



सत्यमेव जयते

भारत सरकार

Government of India

श्रम एवं रोजगार मंत्रालय

Ministry of Labour & Employment

खान सुरक्षा महानिदेशालय

Directorate General of Mines Safety



No. DGMS (Tech) (SOMA)/ Circular No. 03

Dhanbad

dated, 21/08/2024.

To

All Owners, Agents and Managers of Opencast Mines Coal Mines

**Subject: Ensuring Safety in Opencast Coal Mines: Preventing Accidents Involving Wheeled Trackless Transportation Machinery.**

I invite your attention to the alarming increase in accidents involving wheeled trackless transportation machinery, specifically dumpers, tippers, etc., in opencast coal mines. The analysis of fatal accidents in 2023 revealed that 36% of them were caused by dumpers, tippers, trucks, and similar vehicles. Among these accidents, 46% were due to run-overs, 23% were caused by being hit by dumpers, 15% by head-on collisions, 8% by toppling, and 8% by other causes, such as the fall of dumpers from a height.

I urge your immediate attention to the following incidents occurred this year, illustrating the urgent need for action.

**Few Accident cases:**

1. While an empty dumper was being parked in the parking yard of an opencast coal mine, another dumper operator, who was present in the parking yard after parking his dumper, was run over by it and succumbed almost instantly.
2. While a tipper was on the way back to the opencast coal mine after unloading coal at SILO bunker, the operator lost his control over the tipper in the process of negotiating a curve along the road due to over speeding and hit an abandoned building adjacent to the road resulting in his fatal injury at the spot.
3. While driving a loaded water tanker from the water loading point to the workshop for scheduled maintenance, the operator stopped the water tanker on the haul road having a mild gradient (1 in 22) in an opencast coal mine, got down the ladder located at the front side of the water tanker, fell down on the ground. Meanwhile, the water tanker moved forward and rolled over him, and he succumbed to his injuries almost instantly.
4. While a CSIF person entered the dump yard unauthorisedly, he was run over by a dumper.
5. While a hired Bolero vehicle, driven by an untrained and unauthorized driver with six employees, was overtaking a 100T Dumper on the haul road approaching towards an overburden loading face in an opencast coal mine; it was hit, toppled, and dragged for about 6m by the Dumper, inflicting fatal injuries to three persons and serious bodily injuries to three persons.

6. While a jeep camper was stopped along the haul road, it was hit by a dumper leading to the death of 2 persons.
7. While a tipper was moving along the haul road, it hit another tipper, leading to a head-to- tail collision of tippers causing the death of the tipper operator.
8. While a tipper operator got down from the tipper at the working face in an opencast coal mine, the tipper started moving down the gradient, and when the operator tried to board the moving tipper, it collided with another tipper parked idle aside, crushing the operator in between and causing him fatal injury.
9. While a person engaged for guiding unloading of dumpers carrying overburden to form a platform for the coal stock yard near the CHP was taking rest in that area, inadvertently overburden was dumped over him, inflicting fatal injuries.
10. While a supervisor was standing aside a haul road, a tipper hit him.

All these accidents could have been prevented had the following statutory provisions been complied:

**Procedure, Compliance and Documentation:**

1. If the dumper operator had followed the Safe Operating Procedures (SOP) framed for dumper operation and given an audible warning signal while parking the dumper in the parking yard, as required under Regulations 63(g) of the Coal Mines Regulations, 2017.
2. If the parking brake had been applied by the operator while getting down from the Tipper, as per SOP issued for Tipper operation under Reg. 110 of the Coal Mines Regulations, 2017.
3. If the Tipper had been operated on the left side of the road and carefully within speed limits, thereby following the traffic rules as per Reg. 63(1)(d); Reg. 40(1) and Reg. 239 of the Coal Mines Regulations, 2017.
4. If untrained and unauthorized drivers without valid driving licenses had not been allowed to drive light motor vehicles, thus not negligently endangering the lives of persons riding them, as required under Regulation 239 read with Regulation 40(1) and Regulation 109(1) of the Coal Mines Regulations, 2017, read with the traffic rules issued by the Manager.
5. If authorization had been issued by the Manager to the drivers operating light motor vehicles in the mine, as required under Regulation 35(5) of the Coal Mines Regulations, 2017.
6. If the provision of fail-safe brake had been ensured before deploying the Tipper into operation, as per Gazette notification G.S.R. 987(E), Dhanbad, the 1st October, 2018, on "Safety features and devices to be provided in Heavy Earth Moving Machinery (HEMM) including trucks and tippers" under Reg. 216(2) of the Coal Mines Regulations, 2017.
7. If a separate road had been provided for Light Motor Vehicles plying in the mine, as required under Regulation 101 of Coal Mines Regulations, 2017, read with clause no.7 of the gazette notification no. G.S.R. 976(E), Dhanbad, the 1st October, 2018 on "Conditions for Haul Roads" under Regulation 101 of the Coal Mines Regulations 2017
8. If the Dumper had been provided with suitable blind spot mirrors or cameras to cover all blind areas and a proper Proximity warning system to warn the Operator or an anti-collision device been provided as required under the Regulation 216(2) of the Coal Mines Regulations, 2017, read with gazette notification No. G.S.R. 987(E) Dhanbad, the 1st October, 2018 on "Safety features and devices to be provided in Heavy Earth Moving Machinery (HEMM) including trucks and tippers".



### **Preventing Unauthorized Access/ Access without safety:**

1. If the system of recording names in the register before proceeding to work had been implemented for hired light motor vehicle drivers, as required under Regulation 40(3) of the Coal Mines Regulations, 2017.
2. If the hired light motor vehicles had been provided with suitable red flags or flasher lights to improve visibility to Dumper Operators, thus not negligently endangering the lives of the persons riding them, as required under Regulation 239 the Coal Mines Regulations, 2017 read with the Safety Management Plan prepared by mine management.
3. If adequate lighting arrangements had been ensured, as required under Regulation 178 read with Government Gazette Notification No. 981(E) dated 01.10.2028.
4. If individuals had not entered unauthorized places.
5. If pedestrians had been prevented on haul roads.

### **Training:**

1. If copies of transport rules had been handed over to light motor vehicle drivers and their compliance ensured, as required under Regulation 109(2) (3) of the Coal Mines Regulations, 2017.
2. If vocational training had been imparted to light motor vehicle drivers before allowing them to duty in the mine, as required under Rule 6(1) of the Mines Vocational Training Rules, 1966, read with Regulation 39(2)(a) 217(2) of Coal Mines Regulations, 2017.
3. If the SOP framed for Motor grader/Water tanker operations had been followed, particularly when it was required to get down from the Water Tanker. The driver would follow the operating procedure to shut off a running water tanker like engaging the parking brake before the ignition switch is turned off, applying and retaining the service brake till the parking brake is engaged. Extra precaution would be taken by giving sufficient jam on both sides of the wheel if it was unavoidable to park on a gradient to prevent inadvertent movement of the water tanker, as required under Regulation 110 of the Coal Mines Regulations, 2017.

### **Supervision and awareness:**

1. If it had been ensured that the place of coal stock yard and persons engaged there were placed under the charge of a statutory supervisor, in compliance with Regulation 129(1) of Coal Mines Regulations 2017.
2. If employees had taken reasonable care for their own safety by not entering the operating area of the dumpers, thus not endangering their own safety, in compliance with Regulation 239 read with Regulation 40(1), 40(4)(a) of the Coal Mines Regulations, 2017.
3. If transport rules had been followed, maintaining an adequate distance from other vehicles.

I am confident that taking appropriate steps will go a long way in preventing accidents involving wheeled trackless transportation machinery in opencast coal mines.

  
21.08.2024

**(Prabhat Kumar)**  
**Director General of Mines Safety &**  
**Chief Inspector of Mines**