Chapter – 4

Specific Legal Regime For Hazardous Substances: Rules and Notifications Issued Under EPA

Hazardous substances are dealt with by general laws, special laws and specific rules relating to such substances in India. The plan of this and two subsequent chapters is to deal with this body of law in a slightly different manner. We begin by focusing on the rules and notifications which directly and specifically deal with hazardous substances. The subsequent chapter deals with special laws dealing with hazardous substances. Finally, the last chapter deals with general laws which also impinge upon hazardous substances. The advantage of this plan is to focus attention on the special regime categorically developed for such substances. Otherwise it appears as if special regime is just an incremental addition to the general law. The truth of the matter is that nowhere has the general law been adequate to handle the problem of hazardous substances. Whether it is U.K. or U.S.A., a special regime has come into existence to deal with such substances because of their terrific impact on the quality of life and the safety of environment.

Under the enabling provisions of the Environment (Protection) Act, 1986 (EPA) a set of eight rules have been promulgated by the Union of India. These are:

- Hazardous Waste (Management and Handling) Rules, 1989
- Bio-medical Wastes (Management and Handling) Rules, 1998
- Batteries (Management and Handling) Rules, 2001
- Municipal Solid Wastes (Management and Handling) Rules, 2000
- Plastics Manufacture, Sale and Usage Rules, 1999
• The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
• Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996
• The Manufacture Use, Import, Export and Storage of Hazardous Microorganisms / Genetically Engineered Organisms or Cells Rules, 1989

The EPA, 1986 contains provisions regarding the regulation and handling of hazardous substances. The term ‘handling’ has been defined to include almost all kinds of activities connected with hazardous substances. The Central Government is empowered under the Act to lay down procedures and safeguards for the handling of hazardous substances; the prohibition and restrictions on handling of hazardous substances in different areas; and the procedure in accordance with and the safeguards in compliance with which hazardous substances are to be handled or cause to be handled. The prescribed procedure is to be followed and safeguards are to be complied with by any person involved in the handling of such substances. To carry out aforesaid purposes, the Central Government may, by notification in the Official Gazette, frame rules.

The rapid pace of industrialisation, urbanisation and developmental activities have created a great stress on natural environment. The increasing pollution level in different environmental media is evident from the deteriorating air and water quality, high noise levels, increasing vehicular emissions, large production of hazardous wastes and release of toxic chemicals etc. Proper
control and promotion of safe management and use of hazardous substances including hazardous wastes and hazardous chemicals have become imperative to avoid damage to health and environment. India has taken note of international efforts in this regard and various Rules have been framed by the Central Government as per the powers conferred on it by the EPA.

4.1 Management of Hazardous Wastes

Increase in human population and tremendous growth of industrialisation have increased the generation of hazardous waste. Safe disposal of hazardous waste generated by various industries like textiles, dyes, leather goods, engineering products, electroplating, pharmaceuticals, pesticides and insecticides has acquired utmost concern. India produced about 7.2 million tons of hazardous waste in the year 2000. The volumes are increasing day by day and these wastes are indiscriminately being disposed of into rivers, lakes, sea, atmosphere and onto land thereby posing a serious threat to man and environment. Thus, the proper management and handling of these wastes become necessary for the welfare of mankind. Hazardous waste management has become an issue of grave concern for the authorities, regulators, environmental organisations and industries alike. In India, specific Rules have been notified by the Central Government in this regard. A survey of these Rules vis-a-vis judicial response may help us infer as to how far administrative efforts in India have been successful in the proper handling and management of hazardous wastes.

4.1.1 Hazardous Wastes (Management and Handling) Rules, 1989

In exercise of the powers conferred on it by Sections 6, 8 and 25 of the EPA, the Central Government has framed Hazardous Wastes (Management and

Handling) Rules, 1989\(^8\) (hereinafter called ‘HW Rules’ or ‘the Rules’) dealing with the handling of hazardous wastes. The Rules, as amended in 2000\(^9\) and 2003,\(^{10}\) apply to designated categories of waste enumerated in the Schedules to the Rules.\(^{11}\) Waste water and exhaust gases covered under the provisions of Water Act, 1974 and Air Act, 1981 respectively, waste arising out of the operation from ships covered under the provisions of Merchant Shipping Act, 1958 and radio active wastes covered under the provisions of Atomic Energy Act, 1962 have been excluded from the purview of the Rules\(^{12}\)

Under the Rules, the occupier and the operator of a facility\(^{13}\) are responsible for proper collection, reception, treatment, storage\(^{14}\) and disposal\(^{15}\) of hazardous wastes listed in Schedules 1, 2 and 3. They have to ensure that the wastes are properly handled and disposed of without having any adverse effects on the environment. The treatment\(^{16}\) has to take place as per the specifications of State Pollution Control Board (SPCB) or Committee (in respect of Union Territories)\(^{17}\). It is the duty of the occupier and the operator of a facility to take adequate steps to prevent accidents and to provide the workers necessary information, training and equipment to ensure their safety\(^{18}\).

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8 Vide S O 594(E) dated 28th July, 1989
9 By S O 24(E) dated 6th January, 2000
10 By S O 593(E) dated 20th May, 2003 published on 23rd May, 2003
11 For definition of ‘hazardous waste’ see Rule 3(14)
12 Rule 2
13 “Facility” means any location wherein the processes incidental to the waste generation, collection, reception, treatment, storage and disposal are carried out [Rule 3(12)]
14 “Operator of a facility” means a person who owns or operates a facility [Rule 3(21)]
15 “Storage” means storing hazardous wastes for a temporary period, at the end of which the hazardous waste is treated and disposed of. [Rule 3(29)]
16 “Disposal” means deposit, treatment, recycling and recovery of any hazardous wastes [Rule 3(8)]
17 Rule 4
18 Rule 4A
designated authorities have to perform their duties as specified in Column of Schedule 7.19

The collection, treatment, storage and disposal of hazardous wastes have to be only in authorised facilities. Every occupier handling, or a recycler recycling hazardous wastes or any person who intends to be an operator of a facility, has to make an application in the prescribed form to the Member Secretary, SPCB or the Committee, as the case may be, or the designated officer, for the grant of authorisation for carrying on the said activities. However, if an occupier or a recycler does not have a treatment and disposal facility of his own and is operating in an area under the jurisdiction of a Common Treatment, Storage and Disposal Facility (TSDF), he has to become a member of that facility and send his waste to that facility to ensure proper treatment and disposal, failing which the authorisation granted may be cancelled.

The authorisation is not to be issued unless the occupier or operator of a facility possesses appropriate facilities, technical capabilities and equipment to handle hazardous wastes safely. The authorisation application is to be processed by the Board within 90 days and the authorisation granted or renewed remains in force during the specified validity period, unless suspended, cancelled or revoked earlier. The grant of authorisation may be refused after giving the applicant an opportunity of being heard. The Board or the Committee has to maintain a register containing the particulars of the conditions subject to which the authorisation is granted. The document is open for inspection by any person during office hours.20 The authorisation may be

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19. Rule 4B.
20. Rule 5.
cancelled or suspended if the authorised person fails to comply with its conditions or with any of the provisions of the EPA or these Rules. An appeal against any order of grant or refusal of an authorisation lies with Secretary, Department of Environment of the State Government. Packaging, labeling, and transport have to be in a manner so that the hazardous nature of waste is easily visible as per the specified colour codes. For transport, the occupier has to obtain no-objection certificate from the Board and provide relevant information to the transporter regarding the hazardous nature of wastes and measures to be taken in case of an emergency. The identification of the sites for treatment, storage and disposal of hazardous wastes is the joint and several responsibility of the occupier or operator of a facility or any association of occupiers vis-a-vis the State Government. The sites for hazardous waste disposal facility should be determined by the State Government, within thirty days, after receiving the project report by the SPCB including an environmental impact assessment report and details of public hearing along with its recommendations. The State Government has to compile and publish periodically an inventory of such disposal sites and facilities in the state. The occupier or operator is supposed to design and set up the facility as per the guidelines of the Government and its approval, monitoring and regular operation is the responsibility of the Board. The occupier or operator needs to ensure environmentally sound operation of the facility and maintenance of

22. Rule 18.
23. “Transport” means off-site movement of hazardous waste by air, rail, road or water. [Rule 3(31)].
25. See Rule 8.
26. Rule 8A.
records of such operations. They have to send annual reports to the Board or the Committee, as the case may be, which in turn has to compile the information and prepare an inventory of hazardous wastes. In case of any accident, the matter has to be immediately reported, in the prescribed form, to the Board or the Committee.

The import and export of hazardous wastes for dumping or disposal is not permitted under the Rules with the exception of raw material for recycling or reuse. The Ministry of Environment and Forests (MoEF) is the nodal agency to deal with the transboundary movement of hazardous waste which takes place under the responsibility of the concerned authorities and in compliance with the articles of the Basel Convention. The import and export is to be in accordance with the procedure prescribed. In case of illegal movement, the shipment is to be returned to the exporter or the exporting country within thirty days. If this is not possible, the waste has to be disposed of in an environmentally sound manner within thirty days from the date of off-loading in accordance with the procedure laid down by the Board or the Committee in consultation with the Central Pollution Control Board (CPCB). The exporting country has to bear the costs incurred for the disposal of such waste.

27. See Rules 8B and 9.
29. Rule 11.
30. "Transboundary movement" means any movement of hazardous waste or other wastes from an area under the national jurisdiction of one country to or through an area under the national jurisdiction of another country or to or through an area not under the national jurisdiction of any country, provided at least two countries are involved in the movement. [Rule 3(30)].
31. Rule 12. It is important to note that after the amendment of the Rules in the year 2003, the hazardous wastes as specified in Schedule 8 can not be imported or exported under any circumstances.
32. See Rules 13, 14.
33. Rule 15.
The occupier, transporter and operator of a facility are liable for damages caused to the environment due to improper handling and disposal of hazardous waste. The occupier and the operator are also liable to reinstate or restore the damaged environment and also to pay fine as levied by the SPCB with the approval of CPCB for the violation of any of these Rules.34

The procedure for registration and renewal of registration of recyclers and re-refiners of non-ferrous metal wastes as specified in Schedule 4 or used oil or waste oil has now been provided by the amendment of the Rules in 2003. The CPCB has been given the power in this regard. In case of suspension, cancellation or refusal of registration or renewal by the CPCB, an appeal can be filed, within thirty days, to the Secretary, MoEF, who is expected to decide the matter within ninety days after giving the applicant an opportunity of being heard. The registered recyclers and re-refiners have to maintain a record of wastes purchased, processed and sold and file annual return in the prescribed form to the respective SPCB or the Committee.35 They have to use only environmentally sound technologies while recycling and re-refining the wastes. Some of these technologies have been specifically mentioned and the MoEF has been empowered to notify, from time to time, specifications and standards to be followed by the recyclers and re-refiners.36

The owner or occupier generating specified non-ferrous metal waste or used oil or waste oil of ten tons or more per annum has to sell or auction such wastes to registered re-refiner or recycler only. However, any waste oil which does not meet the specifications laid down in Schedule 6 is not to be auctioned or sold.

34. Rule 16.
35. See Rule 19.
36. See Rule 21.
but is to be disposed of in hazardous waste incinerator. The persons generating waste or auctioneers have to keep in mind the validity period of their certificates of registration and ensure that wastes are not stored for more than ninety days. They have to maintain record of auctions and sales and file annual returns to respective SPCB or Committee.  

In Research Foundation for Science v. Union of India, as per the directions of the apex Court, the MoEF constituted a High Powered Committee with Prof. M.G.K. Menon, former Minister for Science and Technology, Government of India, as its Chairman to examine in depth all matters relating to hazardous wastes and to give its report / recommendations at an early date. The report of the Committee stated, among others, that the containers containing the hazardous waste material including waste oil were found lying at the Inland Container Depot, New Delhi as well as in the yard of the Bombay Port Trust, Bombay. The Court directed the Committee to examine the quantum and nature of this hazardous waste and recommend a mechanism for its safe disposal or re-export to the original exporter. The Court has passed and issued different interim orders and directions in this case and imposed costs on the Ministry of Labour and the MoEF for causing delay in filing the relevant affidavits and thereby wasting the time of the Court. Realising that it is not in public interest that hazardous waste should be permitted to continue to lie for any long period of time, the Court directed the Union of India to act on the recommendations of the High Power Committee and made it clear that the disposal of the hazardous material should not in any

38. Writ Petition (c) No. 657 of 1995.  
way lead to any environmental problems and no pollution should be generated. It should be further ensured that the material is given only to those industries who fulfill the necessary requirements relating to environmental safety in terms of processing and containment sites for storage / disposal. Furthermore, no disposal should take place in favour of traders. If there is any importer who had imported the hazardous waste against the orders of the Court, then the Union of India should ensure that such an importer does not benefit from such import. The Court has also directed to issue show cause notice in this case to the importers importing waste oil illegally in the garb of lubricating oil as to why consignment in question should not be ordered to be re-exported or destroyed at their cost, amount spent on analysis in lab be not recovered from them and compensation on ‘polluter pays principle’ be not taken from them. The Court further directed for the constitution of a Special Committee to examine the effect of import of waste on workers’ health.\textsuperscript{40}

It is primarily the function of the Board and its officers to take action to stop unauthorised movement / disposal of hazardous waste and they are not required to bring it to the notice of the Court for seeking a direction on the units to stop unauthorised movement and/or disposal of the waste. It is the basic duty of the concerned officers of the Board under relevant pollution laws to ensure that immediate action is taken against any such units that dump hazardous waste or release untreated effluents in violation of the standards and norms laid down for the purpose. They should not just point out the defaults and wrong doings and wait for the Court’s directions in a matter which is entirely within their domain under the statutory provisions. In fact, such a

\textsuperscript{40} See 2003 (8) Scale 118, 213.
course would enable such nefarious activities to be carried out under the pretext that the matter is pending in the Court. It is entirely for the concerned authorities to find out who are the culprits and take stringent and speedy action under the law with determination. 41

Therefore, in order to give effect to the principles of the Basel Convention, the Central Government has issued HW Rules, 1989 as amended in 2000 & 2003. The Rules apply to the categories of hazardous wastes as specified in the technical annexures of the Rules. If a substance contains excessive levels of, for example, cyanide, lead, copper, mercury, zinc, chromium, nickel, arsenic, phenols or asbestos, it is then subject to regulatory control. The occupier or operator of a facility or recycler dealing in hazardous wastes has to take all measures to ensure that such wastes are properly handled and disposed of without any adverse effect on human health and environment. He is responsible for proper collection, reception, treatment, storage and disposal of these wastes. Moreover, no person can handle hazardous waste without the authorisation granted by the concerned authorities. The State Government, operator or occupier have the responsibility to identify disposal sites after environmental impact assessment. The Government has to make an inventory of disposal sites and ensure reporting of accidents and follow-up operations. Import and export of waste substances have been regulated and import of hazardous waste, except for recycling and reuse, has been prohibited. In case of illegal traffic, the importer or the exporter, as the case may be, has to ensure safe storage and disposal in an environmentally sound manner. The occupier,

transporter and operator have been made responsible for any damage caused to the environment due to improper handling and disposal of hazardous waste. They have to ensure restoration of damaged environment. In addition, the occupier and operator are also liable to pay fine.

However, as per current assessments, 4.4 million tones of hazardous wastes are being generated by 13011 industrial units spread over 373 districts of the country. The States of Maharashtra, Gujarat and Tamil Nadu account for over 63% of the total hazardous waste generated in India. Most of this waste is disposed of by the industries in different ways convenient to them in total ignorance of environmental and health concerns. Illegal dumpsites can be seen outside industrial estates, along roadsides and in low-lying areas. Sometimes hazardous waste is disposed of along with municipal wastes or in river and other water courses. These practices have become a major source of widespread pollution of air and water and the ground water resources have been permanently damaged in many areas. Keeping in view the magnitude and gravity of the problem, the industry should abide by the Rules in letter and spirit (regardless of cost considerations) and in case of failure, the competent authorities should take stern action. There is a need for country wide survey and inventorisation of hazardous wastes. The ‘recycling loophole’ should also be closed to avoid any chances of unlawful dumping.


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44. By S.O. 545(E) dated 2 June, 2000.
who generate, collect, receive, store, transport, treat, dispose or handle biomedical waste (BMW) in any form. Every occupier of an institution including a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory and blood bank has to ensure that BMW generated by it is handled without having any adverse effect on human health and the environment. The waste has to be treated and disposed of in accordance with Schedule I and as per the standards prescribed in Schedule V and within the time-schedule given in Schedule VI. BMW treatment facilities like incinerator, autoclave and microwave have to be installed. BMW is not to be mixed with other waste and is to be segregated at the point of generation itself. It has to be put into containers/bags in accordance with Schedule II prior to storage, transportation, treatment and disposal and containers are to be labeled as per Schedule III. In case of transportation to any waste treatment facility, only authorised vehicles can be used and additional information as prescribed in Schedule IV has to be furnished. Untreated BMW is not to be stored beyond 48 hours and if necessary to store beyond that period, the permission of the prescribed authority has to be taken.

A prescribed authority has to be established by the State Government or the Union Territory, as the case may be, to ensure implementation of the Rules provided that in case of all health care establishments of the Armed Forces, the Director General, Armed Forces Medical Services, is the prescribed authority.

46. 'Bio-medical waste' has been defined as any waste which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I. [Rule 3(5)].

47. Rule 4.

48. Schedule I lays down different treatment and disposal methods for ten categories of BMW.

49. Rule 5.

Every occupier of an institution treating more than one thousand patients per month or operator of a BMW facility has to make an application, in the prescribed form and accompanied with prescribed fee, to the prescribed authority for the grant of authorisation. The authority has power to grant authorisation to an applicant, within ninety days from the date of application and for a period of three years (including a trial period of one year), on being satisfied that the applicant possesses the necessary capacity to handle BMW in accordance with the Rules. The authorisation may also be renewed. The prescribed authority also has the power to refuse to grant or renew authorisation, cancel or suspend it after recording the reasons in writing and giving the applicant an opportunity of being heard.51

Every State/Union Territory is required to constitute an Advisory Committee having experts in different fields like medical and health, animal husbandry and veterinary sciences, environmental management, municipal administration and representatives of NGOs and State Boards / Committees to advise the Government of the State / Union Territory and the prescribed authority regarding proper implementation of the Rules.52 A separate Advisory Committee for the health care establishments of the Armed Forces has also been constituted to advise the Director general.53 The task of monitoring the implementation of the Rules in Armed Forces health care establishment has been entrusted to CPCB.54

The authorised person has to maintain records and submit an annual report to the prescribed authority about the categories and quantities of BMW handled

51. Rules 7 & 8.
52. Rule 9(1).
53. Rule 9(2).
54. Rule 9A.
during the preceding year. The authority sends this report to the CPCB by 31st March every year.\textsuperscript{55} If any accident occurs during handling or transportation of BMW, the authorised person has to inform the prescribed authority.\textsuperscript{56}

Any person aggrieved by an order of the prescribed authority has a right of appeal, within thirty days, to such authority as may be constituted by the State Government/Union Territory for this purpose.\textsuperscript{57} In case of a person aggrieved by the order of the Director General, Armed Forces Medical Services, an appeal may lie, within thirty days, to the Central Government in the MoEF.\textsuperscript{58}

In \textit{Dr. B.L. Wadehra v. Union of India},\textsuperscript{59} even prior to the notification of the Rules, the apex Court issued following directions to the concerned authorities for proper management and disposal of BMW in Delhi:

1. The Government of India, Municipal Corporation of Delhi (MCD) and New Delhi Municipal Council (NDMC) should construct and install incinerators in all the hospitals / nursing homes, with 50 beds and above under their administrative control. This may be done preferably within nine months. A responsible officer of each of these authorities shall file an affidavit in this Court within two months indicating the progress made in this respect.

2. The All India Institute of Medical Sciences, New Delhi should install sufficient number of incinerators, or an equally effective alternate, to dispose of the hospital waste. The Director shall file an affidavit within two months to indicate the progress made in this respect.

\textsuperscript{55} Rules 10, 11.
\textsuperscript{56} Rule 12.
\textsuperscript{57} Rule 13(1).
\textsuperscript{58} Rule 13(2).
\textsuperscript{59} (1996) 2 SCC 594.
3. The MCD and NDMC should issue notices to all the private hospitals / nursing homes in Delhi to make their own arrangements for the disposal of their garbage and hospital waste. They be asked to construct their own incinerators. In case these hospitals are permitted to use facilities (for collection, transportation and disposal of garbage) provided by the MCD and NDMC then they may be asked to pay suitable charges for the service rendered in accordance with law.

The BMW Rules, 1998 as amended in 2000 and 2003 provide that all hospitals, clinics, dispensaries, nursing homes, veterinary hospitals, diagnostic and pathological laboratories and blood banks have to ensure proper disposal of their BMW so as to avoid harm to human health and environment. The Rules make it mandatory for the doctors to provide for the incinerators, either as a group or individually. Authorisation certificates have to be obtained for collection, storage, treatment and disposal of BMW. BMW has to be segregated at the source itself. Under the Rules, the waste generated by hospitals is divided into ten different categories and the procedure for proper disposal of each category has been laid down. The colour coding and the type of container to be used for the disposal of BMW have been specified. In yellow bag, the treatment is through incinerator / deep burial. In red bag, the treatment is through autoclaving / microwaving / chemical treatment. In blue/white bag, the treatment is through autoclaving / microwaving, chemical treatment and destruction. In black bag, the disposal has to be in secured landfill. All the hospitals including private clinics have to dispose of their BMW through proper disposal facilities. SPCBs have to ensure strict implementation of the Rules. Since the BMW Rules are made under EPA, the penalty for violation can be
imprisonment upto five years and a fine of Rs. 1 lakh. An additional fine of Rs. 5000 per day may be imposed in case of repeated violations. In addition to criminal liability, the hospital management can find it difficult to get health insurance covers and funding from financial institutions if the waste treatment facilities are not set up.

However, in reality, private practitioners in India, except in some exceptional cases, can not even think of building an incineration plant costing Rs. 25 lakh approximately. The result is that only a small portion of the waste gets incinerated and a major portion is left to pile up in the municipal garbage dumps. What to say of private practitioners, the CPCB itself admitted that the operation and maintenance of incinerators in major hospitals in Delhi is very poor resulting in emission of dioxin gas and toxic fumes. Hospitals in Delhi generate around 70 tons of waste every day. About 20 tons of this waste is infected and has human body parts. Most of this waste is dumped in landfills along with municipal waste. It is also doubtful whether the segregation of waste at source is being carried out or not as per the Rules. The authorities have really failed to evolve an effective BMW management system and most of the hospitals, nursing homes and dispensaries continue to release toxins and poisonous gases in the air by burning the waste in the open, and thereby exposing the people to cancer and several other respiratory diseases. The BMW Rules are continuously being violated and they are not even known to hospitals, authorities and doctors. These trends are hazardous to human life since unmanaged medical waste can spread fatal diseases like HIV/AIDS and Hepatitis B and C.

BMW is generally of two kinds i.e. biodegradable in the form of used bandages, human body parts, blood etc. and non-biodegradable like syringes, plastic bottles, glass items etc. Incinerators are meant to burn the biodegradable waste and they can not adequately handle non-biodegradable waste. The Rules make it mandatory to segregate waste at the point of generation, put it in different specified colour-coded bags before transportation, treatment and disposal, but most of the hospitals are not doing this. As per Rules, only pathological waste like body parts and bandages should be incinerated and non-biodegradable waste like plastics or metals should be shredded and disinfected by an autoclave or a microwave. Since improper disposal of BMW creates a serious health hazard for the community, there is a need for inhouse management practices which will include segregation of waste at source. There is a need of orientation and training for the staff. The services of a common treatment facility can be hired. Medical associations as well as enforcement authorities should ensure proper compliance with the BMW disposal norms. Awareness among people dealing with BMW is necessary. In fact, there is a pressing need to develop a culture on the handling of BMW. It needs to be borne in mind that medical and paramedical staff in the hospitals, apart from the patients and general public, is at the highest risk of infection from untreated hospital waste.

4.1.3 Batteries (Management and Handling) Rules, 2001

In exercise of the powers conferred by Sections 6, 8 and 25 of the EPA, the Central Government has notified the Batteries (Management and Handling) Rules, 2001 \(^\text{61}\) (hereinafter called ‘the Rules’). These Rules apply to every manufacturer, importer, reconditioner, assembler, dealer, recycler, auctioneer, consumer and bulk consumer involved in manufacturing, processing, sale,

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purchase and use of batteries\textsuperscript{62} or components thereof. The manufacturer, importer, assembler and reconditioner have to ensure that used batteries are collected against new batteries sold as per the Schedule. They have to set up collection centres either individually or jointly at various places and ensure that used batteries collected are sent only to registered recyclers through safe transportation without causing any damage to environment. A half-yearly return of the sales and buy-back has to be filed to the SPCB. They have to create public awareness through advertisements, publications and posters etc. regarding hazards of lead, responsibility of consumers and by giving addresses of dealers and designated collection centres. International recycling sign has to be used on the batteries and recycled lead has to be purchased from registered recyclers only. They have also to bring to the notice of the SPCB or the MoEF any violation by the dealers.\textsuperscript{63}

The dealer has to ensure collection of used batteries as against the new ones sold. He has to give appropriate discount for every used battery returned by the consumer and file a half-yearly return of the sale and buy-back. He has also to ensure safe transportation of collected batteries to the designated collection centres or to the registered recyclers and that no damage is caused to the environment during storage and transportation of used batteries.\textsuperscript{64} Each recycler has to apply for registration to the MoEF or an agency designated by it and ensure strict compliance of the terms and conditions of registration. He has to submit annual returns, make available all records to the SPCB for inspection, mark ‘Recycled’ on lead recovered by reprocessing and create public awareness.\textsuperscript{65}

\footnotesize{\textsuperscript{62} ‘Battery’ means lead acid battery which is a source of electrical energy and contains lead metal. [Rule 3(e)].\textsuperscript{63} Rule 4.\textsuperscript{64} Rule 7.\textsuperscript{65} Rule 8.}
Every recycler has to follow the prescribed procedure for registration / renewal of registration. The Joint Secretary, MoEF or any officer or agency designated by the Ministry, after ensuring that all the formalities of the application form have been complied with and that the recycler possesses appropriate facilities, technical capabilities, and equipment to recycle used batteries and dispose of hazardous waste generated, grants registration. The registration may also be refused, cancelled or suspended after giving the applicant an opportunity of being heard. The registration granted remains in force for a period of two years from the date of issue or from the date of renewal unless suspended or cancelled earlier. There is a right of appeal against any order of suspension or cancellation or refusal of registration. The importers have also to get themselves registered and obtain customs clearance for the import of new lead acid batteries as per the prescribed procedure.

It is the responsibility of the consumer or bulk consumer to ensure that used batteries are not disposed of in any manner other than depositing with the dealer, manufacturer, importer, registered recycler, reconditioner or at the designated collection centres. The auctioneer is also required to ensure that used batteries are auctioned to registered recyclers only. He has to maintain a record of such auctions and file half-yearly returns to the SPCB. The SPCB has to ensure compliance of the Rules. It needs to file an annual compliance status report to the CPCB which in turn compiles and publishes the data received every year from the State Boards. CPCB reviews the compliance of

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66 See Rule 9.
67 Ibid.
68 See Rules 5 & 6
69 Rule 10
70 Rule 11.
71 Rule 12
the Rules periodically to improve the collection and recycling of used lead batteries and apprise the MoEF. All the records and returns ought to be computerised.

The Rules relating to management and handling of batteries were notified by the MoEF on May 16, 2001 to tackle the estimated 60,000 metric tons of lead illegally recycled in the Indian market. Lead acid batteries which are used in vehicles, industries and uninterrupted power supply systems can no longer be thrown into garbage dumps. As per the Rules, lead acid batteries used by both individuals and bulk consumers have to be returned to battery dealers or the manufacturers at designated collection centres. Battery manufacturers, importers, assemblers or reconditioners have to ensure that they collect as many used batteries for as many new batteries they sell, for which they will have to set up used battery collection centres. They will also have to ensure that no damage is caused to environment during transportation and reprocessing of used batteries. Dealers who sell and receive lead acid batteries to and from consumers should also give appropriate discount for every used battery returned by the consumer.

In order to ensure that battery recyclers comply with environmental norms, the Rules make it mandatory for them to get themselves registered with the MoEF. They should ensure strict compliance with pollution norms and batteries recycled at their units should bear an international ‘Recycled’ label. The auctioneers are also under a duty to auction / sell used batteries to registered recyclers only. The Rules relating to creation of awareness among masses are of special significance.

73. Rule 14.
Lead is known to produce several neural disorders and cause damage to liver and kidneys. The major cause of lead pollution in India has been the indiscriminate dumping of batteries and improper recycling of lead batteries by unauthorised and unregistered recycling units. In these units, lead smelting is done in small sheds with no environmental concerns including high energy consumption. The Boards should ensure strict compliance with the Rules and violators should be dealt with severely. Moreover, the workers handling the batteries need extra protection. Since even very low doses of lead constitute a health hazard, the rules relating to special protection of workers should be incorporated. One can easily see the workers engaged in Indian factories pulling batteries apart with their bare hands. These trends are extremely hazardous. Although notification of the Rules is a welcome step but there are doubts over their proper enforcement unless the system of organised collection of used batteries is further strengthened.

4.2 Solid Waste Management

According to the recent report of MoEF (a 343 - page document), the quantum of solid waste generated in India has nearly doubled in the last decade from 77 million tons per annum in 1990 to 147.05 million tons in 1999. Delhi produces around 6000 metric tons of solid waste daily while Mumbai generates 5000 tons. Kolkata and Chennai are no better with around 3,500 tons daily. With the population of India reaching one billion, the increased production of municipal solid waste and its disposal have become major problems. While landfill sites are diminishing, volumes of waste are increasing rapidly.

74. supra note 7.
75. Proper planning eludes solid waste disposal, Newstime (Hyderabad) dated 18th August, 2001: CSE-India Green File, August 2001, No. 164 at 78.
In order to overcome the problems of the generation and disposal of municipal solid wastes, the Central Government, while exercising powers conferred on it by Sections 3, 6 & 25 of the EPA, notified Municipal Solid Waste (Management and Handling) Rules, 2000 (hereinafter called 'the Rules'). These Rules apply to every municipal authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes. The municipal authority is responsible for the development of an infrastructure and implementation of these Rules as per the implementation programme laid down in Schedule 1. The SPCB or the Committee (in case of Union Territory) has been empowered to grant authorisation to the municipal authority or an operator for setting up waste processing and disposal facility including landfilling. Before granting

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76 S.O. 908(E), dated 25th September, 2000
77 “Municipal authority” means Municipal Corporation, Municipality, Nagar Mahapalika, Nagar Nigam, Nagar Panchayat, Municipal Council including notified area Committee (NAC) or any other local body constituted under the relevant statutes and, where the management and handling of municipal solid waste is entrusted to such agency [Rule 3(xiv)]
78 “Collection” means lifting and removal of solid wastes from collection points or any other location [Rule 3(v)]
79 “Segregation” means to separate the municipal solid wastes into the groups of organic, inorganic, recyclables and hazardous wastes [Rule 3(xxiii)]
80 “Storage” means the temporary containment of municipal solid wastes in a manner so as to prevent littering, attraction to vectors, stray animals and excessive foul odour [Rule 3(xxvii)]
81 “Transportation” means conveyance of municipal solid wastes from place to place hygienically through specially designed transport system so as to prevent foul odour, littering, unsightly conditions and accessibility to vectors [Rule 3(xxiv)]
82 “Processing” means the process by which solid wastes are transformed into new or recycled products [Rule 3(xxviii)]
83 “Disposal” means final disposal of municipal solid wastes in terms of the specified measures to prevent contamination of ground water, surface water and ambient air quality [Rule 3(viii)]
84 Rule 2. “Municipal solid waste” includes commercial and residential wastes generated in a municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes [Rule 3(xv)]
85 Rule 4(2) “Landfilling” means disposal of residual solid wastes on land in a facility designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blow litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion [Rule 3(xi)]
authorisation for a given period, the views of other agencies like the State Urban Development Department, the Town and Council Planning Department, Air Port or Air Base Authority and the Ground Water Board have to be taken into consideration. The municipality has to submit an annual report to the Secretary-in-charge of the Department of Urban Development in case of a metropolitan city or the District Magistrate or the Deputy Commissioner in case of all other towns and cities. A copy of the report has to be forwarded to SPCB or the Committee. The SPCB and the Committees have also to submit an annual report to the CPCB, which in turn has to prepare a consolidated annual review report and forward it to the Central Government along with its recommendations.

The overall responsibility for the enforcement of the Rules lies with the Secretary-in-charge of the Department of Urban Development of the State or the Union Territory and in case of a district, with the District Magistrate or the Deputy Commissioner. The standards regarding ground water, ambient air, leachate quality and the compost quality including incineration have been given in Schedules II, III and IV. The SPCB or the Committee has to monitor compliance of these standards in coordination with the CPCB. In case of any accident during handling or transportation of waste, the municipal authority has to report to the Secretary-in-charge of Urban Development in metropolitan cities and to the District Magistrate or Deputy Commissioner in all other cases.

86. Rule 6(2).
87. Rule 4(4).
88. Rule 8.
89. Rule 5.
90. Rule 6(1) & (5).
In Dr. B.L. Wadehra’s case, the petitioner sought directions of the Court to the Municipal Corporation of Delhi (the MCD) and the New Delhi Municipal Council (the NDMC) to perform their statutory duties in connection with the collection, removal and disposal of garbage and other waste. The Court held:

It is clear from various provisions of the Delhi Act and the New Delhi Act that the MCD and the NDMC are under a statutory obligation to scavenge and clean the city of Delhi. It is mandatory for these authorities to collect and dispose of the garbage / waste generated from various sources in the city. We have no hesitation in observing that the MCD and the NDMC have been wholly remiss in the performance of their statutory duties. Apart from the rights guaranteed under the Constitution the residents of Delhi have a statutory right to live in a clean city. The courts are justified in directing the MCD and NDMC to perform their duties under the law. Non-availability of funds, inadequacy or inefficiency of the staff, insufficiency of machinery etc. can not be pleaded as grounds for non-performance of their statutory obligation.

In the light of facts and circumstances of the case, the Court issued various directions for the proper disposal of solid waste and hospital waste generated in the Capital. The directions as regards solid waste management may be summarised as under:

1. The Court approved the experimental schemes by MCD and NDMC for distribution of polythene bags, door to door collection of garbage and its disposal and directed that the city of Delhi is to be scavenged and cleaned everyday. The garbage / waste is to be lifted from collection centres every day and transported to the designated place for disposal.

All receptacles / collection centres are to be kept clean and tidy everyday. The garbage / rubbish is not to be found spread around the collection centres and on the roads.

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92. supra note 59.
93. Id. at 606, 607.
2. The CPCB and the Delhi Pollution Committee ought to regularly send their inspection teams in different areas to ascertain that the collection, transportation and disposal of garbage / waste is carried out satisfactorily. The Board and the Committee need to file the reports in the Court by way of an affidavit after every two months for a period of two years.

3. The Government of the National Capital Territory (NCT) of Delhi should appoint Municipal Magistrates (Metropolitan Magistrates) under Section 469 of the Delhi Act and Section 375 of the New Delhi Act for the trial of offence under these Acts. Residents of Delhi be educated through Doordarshan and by way of announcements in the localities that they are to be liable for penalty in case they violate any provisions of the Act in the matter of collecting and disposal of garbage and other wastes.

4. The Doordarshan should undertake a programme of educating the residents of Delhi regarding their civic duties under the Delhi Act and the New Delhi Act. This may be done by making appropriate announcements, displays on the television. They may also be informed about the penalties which can be imposed for violation of their duties and obligations under the Acts.

5. The MCD has placed order for the supply of about 200 tippers with the Ordinance Vehicle Factory, Jabalpur (Government of India) in May, 1995. The tippers have not as yet been supplied. The Secretary, Ministry of Defence Production, Government of India should ensure the supply of tippers to the MCD as expeditiously as possible and preferably within three months.
6. The MCD has indicated that three Sanitary Land Fill (SLF) sites have already been approved by the Technical Committee of the Delhi Development Authority (DDA) but the same have not been handed over to the MCD by the Development Commissioner. Since Bhatti mines are situated within the ridge area, the same can not be permitted to be utilised for the disposal of the solid waste as at present. The Development Commissioner should hand over the sites to the MCD within three months.

7. The compost plant at Okhla be revived and put into operation by MCD. The MCD should also examine the construction of four additional compost plants.

8. The MCD should not use the filled-up SLFs for any other purpose except forestry. The MCD should develop forests and gardens on these sites.

9. The MCD and NDMC should construct/install additional garbage collection centres in the form of dhalaoes/trolley/steelbins within four months.

10. The Union of India and NCT, Delhi Administration should consider the requests from MCD and NDMC for financial assistance in a just and fair manner to enable these authorities to fulfill their obligations under law.

11. After some time it may not be possible to dispose of garbage and solid waste by ‘SLF’ method due to non-availability of sites. The NCT, Delhi Administration and also the MCD and NDMC should join hands and engage an expert body like NEERI to find out alternate method / methods of garbage and solid waste disposal.

The above stated directions of the Supreme Court are of far reaching significance so far as proper waste disposal is concerned. The rapid industrial
development, urbanisation and continuous flow of persons from rural to urban areas have no doubt made proper waste management a rather difficult task, but at the same time the statutory authorities also can not be permitted to sit back with folded hands and they have to perform the work entrusted to them under law. The Court observed that MCD has a very large force of Karamcharis working for it. There are 38,311 Safai Karamcharis and more than 1400 Sanitary Inspectors and other Officials. The total area which the MCD is supposed to keep clean and tidy is 1399.26 sq km. The simple arithmetic shows that there are 27 Safai Karamcharis and one Sanitary Inspector for one sq km of area. The NDMC is in a still better position. It has 2172 Safai Karamcharis and the area under its control is 42.40 sq km, which means that it has 50 Karamcharis to man one sq km. There is no reason whatsoever why with such a huge manpower at their command the MCD and NDMC can not present a neat and clean Delhi to its residents.

In Vinod Chandra Varma v. State of U.P., the Allahabad High Court observed that it is common knowledge that nowhere cleaning of the roads, garbage and sewer is done in Allahabad by the Nagar Nigam, although there are about 1800 permanent employees and 800 casual labourers working in the Nagar Nigam for this purpose, but they do not work and if they are told to work they threaten to go on strike. In several localities of Allahabad there is filth and garbage which has piled up causing inconvenience to the passer by and lot of diseases and health hazards. For payment of the salaries of employees, Municipal taxes are imposed on the citizens e.g. house tax and water tax. The citizens of Allahabad are paying these taxes without getting any corresponding benefits.

94. AIR 1999 Allahabad 108.
The Court, therefore, directed the Nagar Nigam authorities to clean the city and sewer lines and repair water pipes etc. and take strong disciplinary action against those Safai Karamcharis and other employees who are not working properly.

In *Sector 14 Resident's Welfare Association v. State of Delhi,*95 regarding the upgradation of sewerage management systems in the trans-Yamuna area of Delhi and certain Sectors of Noida, the Court held that the directions given by the Bhure Lal Committee are final and binding on all. If any organisation fails in carrying out the directions so issued, the persons mentioned as being accountable will have to satisfy this Court as to why appropriate action should not be taken for non-implementation of the directions issued.

In *Almitra H. Patel v. Union of India,*96 the Court had earlier constituted a Committee headed by Mr. Asim Burman, Commissioner, Calcutta Municipal Corporation.97 The Committee was to examine all aspects of urban solid waste management in Class 1 Cities having population over one lakh and was requested to give its report as early as possible. The final report of the Committee was received and it was, in fact, on the basis of this report that the Municipal Solid Waste (Management and Handling) Rules, 1999 were notified.

The present writ petition was concerned with the management and handling of solid waste in Delhi.98 The Court referred to the 14 directions issued in *Dr. B.L. Wadehra case*99 and observed that it is indeed unfortunate that despite more than sufficient time (nearly four years) having elapsed, the said directions

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98. For different directions of the apex Court in case of other metropolitan cities also, namely, Mumbai, Chennai, Calcutta and Bangalore, see under the same title (2000) 2 SCC 166; (2000) 3 SCC 575; (2000) 8 SCC 19.
have not been complied with and the condition of Delhi has not improved. The citizens of Delhi increasingly suffer from respiratory and other diseases. River Yamuna is highly polluted and garbage and untreated domestic and industrial waste is being either freely dumped into the said river or is left on open land, a large volume of which remains unattended. The Court admitted that keeping a large city like Delhi clean is not an easy task where the floating population which comes in every day is not very small, but then it is not impossible either. What is required is initiative, selfless zeal and dedication and professional pride - elements which are sadly lacking.

The Court cited the example of Surat, which had for the time immemorial, been known to be one of the dirtiest cities in the country. The plague there in 1995 was the result of the filth which had accumulated therein. Nevertheless the effort of one man, the Municipal Commissioner, who worked in the field and in the office with dedication, resulted in not only eradicating the plague and cleaning up Surat but gave the city of Surat the distinction of being the second most clean city of India. The people of Surat who threw garbage all around were so influenced by the tireless effort of one person that they themselves have now become zealous guardians of their new found clean city of Surat. This shows what one man as the head of an organisation, like the Municipal Corporation, with selfless zeal, initiative and dedication and without allowing any outside interference can achieve by motivating his employees to clean up the city while acting fairly, justly and efficiently within the four corners of the law. However, in Delhi, which is the capital of the country and which should be its showpiece no effective initiative of any kind has been taken by the numerous governmental agencies. The Court observed:
...We believe it is not for this Court to direct as to how the municipal authorities should carry out their function and resolve difficulties in regard to the management of solid waste. The Court, in fact, is ill-equipped to do so. Without doubt the governmental agencies including the local authorities have all the powers of the state to take action and ensure that the city remains clean. They have only to wake up and act. The Court should, however, direct that the local authorities, Government and all statutory authorities must discharge their statutory duties and obligations in keeping the city at least reasonably clean. We propose to do so now by issuing appropriate directions.

In addition to and not in derogation of the orders passed in Dr. B.L. Wadehra case, the Court issued ten time-bound directions to be complied with by the concerned authorities. These directions may be summarised as under:

- The accumulation of any rubbish, filth, garbage or other polluted obnoxious matters in any premises and depositing the same in any street or public place by any person should be prohibited.

- The streets, public premises such as parks etc. should be surface-cleaned on a daily basis, including on Sundays and public holidays.

- The charges and costs should be levied and recovered on the spot from any person littering or throwing rubbish and causing nuisance so as to affect sanitation and public health. The sanitary authorities should prepare a scheme and publish the information regarding such charges / costs. Till the scheme is framed and published, the authorities should recover Rs. 50 as charges and costs from any person littering or violating provisions of the Municipal Corporation Act, Bye-laws and Regulations relating to sanitation and health.

- Proper and scientific disposal of waste in a manner so as to subserve the common good should be ensured and in this connection the suggestions

100. Ibid.
and directions contained in the report prepared by the Asim Burman Committee should be complied with.

- The landfill sites would be identified, within four weeks, bearing in mind the requirement of Delhi for the next twenty years and the environmental considerations. In identifying the same, the CPCB’s advice should be taken into consideration. The sites so identified should be handed over to MCD and/or NDMC within two weeks of the identification, free from all encumbrances and without MCD or NDMC having to make any payment in respect thereof.

- Appropriate steps should be taken to improve the sanitation in the existing slums and to prevent any fresh encroachment or unauthorised occupation of public land for the purpose of dwelling resulting in creation of a slum.

- Eight sites for setting up of compost plants should be identified and made available to MCD / NDMC free of cost which in turn shall take appropriate steps to have the plants established and operative.

- The names, telephone numbers and addresses of the Superintendents of Sanitation and other responsible officers should be regularly published so that the citizens can approach them for any complaint / grievance.

- The Magistrates under Section 20 and/or Section 21 of the Code of Criminal Procedure, 1973 (Cr.P.C.) should be appointed, within six weeks, for each board / circle / ward to ensure compliance and to try the specified offences relating to littering and causing nuisance, sanitation and public health.
All the authorities concerned, including CPCB, should file compliance reports of these directions within eight weeks from today.

The Court held that any violation of the directions issued is to be viewed seriously.

The Rules cast a duty on every municipal authority to properly manage and dispose of municipal solid wastes. The other higher authorities at the district and State levels, including Pollution Control Boards, have also been made responsible / accountable for the proper implementation of the Rules. The Rules provide for a time bound implementation programme including compliance criteria. The standards for composting, treated leachates and incineration have been laid down to ensure safety and to prevent pollution problems. However, the main thrust of the Rules is on landfilling which is the least preferred option in industrialised countries so far as waste disposal is concerned. Moreover, while framing the Rules, the Central Government has completely ignored the subsidy aspect. Those involved in the treatment of waste and recovering valuable materials from it should get some incentive. Besides, the cost of solid waste management should be borne by the Central Government, the State Government and local bodies equally. ‘Waste management fee’ may also be charged from individual households and commercial establishments including imposition of heavy fines for littering or throwing garbage etc. in open environment. There should be regular checkings by the concerned authorities.

Uncontrolled urbanisation, overburdened civic bodies, laxity adopted by enforcement authorities, lack of civic sense among the people, besides inadequate technologies, have rendered the problems associated with solid
waste management in India unmanageable. Fragmented management and lack of inter-sectoral coordination have further compounded the problems. The formulation of a policy for 'proper and total' waste management and disposal should include techniques like segregation of waste at source; systematic disposal; awareness, motivation and involvement of the community; participation of NGOs; capacity building of local municipalities; sanitary landfilling and possible marketing of recycled materials like compost and biofertilizers.

4.2.2 Plastics Manufacture, Sale and Usage Rules, 1999

In exercise of the powers conferred on it by clause (viii) of sub-section (2) of Section 3 read with Section 25 of the EPA, the Central Government has notified the Plastics Manufacture, Sale and Usage Rules, 1999\(^1\) (hereinafter called 'the Rules'). Under the Rules, a person has been prohibited from manufacturing, stocking, distributing or selling carry bags made of virgin or recycled plastic which are less than 8x12 inches (20x30 cms) in size and 20 microns in thickness. Similarly all the vendors have been prohibited from using carry bags or containers made of recycled plastics for storing, carrying, dispensing, or packaging foodstuffs.\(^2\) However, this prohibition does not apply to the manufacture of carry bags exclusively for export purpose on the basis of an order received for export.\(^3\) Likewise, a person can manufacture carry bags or containers from virgin plastic in natural shade or white. The carry bags and containers can be manufactured from recycled plastic also but they are

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103. Rule 2.
not to be used for storing and packaging food stuffs,\textsuperscript{104} pigments and
colourants criteria as laid down by the Bureau of Indian Standards should be
complied with\textsuperscript{105} and they should be marked as ‘recycled’.\textsuperscript{106} Recycling of
plastics has to be undertaken strictly in accordance with the specifications of
the Bureau.\textsuperscript{107} The minimum thickness of carry bags made of virgin or recycled
plastic should not be less than 20 microns.\textsuperscript{108}

The Rules relating to manufacture and recycling have to be enforced by the
SPCBs (in respect of States) and Pollution Control Committees (in respect of
Union Territories) and those relating to the use, collection, segregation,
transportation and disposal, by the Collector / Deputy Commissioner of the
concerned district.\textsuperscript{109} The Rules also cast a duty on Plastic Industry Association
to undertake self-regulatory measures.\textsuperscript{110}

Every occupier manufacturing carry bags or containers of virgin plastic or
recycled plastic or both has to make an application in the prescribed form to the
SPCB or the Committee, as the case may be, for the grant of registration or
renewal of his manufacturing unit. The registration shall be granted within
thirty days of the receipt of application. However, the registration certificate
shall not be issued or renewed unless the unit meets the norms prescribed under
Rules 5, 6, 7 and 8 and also possesses a valid consent under the Water Act and
the Air Act. The registration once granted remains valid for a period of three
years unless revoked, suspended or cancelled earlier. The application for

\begin{itemize}
  \item \textsuperscript{104} "Food-stuffs" means ready to eat food articles and food products, fast food, processed or
cooked food in liquid, powder, solid or semi-solid form. [Rule 2(e)].
  \item \textsuperscript{105} Rule 5.
  \item \textsuperscript{106} Rule 7.
  \item \textsuperscript{107} Rule 6.
  \item \textsuperscript{108} Rule 8.
  \item \textsuperscript{109} Rule 3.
  \item \textsuperscript{110} Rule 9.
\end{itemize}
renewal of registration has to be made at least sixty days before its expiry date.\textsuperscript{111}

Therefore, after the notification of the Rules, no vendor can now use recycled plastic carry bags or containers for storing, carrying, dispensing or packaging food stuffs. Virgin plastic may be used. This prohibition will prevent adverse health effects of toxic dyes leaching into food. A clear distinction has to be made by the manufacturers between products from ‘recycled material’ and ‘virgin plastic’. However, the Rules have not specifically addressed the issue of proper disposal of plastic waste. Since this waste is non-biodegradable and has the tendency of choking the drains, being eaten up by the cattle and emitting toxic gases if burnt, the proper disposal methods deserve a special mention.

4.3 Management of Chemicals

Chemicals, besides food, air and water, have always been part of man’s environment in some measure. Even before the earliest civilizations, the lightning flash caused oxygen and nitrogen of the air to combine, producing oxides of nitrogen and the said nitrogen dioxide eventually combined with water and oxygen to form nitrates that significantly enriched the soil. Volcanoes contributed sulphur dioxide and particulates to the air just as fossil fuel burning power plants do today. But the total contribution from these sources was small and the earth was thinly populated.\textsuperscript{112} With the rise of civilizations, increase in population and tremendous growth of industrialisation, the use of man made chemicals has increased significantly. The Indian chemical industry has grown phenomenally since independence. There are today an

\textsuperscript{111} Rule 10.
\textsuperscript{112} Dr. Ashok v. Union of India, (1997) 5 SCC 10, 15.
estimated 4000 chemical factories with an investment of over Rs. 3000 crore which employ 3.8 lakh people. The chemical industry accounts for 20 percent of fixed assets in industry and produces more than Rs. 6000 crore worth of goods every year. With the large scale manufacture and use of these chemicals, the problem of pollution has become worse. The recognition of the harmful effects of these toxic substances on human health and environment, led to the measures for the control of the release of these substances into the atmosphere and prevention of resultant diseases. Since chemicals are now used in every sector of the economy, from agriculture and food to textiles, paper and pharmaceuticals, certain efforts have been made in India to properly regulate the connected activities. There are Rules relating to the manufacture, storage, use and import of hazardous chemicals, hazardous micro-organisms and emergency planning and preparedness.

4.3.1 The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

Besides the Rules framed by the Central Government to ensure proper handling and disposal of hazardous waste, BMW and municipal solid waste, the Rules to regulate the manufacture, storage and import of hazardous chemicals have also been notified by the Central Government under the enabling provisions e.g. Sections 6, 8 and 25 of EPA. The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (hereinafter called ‘MSIHC Rules’ or ‘the Rules’) as amended in 1990, 1994 and 2000, apply to an industrial

activity involving the usage and storage of specified hazardous chemicals. The list of hazardous chemicals is given in Part II of the Schedule 1. The occupier who has control over an industrial activity involving such chemicals has to show that he has identified the major accident hazards, has taken adequate steps to prevent such accidents and has provided the workers information, training and equipment to ensure their safety. The concerned authority should also inspect the industrial activity at least once in a calendar year. In case of a major accident, the concerned authority as identified in Schedule 5 should be informed by the occupier who in turn should send the information, within 90 days, to the MoEF. The authority should also inform the occupier regarding any lacunae which needs to be rectified.

An occupier undertaking any industrial activity involving the use of specified quantity of a listed hazardous chemical has to report to the concerned authority for grant of approval at least 3 months before commencing the activity. The concerned authority approves the report within 60 days from its receipt. However, if it is of the opinion that there is contravention of the provisions of EPA or Rules made thereunder, it issues a notice under rule 19. If the occupier subsequently makes a change in the threshold quantity of the hazardous chemical, a further report to the concerned authority has to be made. Before undertaking any industrial activity, the occupier has to prepare a safety report containing the information specified in Schedule 8 and has to send a copy of that report to the concerned authority at least ninety days before

118. Rule 4.
119. Rule 3(a). The authorities, as many as nine in number, have been mentioned in Schedule 5.
120. Rule 5.
121. Rules 6, 7.
122. Rule 8.
commencing the activity. After the amendment of the Rules in 1994, it has been made obligatory for the occupiers of both the new and the existing industries to prepare an independent safety audit report with the help of an expert and forward it to the concerned authority. The authority, if it deems fit, may issue an improvement notice under Rule 19 within 45 days.\textsuperscript{123} The authority is also empowered to ask for additional information regarding the safety report.\textsuperscript{124} If the occupier wants to make any modifications in the industrial activity to which the safety report relates, he has to send a report to that effect to the concerned authority at least 90 days before making those modifications.\textsuperscript{125}

The occupier has to prepare an on-site emergency plan detailing how major accidents would be dealt with and including the names of those responsible for safety. He has to ensure that a mock drill of the on-site emergency plan is held every six months and as soon as it is concluded, a detailed report should be made available to the concerned authority.\textsuperscript{126} Preparation of off-site emergency plan and keeping it up-to-date is the duty of the concerned authority who should also ensure its rehearsal at least once in a year.\textsuperscript{127} The occupier has to inform all persons likely to be affected by a major accident regarding safety measures to be adopted in case of an emergency.\textsuperscript{128}

There are provisions relating to disclosure of information and collection, development and dissemination of information. The occupier has to develop a safety data sheet as specified in Schedule 9. The container of a hazardous chemical has to be clearly labeled showing its contents, the name and address

\begin{itemize}
\item \textsuperscript{123} Rule 10.
\item \textsuperscript{124} Rule 12.
\item \textsuperscript{125} Rule 11.
\item \textsuperscript{126} Rule 13.
\item \textsuperscript{127} Rule 14.
\item \textsuperscript{128} Rule 15.
\end{itemize}
of the manufacturer or importer, the physical, chemical and toxicological data
and in case of a big size container, other accompanying documents.129

Any person importing specified hazardous chemicals in India has to inform the
concerned authorities at least 30 days before the date of import. He has to
inform about the name and address of the person receiving the consignment in
India, the port of entry, mode of transport, quantity of chemical to be imported
and complete product safety. The concerned authority may either permit the
import subject to such directions as it may deem fit or direct to stop the import
on safety or environmental considerations. In case the import is permitted, the
authority has to inform the concerned Port Authority to safely handle and store
hazardous chemicals while off-loading. Any person importing hazardous
chemicals has to maintain records as specified in Schedule 10. He has to ensure
that transportation from the port to the ultimate destination takes place in
accordance with the Central Motor Vehicles Rules, 1989.130

If any person contravenes the provisions of the Rules, the concerned authority
should serve on him a notice requiring him to remedy the contravention within
45 days clearly specifying the measures to be adopted in this regard.131 The
Central Government has been empowered to make suitable changes in the
Schedules.132

In Indian Council for Enviro-Legal Action v. Union of India,133 the Court
ruled that since chemical industries are the main culprits in polluting the
environment, there is every need for scrutinising their establishment and

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129. Rules 16, 17.
130. Rule 18.
131. Rule 19.
functioning more rigorously. No distinction should be made in this respect between a large-scale industry and a medium-scale industry. All chemical industries, whether big or small, should be allowed to be established only after taking into consideration all the environmental aspects. Their functioning should be monitored closely to ensure that they do not pollute the environment in their vicinity.

Under the MSIHC Rules, chemicals having acute toxicity values above prescribed levels or capable of producing major accident hazards owing to their physical and chemical properties have been identified as ‘hazardous chemicals’. These include, among others, industrial solvents, dye-stuffs and dye-intermediates and pesticides. These chemicals produce toxic effects through oral ingestion, skin contact or inhalation. Their release into the environment causes pollution of air, water and soil thereby posing a serious risk to man, animals, plants and environment in general. Therefore, the regulation of manufacture, storage and import of hazardous chemicals should be considered as a step in the right direction. The Rules cover most of the chemical and petrochemical industries which use flammable, explosive, toxic and reactive chemicals. The provisions relating to reporting of accidents, preparation of material safety data sheets, conduct of periodic safety audit, labeling of containers, reporting of imports, approval of sites for carrying on industrial activity and preparation of on-site and off-site emergency plans are some of the significant features of the Rules. However, the responsible authorities should ensure proper implementation of the MSIHC Rules. These authorities need to be further trained and strengthened. Chemicals threaten us with allergies, poisoning, cancer, genetic mutation and damage to our reproductive, nervous
and immune systems. Since hazardous chemicals can attack individuals, whole populations and even future generations, if disasters are really to be prevented, there is an urgent need for accurate scientific modeling of their potential long-term impacts on human health and environment.

4.3.2 Chemical Accidents (Emergency Planning, Preparedness & Response) Rules, 1996

In order to develop an emergency planning and response system in case of chemical accidents in India, the Central Government has made Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 (hereinafter called 'the Rules') as amended in 1998. The Rules provide for a four tier crisis management set up at the local, district, state and central level. The composition of the Local Crisis Group has to be in accordance with Schedule 8 with the Sub-divisional Magistrate / District Emergency Authority as the Chairperson. This group is the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident. The group is to meet every month and forward a copy of the proceedings to the District Crisis Group. In order to deal with major chemical accidents and to provide expert guidance for

134. "Chemical accident" means an accident involving a fortuitous, or sudden or unintended occurrence while handling any hazardous chemicals resulting in continuous, intermittent or repeated exposure to death or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity. [Rule 2(a)].
137. "Industrial pocket" means any industrial zone earmarked by the Industrial Development Corporation of the State Government or by the State Government. [Rule 2(d)].
139. Rule 8(4).
140. "Major chemical accident" means an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled development in the course of industrial activity or transportation or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environment. [Rule 2(f)].
handling chemical accidents at different levels, the District Crisis Group is to be constituted at the district level as per the composition specified in Schedule 7 under the Chairmanship of the District Collector,\textsuperscript{141} State Crisis Group at the state level as per the composition specified in Schedule 6 under the Chief Secretary as the Chairperson,\textsuperscript{142} and a Central Crisis Group at the central level as per the composition specified in Schedule 5 under the Secretary, Government of India as the Chairperson.\textsuperscript{143} The District Crisis Group has to meet every forty-five days and send a report to the State Crisis Group. The State Crisis Group is to meet at least once in three months and Central Crisis Group at least once in six months and follow such procedure for transaction of business as they deem fit. All these groups have to perform their respective functions within the area of their jurisdiction to ensure proper planning, prevention, preparedness and mitigation regarding chemical accidents. They have also been made accountable to each other as per their hierarchical position.

Besides constitution of the above stated Crisis Groups, the Rules made it obligatory for the Central Government to set up a Crisis Alert System within thirty days from the date of the commencement of the Rules.\textsuperscript{144} This system includes setting up of a functional control room, an information net working system and appointment of adequate staff and experts to man the functional control room; publication of a list of Major Accident Hazard (MAH) installations,\textsuperscript{145} a list of major chemical accidents in chronological order and a

\begin{footnotesize}
\textsuperscript{141} See Rules 8 & 9.
\textsuperscript{142} See Rules 6 & 7.
\textsuperscript{143} See Rules 3 & 5.
\textsuperscript{144} Rule 3(1).
\textsuperscript{145} "Major Accident Hazard (MAH) Installations" means isolated storage and industrial activity at a site, handling (including transport through carrier or pipeline) of hazardous chemicals equal to or in excess of the threshold quantities specified in Column 3 of Schedules 2 and 3 respectively. [Rule 2(g)].
\end{footnotesize}
list of members of the Central, State and District Crisis Groups; and taking of measures to create awareness amongst the public with a view to preventing chemical accidents.146 The MAH installations have to aid and assist District and Local Crisis Groups in their functioning.147 There is a provision for providing information to the public regarding chemical accidents.148

As on date, there are 1460 MAH units in 19 states of the country. As per the latest report, 1395 on-site plans and 118 off-site plans have been prepared. All the states except Bihar and Jammu & Kashmir have constituted State Level Crisis Groups. A country report on “Status of Emergency Preparedness and Response in MAH Districts in the Country” has been prepared. This study was undertaken to assess the Emergency Preparedness and Response Systems existing in the country. The study has observed that the status of emergency preparedness in the country needs improvement at different levels. Immediate upgradation of availability of information, availability of resources to respond to fire emergencies, availability of hospitals with poison treatment facilities and other responses have been recommended for those districts having maximum MAH units.149

Several cases of chemical accidents involving isolated storage have come to light in the recent past. In this regard, lack of inventorisation of such storage and poor enforcement of legal provisions have been identified as the major factors.150 There is, therefore, an urgent need for dissemination of information, conducting of workshops / trainings and creation of awareness among concerned authorities, state officials, industry representatives and the public. Strict enforcement of the Rules is necessary to prevent chemical accidents in

146. Rule 4.
147. Rule 12.
149. supra note 42, at 102.
150. Ibid.
the country and to avoid the situations like those that occurred at Bhopal in 1984 or Seveso, Italy in 1976.

4.3.3 *The Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms / Genetically Engineered Organisms or Cells Rules, 1989*

While discussing the Rules relating to hazardous substances in India, it is necessary to mention the Manufacture, Use, Import, Export and Storage of Hazardous Micro-organisms / Genetically Engineered Organisms or Cells Rules, 1989\(^{151}\) (hereinafter called 'the Rules'). These Rules apply to the manufacture, storage, sale, processing, import, export, packaging and repackaging of micro-organisms and gene-technological products. The Rules also apply to the production, manufacture etc. of drugs and pharmaceuticals and food-stuffs distilleries and tanneries etc. which make use of micro-organisms / genetically engineered micro-organisms in one way or the other. The above stated activities are to be regulated through different committees which are competent authorities under the Rules.\(^{152}\) The various committees with their respective powers and functions are given below:

1. Recombinant DNA Advisory Committee (RDAC): To review developments in Biotechnology at national and international level and make recommendations for safety regulations in India. The Committee functions in the Department of Biotechnology.

2. Review Committee on Genetic Manipulation (RCGM): To monitor safety aspects of on-going research projects and activities involving genetically engineered organisms / hazardous micro-organisms. To


\(^{152}\) Rule 4.
bring out manuals of guidelines to ensure environmental safety. It also functions in the Department of Biotechnology.

3. Institutional Biosafety Committee (IBSC): To update on-site emergency plan according to the manuals / guidelines of the RCGM. This Committee is to be constituted by an occupier or any person including research institutions handling micro-organisms / genetically engineered organisms.

4. Genetic Engineering Approval Committee (GEAC): To approve the activities involving large scale use of hazardous micro-organisms and recombinants in research and industrial production from the environmental angle. This Committee functions under the Department of Environment, Forest and Wildlife.

5. State Biotechnology Co-ordination Committee (SBCC): To review periodically the safety and control measures in various industries / institutions. To inspect, investigate and take punitive action in case of violations of statutory provisions.

6. District Level Committee (DLC): To monitor safety measures in the districts under the control of District Collectors and to report to the SBCC and GEAC.

Under the Rules, animal pathogens and plant pests are the two major heads of micro-organisms or genetically engineered organisms, products or cells. Their import, export, transport, manufacture, process, use or sale can only be with the approval of GEAC. Any person using them has to obtain a licence from GEAC. Their use for research in laboratories is to be notified by MoEF and they may be carried out of those laboratories only under the supervision of

153. See Rule 5.
IBSC. 154 Their production commences only with the consent of GEAC and no deliberate or unintentional release into the environment should be allowed. However, in some special cases, their deliberate release may be approved by GEAC 155 All the approvals of GEAC are to be for a specified period not exceeding four years at the first instance renewable for two years at a time. The GEAC has power to revoke the approval in specified situations and supervise the implementation of the terms and conditions of approvals through SBCC or DLC or any person authorised in this behalf 156 If an order is not complied with, the DLC or SBCC may take measures at the expense of the person responsible. Where immediate intervention is required in order to prevent any damage to environment, nature or health, necessary steps may be taken without issuing any orders or notice and the assistance of any other governmental authority may be sought 157 The occupier has to furnish such information as may be required including financial conditions and accounts and GEAC may fix fees to cover the expenses incurred by the authorities in connection with approval, examination, supervision and control 158 Any person aggrieved by a decision of GEAC / SBCC may prefer an appeal, within thirty days of the decision, to the appellate authority appointed by MoEF. 159 The MoEF may exempt an occupier from Rules 7-11. 160

156. Rules 13, 14.
158. Rule 18.
159. Rule 19.
Genetic engineering and modification involve scientific techniques and experimentation. For a student of law, it is important to the extent that he is aware of an area of activity where the law that regulates the engineering or modification of genes may apply or be relevant. There is a need to regulate these activities because certain organisms are pathogenic i.e. capable of producing diseases if they escape. Moreover, if they fall into the wrong hands, they have the potential of being used as biological agents in war or by terrorists.

4.4 Relevant Notifications

Besides the Rules framed under the enabling provisions of EPA, the Central Government has also issued certain notifications specifically addressing the issues relating to hazardous substances. Some of these notifications may be quoted to give an idea of administrative efforts made in India to regulate the problem.

4.4.1 Prohibition on Use of Benzidine-Based Dyes and its Salts

In exercise of the powers conferred by clause (d) of sub-section (2) of Section 6 of the EPA, read with Rule 13 of the Environment (Protection) Rules, 1986 (hereinafter EPR), the Central Government prohibited and restricted the use of benzidine-based dyes and its salts in the dying and colour processing industries. These chemical substances were classified as ‘prohibited substances’ and their use was required to be discontinued within three years from the date of issue of notification.161

4.4.2 Criteria for Labeling Certain Products as Environment Friendly Products

The notifications issued by the MoEF laying down the criteria for labeling certain products as Environment Friendly Products are important. These

notifications provide general as well as specific requirements to be complied with in the manufacture, packaging and use of the following products so as to ensure quality safety and performance:

(i) Aerosol Sprays,\textsuperscript{162} 
(ii) Wood Substitutes,\textsuperscript{163} 
(iii) Paper,\textsuperscript{164} 
(iv) Architectural Paints,\textsuperscript{165} 
(v) Detergents,\textsuperscript{166} 
(vi) Plastic,\textsuperscript{167} 
(vii) Packaging Material / Package (Part-1 Paper, Paper Board and Plastics excluding Laminates),\textsuperscript{168} 
(viii) Textiles,\textsuperscript{169} 
(ix) Cosmetics,\textsuperscript{170}


\textsuperscript{166} G.S.R. 706(E), dated 15th November, 1991, Extra., Pt. II, Sec. 3(i), dated 29th November, 1991, pp. 3-4; G.S.R. 440(E), dated 27th April, 1992, Extra., Pt. II. Sec. 3(i), dated 28th April, 1992, pp. 3-4, No. 188.


(x) Food Items, namely Beverages, Infant Foods and Processed Fruits and Vegetable Products,\textsuperscript{171}

(xi) Food Additives,\textsuperscript{172}

(xii) Packaging Material / Package, Part-II Laminates and its Products,\textsuperscript{171}

(xiii) Architectural Paints and Powder Coatings,\textsuperscript{174}

(xiv) Lead Acid Batteries,\textsuperscript{175}

(xv) Aerosol Propellants,\textsuperscript{176}

4 4 3 \textit{Notifications Relating to Coastal Regulation Zone (CRZ)}

The Central Government vide S O 114(E), dated 19th February, 1991 declared coastal stretches as Coastal Regulation Zone (CRZ) and imposed restrictions on the setting up and expansion of industries, operations and processes in the said zone.\textsuperscript{177} However, in view of the objections filed, the Central Government amended the notification\textsuperscript{178} and in exercise of the powers conferred by Section 3(1) & (2)(v) of the EPA read with Rule 5(3) & (4) of EPR, permitted certain activities in the zone in public interest after Environmental Impact Assessment.


\textsuperscript{172} G S R 68(E), dated 8th February 1993, Extra., Pt II, Sec 3(i), dated 15th February, 1993, pp 5-7, No 50, G S R 215(E), dated 17th May, 1996, Extra., Pt II, Sec 3(i), dated 18th May, 1996, pp 6-7, No 170

\textsuperscript{173} G S R 425(E), dated 18th May 1993, Extra., Pt II, Sec 3(i), dated 21st May, 1993, pp 3-4, No 176, G S R 622(E), dated 6th September, 1995, Extra., Pt II, Sec 3(i), dated 7th September, 1995, pp 7-8, No 364

\textsuperscript{174} G S R 623(E), dated 6th September 1995, Extra., Pt II, Sec 3(i), dated 7th September, 1995, p 10, No 364

\textsuperscript{175} G S R 625(E), dated 6th September 1995, Extra., Pt II, Sec 3(i), dated 7th September, 1995, p 15-16, No 364

\textsuperscript{176} G S R 90(E), dated 8th February 1994, Extra., Pt II, Sec 3(i), dated 10th February, 1994, pp 2-3, No 65, G S R 219(E), dated 17th May, 1996, Extra., Pt II, Sec 3(i), dated 18th May, 1996, pp 14-17, No 170

\textsuperscript{177} The notification has been made operative by the Supreme Court in \textit{Indian Council for Enviro-Legal Action v Union of India,} (1996) 5 SCC 281 \textit{See also S Jagannath v Union of India,} (1997) 2 SCC 87, Bittu Sehgal v Union of India, (2001) 9 SCC 181, \textit{Goa Foundation Goa v Diksha Holdings Pvt Ltd,} AIR 2001 SC 184

\textsuperscript{178} See S O 494(E), dated 9th July, 1997, Extra., Pt II, Sec 3(ii), dated 9th July, 1997, pp 4-6, No 393
Report and on approval of concerned authorities. Therefore, the notification
has been amended from time to time in public interest. 179

4.4.4 Prohibition on Open Burning of Waste Oil

In exercise of the powers conferred by Section 6(2)(d) of EPA, read with Rule
13 of the EPR, the Central Government prohibited the open burning of waste
oil throughout India on the ground that this practice was toxic and detrimental
to human health and the environment and it was necessary to prohibit it. 180

4.4.5 Prohibition on the Imports of Specified Hazardous Wastes

In exercise of the powers conferred by Section 3(1) and Section 6(2)(d) of the
EPA, read with Rule 13 of the EPR, the Central Government prohibited the
import of wastes containing beryllium, selenium, chromium (hexavalent),
thallium, and pesticides, herbicides and insecticides and their intermediates /
residues thereof including outdated pesticides on the ground of being
hazardous and toxic to human health and the environment. 181

4.4.6 Constitution of an Authority

In exercise of the powers conferred by Section 3(1) & (3) of the EPA, the
Central Government constituted an authority, known as the Environment
Pollution (Prevention and Control) Authority, for the National Capital Regional

179 For further amendments see S.O. 873(E) dated 30th September 1998, Extra, Pt II
Sec 3(ii), dated 30th September, 1998 p 2, No 650, S.O. 998(E), dated 30th
September, 1999, Extra, Pt II, Sec 3(ii), dated 30th September, 1999, pp 2-3, No
601, S.O. 900(E), dated 29th September 2000, Extra, Pt II, Sec 3(ii), dated 29th
September, 2000, p 2, No 640, S.O. 329(E), dated 12th April, 2001, Extra, Pt II,
Sec 3(ii), dated 12th April, 2001, pp 4-7, No 237, S.O. 988(E), dated 3rd October,
dated 21st May 2002, Extra, Pt II, Sec 3(ii), dated 21st May, 2002, pp 4-8, No 470,
S.O. 52(E), dated 16th January, 2003, Extra, Pt II, Sec 3(ii), dated 17th January,
2003, pp 3-4, No 47, S.O. 838(E), dated 24th July, 2003, S.O. 460(E), dated 22nd
April, 2003, Extra, Pt II, Sec 3(ii), dated 22nd April, 2003, pp 3-4, No 376

180 S.O. 329(E), dated 15th April, 1997, Extra, Pt II, Sec 3(ii), dated 15th April, 1997,
pp 1-2, No 253

181 S.O. 330(E), dated 15th April, 1997, Extra, Pt II, Sec 3(ii), dated 15th April, 1997,
pp 2-3, No 253
(NCR)\(^{182}\) for a period of two years\(^{183}\) from the date of notification. The authority was constituted under the Chairmanship of Shri Bhure Lal with three Members and one Convenor. It was to exercise specified powers and perform specified functions for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution. Some of its powers included the following:

1. To issue directions under Section 5 of the EPA in respect of standards for emission or discharge of environmental pollutants from various sources; restriction of areas in which any industries, operations or processes or class of industries or processes shall not be carried out or shall be carried out subject to certain safeguards; procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents; and procedures and safeguards for the handling of hazardous substances.

2. To ensure compliance of specified emission standards by vehicles for the purpose of controlling vehicular pollution.

3. To ensure maintenance of specified ambient noise standards.

4. The power of entry, inspection, search and seizure under Section 10 of EPA.

5. The power to take samples under Section 11 of EPA.

6. The power to make complaints under Section 19 of EPA against offences and for non-compliance of directions issued by it.


\(^{183}\) For the words 'for a period of two years', the words 'for a period of four years' were substituted vide S.O. 68(E), dated 25th January, 2000, Extra., Pt. II, Sec. 3(ii), dated 25th January, 2000, p. 1, No. 52.
The authority has to function under the supervision and control of the Central Government. It is expected to furnish a progress report of its activities at least once in two months to the Central Government. The tenure of the authority has now been extended upto January, 2006.

4.4.7 Delegation of Power

In exercise of the powers conferred by Section 23 of EPA, the Central Government delegated the powers vested in it under Section 5 of the EPA, to the Chairman, SPCBs (25 States) and Committees (7 Union Territories), to issue directions to any industry or any local or other authority for the violation of the standards and Rules relating to bio-medical waste, hazardous chemicals, industrial solid waste and municipal solid waste including plastic waste.184

4.4.8 National Awards for Taking Significant Measures to Prevent Pollution

The Central Government introduced a scheme of awards to encourage the industries that undertake significant measures like use of clean technologies, products or practices etc. to prevent pollution and find innovative solutions to environmental problems. The industries include highly polluting industries as well as small scale industries handling hazardous chemicals which take effective measures to reduce the risk to the community living in their vicinity.185

4.4.9 Environmental Impact Assessment

The assessment of environmental effects of a developmental or industrial activity has been an implicit part of any civilised decision making process. Evaluation of environmental harm is a pre-requisite in deciding whether or not to grant permission for a proposed activity. Environmental Impact Assessment (EIA) is basically an information gathering exercise which enables the

concerned authorities to understand the environmental effects of a proposed activity. This exercise necessarily involves the use of best possible sources of information, best techniques, expert advise, opinion of the members of the public likely to be affected by the proposed activity and sometimes the opinion of independent third parties also. An objective decision can be taken only after a systematic analysis of all the relevant facts.

EIA is an exercise of evaluating and predicting future changes caused by proposed projects, plans or policies to the quality of the environment. It helps administrative agencies to make correct and environmentally sound decisions. Sometimes the projects or policies are either modified or abandoned when in an assessment they are found likely to result in significant adverse effects upon the quality of environment. EIA is a tool not only for identifying potential damage but also for probing methods of preventing such damage. The process is rooted in the principle that prevention is better than cure and carries the warning 'look before you leap'. Bhopal disaster is the glaring example of how absence of a well-thought out safety mechanism could lead to grave consequences. Needless to say that prevention ensures not only ecological success but also economic success since prevention is not only better than cure but also in many cases cheaper.\(^186\)

EIA has featured in many international and national documents. The Stockholm Declaration, 1972 did not specifically include this obligation, but in Principles 14 and 15 it referred to the need for rational planning as 'an essential tool' to protect and improve the environment and to avoid adverse effects on the environment. In 1985, EC issued a Directive on EIA.\(^187\) In 1991, the


Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)\(^{188}\) introduced an absolute obligation of EIA procedure. It provided that the parties... mindful of the efforts of international organisations to promote the use of environmental impact assessment both at the national and international levels... have to take the necessary legal, administrative or other measures to implement the provisions of this Convention, including, ...the establishment of an environmental impact assessment procedure that permits public participation and preparation of the environmental impact assessment documentation described in Appendix II... and ensure that an environmental impact assessment is undertaken prior to a decision to authorise or undertake a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact.\(^{189}\) Similarly, Principle 17 of the Rio Declaration states:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

At the national level, about 70 percent of the world states have adopted the EIA requirements.\(^{190}\)

However, the EIA processes vary from nation to nation. Broadly, they can be classified under two heads.\(^{191}\)

(i) The statutory mandatory model, and

(ii) The administrative discretionary model.

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188. 30 ILM 802 (1991).
189. See the Preamble and Article 2 of the Espoo.
In the mandatory model, the scope, nature and limits of discretion and the procedure in which the impact assessment is carried out are governed by legislation. There may be specific legislation or delegated legislation obliging the decision maker to assess the impact or review the assessment. This model denotes the compulsory need to make impact assessment before development proposal is approved, industrial licence or permit granted or project sanctioned. The law confers on the administrative agency a power coupled with duty to make an impact assessment. The National Environmental Policy Act, 1969 of the U.S. represents the best example for the statutory mandatory model of EIA.

In the administrative discretion model, all matters are left to be decided by the administrative agency and are controlled only by executive policy, administrative discretion and political expediency. There may not be an enacted law to impose on the authority the compulsion to consider objective criteria. The discretionary model derives strength not from any law but from the discretionary powers of the administration. The Bhopal gas tragedy in India became a typical example of the grave consequences of the lacunae in the legal system following an administrative discretionary model and highlighted the need for a mandatory model of an open EIA.

In view of the evils generated by the existing system, a changeover to the legislative mandatory model has been acutely felt in India. The phenomenal growth of environmental action groups and the obvious concern of the judiciary\(^\text{192}\) were the two positive factors that supported the introduction of

legislative EIA model in India. In fact, the late eighties and early nineties witnessed a few attempts in India towards evolving a mandatory model and a better regime of environmental protection.\textsuperscript{193} Rule 5(1) of the EPR, 1986 provided that while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas, the Central Government may take into account the following factors:

i. Standards for quality of environment in an area.

ii. The maximum allowable limits of concentration of various pollutants (including noise) for an area.

iii. The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted.

iv. The topographic and climatic features of an area.

v. The biological diversity of the area which needs to be preserved.

vi. Environmentally compatible land use.

vii. Net adverse environmental impact likely to be caused.

viii. Proximity to a protected area.

ix. Proximity to human settlements. And

x. Any other factors relevant to the protection of the environment in an area.

Similarly, by way of an amendment in 1987 in the Factories Act, 1948, Section 41A was incorporated which empowered the State Government to constitute a Site Appraisal Committee. The Committee had to make its recommendations to the State Government regarding the initial location of a factory involving hazardous process or for the expansion of any such factory. Moreover, under Rule 8(3) of the HW Rules, 1989, the State Government, occupier or any

\textsuperscript{193} supra note 186, at 559.
association of occupiers had to undertake an EIA study before selecting a site for hazardous waste disposal facility. All this was done prior to a significant notification issued by the MoEF on 27th January, 1994194 which made EIA a mandatory requirement.

The notification directed that a new project listed in Schedule-1 195 or the expansion or modernisation of any existing industry shall not be undertaken unless it has been accorded an environmental clearance by the Central Government in accordance with the specified procedure. A person who desires to undertake any such activity has to make an application in the proforma specified in Schedule II to the Secretary, MoEF. The application is to be accompanied by an EIA Report, Environment Management Plan and details of public hearing as specified in Schedule IV. However, public hearing is not required in respect of small scale industrial undertakings located in notified / designated industrial areas / industrial estates, or areas earmarked for industries under the jurisdiction of industrial development authorities; widening and strengthening of highways; mining projects (major minerals) with lease area upto twenty-five hectares; units located in Export Processing Zones, Special Economic Zones: and modernisation of existing irrigation projects. But for pipeline and highway projects, public hearing is required to be conducted in each district through which the pipeline or highway passes through.


195. Schedule I lists 29 projects including chemical fertilizers, pesticides (technical) and intermediates, petrochemicals, bulk drugs and pharmaceuticals, including intermediates, synthetic rubber, asbestos and mining projects etc.
One time opportunity may be given to the applicant to complete the data and submission of incomplete data for the second time would itself be a sufficient reason for the Impact Assessment Agency to reject the case summarily. Site clearance by the Central Government is needed in case of specified projects e.g. mining, pit-headed thermal power stations, hydro-power, major irrigation projects, ports and harbours (excluding minor ports) and greenfield airports, petrochemical complexes, refineries and mega thermal power plants.

The project report has to be evaluated and assessed by the Impact Assessment Agency (IAA) i.e. MoEF in consultation with a Committee of Experts, the composition of which is specified in Schedule III. The assessment is to be completed within a period of ninety days from the receipt of the requisite documents and data from the project authorities and completion of public hearing and decision is to be conveyed within thirty days thereafter. The clearance once granted is valid for a period of five years.

The project authorities have to submit a half-yearly compliance report to the IAA which makes the reports publicly available. Concealment of any factual data or submission of false, misleading data / reports would lead to the project being rejected. If approval has been granted on the basis of false data, it is also to be revoked.

Therefore, as per the notification, any person who desires to undertake any new project in any part of India or the expansion or modernisation of any existing industry or project listed in Schedule I has to make an application to the Government of India in the MoEF giving all the details specified in Schedule II. The application is to be accompanied by a project report including an EIA report. The reports submitted with the application are to be evaluated.
and assessed by IAA in consultation with a Committee of Experts. Under the original notification of 1994, the IAA and its Committee of Experts had a discretion to interact with the local people likely to be affected by the project. However, by the subsequent amendment in the year 1997, it has been made obligatory to take into account the minutes of the public hearing before granting clearance. A detailed procedure for public hearing has now been provided in Schedule IV.

In Centre for Social Justice v. Union of India,196 the Gujarat High Court held that the notice for public hearing is required to be published in at least two newspapers having wide circulation in the area where the project is going to be set up. The purpose of publication is obvious that the people likely to be affected must be informed about the public hearing at which they can raise their objections or make their suggestions. The whole purpose of the public inquiry is to ensure that local residents who are likely to be affected, especially on the environmental front, on account of the industry coming up in the area should be made to understand the environmental consequences of the project so as to enable them to decide whether they should lodge any objections or make any suggestions. All the residents may welcome the industry and at the same time may like to make suggestions for preventing any environmental degradation.

The Court further observed that at least the officer of the SPCB, the officer from the State Department of Environment & Forests and at least one senior citizen nominated by the Collector will have to remain present in order to prevent the public hearing from being rendered invalid.

Regarding the question as to whether the notification has any retrospective effect, the apex Court answered the question in negative and in *Narmada Bachao Andolan v. Union of India*, held:

The notification under Section 3 of the EPA can not be regarded as having any retrospective effect.... This notification is clearly prospective and inter-alia prohibits the undertaking of a new project listed in Schedule I without prior environmental clearance of the Central Government in accordance with the procedure now specified. In the present case clearance was given by the Central Government in 1987 and at that time no procedure was prescribed by any statute, rule or regulation. The procedure now provided in 1994 for getting prior clearance can not apply retrospectively to the project whose construction commenced nearly eight years prior thereto.

Thus, the undisputed need for prior assessment of the environmental impact before any project is cleared has now been fulfilled by the EIA notification, as amended from time to time. The notification has contributed significantly in the administrative decision-making process. For example, during the session 2002-2003, a total number of 292 projects were appraised for environmental and site clearance. Out of these, 158 projects were cleared and 87 were either rejected or closed. However, since this watch dog function requires lot of manpower and facilities to assess each project, there is a need to further strengthen different agencies involved in the process so that EIA can become a real strong weapon in maintaining the balance between development and environment.

### 4.5 Conclusion

With the rapid growth of industrialisation, urbanisation and 'throw-away' culture of the present day society, the problems associated with hazardous substances have assumed gigantic proportions. The production of these...
substances is considered necessary in view of economic development and well being of the people. However, their excess use results in the generation of hazardous waste and release of hazardous chemicals. These substances have toxic, flammable and explosive properties. Thus, they are dangerous to living beings and the environment. Sometimes, a waste or chemical may not be hazardous by itself but may become so after coming into contact with a hazardous chemical or a hazardous waste. Successive industrial disasters in Bhopal, Delhi etc, polluted air and water, contaminated soil, congested roads due to garbage and residues from construction processes, noise and odours and spreading of epidemics have highlighted the need of proper regulation, management and handling of hazardous substances in India. The ill effects of industrialisation and urbanisation have become apparent. They warrant necessary actions / steps in this direction. The specific legal regime in India concerning such substances appears to be comprehensive. The rules made and notifications issued under the enabling provisions of EPA touch the specific problems associated with hazardous waste, bio-medical waste, municipal solid waste and hazardous chemicals. The judicial activism has also contributed a lot in this regard. India has indeed responded positively to the international opinion as filtered through various conventions and agreements. However, the major cause of concern is the ineffective implementation of these laws by the enforcement agencies who because of indifference and prevailing corruption have failed to evolve an effective system of monitoring and surveillance.

The next chapter deals with the statutory control of hazardous substances in India through special central enactments.