

GOVERNMENT OF INDIA  
MINISTRY OF MINES  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 917**  
ANSWERED ON 11.12.2023

**FUGITIVE DUST EMISSIONS FROM OPENCAST MINES**

917. MS. DOLA SEN:

Will the Minister of MINES be pleased to state:

- (a) whether Government is working on addressing fugitive dust emissions resulting from opencast mining activities and the use of heavy machinery;
- (b) if so, the details thereof and if not, the reasons therefor;
- (c) whether any specific guidelines or technological interventions are in place to minimize fugitive dust emissions during mining operations; and
- (d) if so, the details thereof and if not, the reasons therefor?

**ANSWER**

THE MINISTER OF MINES, COAL AND PARLIAMENTARY AFFAIRS  
(SHRI PRALHAD JOSHI)

(a) & (b): The National Mineral Policy, 2019 emphasizes on prevention and mitigation of adverse environmental effects due to mining in accordance with the latest scientific norms and modern afforestation practices to form integral part of mine development strategy in every instance. All mining operations have to be undertaken within the parameters of a comprehensive Sustainable Development Framework to ensure that environmental, economic and social considerations are integrated effectively in all decisions on mines and minerals issues. The policy also aims at encouraging use of renewable sources of energy at mining sites with a view to reducing pollution, carbon footprint and operational costs, through appropriate incentives, including sensitization training, workshops about environmental issues to all workers involved in mining operations.

Section 18 of Mines and Minerals (Development and Regulation) Act, 1957 empowers Central Government to frame rules for the mineral conservation, systematic development of minerals, protection of environment by preventing or controlling any pollution which may be caused by prospecting or mining operations. Accordingly, Mineral Conservation and Development Rules (MCDR), 2017 were framed, wherein Rule 40 and Rule 43 provides for:

**(i) Rule 40 – Precaution against air pollution** - Every holder of prospecting licence or a mining lease shall take all possible measure to keep air pollution due to fines, dust, smoke or gaseous emissions during prospecting, mining, beneficiation or metallurgical operations and related activities within permissible limits.

**(ii) Rule 43 – Permissible limits and standards** – The standard and permissible limits of all pollutants, toxins and noise shall be such as may be notified by the concerned authorities under the provisions of the relevant laws for the time being in force.

Further, before commencement of mining operations, lease holder has to obtain certain statutory clearances, licenses and approvals including Environmental Clearance from Ministry of Environment, Forest and Climate Change (MOEF&CC). As per the conditions of Environmental Clearance, the project proponent has to monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986 and Appropriate Air Pollution Control (APC) system shall be provided

for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply with prescribed stack emission and fugitive emission standards.

(c) & (d): Pollution levels in mines are monitored by State Pollution Control Board (SPCB) and Central Pollution Control Board (CPCB) as per their guidelines. Ambient air monitoring is carried out in core zone as well as buffer zone as per CPCB guidelines through laboratory recognized by MOEF&CC under Environment (Protection) Act, 1986. For Core and Buffer zone, for monitoring the fugitive dust emission, the National Ambient Air Quality Standard, 2009 is adhered to. Following practices are in general adopted at the mechanized mines to minimize the fugitive dust emissions:

1. Deploying modern fuel-efficient machines.
2. Eliminating dust at source by maintaining roads in good condition by deploying motor grader and by spraying of water.
3. Development of green cover along the haul roads.
4. Emission levels of the mining machinery are kept under check by carrying out timely maintenance as per manufactures recommendations.
5. Arrangements for wheel wash during exit of trucks/dumpers from mine.
6. Preventing overloading of trucks and properly covering the cargo with tarpaulin before the truck goes out of mine.
7. Dedicated manpower to clean the ore spillage on the public road by manual sweeping and washing.
8. Dust suppression on mines through water sprinkling.
9. Use of road sweeping machine for cleaning the public road/Mine Haul Road.

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