

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

**Original Application No. 07/2014 (THC) (WZ)
(I.A. No. 07/2020)**

In the Matter of: -

Janardan Kundalikrao Pharande & Ors.

Applicant(S)

Vs.

Ministry of Environment & Forests & Ors.

Respondent(S)

Index

S. No.	Particulars	Page No.
1.	Status Report filed by Central Pollution Control Board in the matter of O.A. No. 07/2014 (THC) (WZ) (I.A. No. 07/2020) titled as Janardan Kundalikrao Pharande & Ors. Vs. Ministry of Environment & Forests and Ors. In Compliance of Hon'ble NGT Order dated 04.02.2020.	
2.	Annexure-1 Copy of Joint Committee Report Comprising of CPCB, MoEF&CC And IITB.	
3.	Annexure-2 Hon'ble NGT Order dated: 27.01.2020 (date of uploading 04.02.2020)	


(P. K. MISHRA)

Scientist 'E'

Central Pollution Control Board
East Arjun Nagar
Delhi-110032

Dated: - 21.05.2020

Place: - Delhi



Central Pollution Control Board

(Ministry of Environment, Forest and Climate Change)

'Parivesh Bhawan', East Arjun Nagar, Shahdara,

Delhi-110032

STATUS REPORT FILED BY CENTRAL POLLUTION CONTROL BOARD IN COMPLIANCE TO HON'BLE NGT ORDER DATED 04.02.2020 IN O.A. NO-07/2014 (THC) (WZ) (I.A. NO. 07/2020) IN THE MATTER OF 'JANARDAN KUNDALIKRAO PHARANDE & ORS VERSUS MINISTRY OF ENVIRONMENT & FORESTS & ORS'

1.0 BACKGROUND

The Hon'ble NGT gave the following directions in the above said matter vide its order dated 04th February 2020;

"Thus, the industry has to be held to be non-compliant and liable to pay compensation already assessed by the Committee on sound principles. Apart from payment of compensation for the damage in the past, the unit needs to take steps for remediation. The steps be taken accordingly within three months and if noncompliance continues, closure may be the only option. Compensation already calculated may be deposited with the CPCB within one month. The Joint Committee constituted in terms of order dated 20.02.2019 may give report about further liability after the period already taken into account.

CPCB and MPCB may inspect the status of compliance as on 30.04.2020 with reference to the deficiencies noticed in various reports including the notice issued by the MPCB and furnish a report to this Tribunal by 15.05.2020 by e-mail at judicialngt@gov.in."

In compliance of the above order of the Hon'ble Tribunal, the joint Committee comprising of CPCB, MoEF&CC and IITB representatives held a meeting at IITB on 17.02.2020 and copy of the signed report received from the Regional Directorate, Vadodara of CPCB is placed at **Annexure-1**.

The Committee has calculated an additional amount of Rs. 79,20,000 (Rupees Seventy Nine Lakh and Twenty Thousand only) as further liability up to the period of the previous order, 04.02.2020 in terms of environmental compensation to be deposited by M/s. Jubilant Life Sciences Ltd. Nira, Dist. Pune, Maharashtra. The Committee had further decided that since the Committee of CPCB and MPCB has to carry out a compliance verification as on 30.04.2020 and submit its report as per the said order of the Tribunal, further liability based on the compliance status of the unit shall be calculated and submitted along with the compliance report to be submitted.

2.0 STATUS OF COMPLIANCE VERIFICATION:

Due to the outbreak of COVID-19 pandemic in the country and the restrictions imposed on travel and non essential activities, the said joint monitoring of CPB and MPCB could not be carried out till date. Under these circumstances it is assured that the required joint monitoring shall be carried out at the earliest, once state of normalcy returns in the country and especially in Maharashtra and the compliance status report shall be submitted before this Tribunal. It is requested that a time period of at least 45 days from the date of resumption of normal activities & lifting of travel restrictions may be allowed for the submission of the compliance report. Further the industry, M/s. Jubilant Life Sciences Ltd. Nira, Dist. Pune, Maharashtra is yet to deposit the environmental compensation, as directed by the Hon'ble Tribunal vide order dated 04.02.2020 and as informed has filed an application/appeal before the Hon'ble Tribunal in this regard; however CPCB has not received any formal communication in the matter.



Vivek k <vivekcpcb@gmail.com>

O.A. No. 07/2014 (THC) (WZ) in the matter of Janardan Kundalikrao Pharande & Ors. Vs Ministry of Environment & Forests & Ors. before NGT, PB, New Delhi

Amit Thakkar <amit.thakkar07@gmail.com>

Mon, May 18, 2020 at 2:47 PM

To: Vivek k <vivekcpcb@gmail.com>

Cc: pradeep mishra <mishrapkin@yahoo.com>, CPCB Law Cell <law.cpcb@gmail.com>, Rambabu G <grbabu85@gmail.com>

Sir

Based on order dated 04.02.2020 of Hon'ble NGT, the monitoring committee constituted in terms of order dated 20.02.2019 has worked out additional liability till the date of Order i.e 04.02.2020 of Hon'ble NGT. In this regard, please find attached monitoring committee report for further needful.

in addition Hon'ble NGT has directed to check the compliance status of the unit as on 30.04.2020 by Joint Committee of MPCB and CPCB. Compliance Monitoring of the unit was not carried out due to prevailing COVID 19 situation. The same will be initiated once the condition gets normal.

Regards

Amit Thakkar
Scientist D

[Quoted text hidden]

--

Thanks & Regards,

Amit R Thakkar, Scientist D
Central Pollution Control Board
Regional Directorate (West), Vadodara **Monitoring Committee Report Jubilant Life Sciences.pdf**
1264K

**MONITORING COMMITTEE REPORT WITH RESPECT TO ORDER DATED 04.02.2020 OF HON'BLE
NGT IN THE MATTER OA 07 OF 2014**

In the matter OA 07 of 2014 (Janardan Kundalikrao Pharande & Ors. Vs. Ministry of Environment and Forests & Ors., Hon'ble NGT has passed an order dated 04.02.2020, wherein it is directed that ". The Joint Committee constituted in terms of order dated 20.02.2019 may give report for further liability after the period already taken into account". In this regard, a meeting of committee members was organised at IIT Bombay on 17.02.2020.

During meeting following members were present

Prof. Suparna Mukherji : Member
Professor, Environmental Science and Engineering Department,
Indian Institute of Technology, Bombay
Powai, Mumbai -400076

Mr. Suresh Kumar Adapa : Member
Scientist "D", MoEFF & CC
Regional Office, Nagpur

Mr. Amit R Thakkar : Member & Nodal officer
Scientist "D", Regional Directorate, CPCB,
Vadodara

The committee has discussed in detailed about the order dated 04.02.2020 of Hon'ble NGT, monitoring report submitted by the monitoring committee (based on visit dated 07.05.2019 to 09.05.2019 of the unit (JLS) by the monitoring committee), Report submitted by the joint committee (based on visit dated 19.11.2019-20.11.2019 of the unit (JLS) by the joint committee of CPCB and MPCB).

The committee has calculated environmental compensation based on the methodology for assessing environmental compensation and action plan to utilize the fund prepared by CPCB and was reported in the section 8.1 of the monitoring committee report. The same is reproduced below:

8.1 Environmental Compensation

The present environmental management system was monitored by the committee. It was observed that ZLD scheme provided by JLS is not adequate. JLS has provided more than 30 days storage capacity and has stored spent wash (at various concentration stages) in storage lagoons. It has installed a Coal Gasifier without consent from MPCB, and has not yet met with the timelines of the detailed action plan submitted to the Hon'ble NGT. Based on the above, the

monitoring committee arrived at an amount of Rs, 5,47,50,000 (Rupees Five Crore forty seven lakh and fifty thousand) to be paid as Environmental Compensation. This would be in addition to the amount to be paid to the victims apart from remediation cost. The environmental compensation amount was determined based on the methodology for assessing environmental compensation and action plan to utilize the fund prepared by CPCB as discussed in this section.

As per the Environmental compensation, following cases for levying environmental compensation were considered:

- a) Discharges in violation of consent conditions, mainly prescribed standards/ consent limits
- b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc.
- c) Intentional avoidance of data submission or data manipulation by tampering the online continuous emission/effluent monitoring systems
- d) Accidental discharges lasting for short durations resulting into damage to the environment
- e) Intentional discharges to the environment—land, water and air resulting into acute injury or damage to the environment
- f) Injection of treated/partially treated/untreated effluents to ground water

It was observed that the industry is violating the consent conditions such as treated effluent discharge standards, mismanagement of spent wash and storage of compost in open area. Hence the damage (environmental compensation) has been calculated based on 'a' category.

As per this method, the Environmental Compensation shall be based on the following formula:

$$EC = PI \times N \times R \times S \times LF$$

Where:

EC is Environmental Compensation in Rs.

PI= Pollution Index of industrial sector

N= Number of days for which the violation took place

R= A factor in Rupees (Rs) for EC

S= Factor for scale of operation

LF= Location Factor

As the concerned industry falls in the Red Category Large Scale Industry, its Pollution Index is 80. Number of days for which the violation took place is considered as 5 years (1825 days) after the judgment dated 16.05.2014 of Hon'ble NGT in this matter.

Factor R for EC is Rs. 250/day

Factor for scale of operation is 1.5 as the industry's operation is large scale.

Location factor is 1 as the population of the area is less than 1 million

These values have been applied to the formula for EC determination.

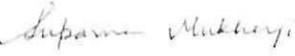
$$EC = 80 \times (5 \times 365) \times 250 \times 1.5 \times 1 = 5,47,50,000$$

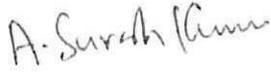
Thus, an amount of Rs. 5,47,50,000 may be imposed on the industry as charges towards Environmental Compensation.

The Environmental compensation was calculated for the period of 5 years (1825 days) after the judgment dated 16.05.2014 of Hon'ble NGT in this matter. Based on the duration of 5 years considered for calculation the amount of Rs. 54750000 was till 15.05.2019. As per the EC calculation the per day environmental compensation is @ 30,000 Rs/day.

As per order dated 04.02.2020 of Hon'ble NGT, further liability till the date of order (i.e. 04.02.2020) the excess environmental compensation for further (264 days) will be Rs. 79,20,000 (Rupee Seventy Nine Lakh Twenty Thousand). It is understood from the order that the Hon'ble NGT has also directed a joint committee of CPCB and MPCB to visit the unit on 30.04.2020 and submit the compliance report. The monitoring committee is in the opinion that, the liability may be further calculate based on the compliance status of the unit and shall be submitted to Hon'ble NGT accordingly along with the joint committee report.

Thus the excess liability of Rs. 79,20,000 (Rupee Seventy Nine Lakh Twenty Thousand) for noncompliance till the order dated 04.02.2020 of Hon'ble NGT may be considered to be collected from the unit.


Prof. Suparna Mukherji
Head of the Department,
Environmental Science &
Engineering Department,
Indian Institute of Technology
Bombay, Mumbai


Shri. Suresh Kumar Adapa
Scientist'D'
Regional Office(WCZ),
Ministry of Environment, Forest
& Climate Change,
Nagpur


Shri. Amit R. Thakkar
Scientist'D'
Central Pollution Control Board,
Regional Directorate (W),
Vadodara

Item No. 01

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 07/2014 (THC) (WZ)
(I.A. No. 07/2020)

Janardan Kundalikrao Pharande & Ors.

Applicant(s)

Versus

Ministry of Environment & Forests & Ors.

Respondent(s)

Date of hearing: 27.01.2020

Date of uploading on the website: 04.02.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

ORDER

1. The issue for consideration is the remedial action to be taken for the damage to the environment caused by M/s. Jubilant Organic Limited, Nimbut-Nira, District Pune, Maharashtra in the course of its distillery unit's activity and financial liability of the unit for compensation on 'Polluter Pays' principle for the damage caused to the environment and other individual victims. Present proceedings are for execution of judgment of this Tribunal dated 16.05.2014 holding that the unit had caused damage to the environment and was liable to take remedial measures and to pay compensation.
2. A brief background may be noted. The original applicants first approached the Bombay High Court in the year 2001 by way of *Writ Petition (PIL) No. 44 of 2001* with the grievance against activities of M/s Jubilant Organic Limited (later segregated into

two different private limited Companies styled as “M/s. Jubilant Industries Ltd. and M/s. Jubilant Life Sciences Ltd.) in discharging hazardous waste in river ‘Nira’ through “Buvasaheb Nala” near Pune in Maharashtra. M/s Jubilant industry was also manufacturing chemicals including Super Phosphate, Vinyl Pyridine etc. The High Court disposed of the *Writ Petition (PIL) No. 44 of 2001* vide order dated 08.02.2006 by issuing certain directions. The applicants again approached the High Court by way of *Writ Petition (PIL) No. 240 of 2009* with the grievance that the directions remained uncomplied resulting in huge surface and ground water pollution. The *Writ Petition (PIL) No. 240 of 2009* was transferred to this Tribunal vide order dated 25.10.2013 and was disposed of vide order dated 16.05.2014.

3. The Tribunal framed following issues for consideration:

- (i) Whether the disposal of the earlier Writ Petition No. 44 of 2001 bars the present Application due to Application of the principle of res-judicata?*
- (ii) Whether the contamination of water can be attributed to Industrial mis-managed discharge of effluents of Jubilant Industry and has resulted into damage to the fertility of the agricultural lands or the Flora and Fauna in the area?*
- (iii) Whether remedial measures are necessary to arrest the water pollution, if any, caused by Jubilant Industry? If yes, what measures shall be adopted?*
- (iv) Whether Jubilant industry is liable to pay any damages for loss caused to the environment and particularly loss to the agricultural lands of the villagers due to loss of fertility? If yes, to what extent and to whom?*
- v) Whether the environmental certificate dated 23rd September 2008 is liable to be set aside and the Jubilant Industry shall be directed to stop expanded Industrial activity undertaken in terms of the said Environmental Clearance?”*

4. Under Issue No. (i), it was held that earlier order of the High Court was not *res-judicata* for consideration of the present application.
5. Under Issue No. (ii), it was held that water downstream of 'Nira' river was contaminated and was unfit for consumption even by animals. In spite of directions of the Maharashtra State Pollution Control Board (MSPCB), water pollution was not controlled and effective steps for remediation of groundwater quality were not taken. The Tribunal directed implementation of action plan filed by the SPCB on 03.03.2014, apart from measures recommended by the Central Ground Water Board (CGWB) with regard to aquifer-remediation. Plea of the unit that pollution was attributable to other industries and sewage was rejected. The findings in this regard are:

“37. The MPCB Report further shows that at ETP outlet of Jubilant Industry and in the sewage of 'Nira' river the percentage of phosphates had exceeded the permissible limits. The percentage of chlorides were higher at location of Buvasaheb and Saloba Nalas. The presence of oil and grease had exceeded in three (3) samples out of 18 samples, collected from different places of the treated effluents. The samples in the river Arm which runs parallel to HRTS, sample collected from river flowing under Buvasaheb Nala, sample collected past mixing of Nira sewage were found to be contaminated due to mixing of oil and grease. The COD (Chemical Oxygen Demand) was also excessive than the permissible limits at the said three (3) places. **Perusal of the report of M.P.C.B. shows that several conditions were imposed by the M.P.C.B. Still, however, the status of the conditions needed to be complied or present compliances is far from satisfactory. No doubt, Jubilant Industry installed certain equipments but the pollution of River water still exists.**

40. **The directions given to Jubilant Industry further show that unabated water pollution could not be controlled by the Industry inspite of assurances and under taking to comply with the earlier conditions, including submission of an action plan for remediation of ground water quality.** The Industry was directed to submit action plan for taking effective steps for

re-remediation of ground water quality in the surrounding area in respect of ground water contamination occurred due to improper treatment and disposal by M/s. Polychem Limited during period from 1963 to 1999 and till the lagoons were re-claimed. **The Industry was further directed to supply drinking water to the affected people.** The Industry was informed that if no proper reply would be given final directions will be issued in the matter.

41. **It has been reported that the ground water quality is adversely affected by indiscriminate disposal of treated/untreated effluent in the past.** It is further reported that high concentration for Alkalinity, Total Dissolved Solids, Total Hardness, Chloride, Nitrate and Fluoride was observed in most of the dugwell and bore-well samples. **The report shows that the Ground Water Contamination encountered could be attributed to leaching from closed unlined lagoons that had been in operation prior to 2006 and improper disposal of untreated and partially treated effluents in Buvasaheb Nala. It is further observed that the Industry has discharged treated/untreated effluent in unlined lagoons occupying an substantial area of 35 acres, during period of about 43 years, which is a cause for ground water contamination. It is further reported that such conclusion is manifested into the occurrence of coloured water, high alkalinity, heavy metals such as Manganese, Lead, Nickel and Iron in ground water over a period of time. Thus, it is more than clear that Jubilant Industry caused contamination of the water of river 'Nira'.**

42. The action plan is submitted by M.P.C.B. alongwith its affidavit dated March 3rd, 2014. The said action plan is considered by the Central Ground Water Board, Pune after discussions with 'NEERI' and M.P.C.B. during joint meeting held on March 12th, 2014. The action plan submitted by the M.P.C.B. in its affidavit dated March 3rd, 2014 is elaborate. We approve the said action plan alongwith the modifications recommended by the Central Ground Water Board, Pune. We also direct the M.P.C.B. to add the measures 'A', 'B', 'C' as recommended by the Central Ground Water Board, Pune in addition to the recommendations in the action plan alongwith the modifications. For example, the recommendation of Aquifer Remediation for meeting ground water quality i.e. recommendation 'A'. Aquifer Remediation and recommendation plan i.e. Recommendation 'B' and the ground water levels and quality mechanism i.e. recommendation 'C' stated in the report of CGWB shall be part and parcel of the remedial measures which shall be implemented by the Industry (Respondent Nos.2, 2A and 2B) alongwith M.P.C.B. report and the recommendations with modifications suggested by the CGWB. In this view of the matter, we do not find it necessary to reproduce the

entire action plan enumerated in the report dated March 19th, 2014 filed by the Central Ground Water Board, Pune.

43. **We find from the record that the water of river 'Nira' is polluted at the place of flow under Buvasaheb Nala. It appears that Buvasaheb Nala is situated within the premises of Jubilant Industry. So also, Saloba Nala is situated within proximity of effluent discharge out let of Jubilant Industry. There is no reliable material on record to show that any other substantial contribution is being made by Municipal sewage or other Industrial effluents for the contamination of 'Nira' river. We cannot expect proof against Jubilant Industry upto the hilt in order to prove such issue.**

6. Under Issues No. (iii) and (iv), it was held that no proper remedial measures had been undertaken by the unit and 'Polluter Pays' principle was required to be invoked. M/s. Jubilant industry was liable to pay the damages for the losses caused to the land owners and to bear the cost of remediation and also to ensure zero discharge of effluents into the river. The findings in this regard are:

“44. **The reports of the agricultural department would indicate that at some places the water is unfit for agricultural use. The claim of the Jubilant Industry that H.R.T.S. is effective and the waste water/spent wash are used for plantation after recycling is untenable.** The growth of small plants cannot be equated with afforestation and rearing of trees within the premises of Industrial Unit. The negligible activity of plantation cannot be treated as afforestation.

45. There is no substantial reason to discard version of the Applicants that farmers have suffered agricultural losses due to the water pollution caused by Jubilant Industry which could be, of course, legacy of the past to some extent i.e. derived from VAM Chemicals. Still, however, when Jubilant Industry got the unit with all the liabilities, then, it must be held accountable for the loss caused to the farmers. This is a fit case in which the principle “polluter’s pay” is applicable.

48. **There is no escape from conclusion that Jubilant Industry is 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 “Nira” due to discharging of industrial effluent of the units run by the Industries.**

49. ... **We hold that Jubilant Industry is liable to pay the damages for losses caused to land owners, to bear cost of remediation and also to ensure zero discharge effluent in River 'Nira'.**
7. With regard to Issue No. (v), it was observed that the question did not survive as the validity period of Environmental Clearance had lapsed. The Tribunal accordingly concluded as follows:

"51. The net result of the foregoing discussion is that there is reliable evidence to draw inference about continuation of Pollution caused to water of 'Nira' river as a result of discharging of Industrial effluent/spent wash by Jubilant Industry. The water pollution has remained unabated. The so called efforts taken by Jubilant Industry were inadequate and did not completely stop the water pollution. The lagoons have dried up. The mere fact that old spent wash storage without lagoons are re-claimed, cannot be deemed as adequate measures. Nor it can be said that installation of new ETP for treatment of effluent for the Acetic Acid plant will diminish the water pollution and can be the solution to deal with continuous pollution of the river water. We are not satisfied with assurances of Jubilant Industry. In view of the findings recorded on the relevant issues and the foregoing discussion, we are inclined to allow the Application and pass the following order/directions:

- (i) The Application is allowed.
- (ii) The Respondent Nos.2, 2A and 2B or any other industry which may take over the unit/units shall not discharge effluents of the Distillery/spent wash of the Industry in Buvasaheb Nala and Saloba Nala or any part of the River 'Nira'.
- (iii) The recommendations of 'NEERI' and CGWB shall be complied with by the Respondent Nos.2, 2A and 2B which shall be regularly monitored by the MPCB.
- (iv) The MPCB shall give appropriate directions to the Respondent Nos.2, 2A and 2B in case zero discharge status is not achieved within period of three (3) months hereafter, including directions under Section 33 of the Water (Prevention of Pollution) Act, 1980.
- (v) The Collector, Pune shall constitute a Committee consisting of:
 - (a) An Additional Collector (Chairperson),
 - (b) Regional Officer of MPCB (Co-ordinator)

(c) A nominee of the Krishi Vidyapeeth, Pune (expert in soil testing and fertility, loss of fertility due to water pollution) and having adequate knowledge about methodology to quantify such loss in terms of money. (As nominated by the Vice-Chancellor).

(d) A nominee of Central Ground Water Board, Pune (As nominated by its Director).

The above Committee shall inspect the land area within radius of two (2) km of Buvasaheb Nala and Saloba Nala within period of three (3) months hereafter. The Committee may take help of any expert and/or Cadastral Surveyor. The Committee shall cause evaluation of loss caused to the agriculturists, if any, due to discharging of industrial effluents in the water of River 'Nira' which assessment may be done after soil testing, examination of the past revenue assessment and other relevant factors. The loss, if any, is noticed then it also be stated with reference to identify of the land owner/occupier. The cost of inspection and work of committee is to be borne by Jubilant Industry which the Collector shall recover, if not paid, as if it is land revenue arrears.

(vi) The Respondent No.2, 2-A and 2-B shall tentatively deposit amount of Rs.25,00,000/- (Rs. Twenty five lacks) in the office of the Collector, Pune in eight (8) weeks and shall be liable to deposit/pay any further amount, if so required, for the purpose of disbursement to be made by the Collector, Pune on basis of report of the aforesaid Committee.

(vii) The report of aforesaid Committee shall be submitted to the Tribunal within period of six (6) months hereafter. A copy of said Report be given to the Respondent No.2, 2A and 2B. Any objection on the said Report, if has to be filed, may be filed within two (2) weeks thereafter. The Collector, Pune shall undertake the work for disbursement of compensation to affected land owners/occupiers as may be further directed on basis of such Report if it is so accepted fully or in part, as per further orders of this Tribunal.

(viii) In case the Respondent Nos.2, 2-A and 2-B will fail to deposit above amount of Rs.25,00,000/- (Rs. Twenty five lacks) in the office of Collector, Pune, it shall be recovered as if it is land revenue arrears under the Maharashtra Land Revenue Code, 1966, by the Collectorate, Pune by attachment and sale of the Industrial Units, stock and barrel.

(ix) **The M.P.C.B. shall issue necessary directions to Respondent 2, 2A and 2B in next four (4) weeks for securing the time-bound remedial measures, as recommended by 'NEERI' and also the MPCB alongwith the further recommendations of the**

Central Ground Water Board, Pune as per the report of CGWB dated March 19th, 2014, which comprehensively shall be treated as part of the directions of this Tribunal for the purpose of remedial measures that should be adopted. The costs of remediation/restitution shall be estimated by the MPCB. If the measures are not complied with by the Industrial units in prescribed time limit, the same shall be recovered by MPCB from the Industry and the compliances shall be ensured through the independent machinery at the costs of the Industry. (The direction is being issued U/s. 15(b) and (c) of the National Green Tribunal Act 2010).

(x) *The Respondent Nos.2, 2A and 2B shall pay Rs.20,000/- (Rs. Twenty thousand only) to the Applicants as costs of the Application and shall bear their own.”*

8. In the course of execution of above directions, the matter was put up before this Tribunal on several dates. Reference may only be made to order dated 18.11.2015 in the context of directions issued by the SPCB on 12.06.2014 requiring the industry to undertake phytoremediation for which the industry sought opinion from NEERI. Vide orders dated 03.10.2016, 04.03.2017 and 23.05.2017, different opinions for remediation measures were noted and finally on 10.08.2017, the Tribunal directed that steps be taken for decontamination of the area in terms of order dated 16.05.2014 in the light of suggestions of CSIR-NEERI as follows:

- “• *All the reports indicate that the groundwater and soil in the abandoned pond are contaminated and remediation of these resources is essential. All the reports and affidavits accept removal of source that is excavation of contaminated soil and its environmentally safe disposal. CSIR-NEERI has suggested phyto-remediation with a long term outcome while hydrogeological expert/s has suggested pump and treat remediation of contaminated water with proper subsurface interventions such as dug wells, leachate collection ponds, etc.*
- *Every remediation methodology is associated with certain advantages and disadvantages with respect to design and planning, engineering control, ease of operation, monitoring requirements, efficiency and duration, and cost. Choice of*

remediation method depends on the actual field conditions with respect to society and environment.

- *Phyto-remediation is a slow process but needs relatively less engineering controls. In addition it does not produce any secondary wastes such as sludge. Pump and treat method, on the other hand, is good and effective for ground water remediation, but not very effective for soil remediation. It needs higher level of engineering controls, produces sludge, and time period required can be long depending on the volume of the aquifer concerned. Remediation time required by pump and treat method can be assessed after estimating the aquifer properties reasonably well and this can be very long considering the limitations of pumping and treatment. This is not addressed in detail in hydrogeology expert report as well as in any affidavit in terms of how many years it will take to complete the task.*
- *In this case use of waste fuels laden with organics and chloride salts is to be explored first at a small scale in laboratory and possibly at filed scale after that.*
- *The use of contaminated soil for composting with press mud needs a thorough study on the proportions of the soil, salt contents, other constituents, and plant uptake of these constituents.*
- *Rain water harvesting and its use of flushing the contaminants out of buffer area and for dilution of the contaminated water is reasonable. This needs good estimation of aquifer properties and buffer zone on a regular basis.*
- *Use of Membrane processes such as RO would generate concentrate stream that has to be evaporated in Multi effect evaporators to obtain salts. These salts are mixed and have no commercial value and disposal is a big issue. Alternate pump and treat method should be examined for comparison and the same should be adopted.*
- *With these observations following remediation plan emerges out:*
 - *Excavation of the contaminated soil sludge from the lagoon and its safe containment with proper bottom lining etc. This would remove the source of contamination and stop further pollution of the natural resources. This has to be done as early as possible.*
 - *Parallel field experimentation on the use of this material for composting with press mud should be taken up immediately. If environmentally safe, the same after composting with press mud can be used as soil amendment.*

- *Containment of polluted water from aquifer with construction of leachate wells and dug wells. The leachate should be treated in system comprising of RO and MEE and salt disposal mechanism. Preferably, alternate pump and treat method such as AOP can be used with safe use of treated water for agriculture or watering.*
- *Meanwhile, complete properties of aquifer including its volume are to be estimated. The pump and treat capacities and time frame of water remediation should be firmed up after that. Rain water harvesting structure can be taken up in view of the report given.*
- *Design and construction of Sewage Treatment plant for the village can be taken up independently as early as possible.*
- *Continuous monitoring with the network of peizowells as suggested should also be part of the plan.*

We permit the Respondent Nos.2, 2A and 2B to commence the work of remediation as per the Detailed Action Plan at the site at their expense subject to the undertaking furnished before us in writing that if the remedial action undertaken by them fails to achieve the desired standards of remediation, the Respondent Nos.2, 2A and 2B shall further undertake such measures required to achieve the desired standards as suggested by CSIR-NEERI and CGWB at their expense. MPCB shall monitor the work of remediation. Results of pilot studies undertaken by CSIR-NEERI shall be placed before us and the Applicant shall be kept informed of such results. Copies of the Detailed Action Plan be furnished to CSIR-NEERI and CGWB.”

9. Vide order dated 20.02.2019, a Monitoring Committee was constituted for compliance of order dated 10.08.2017 as follows:

“8. We are of the view that the compliance of order of this Tribunal dated 10.08.2017 needs to be monitored. The Monitoring Committee to oversee the compliance of the order of this Tribunal needs to be constituted. For this purpose, we constitute a Joint Committee comprising of representatives of Ministry of Environment, Forests and Climate Change (MoEF&CC), Central Pollution Control Board and IIT Mumbai. The nodal agency will be the CPCB for coordination and compliance.”

10. The above Monitoring Committee gave its report dated 01.07.2019 to the effect that the unit had not complied with the directions and continued to violate consent conditions and environmental norms

for which compensation of Rs. 5,47,50,000/- was required to be paid. The report further stated that methodology was required to be worked out for disbursement of compensation to the farmers. Vide order dated 11.07.2019, the Tribunal directed the Collector, Pune to assess the claims for compensation accordingly. The observations of Monitoring Committee in the report dated 01.07.2019 are as under:

Status of compliance with reference to order dated 10.08.2017:

Sl. No.	Description of Remediation Measures	Timeline as per Detailed Action Plan	Compliance status during 07-09.05.2019
1	<p>Excavation of the contaminated soil and store it on impervious ground:</p> <p>The excavated soil is proposed to be stored in identified area provided with lined impervious flooring with appropriate leachate detection collection and treatment system. In order to safely store the contaminated soil of 95,000 CUM the area of the storage site required with a 2.5 m stack height is estimated as 7 acres.</p> <p>The construction of storage site with detailed specifications as per DAP is proposed to be constructed.</p> <p>Excavation, transportation and storage of contaminated soil</p>	<p>Storage site construction to be completed March, 2019.</p> <p>Proposed to commence from April 2019 and to be completed by 31st March, 2020.</p>	<p>There are two contaminated sites (8 acres and 22 acres).</p> <p>The industry has not constructed storage site for storing the excavated material. As informed, the 8 acres contaminated site is impervious in nature based on findings of the hydrogeology report, hence, it will be used for storage of the sludge.</p> <p>The monitoring committee visited both the sites. It was found that the industry has started excavation of sludge from both the sites since December, 2017.</p> <p>As per the details provided, 1604 m³ and 23,778 m³ from the 8 acre and 22 acre has been excavated, respectively.</p> <p>As informed, in the 8 acre site the industry has reportedly excavated about 2.0 acres area and constructed a new chemical effluent treatment plant in that portion.</p> <p>It was informed that from the 22 acre site, about 12 acres has been excavated. In the excavated portion a lined lagoon of capacity 25,000 m³ for storage of concentrated spent wash (after MEE) has been constructed. The site is presently also used for storage of press mud for composting.</p>

			<p>The industry has excavated in total 25,382 m³ of sludge, out of which 3078 m³ has been utilized for composting and reportedly 6075 m³ is stored on the 8 acres site. The remaining sludge, i.e., 16,229 m³ has been distributed to farmers for soil application. (Annexure III-Photograph 1,2,3 & 4)</p>
2	<p>Utilization of excavated material as soil amendment in agriculture:</p> <p>Pilot study to be undertaken by CSIR-NEERI or such reputed institute.</p>	<p>The feasibility study was proposed to be concluded by 31.07.2018 and report shall be submitted to MPCB. Field scale application, if feasible, shall commence from October 2018.</p>	<p>During the visit, it was informed that the final report of CSIR-NEERI is under preparation. Later the industry submitted a copy of report through email dated 12.06.2019 to the monitoring committee.</p> <p>As per the report, NEERI has suggested a prior study of the field condition, soil condition, groundwater quality etc., before the sludge is to be applied; Moreover, only one time application was recommended for sugarcane with application limited to 3 MT/acre in normal soil and 25 MT/acre in sodic soil.</p> <p>Further, there are more recommendations, i.e., the sludge is to be applied in dry form etc. However, the industry has started distributing the sludge removed from the site as such to the farmers for field scale application, even before receiving the final recommendations from CSIR-NEERI.</p> <p>As per the records submitted, the industry has distributed total 16,229.3 m³ (21,098.1 MT) of sludge during December 2017 to May 2018 and then during December 2018 to May 2019.</p>
3	<p>Utilization of excavated distillery sludge as fuel substitute in clay brick manufacturing:</p> <p>Pilot study by CSIR-NEERI or such reputed institute</p>	<p>The feasibility study was proposed to be concluded by 31.03.2018</p>	<p>During the visit, it was informed that the final report of NEERI is under preparation.</p>
4	<p>Utilization with Press mud for Bio composting of Distillery spent wash:</p> <p>Pilot study by CSIR-NEERI or such reputed institute</p>	<p>Arrived conclusion by Feb, 2018. Implementation undertaken during non-rainy season from April, 2018</p>	<p>As per NGT order dated 10.08.2017, the NGT has directed that "...CSIR NEERI shall commence and carry out the said pilot studies as regards the excavated soil from the contaminated lagoons..."</p> <p>However, the study on utilization of sludge with press mud was</p>

			<p>carried out by Mahatma Phule Krishi Vidyapeeth, Rahuri.</p> <p>As informed, the industry has submitted the report of utilization of old sludge with press mud for bio-composting to Hon'ble NGT.</p> <p>As per the report, a combination of sludge (from the contaminated site) and press mud in 40:60 or 50:50 proportion was the best combination in terms of compost quality (with preparation time up to 60 days).</p> <p>As informed, 3078 m³ of old sludge has been utilized for composting.</p>
5	<p>Village Sewage Treatment and recycle:</p> <p>About 1200 KLD untreated sewage from Nira-Nimbut village is estimated to be discharged directly to Buasaheb Nala.</p>	<p>STP to be constructed in 32 weeks after receiving land possession</p> <p>Expected to be ready by Dec, 2019</p>	<p>The industry has informed that the STP will be constructed in the premises of JLS.</p> <p>The industry has submitted copy of the purchase order issued for STP of capacity 600 KLD to M/s Transchem Agritech Pvt. Ltd., Vadodara to treat the sewage from Village Nira which mixes with the Buasaheb Nala in their premises.</p>
6	<p>Arresting leachate flow through surface water:</p> <p>Construction of seepage collection drains along the Buasaheb Nala:</p>	<p>April, 2016</p>	<p>The industry has constructed interceptor wall on the drain side and leachate collection pit to avoid the mixing of leachate from the contaminated sites to Buasaheb Nala since April 2016. However, some seepage was still observed.</p> <p>The monitoring committee has collected grab sample from the upstream of Buasaheb nala and after confluence of leachate inside the premises of JLS.</p> <p>The analysis results are discussed in details in the Monitoring Results and Discussions section. Effect of leachate was clearly observed from the color; the color downstream was double the upstream value.</p>
7	<p>Arresting of leachate flow through Ground water movement:</p> <ul style="list-style-type: none"> • Undertake detailed aquifer characterization • Identify suitable location and design the size of dugwell for arresting the contaminated groundwater leachate movement to buffer 	<p>Study to be completed by 15.01.2018 and recommendations shall be implemented by 30th June, 2018 and 31st Dec, 2018 in phases.</p>	<p>The industry has carried out detailed hydrogeology study of the contaminated sites for identifying the location of piezometric wells near lagoons, suitable location for dug well and rain water harvesting pond. As informed, the reports have already been submitted to Hon'ble NGT.</p> <p>The industry has constructed three dug wells in the 22 acres</p>

	<p>aquifer</p> <ul style="list-style-type: none"> • Design & construct appropriate peizowell network around the operating effluent lagoons to establish the integrity of the same against any seepage contributing to aquifer contamination • Identify suitable location for constructing rainwater harvesting pond 		<p>contaminated site. Out of the 3, presently two are operational.</p> <p>The committee collected a grab sample of groundwater from one of the dug wells located in the 22 acre site. The analysis results showed high COD (1876 mg/l), BOD (828 mg/l) and colour (7000 Hazen units) in the dug well water.</p>
8	<p>Pump and treat the leachates from contaminated aquifer</p> <p>Based on the piloting trials M/s JLS has planned to install suitable RO, evaporation concentrators and solid separation (drying) for treating upto 600 CMD of leachates. It was proposed to construct it in modules of 300 CMD expandable in modules to 600 CMD.</p>	<p>Module of 300 CMD to be Completed by 30.06.2018.</p> <p>Expandable module to 600 CMD to be completed by 31.12.2018.</p> <p>Based on study if quantity assessed is more than 600 CMD then the treatment capacity to be matched and shall be completed by Mar, 2019</p>	<p>The industry has obtained NOC from CGWA for extraction of ground water for leachate treatment.</p> <p>The industry has installed RO plant (Capacity 750 m³ /day) for the treatment of leachate from the dug wells.</p> <p>JLS has submitted purchase order for brackish RO (for treatment of dug well RO reject) and MEE followed by Agitated Thin Film Dryer (ATFD) to concentrate and dry the reject generated from brackish RO plant. However, it was observed that the industry has not met the proposed plan and time targets. (Annexure III-Photograph 5).</p>
9	<p>Construction of rainwater harvesting pond</p>	<p>Excavation of contaminated soil from reclaimed lagoon commence from Oct, 2018.</p> <p>Contaminated soil shifted to new site by Dec, 2019.</p> <p>Rainwater harvesting pond excavated and ready for collection by April, 2020.</p>	<p>The excavation of sludge from contaminated site has been initiated and the present status is detailed in point no. 1.</p> <p>As informed, the rainwater harvesting pond will be constructed after completing excavation of contaminated soil.</p>

XX

XX

XX

Issue of Environmental Compensation:

“As per the Environmental compensation, following cases for levying environmental compensation were considered:

- a) Discharges in violation of consent conditions, mainly prescribed standards/ consent limits.
- b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc.
- c) Intentional avoidance of data submission or data manipulation by tampering the online continuous emission/effluent monitoring systems.
- d) Accidental discharges lasting for short durations resulting into damage to the environment.
- e) Intentional discharges to the environment—land, water and air resulting into acute injury or damage to the environment.
- f) Injection of treated/partially treated/untreated effluents to ground water.

It was observed that the industry is violating the consent conditions such as treated effluent discharge standards, mismanagement of spent wash and storage of compost in open area. Hence the damage (environmental compensation) has been calculated based on 'a' category.”

xx

xx

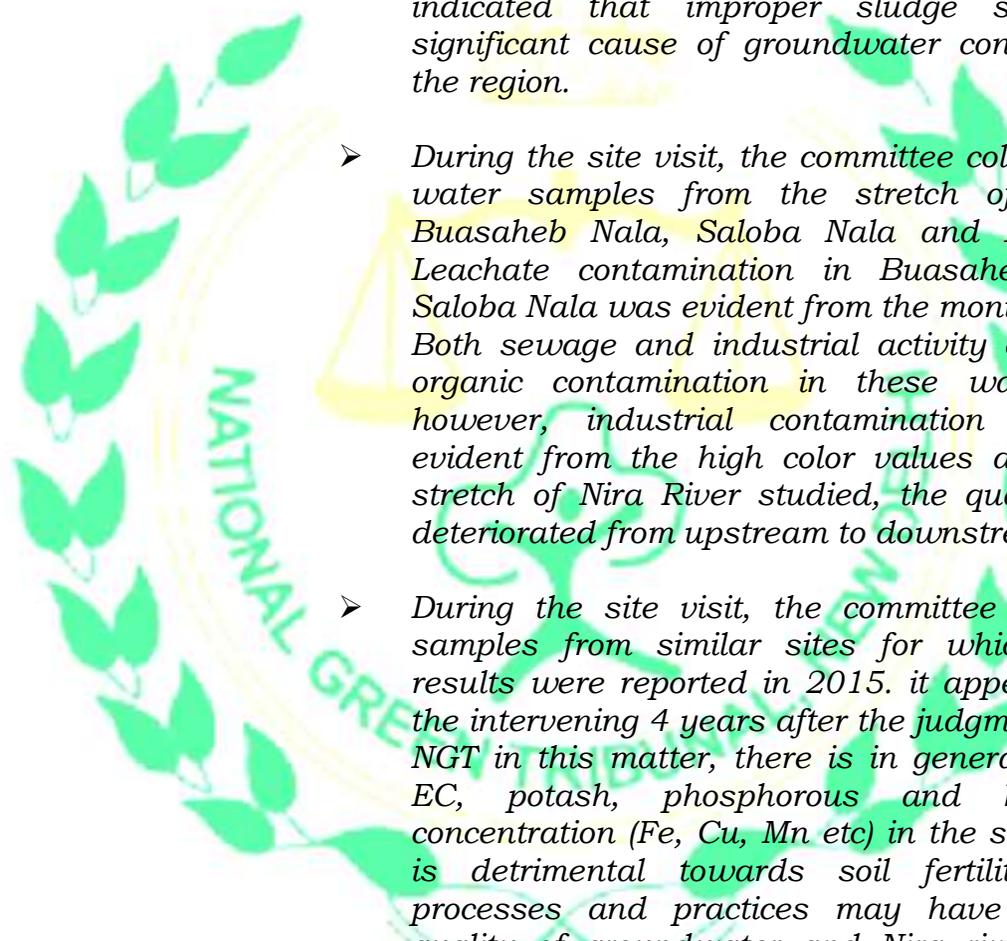
xx

“9.0 Conclusion

Hon'ble NGT constituted a monitoring committee to oversee the compliance of NGT order dated 10.08.2017, to assess the actual amount of damage caused and amount to be disbursed to the victims. The monitoring committee visited the area and JLS during 07- 09.05.2019. Based on the physical observations and discussions during the visit, the records submitted by JLS and MPCB, the monitoring results of samples of groundwater, soil, River Nira, Buasaheb Nala, Saloba Nala, wastewater treatment system provided by JLS for chemical wastewater and spent wash and ZLD approach provided by JLS, the monitoring committee arrived at the following conclusions.

- The monitoring committee found that the industry had carried out various studies of the contaminated sites to understand the hydrogeological characteristics governing groundwater flow, utilization of sludge from the contaminated site for using it as filler material with press mud in the composting process, pilot study for direct application of sludge in the field as soil conditioner etc. as proposed in the detailed action plan (DAP) submitted to Hon'ble NGT.

- *The industry has initiated work as per the action plan, however, deviations from the proposed plan and delay in implementation with respect to the proposed timelines was observed. JLS submitted the CSIR-NEERI final report on pilot study for utilisation of sludge to the committee after the site visit. The final report on utilization of sludge as fuel is still awaited from CSIR-NEERI. JLS has carried out a pilot study for utilization of sludge as filler material along with press mud from Mahatma Phule Krishi Vidyapeeth, Rahuri.*
- *JLS has not constructed storage area with impervious liner for storage of the excavated sludge as proposed in the DAP. Since December 2017, JLS has started excavating sludge from both the 8 acre and 22 acre contaminated sites and has made agreements with farmers for distribution and application of the sludge in their fields. The present practice of excavation and distribution of sludge to the farmers for field scale application even before receiving the final pilot study report of CSIR-NEERI, deviates from the DAP submitted by the industry to Hon'ble NGT. As reported by the industry, about 64% of the excavated sludge has been given to the farmers as soil conditioner, while the remaining sludge was either used for bio composting or was moved for storage on the 8 acres site.*
- *The CSIR-NEERI report recommends prior assessment of soil, groundwater, well water etc. before application of the sludge and also suggests only one time application at specified levels based on the nature of the soil and the crop to be cultivated. However, as per records of sludge distributed to various farmers submitted by the industry, the committee noted that large quantities of sludge have been distributed to individual farmers. Moreover, sludge has also been distributed to the same farmer in consecutive years, violating the recommendations in the NEERI report.*
- *JLS has constructed piezo wells and dug wells in the contaminated site as per the recommendations of the hydro-geology report. However, JLS has failed to meet the plan and timeline proposed for the pump and treat system for leachate. JLS has now installed a RO plant of 750 CMD and procurement of the remaining units, such as, Brakish RO (for treating the RO reject), MEE and ATFD is under progress.*
- *The industry has submitted a copy of the purchase order for STP of capacity 600 KLD to M/s Transchem Agritech Pvt. Ltd., Vadodara to treat the sewage from Village Nira which mixes with the Buasaheb Nala within their premises.*

- 
- *During the site visit, the committee collected groundwater samples from wells and bore well of farmers, a dug well and various piezo wells located in the compost yard within JLS premises. High COD and color was observed in the groundwater samples collected from wells in the farmlands. Colour and COD represent presence of organic contaminants in groundwater. The low BOD to COD ratio (<math><0.4</math>) in these groundwater samples shows evidence of contamination due to industrial operation. In the compost yard within JLS premises, increase in color and COD of groundwater was observed from upstream to downstream indicating mismanagement of concentrated spent wash during bio composting. Water from the dug well located on the 22 acre plot was highly contaminated. These observations indicated that improper sludge storage is a significant cause of groundwater contamination in the region.*
 - *During the site visit, the committee collected surface water samples from the stretch of Nira River, Buasaheb Nala, Saloba Nala and Nira Sewage. Leachate contamination in Buasaheb Nala and Saloba Nala was evident from the monitoring results. Both sewage and industrial activity contributed to organic contamination in these water samples, however, industrial contamination was clearly evident from the high color values also. Over the stretch of Nira River studied, the quality of water deteriorated from upstream to downstream.*
 - *During the site visit, the committee collected soil samples from similar sites for which monitoring results were reported in 2015. it appears that over the intervening 4 years after the judgment of Hon'ble NGT in this matter, there is in general elevation in EC, potash, phosphorous and heavy metal concentration (Fe, Cu, Mn etc) in the soil. This trend is detrimental towards soil fertility. Industrial processes and practices may have affected the quality of groundwater and Nira river water that was used for irrigation of farmlands in the vicinity of JLS. In addition, industry derived soil conditioners may have contributed to this trend.*
 - *The monitoring committee observed that the industry is violating the consent conditions, such as, treated effluent discharge standards, mismanagement of spent wash and storage of compost in open area, inadequate ZLD scheme provided as evident from the large storage capacity provided, i.e., exceeding 30 days of storage and large volume of spent wash stored at various stages of concentration in the storage lagoons.*

The monitoring committee discussed various aspects to calculate the amount of damage caused to the environment to be paid by the project proponent apart from the remediation cost. The amount paid by the project proponent may include environmental compensation and compensation to farmers towards loss of productivity. Based on the noncompliance observed, the monitoring committee arrived at an amount of Rs, 5,47,50,000 (Rupees Five Crore forty seven lakh and fifty thousand) to be paid towards environmental compensation based on the CPCB methodology for assessing environmental compensation. In addition to environmental compensation, a methodology for arriving at the amount to be disbursed to the victims was proposed by the monitoring committee. In the proposed method, compensation to victims/farmers was based on cumulative productivity loss. The proposed method may be used by the District Administrator to calculate the compensation amount for individual victims. It was gathered from the order that an amount of Rs. 25 Lakhs was kept for disbursement to the affected framers (victims). The additional amount as determined by the district administrator based on actual cumulative loss in productivity of all the affected farmers may be recovered from JLS.”

11. Since the industrial unit filed objections to the report dated 01.07.2019, the Tribunal sought comments thereon from the Monitoring Committee vide its order dated 19.09.2019. Apart from this, this Tribunal also constituted a Joint Committee comprising of CPCB and MPCB to ascertain the level of pollution of the river Nira and the efficacy of pollution control devices of the units in question. The joint Committee was also asked to take samples at discharge point of units in question and get it tested to examine the pollution load. It was also directed that samples of soil and ground water in the vicinity of the units shall also be taken and tested.
12. Accordingly, report dated 23.10.2019 has been filed by the CPCB on behalf of the Monitoring Committee. Further, another report

dated 13.12.2019 has been filed by the Joint Committee of CPCB and MPCB. We may make a brief reference to the said two reports.

Report dated 23.10.2019 of the Monitoring Committee dealing with the objections of the industry against report dated 01.07.2019 of the Monitoring Committee:

13. The report deals with all the objections of the applicant and gives reasons to reject the same. It is not necessary to reproduce the entire report. As already mentioned, the report deals with all the objections of the unit in detail, including:

- there was no violation of consent conditions;
- principles of natural justice were not followed;
- mandatory procedure was violated;
- no proper study was carried out;
- time scale for environment compensation was arbitrary;
- legacy issue was wrongly mixed up with current violations;
- historical facts were ignored;
- contamination of river was not referable to the unit;
- there were no applicable standards for the effluent lagoons as the unit was acquired from erstwhile owner;
- effluent was being stored in impervious lagoons constructed as per approved design;
- farmers were using organic sludge and STP was in advance stage of construction;
- finding with regard to soil quality and characteristics and ground water quality referred to area beyond the boundary of the industry;
- the industry was not required to remediate damage never caused by itself;
- remediation of aquifers is yet to begin which is bound to take time;
- compensation is payable only from the date of order dated 16.05.2014;
- the Committee acted beyond the scope of its jurisdiction;
- the Committee looked into the same samples as were taken earlier;
- the Committee ignored river regulation policy;
- the Committee ignored that consent conditions were amended;
- calculation of compensation was not fair;
- the concentrated spent wash was wrongly held to be less than 30% solid;
- coal stored was wrongly found to be hazardous;

14. It will be appropriate to reproduce the conclusion which is as follows:

“CONCLUSION:

The monitoring committee called a meeting for representation of Industry and applicant on 10.10.2019 at IIT Bombay. The committee has examined the objections raised by the industry without any prejudice and point-wise response to comments provided by the committee members are stated in the preceding section. The objections were primarily raised on points, such as, the committee has gone beyond its scope, the calculated environmental compensation was arbitrary, no specific violation of consent condition was brought out by the committee, non-availability of guidelines from regulatory bodies before 2005 related with distillery effluent lagoons, observation of committee on the consent status related with gasifier etc.

The monitoring committee has submitted a report based on the facts observed during the visit and had not gone beyond the scope assigned to the committee. If Hon'ble NGT had found any portion of the report beyond the scope assigned to the committee, the Hon'ble NGT would have excluded the same from consideration.

The monitoring committee has observed various non-compliance based on the consent conditions during its visit and hence, the environmental compensation was calculated as per the methodology laid down by CPCB considering category “a” as the basis. The calculation of environmental compensation was based on observed facts, CPCB guidelines and time of violation was considered as per the referred order dated 29.04.2019 in original Application No. 116/2014 of Hon'ble NGT. The various violations of consent conditions like provision of more than 30 day storage capacity in the lagoons (where all the lagoons were found to be almost full with stored spent wash at various concentration stages indicates that 100% utilization was not practiced by the JLS), dumping of yeast sludge on land outside JLS premises and use of RO reject from CETP for coal quenching were considered as various instances of non-compliance of consent conditions.

The monitoring committee is of the opinion that facts regarding proper treatment, disposal and storage of spent wash has been known for several decades as referred in the consent issued by Maharashtra Pollution Control Board (MPCB) to distillery units way back in 1983, 1985, 1995, 1997, 2000 etc. CPCB also published in the Resource Recycling Series: RERES/4/2001-2002

during 2001 “Management of Distillery wastewater”. Hence the submission made by the industry regarding non-availability of guidelines is found uncorroborated.

The monitoring committee has observed and reported operation of coal Gasifier without obtaining CCA from MPCB. Moreover, the hazardous waste generated from the Gasifier, i.e., tarry residue and Chemical ETP sludge were listed under Non-hazardous category. It may be noted by Hon’ble NGT that in the consent to operate granted by MPCB to the industry vide letter dated 28.06.2012, there is no mention of producer gas in the product list. Producer gas was mentioned as fuel. However, the same cannot be taken as consent to operate for operation of the coal gasifier for production of producer gas as there is no mention of producer gas in the product list in the CCA. The operation of gasifier generates hazardous waste and highly contaminated wastewater. Operation of gasifier since 2012 without proper permission was observed and reported by the committee.

Summarily, the objections raised by the industry are found to be uncorroborated and based on misleading, partial and contradictory submissions. Therefore, the committee has decided without any prejudice to not change the submissions/recommendations made in its earlier report submitted to Hon’ble NGT.”

Report dated 13.12.2019 of the Joint Committee with regard to level of pollution of the river and the effectiveness of the remedial measures:

15. The Committee ascertained the level of pollution of the river and efficacy of the control measures and have given a detailed report noticing the deficiencies and non-compliances. It is not necessary to reproduce the entire report. It will suffice if some pertinent observations and conclusion of the report of joint Committee are reproduced which are as follows:

Extract from observations:

“4. Treatment Efficacy of Effluent Treatment Plants in JLS

The treatment efficacy of the ETP was assessed based on the stage wise sampling, comparing inlet results with the design criteria/details provided by the industry and stage wise reduction in design parameters. The analysis results of the

samples collected from ETPs and RO plant is attached in Annexure I.

Sampling and Monitoring

The joint committee has collected following grab samples of wastewater from Old ETP:

- *Equalization Cum Neutralization Tank*
- *Outlet of Clarifier A*
- *Outlet of Clarifier B (Final Outlet from Old ETP)*

Samples from Aeration Tank-I and Aeration Tank-II were also collected and analysed for MLSS and MLVSS.

- *The joint committee has collected following grab samples of wastewater from New ETP:*
- *Inlet of New ETP (Feed to Equalization Tank)*
- *Outlet of primary Clarifier*
- *Outlet of Clarifier A (New ETP)*
- *Final Outlet of New ETP after pressure sand filter and Activated carbon filter.*

Apart from above, samples from Bioreactor-I and II were also collected from New ETP for MLSS and MLVSS.

The treated water from both the ETPs is collected in a common tank (RO feed Tank) in RO Plant. The joint committee has collected following samples from RO Plant.

- *Feed to RO*
- *RO permeate*
- *RO reject.*

Physical Observations

- *It was informed that wastewater from Acetic anhydride Section is treated in Old ETP. There was no incoming raw wastewater from anhydride section during visit due to some operational problem in the anhydride section as informed. The wastewater received in old ETP is neutralize in the equalization cum neutralization tank and is directly feed to aeration tank-I. Thus, no separate primary treatment/clarification and removal of primary sludge is practiced in the old ETP.*
- *Old ETP was found operational; however very lean flow from one unit operation to other provided in the old ETP was observed. Out of 04 aerators installed in the aeration tank only 02 were in operation. Sand filter provided in the old ETP was not operational during visit. As informed, old ETP has design capacity of 406 CMD and only about 72 CMD wastewater generating from acetic anhydride manufacturing section is fed to the old ETP.*

- *New ETP was found operational. As informed, about 24 CMD of wastewater generating from acid anhydride manufacturing section and about 275 CMD of wastewater generating from Ethyl Acetate Section out of is fed to the New ETP (design capacity of 500 CMD). New ETP is provided with primary treatment.*
- *As per records of wastewater generation and treatment submitted by JLS from May'19 to 18th Nov'19, out of total 68,090 m³ wastewater 11.76% (8,009 m³) is treated in old ETP and remaining 88.24% in New ETP. In the same duration 24,298 m³ of cooling tower blow down was added to aeration tank of old ETP.*
- *RO Plant (CETP+CTBD), treating effluent from Chemical ETPs and Cooling Tower Blow Down, was found operational during visit. It was informed that the final reject from the RO plants is now sent to distillery RO Plant (earlier reject was used for coal quenching) and permeate generated is reused back in the process/cooling towers.*
- *As per records of RO Plant (CETP + CTBD) from May 19 to 18th Nov'19, out of 94,883 m³ RO feed, 72,478 m³ RO permeate is recycled and 14,212 m³ RO reject is send to Distillery RO plant for treatment.*
- *Odours of VOCs/organics were felt by the committee near collection tank, Equalization tank of both the ETPs.*
- *The industry has installed and reportedly carried out commissioning of dug-well RO, brackish RO with MEE & ATFD. Dug-well RO of capacity 1171 m³ has been installed for treating contaminated ground water from dug-well located at 22 acre site by the way of pump and treat system. Brackish RO of capacity 330 m³ has been installed for the reject generated from dugwell RO and RO Plant (CETP+CTBD). The reject from brackish RO will be concentrated in MEE of capacity 200 m³ followed by ATFD. The salt generated from ATFD will be disposed at CHWTSDF. Permeate generated from Dugwell RO & Brackish RO and condensate from MEE will be reused in the process. During visit it was informed that the industry has applied for CCA regarding operation of the installed system from MPCB and it is under process at MPCB.*
- *Installation of STP for treating Nira Sewage was observed under progress. The industry is installing STP of capacity 600 KLD which will be expandable to 1200 KLD based on the actual load of sewage. It was*

informed that, the industry has applied for requisite NOC from Jila Parishad which is awaited.

- During visit coal gasification plant was not in operation.

Result and Discussion

Treatment Efficacy of Old ETP

- The analysis result of the sample collected from the Equalization cum Neutralization tank reveals that the inlet concentration of COD: 23,285 mg/l and BOD: 12,867 mg/l whereas, the old ETP is designed for COD: upto 10,000 mg/l and BOD 5,932 mg/l.
- The ratio of MLVSS/MLSS in Aeration Tank-I and Aeration Tank-II of old ETP was found 0.19 and 0.33 respectively. As per the literatures, the ratio of MLVSS to MLSS for active, organic biomass in the activated sludge process generally varies from 0.6 to 0.8.
- More than 99% reduction in the concentration of COD, BOD and more than 85% reduction in the concentration of TDS was found after the first stage of aeration. Further reduction of about 75%, 86% and 53% respectively in concentration of COD, BOD and TDS was found after second stage of aeration. Overall drastic reduction in all measured parameters from inlet to outlet was found in spite of high concentration of organic at the inlet, low ratio of MLVSS to MLSS in the aeration tank. Therefore, reduction may be attributed due to dilution (about 300% by addition of cooling tower blow down in the aeration tank) and escape of VOCs (as the wastewater is high organic in nature constituting mainly organic anhydrides) during aeration. As the old ETP do not have any provision for treatment of ammonical nitrogen and TDS, the reduction in the concentration of these parameters without treatment facility may be mainly due to dilution. The concentration of COD and BOD in the final outlet was found 42 and 11.2 mg/l respectively. All measured parameters are meeting the MPCB discharge standards for the ETP.

Treatment Efficacy of New ETP

- The analysis result of the sample collected from the inlet to Equalization tank reveals that the inlet concentration of COD: 27,224 mg/l and BOD: 21,450 mg/l whereas the New ETP is designed for COD: 10,000 mg/l and BOD: 7000 mg/l. The ratio of BOD/COD ~0.7 indicates high bio-degradable wastewater. The new ETP receives wastewater mainly from Ethyl Acetate Plants.

- The analysis results of the sample collected from outlet of Primary Clarifier reveals 36.2% and 38.2% reduction in the concentration of COD and BOD respectively after primary treatment.
- The ratio of MLVSS/MLSS in Bioreactor-I and Bioreactor-II of New ETP was found 0.09 and 0.10 respectively. As per the literatures, the ratio of MLVSS to MLSS for active, organic biomass in the activated sludge process generally varies from 0.6 to 0.8.
- About 77% reduction in the concentration of COD and BOD was found in the Aeration tank-I. Overall reduction of 95.3 % and 93.3% in the concentration of COD and BOD respectively was found in new ETP. The concentration of COD and BOD in the final outlet was found 1290 and 881 mg/l respectively.
- As per records submitted by JLS, out of total treated water from both the ETPs 4,581 m³ was used for green belt during May'19 to 18th Nov'19. The treated wastewater from new ETP exceeds MPCB discharge norms for COD and BOD.

Chemical ETP Sludge Management

- The industry has provided decanters for dewatering of sludge generated from old and new ETP. During visit, the decanter was operational.
- As per CCA, the industry is permitted to dispose ETP sludge by the way of bio-composting. However, no records for usage of ETP sludge in Bio-composting yard were available. Moreover ETP sludge is categorized under Hazardous Waste as per Schedule I (35.3) of Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016.
- As per record submitted by the industry, 101.2 MT of ETP sludge was generated during May 2019 to 18th Nov 2019.
- During visit, it was observed that the ETP sludge was dumped haphazardly on the 8 acre contaminated site. As informed the sludge was kept for sun-drying as the 8 acre site is reported impervious as per Hydrogeology report.

RO Plant (CETP + CTBD)

- Analysis result of the sample collected from RO feed tank reveals that the concentration of COD: 743 mg/l exceeds design criterion of RO feed COD: 400 mg/l.
- Analysis results of the sample from permeate storage tank and reject storage tank reveals that the RO permeate has high concentration of COD: 438 mg/l and BOD: 263 mg/l than the MPCB Norms for the reuse of wastewater. This may be due to excess organic load than the design criteria of RO. It was informed that Reject generated is presently sent to Distillery RO feed. During visit Distillery RO plant was not in operation.

xx

xx

xx

9. CONCLUSION:

.... Based on the physical observations and discussions during the visit, the records submitted by JLS and MPCB, the monitoring results of samples of groundwater, soil, River Nira, Buasaheb Nala, Saloba Nala, wastewater treatment system for chemical wastewater and spent wash and ZLD approach provided by JLS, the joint committee arrived at the following conclusions.

During the site visit, the joint committee collected stage wise samples from the Old ETP New ETP and RO Plant (CETP+CTBD) provided for treatment of wastewater generated from Chemical manufacturing section of the JLS.

It was found that the wastewater generated from chemical section (Ethyl Acetate and Acetic Anhydride) has high concentration of COD and BOD as compared with the design criteria of old and new ETP. The Old ETP (presently used for treating part of wastewater from Acetic Anhydride Section) and operated at about 20% of hydraulic design capacity has shown drastic reduction in all measured parameters from inlet to outlet in spite of high concentration of organic at the inlet, low ratio of MLVSS to MLSS in the aeration tank. Therefore, reduction may be attributed due to dilution by means of addition of cooling tower blow down (about 300%) in the aeration tank and escape of VOCs during aeration (as the wastewater is high organic in nature constituting mainly organic anhydrides). The old ETP is not having facility for primary treatment and ammonical nitrogen treatment. The treated wastewater from the old ETP meets MPCB discharge Norms.

The New ETP is presently used for treating wastewater from ethyl acetate section and part of wastewater from acetic anhydride section has shown overall reduction of 95.3 % and 93.3% in the concentration of COD and BOD respectively in spite of low MLVSS to MLSS ratio in the aeration tanks. The concentration of COD and BOD in the

final outlet was found 1290 and 881 mg/l respectively. As per records submitted by JLS, out of total treated water from both the ETPs 4,581 m³ was used for green belt during May'19 to 18th Nov'19. **The treated wastewater from new ETP exceeds MPCB discharge norms for COD and BOD.**

Sludge generated from both the ETPs are dewatered and dumped haphazardly on the 8 acre contaminated site. As per CCA, the industry is permitted to dispose ETP sludge by the way of bio-composting. However, ETP sludge is categorized as Hazardous Waste as per Schedule I (35.3) of Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016.

The RO Plant (Chemical ETP + Cooling Tower Blow Down) received higher concentration of COD than the design criteria. The permeate generated from the RO Plant has high concentration of COD and BOD than MPCB Norms for the reuse of treated water. **Reject from RO Plant is presently sent to Distillery RO. During visit, Distillery RO plant was not in operation.**

During visit Distillery section along with Distillery RO, MEE was not operational. It was informed that the condensate generated from MEE is used in the cooling tower and concentrate is used in bio-composting for spraying on press-mud. The joint committee has calculated the area required for bio-composting based on the 330 days operation of distillery (including monsoon season) by the way of composting under the shed. It was found that the compost yard of 12.5 acres (as per CCA application for 100 KLD) is less than the required. The industry has not provided covered shed for storage of final compost as per SOP of CPCB. **During visit, poor housekeeping in view of spillage of concentrated spent wash resulted due to excess spraying was observed.**

The joint committee has visited 22 acres contaminated site. It was found that the excavated portion of the 22 acres site is filled with water (due to heavy rainfall in the area) having high concentration of colour and other organics which has resulted due to leachate and runoff from the area. The JLS need to immediately pump the accumulated contaminated water into existing lagoon and treat it & dispose it by the way of ZLD scheme provided for distillery spent wash management.

The joint committee has visited 8 acres contaminated site. It was found that the ETP sludge was dumped on the site in open for sun-drying and excavated sludge was stored under cover. The industry needs to dewater and dispose

ETP sludge in accordance with the provision of HW Management Rules and amend CCA for the disposal pathway of the same.

The sample collected from Bore Hole (BH-33) on the 8 acres site has very high concentration of COD. It was gathered that the BH-33 was dug during Hydro-geology study. As per the hydro-geology report no contamination was reported during study. The industry need to assess the source of such contamination and should incorporate the same in the remedial action plan. The 8 acres plot cannot be thus considered as impervious. **The industry need to provide proper impervious site for the safe storage of sludge removed and presently stored on 8 acres site. The industry also needs to remove the ETP sludge from the 8 acres site and dispose it to CHWTSDF.**

The storage lagoons provided for storing spent wash at various concentration stages exceeds 30 days criteria as per CCA. The industry need to restrict the storage lagoon capacity for 30 days.

The industry has now installed dugwell RO, brackish RO, MEE followed by ATFD for the treatment of contaminated water from the dugwell located at 22 acres site as per the action plan submitted to Hon'ble NGT. Installation of Sewage Treatment Plant for treatment of Nira Sewage was found under progress.

The joint committee has collected groundwater samples from wells and bore well of farmers, a dug well and various piezo wells located in the compost yard within JLS premises. **High COD and coloured were observed in the groundwater samples collected from wells in the farmlands. Colour and COD represent presence of organic contaminants in groundwater.** In the compost yard within JLS premises, increase in colour and COD of groundwater was observed from upstream to downstream indicating mismanagement of concentrated spent wash during bio composting. Water from the dug well located on the 22 acre plot was highly contaminated. These observations indicated that improper sludge storage is a significant cause of groundwater contamination in the region.

During the site visit, the committee collected surface water samples from the stretch of Nira River, Buasaheb Nala, Saloba Nala and Nira Sewage. The volumetric flow rate of River Nira and Buasaheb Nala was observed to have increased significantly due to heavy rainfall during monsoon in the catchment area. **The analysis results reveals that over the stretch of Nira River studied (about 2.97 km), the quality of water deteriorated from upstream to downstream due to both sewage and industrial activity contributing to organic contamination in these water samples.**

During the site visit, the committee collected soil samples from 12 sites for which monitoring results were compared with May 2019 results as submitted by the monitoring committee. **It appears that over the intervening 5 years after the judgment of Hon'ble NGT in this matter, there was a general elevation in Electrical Conductivity, potash, phosphorous and heavy metal concentration (Fe, Cu, Mn etc) in the soil as reported during May 2019. Similar trend was observed during present monitoring (Nov 2019) compared with 2015 data. However, decreasing trend observed on comparing present result (Nov 2019) with May 2019 result may be due to heavy rainfall in the area. Industrial processes and practices may have affected the quality of groundwater and Nira river water that was used for irrigation of farmlands in the vicinity of JLS."**

16. We have also considered report filed by the Collector, Pune dated 16.12.2019 in terms of order dated 11.07.2019, concluding that no farmer could be identified or considered as victim for giving compensation.

17. We have also considered the report of the MPCB dated 11.12.2019 in terms of order dated 24.10.2019 on the steps taken by the industry for abatement of pollution which is as follows:

A- Steps taken by industry for the abatement of pollution as per NEERI recommendation:

Sr. No.	Points as per NEERI recommendation	Action taken by industry	Remark of MPCB
1	Eliminate the source of continued addition of pollutants	<ul style="list-style-type: none"> Total contaminated area is 20 acre. 	<ul style="list-style-type: none"> Industry has not constructed storage site for storing of excavated material.
1.1	Excavation of sludge & store on <u>impervious layer</u>	<ul style="list-style-type: none"> Industry has carried out Hydrogeology study for identifying suitable land for storage of contaminated material. 	<ul style="list-style-type: none"> At present stored the contaminated sludge in 1 acre area of 8 acre plot which is impervious. Also in this 8 acres plot 3 acres area is used for the construction of ETP.
a	Identification of suitable land for storage	<ul style="list-style-type: none"> 22 acre & 8 acre plots are identified. But it's observed that 22 acre plot is highly porous while 8 acre plot is impervious. 	<ul style="list-style-type: none"> Additionally eight acre area is available for the storage of contaminated sludge which has impervious layer & leachate collection system at
b	Land preparation for storage with impervious layer & leachate collection system		
c	Excavation of contaminated soil for storage in land prepared for the same	<ul style="list-style-type: none"> Hence excavation of sludge from 22 acre plot is carried out and stored in 1 acre area of 8 acre plot which is impervious. 	

		<ul style="list-style-type: none"> To arrest rain water provided HDPE liner. A new 8 acres of land with impervious layer & leachate collection is ready for the storage of sludge, near the Bio Compost Yard. 	<p>Bio compost yard.</p> <ul style="list-style-type: none"> Trenches provided around the site for arrest the rain water, but leachate coming from contaminated site discharged into Buvasaheb Nalla.
2	excavated for press mud bio-composting	<ul style="list-style-type: none"> Bio composting study is carried out Jointly with the Mahatma Phule Agricultural University, Rahuri. Reports from MPKV received in with conclusion that use of contaminated soil & press mud at the ratio of 40:60 & 50:50 is suitable combination for bio composting. Total Sludge consumed till date is 4000 MT in the bio composting cycle during Jan to May 2019. 	<ul style="list-style-type: none"> Presently industry is utilizing contaminated soil & press mud for bio-composting. As informed by industry till date 3078 cubic meter sludge consumed for the same.
a	Field Piloting of blending the contaminated soil with press mud for bio composting of distillery effluent		
b	Disposal of contaminated soil for beneficial use based on the fields study for Press mud Bio composting		
3	Utilization / Disposal of contaminated soil for use as in Soil amendment for agriculture		
a	Laboratory assessment study for establishing the direct usage(as is) of distillery sludge with high calorific value as low grade fuel in clay brick manufacturing kilns	<ul style="list-style-type: none"> CSIR-NEERI, Nagpur has carried out the study. As per study Sludge utilization in agricultural Field for soil amendment, is distributed to farmers expressing written interest and the records of the same also maintained. As on 16229 cub meter sludge is distributed to farmers for their soil amendment. 	<ul style="list-style-type: none"> Industry is utilizing contaminated soil for soil amendment for agriculture to nearby farmers. As informed by industry 16229 cubic meter sludge is distributed to farmers.
b	Field Piloting for establishing the direct usage(as is) of distillery sludge with high calorific value as low grade fuel in clay brick manufacturing kilns		
c	Disposal of contaminated soil for beneficial use based on the field study for Low grade Fuel		
4	Utilization / Disposal of high calorific value sludge for use as low quality fuel		
a	Laboratory assessment study for establishing the direct usage (as is) of distillery sludge with high calorific value as low grade fuel in clay brick manufacturing kilns	<ul style="list-style-type: none"> CSIR-NEERI, Nagpur has carried out the study at their facility and reported that the sludge is not suitable for utilization. 	<ul style="list-style-type: none"> At present industry is not utilizing said sludge as a low quality fuel.
b	Field Piloting for stablishing the direct usage (as is) of distillery sludge with high calorific value as low grade fuel in clay brick		

	manufacturing kilns		
c	Disposal of contaminated soil for beneficial use based on the field study for low grade fuel.		
5	Community Sewage Treatment Plant		
a	Assessment of the quantity and quality of sewage flowing to the Buasaheb Nala	<ul style="list-style-type: none"> Assessment of the quantity and quality of sewage flowing to the Buasaheb Nala done in May 2014 and Dec 17. NOC received from the Gram Panchayats of Nimbut and Nira. Copies submitted to the NGT and MPCB. Recommendation obtained from the state authorities through the District collector, Pune, the Sub Divisional Officer, Baramati, Tahsildar, Baramati and Gram Sabha Nimbut and Gram Sabha Nira. MoU with Zilla Parishad being perused. STP will be installed and commissioned as per target by Dec 2019, after obtaining clearances from District Authority and MPCB. Consent to Establish (CTE) received from MPCB and subsequently applied for Consent to Operate and is under scrutiny with SRO-Pune. Civil construction of STP – Foundation, tanks and columns completed. Erection of shed & piping work is under progress shall be commissioned by 31/12/2019 as per target submitted. 	<ul style="list-style-type: none"> Assessment of the quantity and quality of sewage flowing to the Buasaheb Nala is completed, also NOC of the Gram Panchayats Nimbut and Nira obtained. STP work is under progress will be commissioned by 31/12/19 as per target submitted (STP of 600 CMD capacity, installation work is completed up to 90%).
b	Assessment and selection of technology for sewage treatment		
c	Selection of site for installation of Sewage treatment plant		
d	Preparation of Detailed Feasibility Report for construction and operation of Sewage Treatment Plant		
e	Signing of an MoU between Jubilant and Local/District administration for allotment of land, STP construction		
f	Land allocation and transfer for project construction by Local/District administration.		
g	Procurement, construction and installation of Sewage Treatment plant as per MoU		
6	Arrest the Migration of pollutants through ground water movement		
a	Undertake a detailed aquifer characterization of the core zone aquifer by drilling holes upto bed rock in a grid pattern across the abandoned lagoon.	<ul style="list-style-type: none"> Hydrogeology study Job Order placed on a NABET/QCI accredited expert on 04/09/2017. Hydrogeology field study undertaking Core drilling upto bed rock completed during 26/10/17 to 12/11/17. Modelling studies and report giving details of all the points was received on 30/03/2018. 	<ul style="list-style-type: none"> The industry has carried out detailed hydrogeology study for identifying the locations of piezometric wells & dug wells near lagoons. The industry has constructed two dug wells in the 22 acres
b	Undertaking pumping tests in the core aquifer to assess the permeability of the aquifer and rate of ground water movement.		
c	Strengthen the network of Peizo wells to arrive at the accurate aquifer dimensions		

	and ground water contour		
d	Identify suitable location and design the size of dug well for arresting the contaminated groundwater leachate movement to buffer aquifer.	<ul style="list-style-type: none"> Additional studies for identification of accurate location for dug well and Bore well construction for extraction of contaminated ground water from aquifer completed in Dec 2018. 	contaminated site of 15 M depth.
e	Estimate the quantity of leachate flow to the proposed dug well that shall be transferred for treatment and reuse by Jubilant.	<ul style="list-style-type: none"> Comprehensive report on the hydrogeology study report is already submitted to the NGT and MPCB. The recommendation of technical report is implemented. 	
f	Design and construct appropriate piezo well network around the operating effluent lagoons to establish the integrity of the same against any seepage contributing to aquifer contamination.		
g	Identify suitable location for construction of rainwater harvesting pond for recharge in the abandoned lagoons for flushing out the contaminants in the aquifer.		
7	Construction of Dug well for leachate collection		
a	Construction of one dug well as per the location and design arrived from the hydrogeology studies	<ul style="list-style-type: none"> Site identified for Dug well construction as per the hydrogeology report and Site clearance by removing sludge and contaminated soil for Dug well construction completed. 	<ul style="list-style-type: none"> At present two dug wells are constructed in 22 acre contaminated site.
b	Assess the leachate flow through pump up test to validate the hydrogeology modelling on flow to arrive at the design and sizing of the RO, MEE & Spray Drier	<ul style="list-style-type: none"> After further detailed hydrogeology study, location of Dug well has been finalized. Two Dug well-constructed. 	
c	Assess the quality of leachates through pumping test at different depths of the contaminated aquifer.	<ul style="list-style-type: none"> Extraction would commence from Dec 2019 for Aquifer remediation 	
d	Construct the remaining dug well as recommended by the hydrogeology aquifer modelling study.		
8	Remediation of Contaminated aquifer Pump and treat the leachates from contaminated aquifer		
a	Identification of the location and design of the dugwell for interception of leachates and quantity of leachate flow from the Hydrogeology studies	<ul style="list-style-type: none"> Hydrogeology study Job Order placed on a NABET/QCI accredited expert on 04/09/2017. Hydrogeology field study undertaking Core drilling upto rock completed during 26/10/17 to 12/11/2017. 	<ul style="list-style-type: none"> Hydrogeology field study undertaking Core drilling upto bed rock completed during 26/10/17 to 12/11/17.
b	Preliminary assessment of quality of leachates from the observation wells and test borewells	<ul style="list-style-type: none"> Modelling studies and report submission giving details of all the points received on 30/03/2018. Report on Additional studies for identification 	<ul style="list-style-type: none"> CGWA has granted NOC for GW extraction.
c	Seek approval from the CGWA for ground water extraction for leachate treatment.		<ul style="list-style-type: none"> Industry has installed RO plant having capacity of 1171 KL/D to treat
d	Selection of technology, design of scheme and		

	equipment capacities for pumping and treatment of leachates including for Reverse Osmosis (RO), Evaporator concentrators and Salt Separation (Drying) for reusing the treated leachates in process and removal of pollutants as salts.	of accurate location for dug well and Bore well construction for extraction of contaminated ground water from aquifer completed in Dec 2018. Comprehensive report on the hydrogeology study report already submitted to NGT and MPCB.	contaminated leachate from Dug wells & Bore wells, brackish RO Plant having capacity 330 KLD to treat RO reject with MEE and Thin Film Dryer of having capacity 200 KLD.
e	Installation and operation of facilities for treatment of leachates	<ul style="list-style-type: none"> Based on the assessment of Dug well leachate water quality during 2016-17, Order placed for RO plant on 03/11/17 for treating and reusing the leachate from Dug well. Installation of RO plant is completed. CGWA has granted NoC for GW extraction for remediation on 18/03/2019. MEE and ATFD installed and Commissioned. 	
9	Construction of Rainwater Harvesting Structure		
a	Identify a suitable location for construction of the rainwater harvesting pond upstream of the proposed dugwells through hydrogeological studies and the surface gradient for natural flow of rain water runoff.	<ul style="list-style-type: none"> Hydrogeology study Job Order placed on a NABET/QCI accredited expert on 04/09/2017. Hydrogeology field study undertaking Core drilling upto bed rock completed during 26/10/17 to 12/11/17. Location are identified in the Hydrogeology study for recharge ponds Sludge and contaminated soil will be excavated prior to construction of Rainwater harvesting pond as per target date committed. 	Till no any practical progress work in respect of rain water harvesting system.
b	Assess the size and capacity of the rainwater harvesting ponds based on the hydraulic characteristics of the aquifer and the rate of pumping of leachates for treatment.		
c	Construction the rainwater harvesting pond and pumping system, if required for filling the rainwater harvesting pond.		
d	Construction of any additional measures/safeguards based on the monitoring of the peizo wells		

- Industry has provided ETP comprising:-

- For Chemical Plant :- ETP comprising of primary, secondary, tertiary treatment units followed by RO.
- For Distillery Plant:- ETP comprising of Biodigester, Reverse Osmosis system, Multiple Effect Evaporator Plant followed by Bio-composting plant.

B- Vigilance maintained against the industry by MPC Board:-

- Environmental sample result sheet is enclosed as Annexure-A

2. *JVS analysis report sheet is enclosed as Annexure- B*
3. *Board has issued Proposed direction on 9.12.2019 is enclosed as Annexure- C*
4. *MPCB consent copy is enclosed as Annexure-D.”*

18. We have heard learned Counsel for the applicants, the industry, the MPCB and CPCB and considered the material on record.

19. Learned Counsel for the applicant submits that despite specific directions for taking appropriate mitigation measures, pollution continues unabated and the steps as directed have not been taken. Order of this Tribunal dated 16.05.2014 having become final, it must be taken to be established that the unit has been causing damage to the environment as found in the said order which damage has continued to be caused not only till the date of the report filed on 01.07.2019 but also later as on date. In this regard, reference has been made to latest status report dated 11.12.2019 filed by the State PCB and report of CPCB dated 13.12.2019. Objections of the industry to the report dated 01.07.2019 have no merit and have been rightly rejected in the further report dated 23.10.2019. Thus, the unit should be required to deposit the amount of compensation already assessed for the past with compensation for further non-compliance.

If non-compliance continues, closure may be ordered. In view of Expert Committee reports of damage to the environment, the report of the Collector, Pune that no victim of pollution was identified is of no consequence on the subject of need to take remedial measures and to pay compensation for damage to the environment.

20. Learned Counsel for the SPCB handed over copy of a closure notice dated 22.04.2019 under Sections 33A of Water (Prevention and Control of Pollution) Act, 1974 and 31A of the Air (Prevention and Control of Pollution) Act, 1981 and Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 for failure to follow the consent conditions. The notice mentions the level of pollution, causing irritation of eyes and breathing problems. Thereafter, the directions for conditional restart were issued on 16.05.2019 subject to bank guarantee of Rs. 2 lakhs. The stand of the MPCB in its status report dated 11.12.2019 is that in view of continued non-compliance, the Board has again issued directions on 09.12.2019 under Section 33A of the Water Act, 1974 and Section 31A of the Air Act, 1981 requiring the unit to show as to why it should not be closed down and electricity be not disconnected. The notice mentions that treatment facility for RO reject has not been provided, leachate was coming from 22 contaminated site meeting Buasaheb Nala and chemical ETP sludge has been dumped on 8 acres contaminated impervious site.
21. On the other hand, learned Counsel for the industry submitted that the industry had already remedied the damage by spending Rs. 55 crores. The Committee wrongly assumed the violations to be of category 'A' which relate to violation of consent conditions. The procedure of taking samples was not followed as a copy thereof was not given to the industry. The industry was entitled to use RO rejects in its process but the Committee wrongly held that the same could not be used for coal quenching as the RO rejects contained higher salt concentrations which results in soil contamination and emission of gases causing air pollution. The

Committee wrongly held that the RO rejects should have been used in multi-effect evaporators and the aquifers have not been remedied.

22. Learned Counsel for the applicant rebutted the stand of the unit. It was submitted that all objections of the applicants have been duly considered by the Expert Committee and the status of remediation has been duly noted in the report of the MPCB. Instead of complying with the deficiencies, the unit continues to defy the law and damage the environment. About the technical plea of procedure for taking sample, it was submitted that since the sample was taken in the presence of representative of the unit, unless part of sample is sought, there is no need to give the same. Moreover, Expert Committee has independently found non-compliance.

23. On due consideration, we find merit in the submissions of the applicants. Before taking up the current reports, we may note that earlier a report was filed by the CPCB on behalf of the Monitoring Committee comprising CPCB, MoEF&CC and IIT, Mumbai to the effect that NEERI and CGWB had prepared a restoration plan for contamination but the industry submitted proposal for alternative approach and obtained feedback from IIT, Delhi. The Tribunal vide order dated 10.08.2017 directed the industry to adhere to the action plan which was to be monitored by the MPCB. The action plan prepared by CGWB, NEERI and IIT, Delhi inter-alia, stipulated:

“Excavation of the contaminated soil from the lagoon and its safe containment in a site with proper bottom lining. Adequate lining was recommended to prevent further contamination and

pollution of natural resources. This was to be completed as early as possible.

Parallel experimentation on use of this material for composting with press mud was also recommended. If found to be environmentally safe, after composting with press mud the contaminated soil from the lagoon can be used for soil amendment.

Containment of polluted water from the aquifer through construction of leachate wells and dug wells. The contaminated water pumped out from the aquifer should be treated by a system comprising of reverse osmosis (RO), multiple effect evaporator (MEE) and salt disposal mechanism. Preferably, alternative treatment methods, such as, Advanced Oxidation Processes (AOP) can be used to facilitate safe use of the treated water for agriculture or watering.

Meanwhile, various properties of the aquifer (including its volume) should be estimated. The pump and treat capacities and time frame for groundwater remediation should be firmed up on this basis. Rain water harvesting structure can be taken up in view of the report given.

Design and construction of Sewage Treatment plant for the village should be taken up independently as early as possible.

Continuous monitoring of piezometric head with a network of piezowells was also suggested as a part of the monitoring and remediation plan.”

24. It was in the light of above that vide order dated 20.02.2019, the Tribunal directed the Monitoring Committee of MoEF&CC, CPCB and IIT Mumbai to oversee the compliance by the unit. The Monitoring Committee carried out inspection of the project site and surrounding villages including the process area, ETP area, lagoon area, contaminated site (22 acres and 8 acres) and compost yard. Samples were collected from Chemical Effluent Treatment Plant, Distillery Effluent Treatment Plant, surface water, groundwater and soil within the premises of JLS and also from the surrounding area within a radius of 2 km around JLS. Several of the sampling points chosen were same as those for which water quality and soil quality data was previously assessed by the Committee constituted by Dist. Collector, Pune. The surface water (09 locations),

groundwater (09 locations) and waste water (05 locations) samples from different phases of treatment system provided by JLS were collected, preserved and sealed by the team from CPCB in presence of Monitoring Committee. The analysis of all water/waste water samples collected was carried out at the laboratory of CPCB, Regional Directorate (W), Vadodara. It was on that basis that report dated 01.07.2019 was furnished which was reiterated vide further report dated 23.10.2019 after duly considering the objections of the unit. Further, report dated 13.12.2019 jointly submitted by CPCB and MPCB confirmed the non-compliances. Report dated 11.12.2019 by the MPCB is also to the same effect for which closure notice has been issued. Thus, the plea of the unit, as put forth in its response dated 25.01.2020, that the unit is compliant and reports dated 01.07.2019, 23.10.2019, 11.12.2019 and 13.12.2019 referred to above were not correct, cannot be accepted. The plea that the non-compliances are of category 'B' and not category 'A' and there is no violation of consent conditions is untenable in view of findings in various reports already quoted above. Further objection that the Committee should have focused only on legacy issue and not on current violations can also not be accepted in view of orders of this Tribunal noted above. The stand of the industry that the RO reject water could be used for quenching of coal fire and ash moistening instead of use of fresh water can also not be accepted having regard to the adverse impact of such use on soil and air. There is set protocol for RO reject water through Multi-effect Evaporator (MEE). There is no direction by the Committee for use of fresh water as wrongly assumed in the plea of the industry. The process needs to be undertaken after

adopting necessary safeguards for leachate management which has not been done. Procedural infirmity in taking sample in the circumstances has not caused any prejudice so as to ignore serious violations and damage to the environment.

Thus, the industry has to be held to be non-compliant and liable to pay compensation already assessed by the Committee on sound principles. Apart from payment of compensation for the damage in the past, the unit needs to take steps for remediation. The steps be taken accordingly within three months and if non-compliance continues, closure may be the only option. Compensation already calculated may be deposited with the CPCB within one month.

The Joint Committee constituted in terms of order dated 20.02.2019 may give report about further liability after the period already taken into account.

CPCB and MPCB may inspect the status of compliance as on 30.04.2020 with reference to the deficiencies noticed in various reports including the notice issued by the MPCB and furnish a report to this Tribunal by 15.05.2020 by e-mail at judicial-ngt@gov.in.

List again on 22.05.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

Dr. Nagin Nanda, EM

February 04, 2020
Original Application No. 07/2014 (T_{HC})(WZ)
DV

