

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF CHEMICALS AND PETROCHEMICALS

LOK SABHA

UNSTARRED QUESTION No. 1923

ANSWERED ON 06/12/2024

ENVIRONMENTAL IMPACT MITIGATORS IN CHEMICAL INDUSTRY

1923. SHRI BIDYUT BARAN MAHATO:

Will the Minister of Chemicals and Fertilizers be pleased to state:

(a) the measures taken / proposed to be taken to ensure that chemical plants and fertilizer manufacturing units in India comply with environmental regulations and are equipped with pollution control technologies.

(b) whether the government is working to mitigate the impact of hazardous chemical spills or leaks, particularly in sensitive areas, where agriculture and water resources are heavily reliant on environmental quality, if so, the details thereof: and

(c) whether any initiatives are being implemented to encourage green chemistry and the development of environmental friendly alternatives to chemical fertilizers, especially in context of agriculture in Jharkhand and Rajasthan, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR CHEMICALS AND FERTILIZERS
(SMT. ANUPRIYA PATEL)

(a) The Government of India has implemented various measures to ensure that chemical plants and fertilizer manufacturing units in India comply with environmental regulations and are equipped with effective pollution control technologies. The Ministry of Environment, Forest and Climate Change (MoEF&CC) has prescribed environmental standards for various pollutants under the Environment Protection Act, 1986. All industrial units, including chemical and fertilizer plants, are required to comply with these standards to control air, water, and soil pollution.

Various environment regulations that have been formulated are as under:

- **The Environment Impact Assessment Notification 2006** by MoEF&CC, mandates any project or activity likely to cause significant environmental impacts, including chemical and fertilizer manufacturing units, must undergo an Environment

Impact Assessment (EIA) and prepare Environment Management Plan before obtaining Environmental Clearance (EC).

- These industries are also required to obtain Consent to Operate (CTO) under the Air (Prevention and Control of Pollution) Act, 1981, and the Water (Prevention and Control of Pollution) Act, 1974, to ensure compliance with pollution control norms.
- The compliance of EC conditions is monitored by the Regional Office of MoEF&CC for Category 'A' projects and by the State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs) for Category 'B' projects. Similarly, the compliance of CTO conditions is monitored by the respective SPCBs/PCCs. This multi-layered monitoring system ensures that industries operate in an environmentally responsible manner.
- **Hazardous Chemicals Safety Regulations:** The MoEF&CC administers the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 (as amended), and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 (CAEPPR Rules, 1996) (as amended). These rules establish preventive mechanisms for chemical safety in industrial operations. The occupiers of Major Accident Hazard (MAH) units are required to conduct annual safety audits and update their Safety Audit Reports. They must also prepare and update the On-site Emergency Plan.
- **Off-site Emergency Plans:** The MSIHC Rules, 1989 assign responsibility for preparing the Off-site Emergency Plan to the District Collector or designated District Emergency Authority (DEA) in each district. The Chief Inspector of Factories (CIF), appointed under the Factories Act, 1948, assists the DEA in preparing these plans, ensuring coordinated action in case of chemical emergencies.

Initiative taken by the Government with respect to pollution control technologies are as under:

- It is mandatory for all the Chemical industries including Chemical Fertilizer industries to have adequate Effluent Treatment System and adequate Air Pollution Control System and to comply with the prescribed effluent and emission discharge standards.
- Central Pollution Control Board (CPCB) has issued directions to all 17 categories of highly polluting industries including Certain Chemicals and Fertilizer industries to install Online Continuous Effluent / Emission Monitoring System (OCEMS) with real time data connectivity with CPCB. CPCB conducts regular inspections of the industries based on the alerts of OCEMS or if OCEMS becomes offline. Based on the observations of inspections, CPCB takes action on the defaulter industries as per extant rules.

Initiative taken by the Government to ensure the compliance w.r.t. Regulations/notifications are as under:

- Central Pollution Control Board / State Pollution Control Boards / Pollution Control Committees take action on those industries that fail to comply with the notified effluent and emission discharge standards.
- In case of any environmental damage caused by the chemical industries, then environmental compensation is being paid by the companies based on the estimates as per the laid down guidelines

(b) To avoid incidents that include spills and leakages of hazardous chemicals, Central Pollution Control Board along with Ministry of Environment, Forests and Climate Change in coordination with other concerned authorities has prepared the guidelines titled “Integrated Guidance Framework for Chemicals Safety” in respect of isolated storage and industries covered under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989. These guidelines were circulated by CPCB to all state pollution control board / pollution control committees in 2021 for implementation.

Considerable spills and leakages of hazardous chemical are likely to cause significant contamination of environment viz. soil, surface water and groundwater, such contaminated sites are further required to be investigated for assessing extent of contamination and for planning of necessary remediation work. In this regard, CPCB has prepared Reference Document on Identification, Inspection and Assessment of Contaminated Sites.

The Ministry of Environment, Forest and Climate Change has also prepared Guidance document for assessment and remediation of contaminated sites in India.

(c) Various initiatives taken by the Government are as under:

- Centres of Excellence have been established by the Department of Chemicals and Petrochemicals (DCPC) to undertake research in development of biodegradable and bio- based chemicals and polymers for various applications.
- The Government has approved the Market Development Assistance (MDA) at Rs. 1500/MT to promote organic fertilizers produced at plants under GOBARdhan initiative.
- HIL (India) Ltd. (a Govt. of India Enterprise, under the Dept. of Chemicals & Petrochemicals) is working on the commercialisation of neem based biopesticides with technology support from Institute of Pesticide Formulation Technology (IPFT).
- HIL (India) Ltd. is also working on the commercialization of Bti (*Bacillus thuringiensis israelensis*) based bio-larvicides with technology support of Indian Council of Medical Research’s Vector Control Research Institute.

- The Dept. of Biotechnology has launched BioE3 policy which will play a catalytic role to drive industrial biotransformation in the country and to ensure sustainable bio-based production of high-value specialty chemicals, enzymes and biopolymers through synthetic biology and genetic engineering.
