inspectors. Mine plans, as & when required by trade unions, are made available to them.

##### **Singareni Collieries Company Limited (SCCL)**

Mine Plans are not displayed at prominent places but they have been given to representative of Trade Unions on requisition.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned the updated maps are being displayed at the prominent places, and the same are being given to the representatives of the Recognized Trade Unions.

[Ministry of Coal O.M.No.54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 23, Para No. 5.20)**

The Committee note that basically DGMS was started as the Bureau of Mines Inspections in 1902 to take care of safety in mining activities. However, over the period, a large number of other functions have been assigned to the Directorate General of Mines Safety (DGMS). This coupled with perennial shortage of staff has affected DGMS capacity to oversee the safety standards in various mines, and especially in coal mines, where the material is always combustible. Even various functions assigned to DGMS may adversely affect its capacity to oversee safety in mines. For example, one of the function of DGMS is to grant statutory permissions and exemptions under the Mines Act, 1952 and review project reports and mining plans. If later on, a mishap occurs in a mine where no mining should have been allowed in the first place, it is doubtful whether DGMS would ever accept this fact while investigating the case of accident in such a mine. In most of the cases, it has been noted that the blame is put on the persons who lost their lives in an accident and the case is closed. Rarely, action is taken against senior persons in management. The Committee feel that there is a need to review the working of DGMS and examine as to which of the functions should be entrusted to them and which can be better handled by some other organization. For example, whether holding of examinations for grant of statutory certificates can be transferred to UPSC or any other organization like Indian School of Mines, etc. can also be considered. DGMS is also responsible for development of safety equipment, material and safe work practices, etc. However, as it is under the control of Ministry of Labour it can hardly be expected to get any support and guidance in these matters from Ministry of Labour. The Committee desire that DGMS should be put under Ministry of Science and Technology and also closely associated with the Council of Scientific and Industrial Research, as it is one of the Science and Technology Organization and de-linked from the Ministry of Labour. The shortage of manpower in DGMS, has affected the periodicity of conducting inspection of mines. In this context, the Committee recommend that cadre review of DGMS be undertaken immediately and need based manpower provided to them. The Committee also desire that an Authority should be established which can hear the appeals against the decisions taken by the DGMS.

## **Reply of the Government**

### **Directorate General of Mines Safety (DGMS):**

Transferring the function of conduction Statutory Examinations from Directorate General of Mines Safety (DGMS) to other Organization:

Statutory Certificates, as required under Coal Mines Regulations, 1957 & Metalliferous Mines Regulations, 1961, is issued by the Board of Mining Examinations (**not DGMS**) consisting of five members (at least three from industry and one from educational institute/scientific body with DG/CIM being the ex-officio Chairman and an officer of DGMS as Secretary of the Board). The examination is, however, conducted by DGMS. The Board, after such examinations, issues statutory certificate to competent persons for supervision & management in mines so as to ensure safe mining operation.

When compared to regular University Examinations, such examinations are essentially different in nature, viz; the level of competence of individual candidate (without any compulsory structured training as in the case of University students) is examined with stress laid on practical aspects of managing/supervising a mine/part of it, besides his theoretical knowledge, keeping in mind the changing scenario of risk in the industry with change in technology level and management practices. The examiners are renowned practicing Mining Engineers from the industry & DGMS/Inspectorate, holding statutory certificate of competency & having wide exposure to the industry. Incidentally, out of five papers of examination, examiners for four are from Industry and only one is from DGMS/Inspectorate.

DGMS, being basically an inspectorate, has the distinct advantage of having wider exposure to the industry & thereby having an in-depth knowledge base in the specialized field of mine safety. Obviously such an advantage had, so far, made it easier for DGMS to conduct such examination efficiently. However, processing large number of application while conducting such examination has been a big job for DGMS, and therefore, strengthening the available infrastructure in terms of providing supporting resources would greatly enhance its efficiency. The Ministry of Labour, therefore, is of the view that since the DGMS is issuing the certificate, it is appropriate that the examinations are conducted by them and not by any other institution.

### **De-linking Directorate General of Mines Safety (DGMS) from Ministry of Labour:**

Under the Constitution of India, safety, health & welfare of workers employed in mines are the concern of the Central Government (Entry 55-Union List – article 246) & so far as Allocation of Business is concerned the Safety of Mines & Oilfields comes under the Jurisdiction of Ministry of Labour. DGMS, being a subordinate office under Ministry of Labour, is encrusted with the



responsibility of administering the Safety Statute in Indian mines. On other countries also, viz, USA similar office (called Mine Safety and Health Administration) is under the Ministry of Labour (called Department of Labour).

To effectively discharge its duties DGMS needs S&T plan scheme. However, collaborative support by Ministry of Science and Technology/Council for Scientific and Industrial Research (CSIR) in this respect may greatly enhance the resource potential.

### **Cadre Review & provision of need based manpower**

Directorate General of Mines Safety (DGMS) being basically an Inspectorate and bulk of its work relates to inspection. In view of the continuing shortage of the front-line inspecting officers, the inspection work of mines is affected considerably. Over the years, the expansion in the mining industry in the country has further aggravated the problem. Provision of need-based manpower, commensurate with the size of mining industry, would definitely have an impact on the overall performance & would allow wider coverage of the industry.

Establishment of an Authority to hear appeal against the decisions by Directorate General of Mines Safety:

The provision under Sec. 12 of Mines Act, 1952 to hear & decide appeals or objections against notices or orders issued by DGMS already exists.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 25, Para No. 5.22)**

The Committee find that one of the institutions to strengthen safety apparatus in the mining industry is in organizing mine conferences from time to time. The aim of these conferences is to review and implement safety in mines in a spirit of mutual cooperation and trust. At these conferences, problems of Mine owners, Managers, Supervisors, Workmen, Ministry of Labour, DGMS and other Government agencies, Educational and Research Institutions, Professional bodies are addressed with a view to enhance the status of safety in mines. The Committee note that first conference was held in the year 1958, 2<sup>nd</sup> in 1966, 3<sup>rd</sup> in 1973, 4<sup>th</sup> in 1978, 5<sup>th</sup> in 1980, 6<sup>th</sup> in 1986, 7<sup>th</sup> in 1998, 8<sup>th</sup> in 1999 and 9<sup>th</sup>, which is the last, in the year 2000. The Committee further find that these mine safety conferences have made far reaching contribution for promoting safety of mines by suggesting useful measures to improve the standard of health and safety in mines. Many of the recommendations have been incorporated in the legislation as well. The Committee find that the periodicity of organizing this conference is not regular. The Committee recommends that a period of 3 to 4

years is desirable for conducting such a conference. The Committee, therefore, recommend that a fixed periodicity be assigned for holding this conference.

### **Reply of the Government**

#### **Ministry of Labour & Employment**

The periodicity of the recommendations of Safety Conference is followed up by Directorate General of Mines Safety (DGMS) by holding tripartite meeting at a regular interval of twice in a year in Coal & once in non-Coal sector. The safety conferences have been held in the past after substantial compliance of the recommendations was observed. However, a periodicity of 3 to 4 years may be maintained.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

#### **Recommendation (Sl.55, Para No. 11.28)**

The Committee find that there is a need to have sectional/departmental Safety Committees so as to focus precisely in a particular area of work. This is all the more necessary because of the fact that these days mining operations are being highly specialized. In a big mechanized mine, there may be areas which technically are so sophisticated that only specialized workers who are continuously engaged in such work, will have the proper understanding of the job concerned. The sectional/departmental Safety Committees can yield fruitful results for ensuring safety in work. The Committee, therefore, recommend that Sectional/Departmental Safety Committee be constituted, under Safety Committee.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

The Pit Safety Committee consists of members representing all major departments of the mine.

#### **Singareni Collieries Company Ltd (SCCL )**

In place of Departmental Safety Committee meetings, members from various departments are opted to participate in Mines Safety Committee meetings.

## **Neyveli Lignite Corporation ( NLC )**

As far as NLC is concerned, the Sectional/Departmental Safety Committee is constituted, under the Safety Committee.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.62, Para No. 12.19)**

The Committee note that there does not exist a separate cadre for training in any of the coal companies. Officials from all disciplines are posted in Training Centres without any yardstick to see whether they can impart any meaningful training. The Committee, therefore, recommend that CIL should review its policy and post only trained and qualified personnel at the VTCs or other training centres run by the CIL or its subsidiaries and set up a separate/cadre for training. It should be staffed by qualified professionals in mining and allied disciplines like electrical/mechanical engineering, occupational health, law, mine surveying and statistics. Taking into consideration that a trained manpower is hope for the future, special dispensation, monetary or otherwise, should be thought for the instructors. The Committee also recommend that the CIL should set up a unified Vocational Training School/College for all its subsidiaries so that a standardized training can be imparted to different categories of mine personnel.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

CIL is presently having a separate cadre for training known as Management Development and Training (MD&T). CIL is trying to locate people having interest in Training and for posting in the Training Department. Qualified personnel are posted in the VTCs and structural training programmes as per the recommendations of the "National Tripartite Workshop" held on 7<sup>th</sup> & 8<sup>th</sup> January 1999 at DGMS, Dhanbad, on revised modules for Vocational Training in mines. The programmes were designed by DGMS. Apart from this, need-based programmes are also being conducted regularly in CIL's VTCs. According to the recommendation of the Committee, CIL has set up Vocational Training Centre (VTC) in all Subsidiaries where the standardized training are being imparted for different categories of mine personnel.

It will not be out of place to mention here that CIL has special training Institute viz. Coal India Training Centre on Long wall mine mechanization at Moonidih, BCCL, CIL Training centre at Dishergarh, ECL.

## **Singareni Collieries Company Ltd (SCCL)**

Out of 8 training centres, First Class Mine Managers have been provided and at 6 (six) Training Centres retraining programme is imparted to the In-charge of MVTCs to improve their skills. Officers are posted at MVTC on rotation basis. At present experienced executives are posted in Training departments as a part of career planning. Soon after posting, they are sent for training at a reputed Institutions.

SCCL is utilizing the services of experienced executives from Electrical, Mechanical and Survey discipline for their training programmes. For this purpose every year SCCL is arranging training programmes for their executive. SCCL is contemplating to send its executives for training on specialized jobs at the Unified Vocational Training School/College to be started by Coal India Limited. In the meanwhile Indian Institute of Coal Management, Ranchi can be entrusted this work. SCCL have already sent their executives for attending various training programmes at IICM, Ranchi.

## **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, a full fledged Vocational Training Centre is available and only qualified Professionals in Mining and allied disciplines like Electrical/Mechanical Engineering, Occupational Health, Law, Mine surveying and Statistics are handling the classes for the participants.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.70, Para No. 13.22)**

The Committee further note that dust control measures in the coal mines are not as rigorous as they should have been. Methane gas ignition and coal dust clouds are commonly noticed in the underground mines. The Committee, therefore, recommend that Government (Central/State) at the time of giving lease of land for coal mining, whether opencast or underground, should impose a complete ban on dry drilling. Necessary amendments may be made in Mines Rules for use of water on cutter bars of all mining machines while cutting rock of coal in the mines and on all Jackhammer drills while drilling in the mines either coal or rock. Latest gas monitoring equipment should always remain in order to constantly monitor the presence of gases.

### **Reply of the Government**

#### **Ministry of Labour & Employment**

The requirement of Regulations 123(6) of CMR 1957 specifically prohibits dry drilling/cutting to prevent liberation of dust. Regulation 123 in general

specifies precautions against dust/dust control measures in coal mines. In respect of inflammable gas, measurement/monitoring provisions already exist under Regulation 145(I) of CMR 1957 and continuous monitoring is made mandatory in mechanized winning process in gassy seams while granting permission for such process under relevant law. This is also emphasized in the recommendation of Sixth Conference on Safety in Mines.

### **Ministry of Coal**

Health and Safety aspects of workers are adequately covered under relevant statute and there is no need for imposing such conditions for grant of mining lease.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

## CHAPTER IV

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

#### **Recommendation (Sl.No.4, Para No. 2.23)**

The Committee also observed that although safety audit is required to be conducted once in two years, yet there is no uniformity in undertaking the safety audits by the subsidiaries of Coal India Limited (CIL) and other coal companies. The Committee had found that the periodicity for conducting safety audit varies from one month to three years in coal subsidiaries. The Committee, therefore, recommend that CIL should review their orders and frame guidelines for conducting regular safety audit at uniform interval of time.

#### **Reply of the Government**

##### **Coal India Limited (CIL)**

A uniform periodicity for all mining companies may not be a practical approach in view of the fact that whereas some companies have lesser number of mines (less than 10) and that too with only opencast workings, the number of mines in other companies is in the order of 90s with very complex underground workings in many seams.

Keeping this in view, it was decided in the Co-ordination Meeting of Director (Tech), CIL with Chiefs of Safety of companies on 14<sup>th</sup> May, 2002 that Safety Audits are to be conducted every year where the same is the practice and in other companies, this shall be completed every 2 year.

##### **Singareni Collieries Company Limited (SCCL)**

Safety audit at all the mines conducted once in a year before the onset of monsoon. In addition to the above, during the year 2003, two more Special Safety Audit Inspections were carried out, one immediately after the occurrence of inundation disaster at GDK-7 LEP and the other one after the roof fall disaster at GDK-8A Inc. All the shortcomings pointed out during above inspections have been rectified. ISO coordinated all the works.

##### **Neyveli Lignite Corporation (NLC)**

In NLC, the Safety Audit is being conducted once in a month by Safety Audit Teams which are formed exclusively for SME equipments/Conveyors and by the Pit Safety Committee in addition to the routine safety inspection at Mine level, as well as by the Central Safety at Corporate level. Apart from the above, the Risk Assessment and Safety Audit was conducted in all the Mines during the

year 2003 through the external expert M/s Society for Mining Research Sustainable Development and Environment, Dhanbad headed by a retired DGMS. It is also proposed to conduct the similar Audits once in 2 years.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Comments of the Committee**

(Please see Para 11 of Chapter I of the Report).

### **Recommendation (Sl.No. 17, Para No. 3.38)**

The Committee have recognized the urgent need for making the emergency plan responsive, speedy and effective in each mines. The Committee, therefore, recommend that each mine should review the existing emergency plan at higher level keeping in view the risk from fire. There is also a need of stabilizing rescue rooms in coal mines having risk of fire where more than 350 persons have been employed in a shift in underground mine. The feasibility of storing oxygen type of rescuer at strategic places in underground mine with the risk of fire in an emergency situation should also be explored. The coal companies should also formulate and implement structured training programmes for the miners, officials and management to develop awareness and increasing effectiveness of emergency response in case of fire.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Emergency Action Plan are reviewed in the course of Inspections by Internal Safety Organisation (ISO). However, fresh directions have been issued for review of Emergency Action Plans at a higher level.

The present Mines Rescue Rules, 1985 require establishment of Rescue Rooms in underground mines where on an average more than 100 persons are employed daily and there is no Rescue Station within radius of 35 km. provided that it is sufficient to provide one Rescue Room for a number of mines belonging to the same owner, if the total number of persons ordinarily employed in all such mines does not exceed 5000 and the mines are situated within a radius of 35 km and connected by road.

The feasibility of storing oxygen type of rescuer at strategic places in underground mine with the risk of fire in an emergency situation is being examined. However, this suffers from the disadvantage that the site of storage of oxygen type self rescuers may not be accessible at the time of emergency

Training programmes for executives and supervisors cover awareness about emergency response for various emergencies including fire.

### **Singareni Collieries Company Limited (SCCL)**

Consultative Committee emergency organisation will review existing emergency plans on quarterly basis and modify emergency plans.

Fire prone mines were identified and establishment of rescue rooms would be completed within nine months.

300 oxygen type self-rescuers are being procured and they would be stationed initially at rescue stations and later on, it is proposed to position them at strategic points in underground at identified fiery mines. Structured training programme has been developed for officers and staff to deal with fire accidents. For miners, it is in the formulation stage and would be completed within one year. A total of 480 persons have been identified for training.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, as per the recommendation of the IX Conference on Safety in Mines, a Structured Training Programme has been formulated for all the Miners, front line supervisory officials etc, in NLC Mines on Fire Prevention to develop awareness and increasing effectiveness of emergency in case of fire. The duration of the Structured Training Programme has been programmed for a week during the Training Calendar 2004-05 in addition to Fire Prevention Mines Act, Rules & Regulations. Mine Operations, Identification of Hazards, First Aid, Worker's Participation in Safety Management etc.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated : 12.1.2005]

### **Comments of the Committee**

(Please see Para 36 of Chapter I of the Report)

### **Recommendation (Sl.No. 24, Para No. 5.21)**

The Committee find that DGMS does not part with copy of enquiry report conducted by them in the aftermath of the fatal coal mine accidents either to Trade Unions or its representative/Members of Tripartite Safety Review Committee. In fact, the Report of DGMS is never made public. On the other hand, the Internal Safety Organisation (ISO) enquiry report was made available to the management and /or Trade Unions and is discussed in the Tripartite Safety Committee. The Committee were of the view that when Reports of Enquiry Committee constituted in the aftermath of Rail/Air accidents, etc. are



made public, there is no justification or rationale, whatsoever, in withholding the DGMS Enquiry Committee Reports from public. The Committee, therefore, recommend that inquiry reports of DGMS should be made public and copies thereof should be made available to concerned Trade Unions.

### **Reply of the Government**

#### **Directorate General of Mines Safety (DGMS)**

The provision under Sec.10 of Mines Act 1952 restricts such reports to be made public. However, the cause portion of the enquiry reports are published in DGMS Annual Report (a public document) & also intimated to the mine management while communicating charge against them. Further, on specific requisition from any other authority as indicated under Section 10(2), which includes registered/recognized trade union, the findings of the report are furnished keeping in view of the provisions of Sec. 10 of Mines Act 1952.

[Ministry of Coal O.M.No. 54012/1/04-CRC      Dated: 12.1.2005]

#### **Comments of the Committee**

(Please see Para 52 of Chapter I of the Report).

#### **Recommendation (Sl.No.26, Para No. 5.23)**

The Committee find that in the event of a mine accident, there is a tendency of multiple disciplinary action simultaneously emanating from different authorities like ISO/DGMS and local police. The Committee are of the view that there is need to curb disciplinary action by multiple agencies and only one authority should be authorized for taking action, as in the case of the Railways. Further, multiple outside interventions for taking action, as in the case of the Railways. Further, multiple outside interventions affect timely rescue operations and cause demoralization to the workers and officers. The Committee note that in case of Railways, enquiry after accident is conducted by a single agency i.e. Commissioner of Railways, where officers are on deputation from Railway. The police or other authorities do not come into picture, except in case of sabotage. It is in this context that Committee recommend that DGMS, which is empowered by the Mines Act, 1952, fix responsibility and prosecute persons held responsible in a Court of Law for awarding punishment, should be sole authority for fixing responsibility of awarding punishment in case of mine accidents. This is all the more important as a person appointed by the Central Government to hold Court of Enquiry has all the powers of Civil Court (Section 24 of the Mines Act, 1952). The Committee also recommend that Mines Act, 1952 be amended, if need be for ensuring protection to a miner in this regard.

## **Reply of the Government**

The question of parallel enquiries by police authorities into the mining accidents had earlier been examined by Ministry of Labour and all the State Governments were requested in the year 2000 that where an Inspector of Mines had commenced an enquiry into mining accidents, no Police Officer should start a fresh enquiry until the enquiry in progress had been completed by the authorities of the DGMS.

On making Directorate General of Mines Safety (DGMS) the sole authority to fix responsibility/awarding punishment in case of mine accident, Government has no objection.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

## **Comments of the Committee**

(Please see Para 56 of Chapter I of the Report).

## **Recommendation (Sl.No.45, Para No. 9.16)**

The Committee note that as per the provision of Mines Rescue Rules, 1985, it is the responsibility of the owner to establish and ensure functioning of rescue room or rescue station and also to provide rescue equipment and apparatus as may be necessary for compliance of these rules. The Committee further note that coal subsidiaries have well elaborated and structured rescue organization manned by trained personnel and equipped with modern state-of-the-art equipments. However, the past experience have shown that whenever any accident has taken place, the rescue operations have been delayed considerably leading to loss of lives of workers which otherwise could have been saved. It has been brought to the notice of the Committee that the system of keeping rescue teams always alert is not visible and members of the Rescue Team are assigned day-to-day mine work. Further, at the time of emergency, the rescue teams have failed to counter emergency, as they were ill equipped. The Committee expressed their displeasure over this and recommend that a totally dedicated work force at the site be raised for the purpose. The Committee also desire that special perks and pre-requisite for rescue operation should be introduced. At the same time, the response time for undertaking rescue operations be further reduced from the present level of 30 minutes. The Committee also recommend that for curtailing delays in starting of rescue operations at emergency sites, periodical integrity emergency stimulation exercise be conducted at least twice a year and the reasons for delay identified and corrective action taken thereon. The Committee further recommend that the rescue equipments and accessories such as high capacity dewatering pumps, gas masks, fire extinguisher, etc., should always remain in readiness especially in underground mines and periodically checked to ensure their preparedness.

The Rescue Team should be imparted extensive and rigorous training and given accommodation closer to rescue station/rescue room so that they could report at the time of emergency without loss of time.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

When the Committee stated that “the Rescue Team are assigned day-to-day mine work”, it appears that the Committee is referring to the Rescue Trained Persons (RTPs) stationed at each underground mine, as reserves, in addition to the permanent Rescue Brigades at the Rescue Stations and Rescue Rooms. Such RTPs are permitted to perform their normal duties except when called upon to undertake Rescue work.

Rescue Organisation dedicated solely to undertake rescue work is always kept on alert and kept well equipped.

Rescue Allowance payable for each Rescue Practice has been suitably enhanced. In addition Annual rescue bonus is also paid to Rescue workers.

Rescue Trained persons are imparted four rigorous Rescue Practices in mines and four under simulated hot and irrespirable atmosphere in state-of-the-art Training Galleries every year.

Rescue Apparatus undergo rigorous periodic tests to ensure that the same are always kept in readiness.

#### **Singareni Collieries Company Ltd.(SCCL)**

As per statute, rescue trained personnel required to be provided are 584. Over and above the requirement 20% additional rescue trained personnel have been provided among the mines of SCCL.

Enhancement of perks is being done on the recommendation of JBCCI. However, in SCCL, it is proposed to enhance the existing allowances over and above the JBCCI recommendations by 35%.

Emergency rescue vehicles fully loaded with equipment are being kept in Air-conditioned garages to reduce the response time to 10 minutes.

Training is being imparted in the galleries 4 time in a year. One new training gallery has been established on surface at GDK. Two more such galleries are proposed to be established one at KGM and one at BPA region at rescue stations.

All Rescue Stations are being equipped with rescue equipment as per statute.

9 Nos. of high gallonage and low-head submersible pumps are being procured and would be installed and kept in readiness at rescue stations.

30 Nos. of latest model BG4k breathing apparatus has been obtained over and above 166 Nos. of BG 174 breathing apparatus.

100 Nos. of fire extinguishers are being kept in readiness at rescue stations to cater the needs of emergency.

As per statute, training is being imparted to all rescue trained personnel.

There are 6 rescue service points catering to the rescue needs of 67 mines of SCCL. Three rescue service points situated at Kothagudem, Godavarkhani and Bhoopalpalli have been provided with accommodation to its bridged members and other essential staff within the rescue station premises.

At the other rescue service points, accommodation has been provided in the nearby colonies.

### **Neyveli Lignite Corporation (NLC)**

NLC is operating mechanized opencast mines. More than one route is available to all the benches for any emergency. The same are known to the employees, workmen etc. and are being monitored regularly.

The emergency mock drills are being conducted at required intervals and if any delay is identified, the corrective action is also taken.

[Ministry of Coal O.M .No . 54012/1/04-CRC Dated: 12.1.2005]

### **Comments of the Committee**

(Please see Para 79 of Chapter I of the Report).

### **Recommendation (Sl.No.60, Para No. 11.33)**

It has been brought to the notice of the Committee that senior officials from Ministry of Coal, Chairman and Managing Directors of coal subsidiaries seldom visit coal mines, especially underground. As a result, they are not aware of the ground realities in coal mines. The Committee recommend that senior officials in the rank of Joint Secretary and above in the Ministry of Coal should undertake surprise visit of underground mines at least once a month and thereby keep themselves abreast with the latest mining status in the mine. Similarly, all

CMDs should also conduct surprise visit of underground mines on safety periodically.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

CMDs are making visits in underground mines. However the recommendation of the Committee has been circulated for needful action.

#### **Singareni Collieries Company Ltd (SCCL)**

CMD is conducting surprise visits to underground mines.

#### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, the Senior Officials including the CMD are conducting surprise visit of the Mines periodically.

#### **Ministry of Coal**

Senior Officers of the Ministry do visit mines as and when required.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Comments of the Committee**

(Please see Para 91 of Chapter I of the Report).

#### **Recommendation (SI.No.63, Para No. 12.20)**

There is also a need to develop clear-cut curriculum for different trainings being imparted at VTCs so that the level of training can be raised. At the end of training some type of examination can be held so that miners take it seriously. Those who pass the examination be given increments, etc., as an encouragement. The Committee also find that VTCs are not being inspected by DGMS due to shortage of staff. The Committee do not approve this and recommend that DGMS should inspect VTCs once in a year without fail.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

There is a clear-cut curriculum for the different trainings imparted at VTCs under the Vocational Training Rules. Also, a clear cut detailed curriculum was prepared by the DGMS as Training Modules and circulated and includes 5

modules for (1) Surface, (2) UG Workers, (3) OC workers, (4) Specific categories of OC workers/Supervisors, (5) Specific categories of UG workers/supervisors.

There is a provision for feed back and test for which 1-2 days have been specially allocated in the Training Modules.

### **Singareni Collieries Company Ltd (SCCL)**

DGMS staff visits MVTCs occasionally.

Gas Testing Examination, Mining Sirdar Examinations are being held at Training Centres. These examinations are conducted by DGMS, during the time they are overseeing MVTC activities such examinations are being taken minimum 4 times in a year at each MVTC.

### **Neyveli Lignite Corporation (NLC)**

As far as NLC is concerned, DGMS is visiting the Group Vocational Training Centres at regular intervals at least once in a year.

### **Ministry of Coal**

The recommendation of the Committee has been circulated to DGMS for necessary action.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Comments of the Committee**

(Please see Para 99 of Chapter of the Report).

## CHAPTER V

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

#### **Recommendation (Sl.No.28, Para No.5.25)**

The Committee find that the present Mines Act was enacted in the year 1952 for regulating the working conditions in mines by providing for measures to be taken for the safety of the workers employed therein and to provide certain amenities to them. The Mines Rules, 1955, Mines Vocational Training Rules, 1966 and Coal Mines Regulations were framed under the Act. The Committee further find that the Coal Mines Regulations primarily deal with the underground mining only. At present, there is no regulations for opencast mining and regulations for underground mining are made applicable to them. Taking into consideration that more than 75% of coal is extracted from the opencast mines, there is a need for separate Regulations for opencast mines also. At the same time, the Committee are of the view that there is a need for change in the Mines Act, 1952. Similarly, the Rules/Regulations have not kept pace with the development taking place in the coal mining sector. Thus, there is also a need to examine these Rules/Regulations/Orders afresh. The Committee, therefore, desire that Government should review the Mines Act, 1952 and the Rules/Regulations/Orders made thereunder in the light of latest development taking place in the mining sector and amend the relevant Act, Rules, Regulations, etc.

#### **Reply of the Government**

##### **Ministry of Coal**

The Mines Act, Regulations and Rules are administered by Ministry of Labour & Employment. The Government/Ministry of Labour agree that there is need for periodical review of Mines Act & its subordinate Rules & Regulations. In fact, this is an ongoing exercise that the government/DGMS have been doing on regular basis.

As far as Opencast Regulation is concerned, draft Opencast Regulations has been framed and circulated to all concerned for eliciting comments. Comments have since been received by Ministry of Labour & Employment. The matter is under process.

[Ministry of Coal.O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 49, Para No. 10.11)**

The Committee note that in the event of death of a mine worker, the benefits under Workmen's Compensation Act, 1923, Ex-gratia payment as per National Coal Wage Agreement, life cover scheme payment of Rs.30,000, Provident Fund, Coal Mines Pension Scheme etc., is admissible to a mineworker. The Committee further note that there is no insurance scheme for the Coal India Limited (CIL) as a whole. However, there are some insurance schemes/Benevolent Schemes in the subsidiaries and payment made as per the schemes. Coal subsidiaries; namely MCL, WCL and SECL had insurance schemes for the workers and executives from Nationalized Insurance Companies. The Committee are pained to note that the insurance company unilaterally withdrew the scheme after some period in MCL Insurance Schemes for WCL and SECL were also dispensed with. Whereas WCL and SECL had gone to the Court against the unilateral withdrawal of the scheme by insurance company, MCL's efforts to get the scheme restarted did not yield any results. The Ministry of Coal/Coal India Limited did not take up the matter with Ministry of Finance on the ground that the scheme was introduced with the mutual understanding between MCL and Oriental Insurance Company and they were not involved in any way under this scheme. The Committee do not approve of inaction in any way under this scheme. The Committee do not approve of inaction on the part of the Ministry of Coal should take up all the three cases with the Ministry of Finance at the highest level for an amicable solution. At the same time, the Committee strongly recommend that as coal mining is a hazardous occupation, and exclusive Group Insurance Scheme be arranged for the benefit of coal mine workers.

### **Reply of the Government**

The matter has been taken up with Ministry of Finance. Ministry of Finance have informed that since the matter is sub-judice and the contempt petitions have been filed, it will not be appropriate for the Ministry of Finance to intervene at this stage.

[Ministry of Col O.M.No.54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No. 65, Para No. 12.22)**

The Committee feel that with the rapid changes in the technology, the prescribed period of 5 years for undertaking training as per MVTD, 1966 need to be re-examined. The Committee desire that the appropriate period of training ought to be 2-3 years, instead of 5 year. The Committee would like to be apprised of the action taken by Ministry of Coal in this regard

### **Reply of the Government**

**Ministry of Labour & Employment**



The Rule 9 of Mines Vocational Training Rules (MVTR) 1966 stipulates the periodicity of refresher training as “at least one fifth of the person employed per year”, i.e. at 5 years interval.

The requirement of the law does not bar mine operators to impart training at lesser intervals.

## **Ministry of Coal**

Recommendation of the Committee along with the comments of Ministry of Labour & Employment has been circulated to coal companies for consideration.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

### **Recommendation (Sl.No.67, Para No. 13.19)**

The Committee have noted that coal miners continue to be exposed to harmful dusts and fumes. The prolonged exposure of miners to coal dust causes pneumoconiosis, which has been identified as occupational disease prevalent in coal mines. Besides this, silicosis, Manganese poisoning, asbestosis and cancer of lungs, stomach and pleura, have been identified as occupational health hazard. In WCL alone, 524 cases of occupational diseases have been identified, after the Nationalisation of coal mine industry in 1971 and 1973. Similarly, in other subsidiaries also, a good number of patients have contracted occupational diseases. The Committee have noted that the Periodical Medical Examination (PME) of workers is conducted at an interval of five years. The Committee are of the view that this period is too long. The Committee, therefore, desire that the matter should be re-examined in consultation with the experts/specialized hospitals in the country and the time limit should be re-fixed. For this purpose, the help of Ministry of Health should be taken. CIL should also undertake a survey for comprehensive study of the Occupational Diseases in collaboration with the reputed institutes like National Institute of Occupational Health, Ministry of Health, ILO, UNDP, Educational and Research Institutes in India. In the opinion of the Committee, this will help in taking preventive measures so that the workers are not affected any further.

### **Reply of the Government**

#### **Coal India Limited (CIL)**

Occupational diseases are chronic in nature taken years for manifestation of the diseases as such the present system as per the miner Rules, 1955 which states that for periodical medical examination thereafter (i.e. after the initial medical examination of every person employed in Mine) of every person

employed in mine at intervals of not more than five years is more logical and effective in identification and treatment of any employee. However, the employee if he suffers for any ailments always has the option to report to the company hospital for treatment and if diagnosed of suffering from occupational disease immediate steps are taken for its treatment to the Occupational Disease Board.

As recommended a committee being formed to make comprehensive survey of occupational diseases in Coal Industry. If needed, other institutions will also be involved. Further action will be taken on the basis of the committee report.

### **Singareni Collieries Company Ltd (SCCL)**

The main aim of the PME is to detect the occurrence of occupational diseases pertinent to the industry at an early stage itself so that necessary interventions could be instituted. The occupational disease in case of coal industry is Coal Workers Pneumoconiosis and it takes long time to present early discernable changes to be seen on examination. Hence the periodicity of medical examinations of 5 years is enough to detect any early changes suggestive of the occupational lung disease to be detected.

However, for other morbid conditions viz., Hypertension, Diabetes etc., the periodicity at lesser intervals is of much use. Frequent medical examination and treatment is given to those with the chronic disease as mentioned above at regular intervals is in practice at SCCL.

### **Neyveli Lignite Corporation(NLC)**

As far as NLC is concerned, the periodical study is being conducted to identify and to detect emerging occupational health hazards like Silicosis and Pneumoconiosis and like. But no such cases were identified as occupational diseases in NLC so far.

[Ministry of Coal O.M.No. 54012/1/04-CRC Dated: 12.1.2005]

NEW DELHI;  
21 March, 2005  
30 Phalguna, 1926 (Saka)

ANANTH KUMAR,  
Chairman,  
Standing Committee on Coal & Steel.

## ANNEXURE I

### MINUTES OF THE EIGHTH SITTING OF THE STANDING COMMITTEE ON COAL AND STEEL (2004-05) HELD ON 21<sup>ST</sup> MARCH, 2005 IN COMMITTEE ROOM 'D', PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee met from 1700 hrs. to 1815hrs.

#### PRESENT

Shri Ananth Kumar - In the Chair

#### MEMBERS

2. Shri Hansraj G.Ahir
3. Shri Harischandra Chavan
4. Shri Bikash Chowdhury
5. Shri Chandra Sekhar Dubey
6. Shri Faggan Singh Kulaste
7. Shri Vikrambhai Arjanbhai Maadam
8. Shri Dalpat Singh Paraste
9. Shri E.Ponnuswamy
10. Smt. Karuna Shukla
11. Shri Ramsewak Singh (Babuji)
12. Shri Devdas Apte
13. Shri Ramadhar Kashyap
14. Capt.Jai Narayan Prasad Nishad
15. Shri Vidya Sagar Nishad
16. Shri G.K.Vasan

#### SECRETARIAT

1. Shri A.K.Singh - Director
2. Shri Shiv Singh - Under Secretary

2. At the outset, Chairman welcomed the Members to the sitting of the Committee. Thereafter, the Committee considered and adopted the following Draft Reports:

- (i) \*\* \*\* \*\* \*\*
- (ii) Action Taken Report on the recommendations contained in the Forty Seventh Report of the Standing Committee on Energy (2004) on the subject "Safety in Coal Mines".

3. The Committee adopted the aforesaid Draft Reports with minor additions/deletions/amendments.

4. The Committee authorized the Chairman to finalise these Reports after making consequential change arising out of factual verifications by the concerned Ministries and to present the same to both the Houses of Parliament.

The Committee then adjourned.

ANNEXURE II  
(Vide Para IV of the Introduction)

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE  
RECOMMENDATIONS CONTAINED IN THE SEVENTH REPORT OF THE  
STANDING COMMITTEE ON COAL AND STEEL

I.	Total No. of Recommendations made	73
II.	Recommendations that have been accepted by the Government (vide recommendation at Sl.Nos. 1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 50, 51, 52, 53, 54, 56, 57, 58, 59, 61, 64, 66, 68, 69, 71, 72 and 73).	53
	Percentage of total	72.60%
III.	Recommendations which the Committee do not desire to pursue in view of the Government's replies (vide recommendation at Sl.Nos.2, 5, 16, 22, 23, 25, 55, 62 and 70).	9
	Percentage of total	12.32%
IV.	Recommendations in respect of which replies of the Government have not been accepted by the Committee (vide recommendation at Sl.Nos. 4, 17, 24, 26, 45, 60 and 63).	7
	Percentage of total	9.58%
V.	Recommendations in respect of which final replies of the Government are still awaited (vide recommendation at Sl.Nos.28, 49, 65 and 67).	4
	Percentage of total	5.47%