

**BEFORE THE NATIONAL GREEN TRIBUNAL
(WESTERN ZONE) BENCH, PUNE**

**(M.A. 145 of 2014) in
APPLICATION No. 11(THC)/2013
AND
APPLICATION No. 11(THC)/2013**

CORAM:

**Hon'ble Mr. Justice V.R. Kingaonkar
(Judicial Member)**

**Hon'ble Dr. Ajay A. Deshpande
(Expert Member)**

B E T W E E N:

Raghunath s/o. Rakhamaji Lohakare,
Age 46 Yrs., Occn : Business,
R/o. Ranjangaon Shenpunji,
Tq. Gangapur, Distt : Aurangabad

....Applicant

A N D

- 1. Maharashtra Prevention of Water Pollution Board,**
Having its office at 'Kalpataru Point', 3rd and 4th floor,
Sian Matunga Scheme Road No.8,
Opposite Cine Planet Cinema,
Near Sian Circle, Sian (East)
- 2. Maharashtra Pollution Control Board**
Through Sub Regional Officer,
A-4/1, MIDC Area, Chikalthana,
Behind Lokpatra office
Jalna Road, Aurangabad,
- 3. State of Maharashtra,**
Through : Chief Secretary,
Mantralaya, Mumbai.
- 4. Environmental Department,**
Govt. of Maharashtra,
Through : Secretary,
Mantralaya, Mumbai.

- 5. Airian Arga-Chemicals,**
G/1, M.I.D.C. Waluj,
Aurangabad.
- 6. Maharashtra Pesticides Pvt. Ltd.,**
G/a, M.I.D.C., Waluj,
Aurangabad.
- 7. Seedson Pvt. Ltd.,**
H-29, M.I.D.C. Waluj,
Aurangabad.
- 8. Narsimha Chemicals,**
H-42, M.I.D.C. Waluj,
Aurangabad.
- 9. Lilasons Brewaries,**
H-5/6, M.I.D.C. Waluj,
Aurangabad.
- 10. Aurangabad Brewarage Ltd.,**
H-3, M.I.D.C. Waluj,
Aurangabad.
- 11. Unitech Pharma Pvt. Ltd.,**
H-4, M.I.D.C. Waluj,
Aurangabad.
- 12. Koliracks Chemicals Pvt.Ltd.,**
K-26, M.I.D.C. Waluj,
Aurangabad.
- 13. Orchid Chemicals & Pharmaceuticals Ltd,**
L-9, M.I.D.C. Waluj,
Aurangabad.
- 14. J.K. Chemicals,**
M.I.D.C. Area Waluj,
Aurangabad.
- 15. Aurangabad Carbons,**
M.I.D.C. Area Waluj,
Aurangabad.
- 16. Pals Brewaries Ltd.,**
M.I.D.C. Area Waluj,
Aurangabad.
- 17. Fosters Brewaries,**

M.I.D.C. Area Waluj,
Aurangabad.

18. Inersia Brewaries,
M.I.D.C. Area, Waluj, Aurangabad.

19. Paschim Chemicals,
M.I.D.C. Area, Waluj,
Aurangabad.

20. Akar Tools Limited,
M.I.D.C. Area, Waluj,
Aurangabad.

21. AMRI India Pvt. Ltd.,
G1/1, ½ M.I.D.C. Waluj,
Aurangabad.

...Respondents

Counsel for Applicant :
Absent - Nemo

Counsel for Respondent Nos.2,3 & 4 :
Mr. D.M. Gupte, Adv.,

Counsel for Respondent Nos.6, 9 to 11, 14, 16 to 20 :
Mr. Varun Joshi Adv.

Counsel for Respondent Nos.13:
Mr. S.V. Natu, Adv.

Counsel for Respondent Nos.21: (Intervener)
Dr. Nikhil Sakhardande w/ Mr. Tanmey Rajadhyaksha

DATE : 24th September, 2014

J U D G M E N T

1. Shri Raghunath Rakhmaji Lohakare, Original Applicant, filed Writ Petition No.3439 of 2002 in the Hon'ble High Court of Judicature of Bombay, Bench at Aurangabad which was subsequently transferred to this Tribunal vide

Order of Hon'ble Division Bench dated 1st October 2013. The Applicant claims to be resident of Ranjangaon Shenpunji which is located near Maharashtra Industrial Development Corporation (MIDC), Industrial Area, Waluj, Aurangabad. The Applicant has filed this Application raising issues of ground water pollution in the vicinity of Waluj Industrial area and also seeking stringent enforcement of environmental Regulations to Control the water pollution.

2. The Applicant has arrayed Maharashtra Pollution Control Board (MPCB) which is responsible for implementation of Water (Prevention and Control of Pollution) Act 1974 (called 'Water Act') as Respondent Nos.1 and 2. The State of Maharashtra is Respondent No.3 while Environment Department, Government of Maharashtra is Respondent No.4. All other Respondents are individual Industrial Units, located in the said industrial area. The Respondent Nos.3 and 4 have not filed any Affidavit in the proceedings in this Tribunal or even in the High Court, however, as their role in the enforcement of Water Act is limited; their submission of Affidavit is not necessary in adjudication of the matter.

3. The Applicant claims that the villagers of village Ranjangaon Shenpunji are dependent on drinking water drawn from the public well constructed near the boundary wall of the Ranjangaon Shenpunji percolation tank. The

Applicant submits that though the Maharashtra Industrial Development Corporation (MIDC) Waluj industrial area is not notified as Chemical Industrial Zone, the authorities have allowed several chemical factories including the listed Respondents in 1989 to operate such chemical industries within the area. The Applicant further submits that since commissioning of these chemical factories and unabated discharge of polluted effluents mainly from six (6) industries, the source of drinking water of the village is contaminated and the villagers are getting polluted water for drinking purpose. Applicant further claims that such supply of polluted water is causing health hazards to the local residents. According to the Applicant, the Respondent-Industries are not treating their industrial effluents adequately and discharge in open area which meets the Ranjangaon percolation tank and Jogeshwari Tank thereby polluting these water sources. Further, the well water in the surrounding are also polluted and showing yellowish colour and typical smell.

4. The Applicants have therefore prayed for :

- I) The Respondent Nos.1 to 4 be directed by Writ of Mandamus to impose conditions on the Respondent Nos.6 to 20 to treat the effluent and to discharge the same in the streams only after necessary treatment.
- II) Direction may also be issued by Writ of Mandamus against the Respondent Nos. 1 to 4 to be vigilant in inspecting the discharge of the

effluent by the Respondent Nos.6 to 20 and to prevent the water pollution by control on the effluent discharged by the Respondent Nos.6 to 20.

5. Respondents-Industries have filed their Affidavits before the Hon'ble High Court. All such submissions may be summarized as under :

These industries have been commissioned after obtaining necessary environmental permissions from the competent authorities and also, have valid consent to operate from MPCB. The industries have installed necessary Pollution Control Systems. They are operating Pollution Control System efficiently and their Pollution Control System are regularly verified and monitored by the Respondent No.1. Some Industries further claim that they have been established recently and/or they have taken over from other industries which were in operation in the past.

6. Respondent No.1 and 2 filed the first Affidavit on 7-12-2013 and submitted that a Common Effluent Treatment Plan (CETP) of 10 M.L.D. capacity is established at the Maharashtra Industrial Development Corporation (MIDC), Waluj area which is made operational from July 2011. MPCB further submits that the Respondent No.5, 9 to 11, and 13 to 20 are Member units of said (CETP) and are connected to CETP and they are regularly sending their effluent after initial treatment to CETP for further treatment and disposal. MPCB has also observed that most of the well

water parameters are meeting with the “*Irrigation Standards*” and the same well water is useful for irrigation purpose. Maharashtra Pollution Control Board (MPCB) has further submitted that the Respondents-Industry No.5, 9, 11, 13, 16, 17, 19 and 20 have provided adequate pollution control devices and they are sending their treated effluents regularly to CETP Waluj. MPCB has further mentioned that, at present, said industries are not discharging their effluent outside the factory premises.

7. MPCB further submits that the Maharashtra Industrial Development Corporation (MIDC) is supplying the drinking water to the villages located near the industrial area, including the Ranjangaon - Shenpunji village. MPCB further submits that due to operation of CETP in MIDC Waluj from the year 2011, there is no discharge of effluent from Respondents-Industries in the water resources of Jogeshwari minor tank, Ranjangaon percolation tank, wells and borewells of Ranjangaon Shenpunji and even in the wells, in the agricultural fields of Ranjangaon Shenpunji, except discharges reported by MPCB.

8. After going through the Affidavit filed by Regional Officer of MPCB, Member Secretary of MPCB was directed on 2-1-2014 to take a review and arrange to file detailed affidavit along with all the information of monitoring the Ground Water Quality, report of treated industrial effluents,

the details of industries and the owners thereof, which used to and are presently discharging the effluents directly or indirectly leading to percolation tank and the wells, in order to locate identity of polluting industries. This order was specifically issued as it could be seen from Annexure-I of the affidavit that the well water at Ranjangaon has higher concentration of pollution. Still, however, the Affidavit of MPCB could not locate the source of pollution and also, present status of water quality of the wells.

9. Considering the pleadings and the nature of dispute, we deem it proper to frame following issues for adjudication of the present Application :

- (1)** Whether contamination of ground water in and around village Ranjangaon-Shenpunji can be attributed to the mis-managed and inadequately treated Industrial discharges of any plant from the Industries at Waluj, MIDC area ? If yes, then whether resultantly ground water and also the water in percolation tank have been polluted ?
- (2)** Whether the remedial measures for restoring the ground water quality are necessary to arrest the ground water pollution, if any caused by industrial discharges? If yes, what measures shall be adopted ?
- (3)** Whether the Respondents and Industries in Waluj MIDC area are liable to pay any damages for loss caused to the environment and restitution/restoration of groundwater quality ? If yes, to what extent and to whom ?
- (4)** Whether there is need to issue specific orders to the authorities for regulating the industrial discharges and/or the CETP and operations ?

10. MPCB filed another Affidavit dated 22nd January 2014 in compliance of orders dated January 2nd 2014 and submitted actions taken by the Board against some of the industries. The Affidavit also records that from the comparative statement of the analysis done by the Board, it is observed that for the above period i.e. 2003 to 2013 the pollutional discharges have caused surface and Ground Water contamination till CETP came into operation. The Affidavit also reports that overall results of the CETP are conforming the standards prescribed. However, this Affidavit does not contain identification of source of pollution and also does not locate identity of polluting industries as directed in our order dated January 2nd, 2014. Considering this, the Central Ground Water Board, Nagpur was directed vide Order dated January 23rd 2014 to verify the water pollution levels and also, whether there is any environmental damage caused due to the industrial discharges and also, for development of remedial plan.

11. Central Ground Water Board, Nagpur, submitted their report on 22nd April 2014, and recorded following important conclusions :

- a) *The TDS values in excess of 2000 mg/L in ground water samples collected in and around Ranjangaon(s), Kamlapur, Ramrai and Ramraiwadi villages indicate that the ground water pollution has already been initiated in the area and reached to moderate level.*
- b) *The TDS, Ca, Mg and Cl have been observed more than MPL in and around Ranjangaon (S), Kamlapur and*

Ramraiwadi indicating the deterioration of ground water due to pollution.

- c) The concentration of nitrate content was above MPL in background samples collected from Shajapur and Vitava and also in the core areas of Waluj MIDC around Ranjangaon (S). The higher values of nitrate, indicates ground water pollution due to both improper disposal of sewage and solid waste of the town and industrial effluents/waste.
- d) The ground water of shallow aquifer is relatively more polluted than deeper aquifer. Except nitrate, where the concentration of nitrate is found more in deeper aquifer indicating contamination due to anthropogenic activity.
- e) As per MPCB, A-II standards, it is observed that in all the samples, all the trace metals are within permissible limits, except Chromium (Cr). The high concentration of Cr (0.118 mg/L) was found at sampling point WLI/CETP-019 i.e., CETP outlet point, however, the same is within permissible limit at the discharge point.
- f) This indicates that the surface water is also being contaminated due to industrial pollution in and around Ranjangaon(S) village area, Ramraiwadi, Pardeshwadi (Jogeshwari) irrigation tank and Discharge Point. It also indicates that untreated effluent is still being discharged by some industries into the nala thereby leading to pollution of surface water.
- g) It has been observed that the treated effluent at CETP and discharge point has pungent smell, blackish green colour and TDS values of 2566 mg/L and 2548 mg/L respectively which is beyond the permissible limits of MPCB, A-II standards and the same is being still discharged in Kham river near Patoda and Pandharpur villages.
- h) The CETP has been operational since July 2011 and prior to the functioning of CETP, the treated/untreated effluent was disposed off on the land by the industries. Thus, the presence of TDS, Ca, Mg, Cl, Cr, Ni and Mn in more than MPL of BIS drinking water standards (2012) in ground water and low DO levels, high concentration of MN, TDS, CL and Cr in surface water (as per EPR, 1986 and MPCB, A-II standards) indicates that the long term discharge of treated/untreated effluent on the surface without adhering to the prescribed standards has lead to surface and ground water pollution in the area.
- i) Presently the CETP is receiving only 2 MLD effluents and thus functioning at 20 % of its capacity. This indicates that the entire effluent generated by the industries is perhaps not being received in CETP. Perhaps, the untreated effluent is being discharged into

local nalas by the small and medium scale industries, thereby leading to pollution of surface as well as ground water.

12. Respondent No.14 filed an Affidavit in reply on 31st July, 2014 and presented a Report prepared by MPCB, titled **“Proposed Action Plan Industrial Cluster at Aurangabad”**.

The report is said to be prepared by MPCB in order to comply the directions of MoEF /CPCB related to comprehensive environmental pollution index (CEPI) and available to MPCB website. This fact was also accepted by the MPCB officials present in the Tribunal. The Report is quite exhaustive and deals with the status of Pollution in the Industrial estates in District Aurangabad, identification of polluting sources, and also detailed action plan to control the pollution. The report also refers to study conducted by NEERI about the Ground Water Pollution in the area as referred in the present Application. We do not know the reasons why such important information and Reports have not been adduced before the Tribunal in spite of our clear directions to the Member Secretary of the Board.

13. The Central Ground Water Board its report dated 22nd April, 2014 concluded in para 5.1 that :

“The concentration of most of the constituents (in the Ground Water samples) are higher than that observed in the background sample. This clearly indicates that the Industrial Pollution is contributing to deterioration of ground water quality in the eastern stretch starting from north Ranjangaon Shenpunji to south Shivrai in study area.”

Similarly, CGWB have also noted that the surface water is also being contaminated due to Industrial pollution.

14. MPCB in its Affidavits has already given details of Ground Water Quality in and around MIDC Waluj. MPCB in its Affidavit dated 2nd January, 2014 presented the Water Quality data of the percolation tank in question, well and nalla and has concluded that the water quality is found exceeding the prescribed limit. Even in the Report on Action Plan referred above, MPCB has enclosed the water quality data and has concluded that the quality of water in percolation tank has been deteriorated. In fact, it is found from the report on Action plan that MPCB had even proposed to prepare remedial Action Plan.

15. Based on the above information and reports, including the independent agency, CGWB, we are of the opinion that the ground water and also the water in percolation tank is not meeting the required quality standard and therefore, the issue No.1 is answered in the “AFFIRMATIVE”.

Issue No.2 :

16. The Ground Water is an important source of drinking water supply in rural area, particularly, with the uncertainty in Mansoon, the dependency on the ground water is increasing for the drinking water supply and other purposes

including agriculture. Needless to say that protecting the ground water quality and controlling the pollution/contamination of the ground water is the necessity of hour. It is also to be noted that the ground water system is quite complex and once polluted, it is a Herculean task, even to assess the level and extent of pollution, even with the latest analytical and modeling techniques and therefore, it is utmost necessary to adopt the 'Precautionary principle' while dealing with the protection and conservation of the Ground Water Quality. Under these circumstances, it becomes necessary that adequate and prompt remedial measures should be planned and implemented for the said purpose. It is observed from the MPCB Report that MPCB has already identified need of such remedial measures and had also referred to the studies carried out by NEERI in the past. MPCB has mentioned in para 4.2.1 of the Report that the remediation plan will be prepared soon. We do not know whether such plan has been prepared or otherwise as no relevant documents are placed before the Tribunal.

17. Central Ground Water Board (CGWB) has also recommended an Action Plan to tackle Ground Water Pollution in the said area which is as under :

Based on the above conclusions, following recommendations/action plan is suggested to tackle the ground water pollution in the study area.

- i) All the industries and MPCB shall ensure that the untreated effluent is not discharged in local*

nalas, which is leading to the pollution of surface and ground water.

- ii) All the industries and MPCB shall ensure that their entire effluent is transported to CETP for treatment.
- iii) The CETP shall be operated to its capacity and all the effluents generated by the industries shall be inadvertently brought to the CETP for treatment and ultimate discharge in Khamb River.
- iv) The industries and MPCB shall ensure operation and maintenance of existing CETP so as to achieve the consented standards particularly for DO, TDS, Chloride and Chromium etc.
- v) The removal of color in the CETP should be ensured by the industry and MPCB.
- vi) The Industries shall stop all the seepages/leakages from all the industrial units and the transmission pipes till it reaches the CETP.
- vii) The Industries shall increase green belt development as per CPCB guidelines in the area.
- viii) Some of the industries like Amri India Pvt. Ltd. (Respondent No.5) are having unused storage lagoons in their premises. These and other such unused lagoons should be identified and they should be filled with local clay or other impervious material to avoid further contamination of ground water due to natural recharge.
- ix) If the size of lagoons is too big to be lined then the same may be filled with local clay and the industry shall undertake "phyto Remediation" technique in consultation with NEERI or other Expert Educational Institute to minimize the contamination of water and soil.
- x) The Industries shall regularly monitor water quality of CETP outlet and discharge point at Khamb River. The results of the water quality shall be submitted to MPCB for monitoring/scrutiny on monthly basis.
In addition to the above for aquifer remediation and monitoring of ground water levels and quality following measures are also recommended.
- xi) **Aquifer Remediation for improving ground water quality** : A thorough site characterization and risk assessment is

required, when the groundwater contamination is confirmed and remedial action is deemed necessary. The most common physical and chemical remediation technologies available are artificial recharge, pump and treat, Soil Aquifer Treatment (SAT), bio and phyto-remediation etc.

xii) **Aquifer Remediation Report and implementation Plan** : Using just one technology may not be adequate to remediate contaminated sites with different contaminants and complex site conditions. Under such situations, different technologies are used sequentially or concurrently along with the primary treatment technology to achieve the remedial goals. A comprehensive report and implementation plan including the hydro geological and hydro chemical inputs needs to be prepared considering the local hydro geological and climatologically features. For this purpose, expert or group of experts having thorough knowledge of the available technologies and will be better equipped to utilize proper judgment for the decisions regarding the remediation of contaminated sites. Such report shall be prepared by the Industry through NABET accredited Consultant and submitted to competent/regulatory authority for technical evaluation.

xiii) **Ground Water Levels and Quality Monitoring Mechanism** : The ground water levels and quality shall be regularly monitored by the industry by establishing about 20 representative Key Observation Wells (i.e. dugwells and borewells) or even more depending on the need for shallow and deeper aquifers in the ground water polluted/affected areas. The density and distribution of KOW's shall be decided based on the above Aquifer Remediation Report and implementation Plan. The ground water levels and quality shall be monitored two (2) times during the water year i.e. during the pre-monsoon (May) and post-monsoon (November) season for all their major parameters including the heavy metals mentioned in the drinking water standards of BIS, 2012. The results of the water sample analysis and water level data shall be submitted to competent/regulatory authority for monitoring/scrutiny.

18. It is therefore, necessary that the remedial measures need to be taken as per procedure given by the CGWB. We note that MPCB has a mandate for formulation of such Action plan and seek execution thereof, under the provisions of Section 17 (1) (a) of the Water (P&CP) Act, 1974, which is as under :

A) To plan a comprehensive programme for the prevention, control or abatement of pollution of streams or wells in State and to secure the execution thereof.

Said Boards also have necessary powers for the abatement of the pollution under Sections 30 and 32, as the case may be.

19. Accordingly, the issue No.2 is answered in Affirmative, with further direction that MPCB needs to formulate and execute such ground water quality remedial action plan, based on recommendations of CGWB.

Issue No.3 :

20. Thus, this is a case where the ground water in and around village Ranjangaon Shenpunji is contaminated/polluted due to the mismanaged and inadequate Treated Industrial discharges from the industries in Waluj area. It is already on record that the well water and also the percolation tank water is not meeting the desired irrigation water quality standards and therefore, the local residents have suffered directly or indirectly due to the losses caused by Ground Water Pollution. The Respondents-

industries have taken a stand that they have provided necessary pollution control systems and operating the same within the parameters defined by MPCB. Some industries have also taken a stand that this ground water pollution may be due to industrial discharges over a long period of about 15 to 20 years i.e legacy discharges, and some of the industries claim to be in-operation only for a short time. During the arguments, it was also indicated that in the absence of CETP, individual units were treating their effluents and discharging it on land for irrigation. And, therefore, though individual units were operating within prescribed norms, the cumulative impacts could have been responsible. Therefore, the stand of industries is that the MIDC which was required to provide CETP should also be part of this Application. We are aware of such *scenario* and are of the opinion that these industries can not shirk their responsibility and are liable for implementing ground water remedial action plan as and when formulated. The issues raised by these industries could only be relevant in terms of equitable distribution of cost that can be imposed on the industries towards the remedial measures. It is matter of record that the ground water remedial measures involve significant costs and necessarily such costs need to be paid by concerned industries. This is a fit case where the

principle of 'Polluter's pay' can be applied besides principle of 'Sustainable development' and Precautionary principle.

21. The Hon'ble Supreme Court in the case of "**Indian Council For Enviro Legal Vrs. Union of India and Ors., 1996 AIR 1446-SCC(3)212**" has dealt with the similar issues. The Hon'ble Supreme Court in the "**Oleum Gas Leak case**", has ruled that :

"We would therefore hold that where an enterprise is engaged in a hazardous or inherently dangerous activity and harm results to anyone on account of an accident in the operation of such hazardous or inherently dangerous activity resulting for example, in escape of toxic gas the enterprise is strictly and absolutely liable to compensate all those who are affected by the accident and such liability is not subject to any of the exceptions which operate vis-à-vis the tortuous principle of strict liability under the rule in Ryland Vrs. Fletcher (supra).

"We would also like to point out that the measure of compensation in the kind of cases referred to in the preceding paragraph must be correlated to the magnitude and capacity of the enterprise because such compensation must have a deterrent effect. The larger and more prosperous the entire, greater must be the amount of compensation payable by it for the harm caused on account of an accident in the carrying on of the hazardous or inherently dangerous activity by the enterprise"

22. Once the law in "**Oleum Gas Leak case**" and also "**Indian Counsel for Enviro Legal Vrs. Union of India (Bichhri case)**", invite of the above discussion, the industries in MIDC Waluj area in the catchments of the wells and percolation tank referred above are absolutely liable to compensate for the harm caused by them to the villagers in

the affected area, to the soil and to the ground water. The issue No.3 is accordingly settled in “AFFIRMATIVE”.

23. We may take a brief survey of settled legal position in the context of pollution of water bodies. The Apex Court in **“Tirupur Dyeing Factory Owners Vrs. Noyyal River A. Protection Association & Others, 2009 (9) S.C.C. 739”** in which the Apex Courts took survey of the relevant case law viz. :

- (i) **Indian Council for Enviro Legal Action and Ors. Vrs. Union of India (UOI) and Ors. (1996) 3 S.C.C. 212.**
- (ii) **Vellore Citizens’ Welfare Forum Vrs. Union of India (1996) 5 S.C.C. 647**
- (iii) **People’s Union for Civil Liberties Vrs. Union of India, (1997) 3 S.C.C. 433 : (1997) SCC (Cri) 434.**
- (iv) **A.P. Pollution Control Board Vrs. Prof. M.V. Nayudu, (1999) 2 SCC 212.**
- (v) **M.C. Mehta Vrs. Union of India, (2009) 12 SCC 118.**

24. The Apex Court held that the Members of “Tirupur Dyeing Factory Owners Association” caused unabated pollution on account of discharging the Industrial effluents into Noyyal river to the extent, that the water of the river was neither fit for irrigation nor potable. It is observed :

“They cannot escape the responsibility to meet out the expenses of reversing the ecology. They are bound to meet the expenses of removing the sludge of the river and also for cleaning the dam. The principles of “polluter pays” and “precautionary principle” have to be read with the doctrine of “sustainable development”. It becomes the responsibility of the members of the appellant Association that they have

to carry out their industrial activities without polluting the water”

25. The facts of the present case would show that legal position considered and made applicable in case of “Tirupur Dying Factory Owners Association” (supra) is applicable herein also. There is no escape from conclusion that the industries in Waluj MIDC area are liable to pay damages caused due to the water pollution, restore the environment and ensure that there shall be no further pollution in the river wells due to discharging of industrial effluent of the units run by the Industries.

26. The next step in such accountability is identification of the industries. We are sure that MPCB as regularity organization must be having sufficient data about the industries in operation in the said time frame, their effluent generation capacity, their effluent quality besides the compliance levels. In addition we will like to point out para **4.2.2.** of the MPCB Report on the Action Plan which is based on NEERI Report and is reproduced below :

Innotech Ltd., Paschim Chemicals Pvt. Ltd., Ariane Orgachem Pvt. Ltd. and Endurance Systems Pvt. Ltd. are not meeting the land disposal criteria with respect to EC, TDS, sodium, COD and BOD as prescribed by State and Central boards for pollution control. Industries like Paschim Chemicals Pvt. Ltd. and Ariane Orgachem Pvt. Ltd., are disposing their treated waste water in an unregulated manner on barren land without any plantation.

The wells downstream of Endurance system India Pvt. Ltd. namely W5 and W27 also showed high

concentration of Cr. i.e. 7.86 mg. L⁻¹ and 1.30 mg. L⁻¹ respectively. The concentration of Cr.Zn and Ni in the treated waste water of Aurangabad Electricals Pvt. Ltd. were 1.72, 69.0 and 99.65 mgL⁻¹ respectively. The high concentration of Cr.(2.16 mg.L⁻¹) in W12 was observed which is in close proximity of Aurangabad Electricals Pvt. Ltd. the metals concentrations in the wells can be linked to the wastewater which is being disposed on land by these industries.

27. In addition MPCB has also defined out the remediation plan for the soil quality in para **4.1.7** in the Report which is reproduced below :

4.1.7. : Remedies for abatement, treatment and restoration of normal soil quality.

At present, as observed during visits to different industrial sites, indiscriminate disposal of wastewater on land is practiced. This has lead in deterioration of soil quality, groundwater pollution, damage to crops in nearby area and health problems to the local people who uses the groundwater. Therefore, the following recommendations are made:

1. Site-specific land application of wastewater needs to be adopted. Soil characteristics determine the amount of wastewater to be applied to the land. Hence, it is recommended before applying the wastewater, soil characteristics must be known.

2. The modeling studies indicate that the application rate of wastewater should be less than the average vertical hydraulic conductivity of soil to avoid ground water contamination due to leaching.

3. For land application, the characteristics of the wastewater determine the quality of wastewater and amount to be used on land. Each type of wastewater contains one or more constituents that limit its application. Treated wastewaters from industries like Innotech Pharma Ltd., Paschim Chemicals Pvt. Ltd., Ariane Orgachem Pvt. Ltd. and Endurance Systems Pvt. Ltd are not meeting the land disposal criteria with respect to EC, TDS, sodium, COD and BOD as prescribed by State and Central boards for pollution control. They must follow the regulations strictly.

4. Industries like Paschim Chemicals Pvt. Ltd. and Ariane Orgachem Pvt. Ltd., are disposing their treated

wastewater in an unregulated manner on barren land without any plantation. To avoid further deterioration of soil and groundwater qualities, effective utilization of treated wastewater for plantation should be done at wastewater disposal sites after meeting the land disposal criteria.

Therefore, it is recommended to establish a CETP with appropriate unit operations and process which can produce effluent suitable in all respects for land disposal.

5. Some of the industries are not meeting the criteria of wastewater disposal on land and also companies are disposing their effluent unscientifically and indiscriminately, the current land disposal practices should be stopped immediately. Hence, to avoid further contamination, CETP at Waluj MIDC, Aurangabad should be made operational at the earliest.

6. The soil's capacity to use, retain, or reduce the undesirable effects of wastewater varies significantly according to the physical, chemical, and biological properties of the soil and the characteristics of the wastewater. Thus, the development of a land treatment system must be tailored to the characteristics of the specific site and the specific wastewater. Industries like Garware Polyester Ltd., Wockhardt Biotech Park Ltd., Innotech Pharma Ltd., Paschim Chemical Pvt. Ltd., Ariane Orgachem Ltd., Fosters India Ltd., and Aurangabad Breweries Ltd. possess different types of soil and hence have different soil characteristics. Recommended hydraulic loading (quantity and schedule) of wastewater should be carefully implemented by these industries to avoid further deterioration of soils.

7. Based on lysimeter studies, it is recommended that the treated wastewater having BOD load of 30 and 60 mg/L can be disposed on land with suitable plantation at optimum hydraulic loading of 150 m³/ha/day during pre monsoon and 125 m³/ha/day during post monsoon respectively.

8. It is also recommended that the plant growth was the best among all treatments with the composite treated wastewater having BOD load of 30 mg/L. Hence, this is more suitable for land application.

9. Groundwater studies at Vittawa and Ranjangaon areas, which are in the vicinity of MIDC, Waluj and percolation tank showed that dug wells, bore wells and hand pumps in and around were severely polluted. The percolation tank (stagnant water reservoir) is nearer to

the cluster of industries such as Lilason Industries Ltd., Innotech Pharma Ltd., Aurangabad Breweries Ltd., Paschim Chemicals Pvt. Ltd., Ariane Orgachem Pvt. Ltd. and Endurance system India Pvt. Ltd.. The wastewaters from these industries move to percolation tank through seepage and contaminate the water in percolation tank which acts as a groundwater recharge source. This might be the cause of groundwater pollution of nearby areas. To avoid further groundwater pollution, the percolation tank (stagnant water reservoir) should be filled.

10. *Wastewater disposal sites of industries like, Garware Polyester Ltd., Wockhardt Biotech Park Ltd., Innotech Pharma Ltd., Paschim Chemical Pvt. Ltd., Ariane Orgachem Ltd., Fosters India Ltd., and Aurangabad Breweries Ltd. are severely polluted due to continuous wastewater application and are need to remediation/reclamation.*

11. *The lysimeter investigations for assessing the feasibility of the wastewater application on land need to be performed to assess the amount of wastewater to be applied at a specific site.*

12. *Land disposal sites should be monitored regularly to assess the soil and groundwater quality in the area.*

13. *Each of the alternatives discussed above can go wrong if a site-specific waste management and monitoring programme is not implemented. The results of monitoring must be reviewed periodically and the management plan may be modified, if necessary.*

28. MPCB in para 4.2.5 of the said action has noted. :

Treatment and management of contaminated ground water bodies etc.

Waste water disposal sites of industries like, Garware Polyester Ltd., Wockhardi Biotech Park Ltd., Innotech Pharma Ltd., Paschim Chemical Pvt. Ariane Orgachem Ltd., Fosters India Ltd., and Aurangabad Breweries Ltd. are severely polluted due to continuous waste water application and there is need for remediation/reclamation.

Ground water studies at Vittawa and Ranjangaon areas, which are in the vicinity of MIDC, Waluj and percolation tank showed that dug walls, bore wells and hand pumps in and around were severely polluted. The percolation tank (stagnant

water reservoir) is nearer to the cluster of industries such as Lilason Industries Ltd., Innotech Pharma Ltd., Aurangabad Breweries Ltd., Paschim Chemicals Pvt. Ltd. The waste water from these industries moves to percolation tank through seepage and contaminate the water in percolation tank which acts as a ground water recharge source. This might be the cause of ground water pollution of nearby areas. To avoid further groundwater pollution, the percolation tank (stagnant water reservoir) should be filled. Industries will be directed to segregate high TDS streams and treat it separately.

29. Considering the above discussion, we find that MPCB has already prepared road map for implementation for remediation measures for the Ground Water Quality and the Soil Quality in the area under question. The only hurdle is absence of initiation of such Action Plan and we really don't know the reasons thereof. It is necessary that the MPCB shall revisit the remedial Action Plan, if prepared earlier, in line with CGWB Report and then finalise the remediation Action Plan.

30. It is placed on record that the MIDC Waluj area accommodates about 1520 Industrial units of which 316 are in highly polluting or red category. The CETP is in operation since 2012 which has a capacity of 10 MLD. As per the record the total generation of waste water in Waluj industrial area is 10.4 MLD or so. However, CGWB has reported that the CETP is in operation only with two (2) MLD capacity due to shortage of incoming effluents. CGWB has further reported that the CETP is also not discharging the desired quality of effluent. All these facts speak for

themselves though not disclosed by MPCB. More than eight (8) MLD industrial effluent is still not reaching CETP and being discharged either on land or in nalas with or without treatment. These facts demonstrate that enforcement levels in MIDC Waluj are not to the desirable level. When the matter was taken up by the Tribunal, MPCB observed some non compliances and actions were initiated. We hope that such actions are not for the sake of Tribunal proceedings and consistent enforcement measures are taken by MPCB. During such inspections, MPCB found M/s. Endurance System discharging Chrome Bearing effluent outside premises and has issued directions of closure against the industry. The industry has also filed M.A. No. 145/2014 in connection with such closure with a prayer to direct MPCB to give hearing before restart. What we found interesting is that this industry has also been identified as source of pollution by NEERI as reported in MPCB's Report. In fact, there are serious observations regarding the Chrome content in the Ground water in wells in the vicinity of these industries. In spite of all such previous record, such industries continue to discharge highly toxic effluent bearing Chrome, into the environment which shows the apathy, these industries have towards the environmental protection. We are, therefore, not inclined to accept any request for expeditious hearing by MPCB and we leave it to Member

Secretary MPCB to ensure that all pollution control systems are in place and are capable of meeting standards at all times and any other safeguards which he will like to rely upon, including independent expert appraisal, before considering such restart. However, the industry is at liberty to challenge such order of closure or such directions given by MPCB, as per the legal avenues available to them, if deemed fit and necessary. The MA 145/2014 is accordingly disposed of.

31. In the result, we allow the Application with following directions issued under Section 14, 15 read with 20 of National Green Tribunal Act, 2010 :

- (I)** MPCB shall devise remedial action plan for the ground water quality and soil water quality as identified in NEERI/CGWB report. MPCB may take help of NEERI to formulate such action plan and identify the cost thereof within next four (4) months.
- (II)** MPCB shall thereafter execute such remedial action plan with the assistance of MIDC, GSDA and other authorities as deem necessary in close co-ordination with the District Collector, within next one (1) year or the time frame as suggested by the Expert Agency like NEERI.
- (III)** MPCB shall recover the costs of the remedial measures based on equitable distribution and Polluter's Pay principle from the responsible industries in the catchments of such contaminated wells/aquifers as identified by the CGWB/NEERI.
- (IV)** MPCB shall prepare such report identifying the industries and their proposed contribution, may be in the percentage of overall cost basis for further orders from the Tribunal in next three (3) months.

- (V) MPCB shall also utilize the amount of Bank guarantees forfeited from the industries in Waluj Industrial area for the said purpose, for initiating the works referred above.
- (VI) The industries listed in NEERI/MPCB report i.e. Innotech Pharma Ltd., Paschim Chemicals Pvt. Ltd. and Endurnce System Pvt. Ltd., Aurangabad Electrical shall deposit initial amount of Rs.5 lacs each with MPCB towards such remedial action plan.
- (VII) MPCB shall ensure that the industries in MIDC, Waluj area and CETP achieve the desired effluent, quality by issuing suitable directions and the same shall be achieved in a period not more than three (3) months. In case, such compliance is not attained in 3 months by individual industries and in 6 months by CETP, then MPCB shall take stringent legal action against the non-complying industries.
- (VIII) MPCB shall pay the costs of Rs.10,000/- (Rs. Ten thousand) to be paid to the National Environmental Relief Fund, in view of non production of their own action plan and also the NEERI Report in the proceedings.
- (IX) MIDC shall continue to provide water for domestic purposes in villages/localities, located in the eastern stretch starting from north Ranjangaon Shempunji to south Shivrai, where ground water quality deterioration is reported by CGWB, till such remedial action plan is implemented and the ground water quality is fit for drinking purpose, as per norms.

Application is disposed of.

.....,JM
(Justice V. R. Kingaonkar)

....., EM
(Dr. Ajay. A. Deshpande)

Dt/- 24th September 2014