

fundamental rights were dealt with treating them as writ petitions and the relief of compensation was also granted through writ jurisdiction under Article 32 of the Constitution.

In respect of writ petitions of disputed facts the Supreme Court developed a theory of **Fact finding commissions**, *Nilabati Behera v. State of Orissa*, AIR 1993 SC 1960. *In re death of Savinder Singh Grover*, 1993 SCC (CrI) 1464, *People's Union for Civil Liberties v. Union of India*, AIR 1997 SC 1203. Usually the Supreme Court or High Courts do not take up the issues relating to disputed facts in writ proceedings. They consider only the question of law. When a matter with disputed fact is placed before the Court for consideration the Court refuses to take up such issue and direct the petitioner to approach a Civil Court for resolving the disputed question of fact. But in cases of claim for compensation through public law remedy under Article 32, the Supreme Court instead of making the petitioner to resort to the private law remedy, invented the process of fact finding commissions to inquire into the disputed facts and submit report before the Court to

consider the correctness of the facts placed before the Court. By taking the aid of such report the Court is coming to a conclusion whether there is infringement of the right to life and personal liberty and whether it is a fit case to award compensation in writ proceedings.

The compensatory jurisprudence introduced by the Supreme Court of India by invoking powers under Article 32 gained tremendous importance in recent times due to the increase of the incidents of State lawlessness, *Rudul Sah v. State of Bihar*, AIR 1983 SC 1086, police lawlessness, *Sabelli v. Commissioner of Police, Delhi*, AIR 1990 SC 513, custodial violence, *Sudha Rasbeed v. Union of India*, 1995 (1) SCALE 77 (SC), violence in jails, *Nilabati Behera v. State of Orissa*, AIR 1993 SC 1960, unlawful detentions, *Arvinder Singh Bagga v. State of U.P.* AIR 1995 SC 117, and other violations. This innovation made by the Supreme Court is not only reducing the multiplicity of litigation but also helping the Courts to render speedy justice to victims of the imfringment of right to life and personal liberty.

NATURE AND NEXUS OF HAZARDOUS SUBSTANCES AND HAZARDOUS CHEMICALS UNDER THE ENVIRONMENT PROTECTION LAW - A CRITICAL ANALYSIS

By

—Dr. N. MAHESHWARA SWAMY,

Ph.D. (Law), L.L.M. (Labr. Law), M.A (Eco), IRPM & IPR (PG Dips), (MBA),
Assistant Professor, University College of Law, O.U.,
Hyderabad, A.P.

with

—N. RANJIT, B.E. (Chem. Engg.), M.S. (Natural Gas), (USA)

and

—N. CHAITHANYA, B.E. (Chem. Engg.)

INTRODUCTION

Environment (Protection) Act, 1986 (hereinafter called as the Act), is the main

enactment covering provisions for protecting the Indian environment in various ways. Besides this, there are a catena of other enactments which protect the various

components of environment in their own way, in relation to air, water, forests, wildlife, *etc.* Although the present Act is younger to some of the other said enactments, it contains comprehensive provisions to achieve the targeted goals. Section 3 of the Act empowers the Central Government to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution. In particular such measures may include, laying down procedures and safeguards for the handling of hazardous substances, as provided in Section 3(2)(vii) of the Act. In fact, the Central Government has a responsibility to make rules for carrying out the purposes of the Act providing for all or any of the matters contemplated under Sections 7 to 9, 11 to 13, 19 and 20. In exercise of its powers under Sections 6, 8 and 25 of the Act, the Central Government made various Rules to provide regulations for environmental pollution and for procedural safeguards, which include, *inter alia*, handling of hazardous substances. Thus, handling of hazardous substances gains considerable significance in the scheme of the Act.

Section 2(c) of the Act defines the term "hazardous substance". This term is also defined under Section 2(d) of the Public Liability Insurance Act, 1991 and also in Section 2(f) of the National Environment Tribunal Act, 1995. But in no other Act or the Rules made under the Environment (Protection) Act, that term is apparently given any significance. Even in the present act, though a special emphasis is made to the term "hazardous substance", much clarity is not provided thereto either by the Parliament at the time of enactment or by the Central Government at the time of making any Rules, except with respect to certain matters of pollution control.

While it is a welcome step that the Act itself has defined the term "hazardous

substance" a perusal of the Act and the Rules framed thereunder reveals that neither of these provisions could provide any list of "hazardous substances", nor could they provide any explanation to that effect. However, some of the said Rules define certain terms like "hazardous wastes", "hazardous chemicals" *etc.*, but without making any contextual inter-connection in express terms with regard to the term "hazardous substance". This situation may create technical problems for a strict enforcement of the law in dealing with environmental pollution issues. As such, there is an immense need to re-look into the various provisions of the law and identify the problems areas and then to make suitable suggestions to mitigate the same. The present article is the outcome of such an attempt.

DEFINITION OF THE TERM "HAZARDOUS SUBSTANCE"

Apart from under the present Act the phrase "Hazardous Substance" has also been defined in different enactments and the Rules framed thereunder, for the purposes specified therein, but with ultimate objective of preventing, controlling and abating the environmental pollution and as discussed below:

1. Definition under the Environment (Protection) Act, 1986 :—As already mentioned above, Section 2(e) of the Environment (Protection) Act of 1986, defines the term "hazardous substance", in the following manner:

"Hazardous substance means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plants, micro-organism, property or the environment".

An analysis of the above definition reveals the following aspects:

1. Hazardous substance is any substance or preparation.
2. Such substance or preparation is liable to cause harm to human beings, other living creatures, plants, micro-organism, property or the environment.
3. Such liability must be by reason of its chemical or physico-chemical properties or handling of the substance or preparation.
4. Actual harm need not be caused at the time of fixing the meaning of the term.

From a bare reading of the above definition it can be said that it is silent in providing any meaning to the term “substance”. This situation requires to make a reference to the dictionary meanings of that term. In its common parlance, a substance means, that which underlies all outward manifestations; substratum; the permanent subject or cause of phenomena, whether material or spiritual; that in which properties inhere; that which is real, in distinction from that which is apparent; the abiding part of any existence, in distinction from any accident; that which constitutes anything what it is; real or existing essence. It also means an important element in any existence; the characteristic and essential components of anything; the main part; essential import; purport. It also means any body; matter; material of which a thing is made; hence, substantiality; solidity; firmness; as, the substance of which a garment is made; some textile fabrics have little substance.

As defined under the New International Webster’s Pocket dictionary of the English Language, the term “substance” means the material of which any thing is made or constituted. Construed accordingly, hazardous substance means the hazardous material of which anything is made or constituted. That also means that the substance must result in an end product. If this interpretation is applied

to the context of present study, a “hazardous substance” means a “hazardous product”. Then the question that arises for consideration is whether a hazardous substance includes a hazardous chemical or *vice versa*. If the answer is in positive terms, then it would not sound well to say that a hazardous chemical can also be the end product of a chemical as such, and can therefore be meant a hazardous substance.

Handling

The above definition of the term “Hazardous substance” also requires to know the meaning of the term “handling” as defined in Section 2(d) of the said Act. It runs as follows:

“Handling”, in relation to any substance means the manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion offering for sale, transfer or the like of such substance”.

Now it would be pertinent to verify the various provisions of the Environment Act dealing with hazardous substances for the purpose of the present Act.

2. Definition under the Public Liability Insurance Act, 1991 :—This term, as defined under Section 2(d) means “any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986 (29 of 1986), and exceeding such quantity as may be specified, by notification, by the Central Government”.

3. Definition under the National Environment Tribunal Act, 1995 :—The term “hazardous substance” as defined under the National Environment Tribunal Act, 1995 means any substance or preparation which is defined as hazardous substance in the Environment (Protection) Act, 1986 (29 of 1986) and exceeding such quantity as specified by the Central Government under the Public Liability Insurance Act, 1991 (6 of 1991).

A perusal of the above definition indicates that for the constitution of “hazardous substance”, the following ingredients must be ensured:

- (i) there must be any substance or preparation,
- (ii) such substance or preparation must be defined as hazardous substance in the Environment (Protection) Act, 1986, and
- (iii) such substance or preparation must exceed such quantity as specified by the Central Government under the Public Liability Insurance Act, 1991.

Thus, Section 2(d) of the present Act brings a nexus between the provisions of the Environment (Protection) Act, 1986 and of the various Rules framed under the said Act, in the absence of which the present Act will have no independent existence.

A critical analysis of the above definition envisages that in order to constitute the term “hazardous substance”, the following ingredients must prevail, namely:

1. any substance or preparation
2. such substance or preparation is defined as hazardous substance under the Environment (Protection) Act, 1986, and
3. such substance or preparation must exceed the quantity as may be specified by notification by the Central Government.

A perusal of the definition of the term “hazardous substance” as provided in Section 2(d) of the present Act *vis-a-vis* in Section 2(e) of the Environment (Protection) Act of 1986 goes to establish that the definition provided in the former Act is inclusive of the definition of the latter Act, and both these definitions are inseparable.

4. Definitions under the Rules framed by the Central Government :—

The following Rules, framed by the Central Government while exercising its powers under Sections 6, 8 and 25 of the Environment (Protection) Act, deal respectively with regulations for environmental pollution, need for handling hazardous substances to comply with procedural safeguards, and Central Government’s responsibility to make rules for carrying out the purposes of the Act providing for all or any of the matters contemplated under Sections 7 to 9, 11 to 13, 19, 20 and any other matter which required to be or may be prescribed, respectively. Some of these Rules although absent in defining the term “hazardous substances”, the same contained terms like “prohibited substances”, “restricted substances”, “hazardous waste”, “hazardous chemical” with their due definitions, as discussed below:

- (a) The Environment (Protection) Rules, 1986. These Rules have come into force with effect from 19-11-1986.
- (b) Hazardous Wastes (Management and Handling) Rules, 1989. These Rules have come into force with effect from 28-7-1989.
- (c) The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989. These Rules have come into force with effect from 27-11-1989.
- (d) Rules for the Manufacture, use, import, export and storage of hazardous micro organisms/genetically engineered organisms or cells, 1989, came into force with effect from 13-9-1993.
- (e) The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. These Rules have come into force with effect from 2-8-1996.

In order to critically analyse the phrase “Hazardous Substances”, it is essential to refer

to the pertinent definitions under the Rules framed under the Environmental (Protection) Act, as discussed below. However, it is interesting to note that majority of the Rules made under the Act did not much emphasise on the term “hazardous substance” but have used the term “hazardous chemical”. Therefore, there is quite an apparent need to understand the term “Chemical”. In its general connotation, a “Chemical” is a substance that is produced or used in a process (reaction) involving changes to atoms or molecules. The term is sometimes defined more broadly as “a substance”. As such, there is no much distinction between a “Hazardous Substance” and “Hazardous Chemical”.

(a) Definition under the Environment (Protection) Rules, 1986

The Environment (Protection) Rules, 1986, framed under the Environment (Protection) Act, 1986 though did not define specifically the term “hazardous substance”, it provides definition to the terms “prohibited substance” to mean the substance prohibited for handling (Rule 2(ee)), and “restricted substance” to mean the substance restricted for handling”.

Rule 3 of the said Rules provides various standards for the emission or discharge of environmental pollutants which obviously include hazardous substances. Such standards are specified in Schedules I to IV of the said Rules.

Schedule I of the said Rules framed under Rule 3, provides, industry-wise standards in specified parameters. This Schedule provides information relating to 96 types of industries, the last entry which relates to “Emission standards for Diesel Engines for power plant generator set applications and other requirements with effect from 11-7-2002. While Schedule II is omitted, Schedule III provides information relating to Ambient Air Quality Standards in respect of Noise, and Schedule IV provides Standards for Emission

of Smoke, vapour, *etc.*, from Motor Vehicles. Schedule VI of the said Rules provide general standards for discharge of environmental pollutants in five parts, namely Part A, B, C, D and E. Similarly, Schedule VII of the said Rules provide standards for National Ambient Air Quality. It is interesting to note that neither the Environment Act, 1986 nor the Environment Rules, 1986 framed under the said Act directly provide for any list of “Hazardous substances”. However, the Manufacture, storage and Import of Hazardous Chemicals Rules, 1989 provides a list of “hazardous chemicals” which satisfy the criteria laid down in Part I of Schedule I or listed in Column 2 of Part II of the said Schedule to the said Rules. In addition, chemicals listed in Column 2 of Schedules 2 and 3 of the said Rules are also considered to be hazardous chemicals. Now the problem for consideration is whether or not the term “Hazardous substances” include the “Hazardous chemicals”.

(b) Definition Under the Hazardous Wastes (Management and Handling) Rules, 1989

Section 3(i), (j) and (x) of these Rules provide definitions to the term “hazardous wastes”, “hazardous wastes site”, and “environmentally sound management of hazardous wastes”. Rule 4 of these Rules deal with the responsibility of the occupier and operator of a facility for handling of the wastes. Rule 4A of the same provide the duties of the occupier and operator of a facility to take adequate steps while handling hazardous waste. As per Rule 5 thereof, hazardous wastes shall be collected, treated, stored and disposed of only in such facilities as may be authorised for that purpose”. Similarly, Rule 7 deals with packaging, labelling and transport of hazardous wastes, Rule 11 deals with import and export of hazardous wastes for dumping and disposal, Rule 12 deals with import of hazardous wastes for recycling and reuse, Rules 13 and 14 deal with procedure for import and export of

hazardous wastes, and Schedule I provides ultimately a list of processes generating hazardous wastes, Schedule-2 provides a list of waste substances with concentration limits, Schedule-3, Part - B provides a list of hazardous characteristics. But no other provision under these Rules do provide for any information dealing with "hazardous substances".

(c) **Definition Under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989**

As in the above mentioned Rules, under these Rules also the phrase "hazardous substance" is not defined. However, Rule 2(e) of these Rules defines the phrase "hazardous chemical", in the following manner:

- “(i) any chemical which satisfies any of the criteria laid down in Part I of Schedule I or listed in Column 2 of Part II of this Schedule;
- (ii) any chemical listed in Column 2 of Schedule 2;
- (iii) any chemical listed in Column 2 of Schedule 3”.

These Rules, as provided in Rule 4 thereof, shall apply to an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in Part I of Schedule I or listed in Column 2 of Part II of that Schedule is or may be involved; and isolated storage of a hazardous chemical listed in Schedule 2 in a quantity equal to or more than the threshold quantity specified in column 3 thereof.

Thus the above definition also requires to know what is a "chemical". Chemical in its general parlance means, a substance that is produced or used in a process or reaction involving changes to atoms or molecules. The term is sometimes defined more broadly as "a substance". Thus, it can safely be said that a "hazardous chemical" may, in a broader sense, be called as a "hazardous substance".

(d) **Definition under the Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro/Organisms Genetically Engineered Organisms or Cells.**

These Rules could either define the term "hazardous substance" or "hazardous chemical". Rule 5 thereof deals with classification of micro-organisms or genetically engineered products, and a list of micro-organisms is provided in Schedule thereof which are divided into the following categories, namely: (i) bacterial agents; (ii) fungal agents, (iii) parasitic agents; (iv) viral, rickettsial and chlamydial agents; and (v) special category. Rule 7 of these Rules provides that no person shall import, export, transport, manufacture, process, use or sell any hazardous micro-organisms or genetically engineered organisms/substances or cells except with the approval of the genetic Engineering Approval Committee.

(e) **Definition Under the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.**

As in the case of the above Rules, under these Rules also the phrase "hazardous substance" is not defined, Rule 2(b) of these Rules, defines the phrase "hazardous chemical", in the following manner, namely:

"Hazardous chemical" means:

- (i) any chemical which satisfies any of the criteria laid down in Part I of Schedule I or is listed in Part 2 of the said Schedule;
- (ii) any chemical listed in Column 2 of Schedule 2;
- (iii) any chemical listed in Column 2 of Schedule 3”.

Rule (h) of these Rules bring a nexus of these Rules with the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989. Similarly, for the purpose of Rule 2(b), Schedule I of these Rules provides in Part II

thereof a list of as many as 431 chemicals, and Schedule 2 provides a list of 27 chemicals, which must be treated to be hazardous. Similarly, Schedule 3 of these Rules provides a list of as many as 99 toxic chemicals, 25 toxic chemicals, 25 highly reactive chemicals, and 30 explosive chemicals, categorised into 4 groups. Besides, Part II of Schedule 3 provides substances not specially named in Part I afore said, namely flammable chemicals which include (1) flammable gases, (2) highly flammable liquids, and (3) flammable liquids, as a fifth group.

OTHER ASPECTS OF HAZARDOUS SUBSTANCES

Duties of Persons carrying on any industry, operation or process or handling any hazardous substance under the Environment (Protection) Act, 1986

As provided under sub-section (2) of Section 10 of the Act, every person carrying on any industry, operation or process or handling any hazardous substance shall be bound to render all assistance to the person empowered by the Central Government who enters any place for the purposes of performing any of the functions that may be entrusted to him by the Central Government, and for examining and testing any equipment, industrial, record, register, document or any other material object or for conducting a search of any building in which he has reason to believe that an offence under this Act or the rules made thereunder has been or is being or is about to be committed, and for seizing the same if he believes that it may furnish evidence of the commission of an offence. A person who willfully delays or obstructs the person authorised by the Central Government in the performance of the latter's functions, shall be guilty of an offence under this Act. For the purpose of search and seizure the provisions of criminal procedure code shall apply.

Central Government to make Rules for handling hazardous substances

Section 25(b) of the Act empowers the Central Government to make rules relating to the procedure in accordance with and the

safeguards in compliance with which hazardous substances shall be handled or cause to be handled under Section 8 of the Act. Section 8 of the Act provides that no person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed. Rule 13 of the Rules of 1986 prohibits and restricts the handling of hazardous substances in different areas and provides the criteria to be followed therefor.

Restrictions on the handling of hazardous substances under the Environment (Protection) Rules, 1986

As discussed above, Rule 13 of the said Rules prohibit and restrict on the handling of hazardous substances in different areas. Sub-rule (1) of Rule 13 lays down an obligation on the part of the Central Government for taking the following specified factors into consideration while prohibiting or restricting the handling of hazardous substances"

- (i) the hazardous nature of the substance in terms of its damaging potentiality to the environment, human beings, other living creatures, plants and property;
- (ii) available substitutes for the substances proposed to be prohibited or restricted;
- (iii) availability of such substitutes or the state of technology for developing a safe substitute available indigenously;
- (iv) gestation period for introduction of a new substitute for bringing a total prohibition of the hazardous substance;
- (v) any other factor that the Central Government may consider relevant.

The above factors go to show that the Central Government's intention should be to bring for a total prohibition of the hazardous substances with safe substitutes developed indigenously.

For the above purposes provided under Rule 13(1), the Central Government should follow the following procedure, as specified in sub-rule (2) of Rule 13:

1. Giving of a notice in the Official Gazette of its intention to impose required prohibitions or restrictions.
2. Such a notification should give a brief description of the hazardous substances along with the geographic region or area to which the notification pertains, and specifying the reasons for prohibition or restriction on the handling of such hazardous substances.
3. Permitting filing of written objections against such impositions by any person interested within 30 days from the date of publication of the notification.
4. Imposing prohibitions or restrictions as aforementioned within a period of sixty days from the date of publication of the notification after considering all the objections so received.

Duty of owner to take out insurance policies for starting handling of hazardous substances under the Public Liability Insurance Act, 1991

As provided under Section 4 of the Public Liability Insurance Act, every owner, *i.e.*, the person who owns or has control over handling any hazardous substance at the time of any accident as defined in Section 2(g) of the said Act, has to take out one or more insurance policies before starting the work of handling any hazardous substance whereby he is insured against the liability to give relief under Section 3(1) of the said Act, namely in case of death or injury to any person, other than a workman, or damage to any property resulted from an accident.

Section 12 of the said Act empowers the Central Government to give directions, *inter alia*, prohibiting or regulating handling of any hazardous substance, or stoppage or regulation of the supply of electricity, water or any other service to any owner or any person, officer, authority or agency and such owner, person, officer, authority or agency shall be bound to comply with such directions. Failure to compliance will entail penalty under Section 14 thereof.

Section 13 of the said Act empowers the Central Government or any of its authorised person to that effect, to make an application to a Court which is not inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of first class for restraining the owner from the handling of any hazardous substance in contravention of any of the provisions of the said Act. Section 14 provides.

CONCLUSIONS AND SUGGESTIONS

A bird's eye view of the foregoing discussion and observations establish the fact that there is some confusion in understanding the intention of the legislature in using the term "hazardous substance" in the main Act and "hazardous chemical" in various rules made under that act. Whatever may be the intention, the ultimate objective apparently is to protect the environment from pollution. This objective can obviously be achieved by invoking Section 2(c) of the Environment (Protection) Act, 1986 which defines the term "environment pollution" to mean the presence in the environment of any environmental pollutant". Similarly, Section 2(b) provides further explanation to the term "environment pollutant" to mean any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment. That means, for an examination of the objective of the Act, all these terms have to read conjunctively.

The above situation also alarms the need for legislatively explaining the interconnection between the two terms "hazardous substance" appearing in Section 2(e) of the Environment (Protection) Act, 1986 and "hazardous chemical" as appearing in various Rules made under the Act, and to satisfy whether or not these are used synonymously to serve the same purpose. Therefore, an Explanation below Section 2(e) of the Act may be inserted, which may more so, be in the following form:

Explanation :—The term "hazardous substance" wherever it occurs shall also include within its meaning a "hazardous chemical".