

Mangesh G. Salodkar

vs

Monsanto Chemicals Of India Ltd.

Bombay High Court

13 July 2006

Citations: 2007 (2) BomCR 883

Bench: R Vyas, D Chandrachud

JUDGMENT

D.Y. Chandrachud, J.

1. The activities of Monsanto:

Monsanto Chemicals of India Ltd. ("Monsanto") is engaged in the formulation of herbicides. Those formulations are sold under the brand names of Machete, Lasso, Roundup and Avadex. The active ingredients in these herbicides are Butachlor, Alachlor, Glyphosate and Triallate. The concentrated active ingredient is manufactured in the U.S. and is imported into India. Monsanto has a factory at Silvassa in which the process of formulation is carried out - a process by which an active ingredient concentrate is diluted to a level or form at which it can be used by the consumer. Monsanto has been in the market in India since 1973 or thereabout. The Central Insecticides Board, a regulatory body constituted under the Insecticides Act, 1968, has accorded statutory approval. Between 1970 and 1999, Monsanto had a factory at Lonavala. The Plant at Lonavala was closed in 1999. A new plant was established at Silvassa in the Union Territory of Dadra Nagar Haveli. The grievance:

2. Mangesh Gopal Salodkar was employed at Monsanto's establishment at Lonavala on 15th April 1996 as a trainee Production Executive. He was confirmed on 15th January 1997. He retired from service voluntarily on 30th April 1999 and was paid his terminal dues. Barely was the ink on the letter of retirement dry than on 5th May 1999, Salodkar suffered a brain hemorrhage. Salodkar was reduced to a near vegetative state, his cognitive faculties seriously damaged. Monsanto bore the expenses of hospitalisation amounting to Rs. 1,15,343/- and paid him an ex gratia of Rs. 2,50,000/-. A petition under Article 226 of the Constitution was instituted in this Court by Salodkar in person. The grievance of the Petitioner is that the operation and working of Monsanto's plants is so hazardous that healthy employees in the productive age group like him have been afflicted with life long debilitation and disease. According to the Petitioner, the First Respondent's parent Corporation is situated in the U.S. with factories and establishments all over the world including South America, Europe, Africa and Asia. In India at the earlier plant at Lonavala and at the presently operated plant at Silvassa, Monsanto has been dealing in Butachlor, Alachlor, Glyphosate and Triallate. The Petitioner contends that almost all pesticides, insecticides and herbicides have been proved to be dangerous to human health. The Petitioner relies upon several studies to establish that pesticides lead to an increased risk of cancer, spontaneous abortion, genetic damage, infertility, liver and pancreatic damage, neuropathy, disturbances to immune systems,

stillbirths and decreased sperm counts. The Petitioner has alleged that Monsanto has been identified by the U.S. Environmental Protection Agency as being a "potentially responsible party" for no fewer than 93 contaminated sites (Superfund Sites) in the U.S. In 1986, a U.S. District Court found Monsanto liable in the death of a Texas employee from leukemia caused by exposure to benzene, which is a carcinogen. It has been alleged that in 1988, Monsanto agreed to a \$1.5 million settlement in a chemical poisoning case filed by over 170 former employees of the company's Nitro, West Virginia facility. Six workers said they had been exposed to chemicals which gave them a rare form of bladder cancer. The Massachusetts Attorney General's Office is stated to have fined Monsanto U.S. \$ 1 million for violation of a State environmental law for illegally discharging acid-laden waste water from a plant and failing to report the release immediately and for understating the volume of the release. In 1992, Monsanto agreed to pay U.S. \$39 million in a settlement with 1700 Houston residents who claimed injuries as a result of living near a former toxic waste dump. The Petitioner has alleged that the Mississippi River suffered environmental damage from pollution originating in Monsanto's facility in Illinois which was a major producer of chloronitrobenzenes.

3. The Petitioner's allegation is that the plant at Lonavala was run by Monsanto in a shoddy fashion. The plant faced serious constraints of space and problems with regard to the storage of chemicals and the disposal of hazardous residue. According to the Petitioner, the plant was not designed to the specifications of the Factories Act, 1948 or the Insecticides Act, 1968. Ventilation and exhaust systems were poor and the mixing of chemicals was carried out in open furnaces, exposing the staff at the plant to serious risks. The forty five employees engaged at Lonavala, worked in poor conditions and it is alleged that at least four of them contracted Tuberculosis while others suffered from ailments of a varying degree. According to the Petitioner, the plant at Silvassa was also run in haphazard manner: exhaust systems were inadequate and employees were made to work with concentrated chemicals for twelve hours at a stretch though this is prohibited in high risk chemical industries. One member of the staff who is named, is alleged to have suffered a heart attack within six months of his transfer to the Silvassa plant and the postmortem report upon his death revealed that the employee had died due to "cardiorespiratory failure associated with Brain Hemorrhage resulting in undiagnosed deceases in the body.

4. The Petitioner claims to have suffered a massive brain hemorrhage resulting in his losing his 'competency, alertness and capacity to do any kind of stressful or hard work'. According to the Petitioner, this ailment was caused by exposure to the toxic and poisonous chemicals being handled, mixed and produced by Monsanto. The Petitioner has relied upon the principle of absolute liability and has submitted before the Court that Monsanto must bear the liability and costs consequential upon the ill-health of its employees, past, present and future. Monsanto's defence:

5. Monsanto filed an affidavit in reply to the proceedings before the Court. According to Monsanto, the petition is an abuse of judicial process and was filed for colourable and extraneous purposes. The Petitioner, according to Monsanto had voluntarily resigned and was paid his terminal dues. It was after he ceased to be an employee of the Company that the Petitioner suffered a brain haemorrhage notwithstanding which the Company claims that it paid his hospitalization expenses. Monsanto also records that it paid ex-gratia. Monsanto has stated before the Court that it has all the requisite statutory permissions including those under the Factories Act, 1948 and the Insecticides Act, 1968. No complaint was made by the Petitioner to any of the authorities constituted under the governing statutes in India. Monsanto states before the Court that it holds accreditations from international agencies which

are granted after stringent scrutiny and due compliance of high standards of safety for employees, together with the adoption of measures for environmental protection. Monsanto has stated in its affidavit that it manufactures only formulations. Fungicide formulation involves mixing concentrated active chemicals with various dilutants and additives, to produce convenient and easy to use fungicides packaged for the end user. The Central Insecticides board has granted its approval after a process of rigorous testing for the use of herbicides, pesticides or insecticides. The Board also granted permission for manufacturing and import after the submission of two years' data on chemistry, bioefficacy and residues, amongst other parameters. The plant is subject to inspection by several agencies including the Pollution Control Board. Monsanto denied that the medical condition of the Petitioner was caused by exposure to herbicides or chemical use in their formulation. According to Monsanto, an aneurysm is a medical condition caused by weakness in the wall of a blood vessel in the brain. Monsanto contends that the allegations in the petition are only based on an internet down load of a report authored by the Green Peace Foundation which was not supported by hard facts and is factually inaccurate and highly exaggerated. Most of the allegations in the petition, it has been stated, related to the chemical business of the former Monsanto Company of the U.S. which business has been now run by Solutia Inc. The activities of Monsanto are totally unconnected. In sum and substance, therefore, the contention of the First Respondent is that the herbicides manufactured by it do not pose any risk to human beings or to the environment.

The appointment of Amicus Curiae and Commissioner:

6. The petition was instituted by Mangesh Gopal Salodkar in person. This Court considered it necessary in the interests of justice to appoint amicus curiae and by an order dated 12th September 2003, Ms. Tanu Mehta-Tiwari, an Advocate of this Court was requested to assist in the proceedings. On 2nd July 2004, after pleadings were filed, the record examined and Counsel heard this Court recorded the view, prima facie, that a case was made out for initiating an investigation into the working of the First Respondent. This Court appointed a Commissioner to investigate into the matter and to arrive at a finding as to whether employees who had worked in the past or those who were working with Monsanto had suffered toxic exposure. A former Judge of this Court, Mr. Justice D.R. Dhanuka agreed to act as Commissioner. The Commissioner was permitted to obtain the assistance of experts in the fields of toxicology, neuroscience, chemistry, environmental science and such other discipline as he considered necessary on areas of which formed the subject matter of his investigation. The Commissioner was permitted to seek information and disclosures of records from the First Respondent and from the regulatory authorities concerned. Employees and exemployees of the First Respondent were permitted to file their affidavits in regard to the injuries and diseases which they claimed to have suffered while working with the Company. The Report of the Commissioner:

7. The Commissioner has, after carrying out a detailed investigation, submitted his report on 19th April 2006. All the contesting parties were heard and their objections were noted. In pursuance of the mandate conferred upon him, the Commissioner called upon Dr. H. N. Saiyed, Director of the National Institute of Occupational Health in the Indian Council of Medical Research, Ahmedabad to submit an expert report on certain specified issues which were as follows:

1. The Chemicals to be considered for the study are:

a. Machete - 50% EC

b. Lasso - 50% EC

c. Machete GR - 5%

d. Lasso GR - 10%

e. Roundup - 41% SL

f. Avadez BW - 59% EC

2. What are the kind of diseases, injuries, mutations, and biochemical changes known or likely to occur in the human body due to exposure to these chemicals?

3. At what level of exposure, and by what routes of exposure, are the said chemicals and formulations harmful to human body?

4. What is the time frame over which particular harmful effects of the chemicals may become manifest in the human body?

5. What is the approximate time frame over which the harmful effects of the concerned chemicals and formulations can cause health hazards or can be so discovered resulting in diseases of one kind or the other?

6. Is it your opinion that manufacture of formulations of these chemicals, as performed by Monsanto India Limited at Silvassa plant placed an unacceptable risk of harm to employees based upon acceptable practice in industry in India?

7. In your opinion what would be the appropriate conditions of manufacturing/formulating the said chemicals given regulations and practices in India, so as to ensure that workers are not subjected to an unreasonable risk of harm as a result of chemical exposure?

8. What is the toxicology per se of concerned chemicals and formulations and whether health hazards are faced by employees and workmen working on the plant in the factory of the Respondents?

9. Whether in your opinion the manufacture of formulations of these chemicals is liable to be considered as hazardous and dangerous exposing the workers and other employees to serious health and environmental problems?

In his report, the Commissioner summarized the manifestations of toxicity for each ingredient of the chemicals concerning which his opinion had been sought. The Commissioner records that his toxicological information was gathered on the basis of literature drawn from independent websites such as the International Program on Chemical Safety, a joint venture of the World Health Organization, International Labour Organization and the United Nations Environmental Program. The toxicity manifestations were summarized in the following chart:

Chemical Toxicity Manifestations

Alachlor Irritation of skin and eyes (particularly technical compound), contact dermatitis, cancer of blood

(animal studies), abnormal functions of liver and

kidneys. Eye abnormalities.

Butachlor Similar to alachlor

Sulfosulfuron Irritation of the skin and kidney stone at very high doses

Glyphosate Very very low toxicity

Tri-allate Abnormal behaviour, demyelination of spinal tract and peripheral nerve fibres, Toxic effects on liver and kidneys

Xylene Short term effects on CNS functions. Long term effects are less clear

Monochloronbenzen May affect nervous system, liver and kidneys.

Bentonite Respiratory Toxicant. Toxicity depends upon crystalline silica content which varies from 1 - 20%.

Medical records and chest X-rays of the employees were produced before the Commissioner by the First Respondent. The Commissioner noted that the quality of some of the medical investigations was not up to mark and raised doubt about their validity. For instance, the urine reports of medical examination of all workers examined in June 1997 were identical and the blood urea values of 26 out of 32 subjects examined in November 1997 showed the same value of 22.8 mg. The chest X-rays were almost unreadable. Dr.Saiyed observed that abnormal findings of blood pressure, blood sugar, blood urea, SGPT, serum creatinine, Chest X-rays, audiometry and lung function test were observed. Except for blood sugar and blood pressure readings these abnormalities were not communicated to the workers. The Report of Dr.Saiyed observed thus:

It is important to note that chemicals used in the factory and physical conditions have potentiality to cause the observed abnormalities in biochemical parameters, lung function and audiometry and therefore, detection of such abnormalities warrants in depth investigations of individual worker to find out the cause as well as assessment of the work environment.

The parameters for the survey included : (i) Measurement of noise levels; (ii) Measurement of dust levels; (iii) Measurement of heat stress; and (iv) Measurement of chemical levels in the air. The Commissioner found a high incidence of tuberculosis amongst the workers and came to the following findings:

Excess exposure to dust can lead to development for various respiratory diseases. We do not have information on the chemical constituents of the dust in the work environment. Inhalation of dust impregnated with the chemical can cause chemical toxicity. Exposure to silica over a long period can lead to development of silicosis and increased susceptibility to development of tuberculosis. This is important because there is an alleged high incidence of tuberculosis amongst the workers.

Dr. Saiyed noted that from the perspective of toxicology, the following parameters are relevant:

Investigation Target Organ Exposure parameter

SGPT and Serum

Bilirubin Liver Alachor, butachlor, triallate, Chlorobenzene

Blood urea and Serum Creatinine Kidney Alachor, butachlor, triallate, Chlorobenzene

Urine report (less Kidney and other -do- parts of urinary

tract (infections, stone)

specific functional

parameter)

Audiometry Hearing Noise

Pulmonary function test Lungs Dust

Changes in the aforesaid parameters could, according to Dr. Saiyed, also occur due to causes not related to chemical exposure but nevertheless it was necessary to exclude the chemical cause particularly when it was simultaneously observed in many workers having a possibility of such exposure. Once an abnormality is detected in workers, it is necessary to (i) Inform the employee of the existence of the abnormality, its possible causes and remedial action; (ii) Place the workers under surveillance; (iii) Monitor the work environment; (iv) Provide effective protection to the worker; and (v) Change the place of work if the exposure cannot be controlled. The report of Dr. Saiyed makes the following observations:

In annexure 6, I have detailed the finding of various abnormalities indicating possible functional impairment of liver, kidney, lungs and hearing amongst a number of workers at different points of time. The records do not show that any action listed in the previous paragraphs such as informing employer and employees, putting worker under surveillance and detailed work environment monitoring was carried out. In these cases the effects may be transitory but exposure is one of the strong possibility. For example, in July 2000 SGPT values were abnormal in all 50 workers and urea levels were found abnormal (40 mg/dL or more) in 18(36%) subjects. These findings could indicate a strong possibility of exposure of the workers to an exposure having effects liver and kidney. With regard to the SGPT high levels observed during July 2000, I was handed over a fax letter dated 20th Nov. 2004 on 25th March 2005, stating that high levels of SGPT were due to improper storage conditions of chemical reagents due to frequent failure of power supply at Dahanu Road monsoon (Annexure 10). It is not clear when it was discovered that the high levels of SGPT were due to spoiled chemicals. It is also important to note that the abnormal levels of SGPT were also noted in a number of workers in previous year (1999) and also during following year (2001). In absence of alternate explanation I am inclined to put the possibility of relationship between chemical exposure and biochemical abnormalities related to liver and kidney. The

consequence of such finding is not clear. No case of kidney or liver failure has been reported in any worker. The ex-workers may examine for these parameters.

8. The Commissioner has formed the opinion that the working conditions of Monsanto plant at Silvassa have since improved and are presently satisfactory. The Management had taken several steps to improve of working conditions. However, Dr.Saiyed found several deficiencies on the part of Monsanto, in regard to the working conditions in the past which were summarized as follows:

(i) No industrial-hygiene survey reports prior to February 2000 were available. An industrial-hygiene survey is a principal tool for evaluation of work hazards;

(ii) On workers' health, Dr.Saiyed made the following observations:

Workers' Health: Medical examination showed higher than normal values of biochemical parameters for liver and kidneys function at several occasions. During one of the medical examination (July 2000) all workers showed higher than normal values of SGPT. The plant medical officer in his letter of Nov. 2004 has attributed this to the use of spoiled reagents, however, it is not clear when it was discovered and what action was taken. There is no explanation offered for the biochemical abnormalities at other occasions of periodic medical examination. This could be related to chemical exposure as many of the chemicals used in the factory have potentiality of causing such effects. At this stage, I cannot give my opinion definitely as very limited data regarding chemical exposure is available.

Medical records were found to have been poorly maintained:

I am particularly concerned about the manner in which the medical records are dealt with. They were treated merely as 'ritual'. The company's excuse for the poor quality of medical investigations is not satisfactory. A medical investigation which has been done casually (i.e. without maintaining the quality) and its results not treated as an input of the workers' health is even worse than if it had not been done Because if no abnormality is reported then the interpretation would be that every thing is just fine. I am not sure about the extent to which such things are common in other industries. The preemployment and periodical medical examination and keeping of medical records of the workers of hazardous industry is compulsory under the Factories Act but the extent to which such records are kept and inspected by the competent authority need to be investigated. The records of Monsanto at Silvassa do not seem to be ever inspected by the office of Factory Inspectorate and as understood from the Petitioner's lawyer that this was due to non-availability of the appropriate expertise at Factory Inspectorate at Silvassa (Annexure-15). Lakhs of rupees are spent on medical examination but the effectiveness of such examination for early detection of medical abnormalities and corrective action need to be evaluated. The State Factory Inspectorate needs to b e strengthened to protect the health of our workers.

Dr.Saiyed's report contains the following recommendations:

Recommendations:

1. The company should continue its present efforts of improving the working conditions, as there is always a scope for improvement.

2. Regular industrial hygiene surveys are essential for the monitoring of work environment and checking effectiveness of control measures: In addition to routine parameters, the company may explore the possibility of assessing biomarkers of exposure to principal chemicals wherever feasible.

3. Regular Pre-employment and periodic medical examinations particularly before, during and after peak season should be carried out. It should also include biochemical estimations for detection of target organ effect.

4. Workers showing abnormal values should be informed and removed from further exposure and put under surveillance. Similarly the management should be informed about the medical abnormalities detected and its possible significance.

5. There is need for greater liaison between medical officer and safety department dealing with working conditions for the exchange of observations.

6. All efforts should be made to control the hazards by engineering means. Personal Protective Equipments (PPE) and other strategies such as rotation of workers should be used only when all engineering control measures have failed.

7. Factory inspectorate should make regular visits of the factories dealing with hazardous processes and advice for the corrective measures whenever needed.

8. The medical and work environment records maintained by the factories should be regularly inspected by the competent authorities to check the quality of the records and action taken on the basis of reports.

9. The medical records and environmental records are to be compulsorily maintained under the provisions of Factories Act. It is important that the quality of such records should be inspected by the expert for quality and critically look at the abnormalities and corrective action to protect the health of the workers otherwise the huge amount of money spent on such investigations will lose significance and will continue to be a ritual only. The factory inspectorate must find means of addressing this issue.

10. The workers (including contractor's workers), who showed abnormal findings when examined last and have left the company should be medically examined.

9. Mr. Justice D.R. Dhanuka has furnished cogent reasons for accepting Dr.Saiyed's Report. No objections have been urged before us by Counsel for the First Respondent in regard to Dr.Saiyed's Report. As an unbiased and independent expert assessment the Report has to be accepted. Justice Dhanuka adverted to the medical summary relating to the condition of the Petitioner, contained in Annexure-11 to Dr.Saiyed's report. The medical report in so far as the Petitioner is concerned, is to the following effect:

Medical records show him suffering from Sub-arachnoid hemorrhage due to aneurism [weakness in the valves of blood vessel]. No other condition is listed. To the best of my knowledge none of the chemicals used at Monsanto can produce such effect.

The Commissioner considered it appropriate to have all the employees who had filed affidavits before him medically examined. The medical examination was conducted by a

medical board of the BYL Nair Hospital. Thirteen employees, who had specifically complained, were examined. A panel of Senior Doctors in the Hospital formed by the Head of the Department of Respiratory Medicine arrived at the conclusion that none of the ailments of the employees could be related to or be attributable to toxic exposure. In so far as the Petitioner is concerned, the Commissioner had also requested Dr. Alok Sharma, Professor and Head of the Department of Neurosurgery at the LTMG Hospital, Sion, Mumbai, to submit a medical report. The medical report of Dr. Sharma was to the following effect:

(1) Glyphosate and xylene can be damaging to the blood vessel wall which is a prerequisite for aneurysm formation and subsequent brain hemorrhage.

(2) In the individual case of Mr. Salotkar, it is not possible, on the basis of the presently available evidence, to make a definitive conclusion regarding the nexus of his clinical condition with the exposure to the chemicals.

(3) However, in view of the clinical and experimental studies we have evaluated and our own clinical experience, we can conclude that there is a strong possibility of such a nexus.

(4) The only way to reconcile the apparently contradictory conclusions (2) & (3) above would be to determine if there were any other cases of brain hemorrhage in employees of Monsanto. If Mr. Salotkar's case was the only such case then conclusion (2) becomes significant. If there have been other cases of brain hemorrhages in the past amongst the employees of this company then conclusion (3) becomes more significant.

10. The report submitted by Justice D.R. Dhanuka has reiterated the serious deficiencies that were observed in regard to the manner in which records were maintained by the Inspectorate of Factories. The amicus curiae had deputed her junior to visit the office of the Chief Inspector of Factories & Boilers' Administration of Daman, Diu and Dadra & Nagar Haveli for inspecting documents relating to Monsanto. The Chief Inspector who gave inspection of the records from his office, informed the Advocate that he had visited the plant only once in 1996 while issuing a licence. He, however, suggested that a meeting be held with the Deputy Director of Agriculture, Dadra & Nagar Haveli at Silvassa. Upon visiting the office of the Deputy Director it transpired that while the Licence Renewal documents were available for inspection, there were no written records of visits. The Deputy Director of Agriculture stated that no official reports are made of field visits unless there are any complaints. According to the Deputy Director, his office did not have a sufficient pool of trained staff to visit the industries under his regulatory control and the Central Government had been apprised of the situation. The Inspectorate of Factories at Pune was also contacted through the Amicus Curiae for obtaining better information of the working conditions at the Lonavala Plant. Most of the records maintained by the Inspectorate were not legible.

11. On the basis of the material which has been placed on the records before him, the Commissioner has come to the conclusion that the allegations attributing the ailments of the Petitioner and the other employees to toxic exposure sustained at Monsanto's establishment have not been proved. However, the Commissioner explored the possibility of Monsanto paying ex-gratia to its former employees on what were termed as humanitarian considerations. Though Monsanto stated that it was not willing to arrive at a 'settlement' as such, since it was not accepting the allegations of negligence, the Company was not averse to considering the recommendations of the Commissioner for the payment of ex-gratia to the employees including to a widow of one of the ex-employees on humanitarian considerations. The

Commissioner, by his letter dated 13th February 2006 addressed to all the Advocates appearing before him indicated that he was inclined to accept the report of Dr.Saiyed and record a finding to the effect that the allegations linking the medical condition of the workmen to toxic exposure were not proved. However, the Commissioner desired that the First Respondent consider making reasonable payments to the concerned ex-employees, ex-gratia, without the admission of guilt on the part of the Company. On 1st March 2006, Amicus Curiae informed the Commissioner that all the employees were willing to accept ex-gratia. The Commissioner has been informed that the First Respondent has agreed to pay an amount Rs. 6.70 lakhs to 14 ex-employees including a widow of an ex-employee. The First Respondent has also agreed to pay an amount of Rs. 17.80 lakhs to the Petitioner, who had suffered brain hemorrhage and who was seriously disabled. The exemployees filed affidavits before the Commissioner recording that they had received various amounts as ex-gratia from the First Respondent in full and final settlement. However, the payment of Rs. 17.80 lakhs to the Petitioner, Mangesh Gopal Salodkar, is to be effected after the petition is disposed of.

12. In so far as Monsanto is concerned, the Commissioner notes in para 10.3 of the report that Dr.Saiyed had recommended that several improvements can be carried out in future in the following areas:

- (a) Medical investigation should be thorough and medical records should not be merely a ritual;
- (b) There should be greater liaison between the Medical Officer and the Safety Department;
- (c) Workers showing abnormal values should be removed from further exposure;
- (d) All efforts should be made to control hazards by means of engineering techniques;
- (e) Personal Protective Equipments (PPE) and other strategies such as rotation of workers should be used only when all engineering control measures have failed. Justice Dhanuka has suggested that the recommendations which have been made by Dr.Saiyed be accepted by the Court. That has not been opposed. During the course of the hearing before the Court, Monsanto's Counsel has reiterated the submission that has been urged before Mr. Justice Dhanuka, namely that while the Company does not accept or admit any allegations of negligence, it is willing to ensure that the suggestions which have been made by Dr.Saiyed in the course of his report would be duly and effectively implemented. We record and accept the assurance. Absence of Trained Manpower:

13. The case before the Court has brought into focus the urgent necessity for upgrading and enhancing professional standards at the Inspectorates of Factories. The most serious impediment encountered in the conduct of investigation in the present case is a lack of proper and effective record keeping in respect of inspection visits made by the staff of the Inspectorate of Factories and the absence of interaction with representatives of workers. The Deputy Director of Agriculture of Dadra & Nagar Heveli lacks a sufficient pool of trained staff to inspect and assess Industries for regulatory compliance. The situation is alarming. Unless regulatory authorities vested with the duty of ensuring compliance with welfare legislation such as the Factories' Act, 1948, possess trained man power, the object of enacting such legislation is defeated.

The Right to Health:

14. The Constitution guarantees the right to life under Article 21 of the Constitution. Health is an integral facet of life. Absent good health, life is deprived of the rationale for existence. Deprive a worker of her health and she loses her means of livelihood. Deprivation of livelihood constitutes the social destruction of the family unit of the wage earner. The aspirations of a whole generation depend upon the ability of the wage earner to provide support for the family. The loss of livelihood upon termination of service on grounds of continued ill health relegates the industrial worker and all those who depend on the workman to the margins of existence. Support for the preservation and enjoyment of good health is hence an important obligation of the State and the employer. There can be no contracting out of such obligations. No fine print of exceptions can be countenanced. The mandate to support life is inalienable.

15. In *Consumer Education and Research Centre v. Union of India* the Supreme Court held that the right to health of a worker is an integral facet of a meaningful right to life. Lack of health denudes the worker of livelihood. The compelling need to earn livelihood should not be at the cost of being exposed to health hazards in an unhygienic working environment.

16. Article 39(e) of the Directive Principles of State Policy mandates that the State shall, in particular, direct its policy towards securing that the health and strength of workers, men and women, are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength. The State is required by Article 41, within the limits of its economic capacity and development, to make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in cases of undeserved want. The State is to make provisions for securing just and humane conditions of work, under Article 42. Article 43 emphasises the importance of conditions of work that ensure a decent standard of life. These provisions are implemented by salutary legislation enacted in the public interest such as the Factories Act, 1948. There is a range of legislation enacted by the Parliament and by State legislative bodies in India. There is no dearth of carefully conceived labour welfare laws. Section 2(cb) of the Factories' Act, 1948 defines the expression "hazardous process" as follows:

(cb) "hazardous process" means any process or activity in relation to an industry specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, byproducts, wastes or effluents thereof would -

(i) cause material impairment to the health of the persons engaged in or connected therewith, or

(ii) result in the pollution of the general environment: Provided that the State Government may, by notification in the Official Gazette, amend the First Schedule by way of addition, omission or variation of any industry specified in the said Schedule;

The First Schedule to the Act specifies a list of industries involved in hazardous processes. Item 17 refers to Chemical Industries. Item 18 relates to Industries engaged in Insecticides, Fungicides, Herbicides and other Pesticides. Section 41B requires a compulsory disclosure of information by the occupier of every factory involving a hazardous process of all information regarding dangers, health hazards and measures to overcome such hazards arising from the exposure to or handling of materials or substances used in manufacture, transportation, storage and other processes. This disclosure is required to be made to workers employed in

the factory, to the Chief Inspector, the local authority within whose jurisdiction the factory is situate and to the general public in the vicinity. The occupier, at the time of registration is required by Sub-section (2) of Section 41B to lay down a detailed policy with respect to the health and safety of the workers employed therein. Sub-section (3) requires a disclosure of accurate information of the quantity, specifications and other characteristics of wastes and the manner of their disposal. The occupier is required by sub-Section (4) of Section 41B to draw up an on site emergency plan and detailed control measures for his factory. Section 41C requires every occupier of a factory to maintain accurate and upto date health records or, as the case may be, medical records, of the workers in the factory who are exposed to any chemical, toxic or any other harmful substances which are manufactured, stored, handled or transported and such records are required to be accessible to the workers subject to such conditions as may be prescribed. The provisions mandate appointment of persons who possess qualifications and experience in handling hazardous substances and are competent to supervise such handling within the factory and to provide at the working place all the necessary facilities for protecting the workers in the manner prescribed. Medical examination is mandated for every worker before such worker is assigned to a job involving the handling of or working with a hazardous substance and while continuing in such job, and after he has ceased to work in such job, at intervals not exceeding twelve months in such manner as may be prescribed. Under Section 41D, the Central Government is empowered to appoint an Inquiry Committee to enquire into the standards of health and safety in the event of the occurrence of an extraordinary situation involving a factory engaged in a hazardous process. This is with a view to finding out the causes of any failure or neglect in the adoption of any measures or standards prescribed for the health and safety of the workers employed in the factory. Under Section 41E, the Central Government may direct the adoption of emergency standards. Section 41F defines permissible limits of exposure of chemical and toxic substances. Section 41G mandates the participation of workers in safety management. The occupier in every factory where a hazardous process takes place or where hazardous substances are used or handled is required to set up a Safety Committee consisting of an equal number of representatives of the workers and of the management. Section 41H confers upon the workers a right to be informed of a likelihood of imminent danger to their lives or health.

17. These salutary provisions which are contained in Chapter IV of the Factories Act, 1948 must be enforced by the regulatory authorities. Unless the man-power involved in implementing the provisions of the Factories Act, 1948 is effectively trained, the provisions of the Act which are conceived in the public interest will not be enforced. The appropriate Governments must provide a pool of trained man power to enforce, supervise and regulate the implementation of these statutory provisions.

18. The dearth that is perceived in cases such as the present is not of the existence of legislation, but of the implementation of legislative standards. The Factories Act, 1948 contains detailed provisions for ensuring the welfare of workers and for guarding against unhygienic and dangerous conditions of work. Special provisions have been made for regulating hazardous processes. These provisions are supplemented by other salutary provisions such as the appointment of Safety Officers under Section 40B and for the conduct of safety and occupational health surveys in Section 91A. Detailed provisions have been made for the appraisal of hazardous processes, the disclosure of information by occupiers, provision of medical facilities, maintenance of health records, prescribing permissible limits of exposure to chemical and toxic substances, and for laying down emergency standards. The right of workers to be fully informed on issues concerning health and to participate in safety

management are instances of rights which are constitutionally recognised and implemented by legislation.

19. Ignorance is a powerful barrier to the fulfillment of socioeconomic rights. In matters of workers' safety, ignorance of rights is compounded by the economic necessity of sustaining livelihood. Economic necessity poses a serious constraint upon workers complaining about conditions of work. The choice is between economic death, as industrial law often describes the consequences of termination, or disease, debilitation and death caused by working in a hazardous environment. Prospective workers have no bargaining power to scrutinise working conditions. Present workers are chilled into silence. Past workers are lost in the oblivion of faded memories. The regulatory authority entrusted with the task of enforcing statutory standards designed to promote health, safety and welfare of workers, therefore, has a vital role to play in the achievement of statutory norms.

20. As this case demonstrates, the absence of updated medical records results in a virtual denial of access to justice. In the absence of information, factory workers and all those who espouse the cause of workers cannot realistically attempt to redress the systemic failure on the part of the regulated industry to maintain mandatory standards. Workers drawn from near and far to a place of employment disperse, often without a trace into far flung villages after employment ceases. In the absence of any social security that will tide over their physical and mental afflictions erstwhile industrial workers are lost to the unorganised sector. Once dispersed, the workers are difficult to access. New workers are available to fill in the breach in a labour surplus economy. Unless employers are rigidly held down to a regime of strict compliance, a relaxed regime of enforcement and the minimal penalties for a defaulting employer furnish no disincentive to non compliance or, worse still, to evasion. As this case itself shows, the Factory Inspectorates are woefully understaffed. The available staff does not possess requisite training necessary for dealing with complex industrial processes and hazards which they are liable to pose to the health of workers. Record keeping is in a primitive stage. It is only when a litigation confronts an employer that some remedial measures are taken to alter the existing state of affairs. We would, therefore, impress upon the Central and the State Governments the need to take immediate steps to rectify the situation and to be alive to the dangers to which industrial workers are being increasingly exposed in hazardous employments.

21. Without laying down a comprehensive list of measures which should be taken we have, with the assistance of Counsel identified areas of concern which must be attended to by the Central and State Governments. Some of these areas require further deliberation so that regulatory measures can be fine-tuned to deal with the practical problems. We are therefore enlisting, with the assistance of Counsel, recommended areas, where action must be considered by the Central and the State Governments and rectificatory steps can be taken:

(i) The State and the Central Governments should consider taking immediate steps for filling up the sanctioned strength of Factory Inspectors and of Certifying Surgeons;

(ii) The staff of the Factory Inspectorates should be adequately and regularly trained to deal with their functions and where specialised staff is required, such staff should be specially recruited for this work to the extent to which it is feasible;

(iii) In the case of factories involved in hazardous processes, the Government concerned shall consider issuing directions to the Factory Inspectors to visit every factory within their

jurisdiction at least once in a period of three months for the purposes of taking samples in accordance with the provisions of Section 91 of the Factories Act, 1948. Records of these visits must be maintained;

(iv) The medical examination of workers which is to be conducted under Section 41E of the Factories Act, 1948 should be such as would enable an identification of diseases and illnesses which are a likely outcome of the process and material used in the factory;

(v) Copies of medical records of workmen must be handed over to them as and when medical examinations are conducted and the appropriate Government will consider the issuance of suitable directions mandating the permanent preservation of medical records in the electronic form by factories engaged in hazardous processes;

(vi) In respect of factories involved in hazardous process, safety and occupational health surveys as required by Section 91A should invariably be carried out at the time of renewal of licences, apart from other times;

(vii) The State Government shall consider issuance of directions for the appointment of Safety Officers in the case of factories involved in hazardous processes under Section 40B(1)(ii) irrespective of the size of the factory and the number of workers employed therein;

(viii) The operations of the Factories' Inspectorates must be computerised. Modern methods of preserving data in the electronic form including digitisation of records must be adopted.

22. This petition initially originated in an individual grievance of an employee who claimed to have suffered neurological damage while working in the hazardous processes of a factory establishment. The enquiry before the Court was expanded into a litigation in the public interest covering a broader group of employees and concerns wider than the working conditions of a particular factory. The problems which the case confronts are systemic. They reflect a malaise which afflicts the regime of regulatory compliance in India. The enquiry by the Commissioner appointed by the Court has revealed deficiencies in the implementation of statutory standards of which we have taken serious note. In so far as the ground of relief for the individual employee was concerned, the material which was collected painstakingly by Mr. Justice D.R. Dhanuka has led the Learned Commissioner to conclude that a nexus between the medical condition of the workman concerned with acts of commission or omission on the part of the employer has not been established. The report of the Commissioner and the underlying material before him does establish serious deficiencies in the past on the part of the employer in the present case in maintaining records and in following a sustained line of investigation while enquiring into the medical problems of the workers. However, both Dr.Saiyed and Justice Dhanuka note that there has been a marked improvement in the standards which are now being observed by the employer. This Court is conscious of the fact that the jurisdiction under Article 226 is subject to self imposed restraints wisely conceived and consistently followed over the last five decades. In a Public Interest Litigation the High Court can in appropriate cases relax the requirement of standing or locus standi. But the jurisdiction which the Court exercises in a PIL is subject to the same restraints which are observed in the exercise of the jurisdiction under Article 226.

23. The Commissioner has arrived at the conclusion that a positive nexus between the exposure to toxic chemicals in the work place and the bodily ailments suffered by the employees has not been found. Dr.Saiyed's report finds a strong possibility that the exposure

of workers to toxic chemicals was liable to have effects on the liver and kidney functions. The chemicals used in the factory have been held to have the potential to cause abnormalities in the biochemical parameters that were observed. A high incidence of tuberculosis was found amongst the workers and an exposure to silica over a long period of time is known to increase a susceptibility to the disease. Notwithstanding these strong possibilities the data that was available is limited and Dr.Saiyed's report would suggest that unless a large batch of former workers is examined, no categoric finding could be arrived at. The workers have dispersed after their tenure of service came to an end. The records at the Factories Inspectorate at Lonavala and Pune are totally inadequate. In these circumstances, Justice Dhanuka in his report found that the a positive co-relation could not be found between the medical condition that was observed and an originating cause in the working environment of the factory. The difficulties are compounded by the fact that the factory at Lonavala has long since been closed and the records of the Inspectorate in Pune were found to be illegible. The Commissioner appointed by the Court has in view of these difficulties justifiably taken recourse to the use of mediative techniques in attempting to resolve the grievance of the workers. Fact finding and adjudication are but one facet, an important facet nonetheless, of the judicial process. The use of mediation and conciliation can be effective even in class action or in public interest litigation. This case demonstrates the efficacy of a recourse to mediatory mechanisms to provide relief to a section of the society in the context of a grievance relating to the deprivation of socio-economic rights. There is legislative recognition in India of the importance of conciliation and mediation, Section 89 of the Code of Civil Procedure, 1908, being the most recent addition to legislative standards on the subject. Recourse to mediation and conciliation can gainfully be pursued beyond its traditional applications to private disputes of a civil or commercial nature. As this case would demonstrate, matters involving public interest and the enforcement of human rights norms with a socio economic content can be resolved expeditiously through a wise and selective application of mediatory techniques. The settlement that has been arrived at in the present case has the approval of all the individual workmen concerned. The Petitioner himself has been assisted in these proceedings by his father who looks after his welfare. We would respectfully commend the assistance which has been rendered to the Court by the Learned Commissioner, Mr. Justice D.R. Dhanuka and by the Amicus Curiae and accept the submission that the Court take on record a settlement between the parties. That would facilitate the disbursal of the compensation of Rs. 17.80 lakhs to the Petitioner. The other workers have already received the amounts as agreed. The Amicus Curiae has stated before the Court that the Petitioner would be advised to apply for necessary exemptions as may be available under the Income Tax Act, 1961 so as to reduce the incidence of tax liability upon the Petitioner. The authorities shall extend such benefits as are legitimately permissible in law. The amount of Rs. 17.80 lakhs was brought in without any deduction by the First Respondent in pursuance of the orders of the Court. Consequently, the tax liability on the aforesaid amount, if any, shall be borne by the Petitioner and the First Respondent shall not be liable for non-deduction of the amount of tax. The amount of Rs. 17.80 lakhs has been quantified so as to meet the requirements of the medical expenses of the Petitioner.

24. We have passed a brief procedural order separately in regard to the payment of honorarium to the Commissioner and to the Amicus Curiae.

25. We hope and trust that the Central and the State Governments will be alive to the serious problems which the case has highlighted and would take necessary steps along the line suggested in this judgment to ensure that the right to health, which is an intrinsic facet of Article 21 of the Constitution, finds realistic implementation for industrial workers.

26. The Petition is accordingly disposed of. There shall be no order as to costs.