BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH, PUNE

MEMORANDUM OF APPLICATION

(UNDER SECTION 14 AND SECTION 18(1) READ WITH SECTIONS 15, 17 AND 20 OF THE NATIONAL GREEN TRIBUNAL ACT 2010)

APPLICATION NO. 64 OF 2016

BETWEEN:

Akhil Bhartiya Mangela Samaj	)	
& Ors.	)	...Applicants
Versus		
Maharashtra Pollution Control	)	
Board & Ors.	)	...Respondents

Note on behalf of the Applicants on the Expert Committee Report

This Committee was constituted by this Hon'ble tribunal by its order dated 26.09.2019 to assess:

- The extent of damage in and around Tarapur MIDC
- Restoration measures
- Environmental damage cost, cost of restoration and
- Individual accountability of CETP and polluting units

Below are the relevant extracts of the Report, that give and overview of its findings :-

1. **Wastewater Management-**

1.1. Pg.8-

'*Leakages from drainage network of CETP, overflow from CETP, illegal discharges*

have been noticed. Indiscriminate discharge of partially treated wastewater or untreated/illegal effluent discharge into creeks, coastal sea may have an impact on surface water bodies, soil, sediment and groundwater in and around MIDC Tarapur.'

2. **Sludge Management**-

2.1. Pg. 20 –

'*The above Table 3.3 reveals that the CETP operator is either not generating consistent CETP sludge or the entire CETP sludge generated is not being sent to CHWTSDF.*

Further, as per authorisation dated 29/11/2019 granted by MPCB having validity from 31/12/2017 to 31/12/2020, the CETP has been authorised for 7 Metric Tonne/Day as Chemical Sludge. However, the unit is generating more than the authorised quantity as is evident from sludge sent to CHWTSDF, Taloja. About 750 metric tons of sludge was stored as on 13.11. 2019 at CETP premises.'

3. **CETP inlet and outlet norms**

3.1. COD Inlet and Outlet:

3.1.1. Pg.21 -

'*The data given at Annexure - III and the Figure 3.4 reveals that COD outlet has hardly complied with the standard of 250 mg/l stipulated under the Consent to Operate. Among the 391 outlet samples collected during the said period of April 2011 to Nov. 2019, 379 samples have exceeded the said outlet standard and average COD concentration in CETP outlet has been observed as 813.64 mg/l. The CETP inlet effluent has also not complied continuously to the prescribed standard limit of 3500 mg/l. Among 391 inlet samples collected during the said period of April 2011 to Nov. 2019, 100 samples have exceeded the said inlet standard and average COD concentration in CETP inlet has been observed as*

5323.76 mg/l.'

3.2. BOD Inlet and Outlet-

3.2.1. Pg. 22 -

'*The data given at Annexure - III and the Figure 3.5 reveals that BOD outlet has hardly complied with the standard of 100 mg/l or 30 mg/l stipulated under Consent to Operate. Among the 391 outlet samples collected during the said period of April 2011 to Nov. 2019, BOD concentration of 390 samples have exceeded the said outlet standard of 100 mg/l or 30 mg/l and having average concentration as 315.6 mg/l. The CETP inlet effluent has intermittently not complied to the prescribed standard limit of 1500 mg/l. Among 391 samples collected during the said period of April 2011 to Nov. 2019, 61samples have exceeded the said inlet standard and average BOD concentration in CETP inlet has been observed as 2098.6 mg/l.*'

3.3. Suspended Solids-

3.3.1. Pg. 23-

'The data given at Annexure - III and the Figure 3.6 reveals that SS outlet has not continuously complied with the standard of 100 mg/l stipulated under the Consent to Operate. Among the 389 outlet samples collected during the said period of April 2011 to Nov. 2019 and analysed for SS, 269 samples have exceeded the said outlet standard having average concentration as 206.53 mg/l.'

4. **Excess Effluent quantity-**

4.1.1. Pg. 24 -

'*…of the 104 months since April 2011 to Nov 2019, the CETP inlet effluent quantity has exceeded for 75 months than the designed capacity of 25 MLD. During such 75 months, the said average inlet to the CETP has been reported as 25.27 MLD having maximum monthly average of daily inlet effluent quantity as 26.343 MLD against the said design of 25 MLD. The excess hydraulic load may have resulted into drains as overflow.*'

5. **Damage to the environment-**

5.1. Drain Water Samples-

5.1.1. Pg.44 (drain sample results) –

'(*a)Very low pH of water in drain opposite Everest Kanto i.e.1.8 indicate discharge of highly acidic untreated effluent in the drain from industries.*

(b) Elevated concentration of TDS, BOD and COD in all the monitored drains (except COD in drains near Yashwant Shrushti; near Viraj, and; near Sump1) indicate that industries are discharging untreated/partially treated effluent to drains.

(c) No DO value in the monitored drains (Strom Drain near Aarti; Drain near Auro Lab; Drain opposite Everest kento and Drain Near Sump 3) also indicate discharge of untreated/partially treated effluent to such drains and unhealthy condition for aquatic life.

(d) Elevated level of Phenols observed in drain near sump 3 and storm drain near Aarti industries (Plot No-K8) indicates industries are discharging untreated solvent/chemicals to the drains.

(e) Values of analysed heavy metals (Lead, Copper, Zinc, Chromium, Barium, Vanadium, Arsenic, Cadmium) are within the aforesaid standards though elevated level of Iron and Manganese have been observed in storm drains near Auro Lab and Aarti industries (Plot No- K8).
Further, color of water samples were noticed as black, Grey, brown, pink and light yellow in different drains. Odour in water samples of drains indicate the presence of solvent/Chemical.'

5.2. Sediment Samples from drain

5.2.1. Pg. 45 –

'*The above findings indicate that the drains in and around Tarapur MIDC area is contaminated with elevated levels of TDS, BOD, COD, TSS, Fluorides and*

Phenols besides being highly acidic…. Further, odour and colour was also observed in drain waters. DO measured in four of the drains were also observed to be absent. These indicate that industries are discharging untreated effluent/solvent/chemicals to the drains.'

5.3. Creek Water samples-

5.3.1. Pg. 51 –

'*The above findings indicate that the two creeks have elevated levels of COD and TDS at different stretches (where interference of water from Tarapur MIDC area begins). There was no DO in Creeks near Dumping ground (upstream of Navapur Dandi Creek) and Dandi Creek (downstream of Navapur Dandi Creek). Colour and odour were observed at different locations of the both the Creeks. Further, Phenols at downstream location of both the Creeks viz. Dandi Creek (downstream of Navapur Dandi Creek) and Murbe Creek (downstream of Kharekuran Murbe Creek) have been observed higher than other sampling locations of the Creeks and streams though the same are within the aforesaid standards.*

[…]

Thus, it indicates that the two creeks (Navapur Dandi Creek and Kharekuran Murbe Creek flowing North and South of Tarapur MIDC respectively) receiving polluted effluent from the drains of MIDC Tapaur were found having impact of discharges from such drains.'

5.4. Sea water and sand samples

5.4.1. Pg. 54 –

'However, presence of Phenols in both the beaches indicate impact of discharge from Tarapur MIDC area and requirement of further analysis which may be carried out during detailed investigation'

5.5. Groundwater samples-

5.5.1. Pg. 56 and 57 –

'*The above observations of high TDS and presence of BOD and COD in all the monitored ground water samples and presence of colour, odour, Chlorides,*

Fluorides, Sulphates, Total Ammonical Nitrogen, Metals (Lead, Copper, Iron and Manganese) in one or more samples of the sampled ground water indicate that the ground water in and around Tarapur MIDC has been contaminated due to the industrial activities.'

5.6. Pg. 81-

'*The chapter 3 of this report outlines that the 25 MLD capacity CETP is discharging higher concentrated effluent (not meeting the prescribed standards under the Consent to Operate issued by MPCB) into coastal water of the Arabian sea besides discharge of partially treated/untreated effluent as overflow from it beyond its hydraulic load of 25 MLD. Such high concentrated effluent as overflow is discharged into natural drain and has impact on creeks and coastal water. The environment damage assessment, as given in chapter 4 of this report, also reveals discharge of high concentration quality effluent from industries into drains and that drains and ground water in and around MIDC Tarapur are contaminated and have impact on creeks and sea water. These precarious actions tend to disrupt the assimilative capacity of the bio-sphere, hindering the ecological balance of the water environment (both water stream and ocean). Discharge of high concentrated pollutants into the ocean can endanger marine life and put aquatic life at risk affecting the livelihood of fisherfolks and other dependent community. In addition to perils to aquatic life, high concentrated pollutants in water sources can adversely impact health of people residing in the surrounding areas through direct and indirect consumption.*

Hundreds of fishes were found dead in the shores of Navapur bay, which was reportedly due to a low level of dissolved oxygen . Local dwellers have reported that Navapur creek has developed foul odour and reddish tinge 2 that is clear evidence for toxic loadings.

Surface water pollution has several adverse effects mainly affecting aquatic life and human health. Toxic chemicals released from industries beyond the safety limit can result in both carcinogenic and non-carcinogenic health effects on humans when entered into the food chain.

Low-income population residing in close proximity to the polluting source and depended on the eco-system services for livihood, food, and water, are particularly as high risk. The damages to local population includes increased likelihood of mortality, higher treatment cost due to morbidity, and loss of economic productivity.'

6. **Other observations of the Committee:**

6.1. CETP Operating without valid consent to operate-

Pg. 31-

'*During the visit, CETP was operational without valid consent. The earlier consent expired on 31.12.2017. MPCB issued consent on 29.11.2019 for the period from 31.12.2017 to 31.12.2020. This shows the CETP was operational without consent from 31.12.2017 to 29.11.2019 i.e. almost for 23 months. MPCB granted consent even though CETP is grossly polluting consistently*.'

6.2. Leakages from pipes and pumps-

Pg. 32 –

'*There were leakages from pipes & pumps, overflow of effluent from some units (equalization tanks/aeration tanks) and overall housekeeping was found to be poor. There was heavy smell of SVOCs/VOCs (solvents/chemicals) near the inlet sumps. Inlet of CETP (with BOD: 3150 mg/l & COD: 5680 mg/l) indicating that member industries discharging their untreated/partially treated effluent to CETP without confirming the inlet design norms of CETP. CETP is not designed for such high strength effluent. There is an urgent need of separate arrangement for High COD and High TDS effluent such as Common MEE and Common Spray Dryer. Such effluent streams are required to be separately collected and transferred to common facilities with identification of such industries.*

CETP has no proper mechanism in place for routine monitoring of individual defaulter member units'

Pg. 33 –

'(vi)… There is also overflowing/leakages from pumps etc. from this sump to nearby natural drain which meets with Navapur Creek and further to the Arabian Sea. It is informed that the operation of this Sump is under MIDC and responsibility lies with MIDC for proper maintenance and removal all the sludge from sump. MIDC needs to be directed to take immediate action for the same.'

6.3. Quantum of sludge generation much higher than authorised quantity of 7 metric tones / day –

Pg. 33-

'(vii) The stock of sludge about 750 MT stored in the premises needs to be disposed immediately to the CHWTSDF.'

6.4. CETP needs upgradation/ revamping of its units-

Pg. 33-

'(ix) CETP needs thorough up-gradation/revamping of its units/processes in terms of capacity, retention time, automatic chemicals dosing, scraping mechanism, aeration tanks, aeration capacity, de-sludging, transfer pumps & pipelines, removal of corrosion affected equipment/materials, decanters and its capacity, sludge drying beds, etc.'

7. Environmental damage and restoration cost –

7.1. Damage to the environment-

Pg. 77 –

'*The above estimate effluent discharge beyond the standards on surface water wetlands. The impact on sea water pollution and wetlands is also very conservative due to lack of better information on other pollutants including nitrates/ntirogen and phosphates*.

The chapter 4 reveals that groundwater is contaminated in the region due to illegal discharges of the effluent from the industries/CETP. These infractions are not recorded and there is lack of information on the sub-surface hydrology of the site to

estimate the quantum of contaminates to ground water. Instead cost to be incurred in their detailed assessment (including other water bodies) and their remediation have been accounted as "Super Fund" and the initial amount for the super fund is being suggested as 75 Crores INR which may increase or decrease depending upon the selected remediation options based on outcome of the detailed assessment and application of other tools as suggested under Chapter 8. The total environmental damage cost has, therefore, been estimated as 85.042 Crore INR (79.014 + 5.938 Crore INR) and with creation of super fund having initial deposit of Rs. 75 Crore INR as environmental restoration cost.

Therefore, the total estimated environmental damage and restoration cost comes out to be 160.042 Crore INR.' *Crore INR (79.014 + 5.938 Crore INR) and with creation of super fund having initial deposit of Rs. 75 Crore INR as environmental restoration cost.'*

8. Immediate measures suggested-

8.1. Pg. 88-91

9. Restoration and remedial steps-

9.1. Pg. 92 –

'*there is need to remediate ground water and drains as well as control impact on the two creeks (Navapur Dandi Creek and Kharekuran Murbe Creek) receiving discharges from the drains/CETP outlet.'*

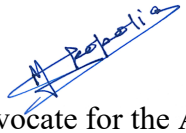
[...]

As outlined in the "Guidance document for assessment and remediation of contaminated sites in India" prepared by the Ministry of Environment, Forest & Climate Change, Govt. of India, a detailed project report (DPR) for contaminated sites in and around Tarapur MIDC area needs to be prepared as Phase-I work which shall include delineation of the contaminated areas and areas needing remediation, detailed site investigation & characterization, risk assessment studies & identification of remediation goals/objectives and preparation of remediation plans thereof, selection of remediation criteria, outlining remediation options, preparation of detailed technical document with specifications for the selected remediation option. Further, investigation of sediments in drains and creeks are also necessary to

rule out the need for remediation in sediments.

[…]

Till the remediation plan is implemented, use of contaminated ground water in effected areas of in and around Tarapur MIDC may be prohibited for drinking purpose by Central Ground Water Authority, MIDC and District Administration.'



Advocate for the Applicants