
**FRAMEWORK FOR IMPLEMENTATION TO ENSURE EFFECTIVE OVERALL
INDUSTRIAL EFFLUENT MANAGEMENT IN TALOJA MIDC INCLUDING
IMPROVED PERFORMANCE OF CETP**

(Prepared in compliance of order passed by Hon'ble NGT, PB, New Delhi
dated 17th Aug 2018 in OA No 125 of 2018 filed by Arvind Mhatre V/s
MoEF, CC and Others)

October, 2018

FRAMEWORK FOR IMPLEMENTATION TO ENSURE EFFECTIVE OVERALL INDUSTRIAL EFFLUENT MANAGEMENT IN TALOJA MIDC INCLUDING IMPROVED PERFORMANCE OF CETP

1.0 BACKGROUND

Shri Arvind Mhatre filed Original Application No.125 of 2018, seeking various relief against the damage to environment due to discharge of effluents in the Kasardi River and Ghot River having adverse impact on the environment, though a Common Effluent Treatment Plant (CETP) is being managed by the Talaja CETP Co-operative Society Limited. Shri Mhatre further requested Hon'ble Tribunal to appoint a fresh tender body/executive body for the maintenance of the CETP Talaja considering the failure of the existing managing committee for upgradation and proper O & M of the CETP.

Hon'ble National Green Tribunal, Principal Bench, New Delhi has passed an Order dated 17-08-2018 in the abovesaid matter considering the situation of the present nature of CETP Talaja requires continuous action not only to stop the pollution, but also damage is to be restored. Hon'ble NGT Principal Bench has constituted a Monitoring Committee (hereinafter referred as Committee) to ensure credible mechanism consisting of following members:-

- | | |
|---------------------------------------|------------|
| 1) Hon'ble Justice V.M.Kanade | - Chairman |
| Former Judge of Bombay High Court | |
| 2) Shri Prasoon Gargava, Scientist-E, | - Member |
| Representative of the Central | |
| Pollution Control Board | |
| 3) Dr. Vijay Suryawanshi, | - Member |
| District Collector – Raigad | |

The Hon'ble NGT has requested to Chief Secretary, Govt of Maharashtra to direct concern department to convene the meeting and make necessary arrangements. Accordingly, the Environment Deptt, Govt of Maharashtra has issued an office order dated 5.9.2018 regarding constitution of monitoring Committee. A Preliminary Meeting

of the above Committee was held on 05-09-2018 in which it was decided that there should be open dialogue with all stakeholders to get their issues & concern in compliance of the Order dated 17th Aug 2018 passed by Hon'ble NGT in OA No 125 of 2018 filed by Arvind Mhatra Vs MoEF & CC and Others.

Accordingly, the 2nd meeting held on 21-09-2018 at 3.00 a.m. at Parishad Sabhagruha No.5, 7th Floor, Main Building, Mantralaya, Mumbai – 400 032. The idea of the committee was to get the submissions of the stakeholders about their concerns/issues/suggestions before working on preparation of a draft strategic framework & monitoring mechanism for activities to be executed. The stakeholders presented about their roles, responsibilities & issues pertaining to present status of Taloja CETP and feasible measures to be taken for effective operation of Taloja CETP. The committee took stock of all the actions taken so far by stakeholders in light of the various directions of the Tribunal. Based on the inputs received from various stakeholders, the committee further worked on devising strategic framework for implementation with specific mention of tasks & responsibilities and with mechanism for reporting of measurable indicators of progress and success by all stakeholders.

2.0 VITAL FACTS FOR CONSIDERAION IN STRATAGIC FRAMEWORK & MONITORING MECHANISM

There are 229 industrial units out of 982 in Taloja MIDC generating effluent. There are 157 units having effluent generation less than 25 CMD, 57 units having more than 25 CMD and remaining 15 are Zero Liquid Discharge (ZLD). An effective action plan requires critical inventorization & review of factors affecting the goal. Following are key stakeholders in overall effluent management system in Taloja MIDC:

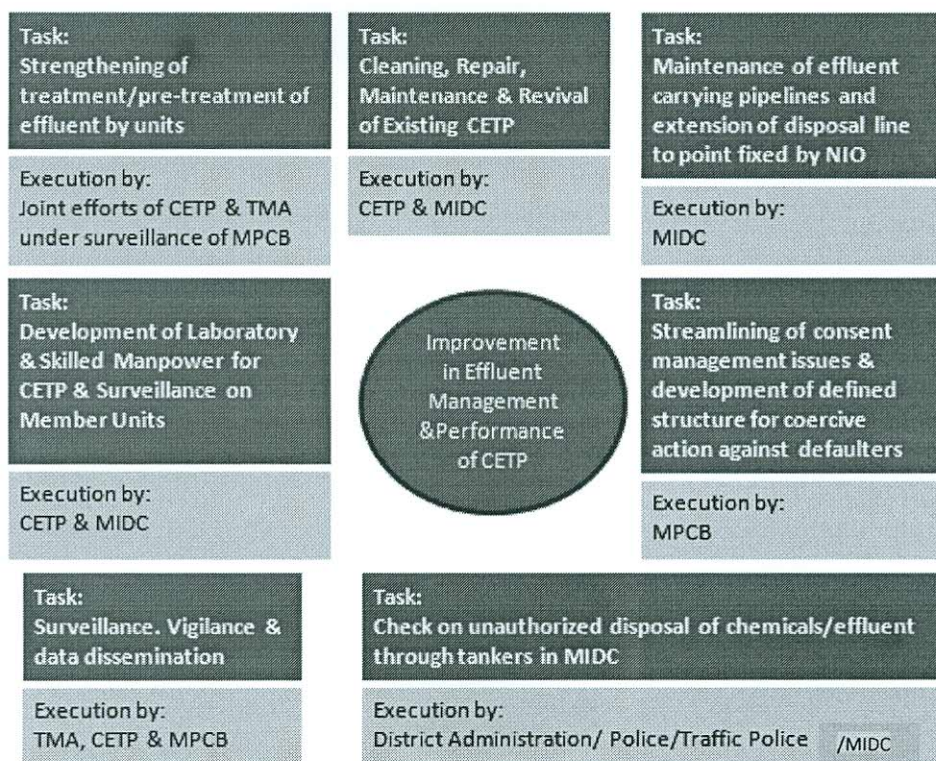
- Maharashtra Industrial Development Corporation (MIDC);
- Taloja Manufacturers Association (TMA);
- Industries generating effluent in MIDC;
- Taloja CETP Co-op. Society Ltd.;
- Maharashtra Pollution Control Board (MPCB); and
- District Administration

It is gathered that industrial estate of MIDC Talaja has been struggling with responsibilities' sharing administrative issues among stakeholders which also resulted in haphazard effluent management & non-performance of CETP over the years. Following core issues are identified by the Committee with respect to the despoiled effluent management system in the industrial estate:

- ❖ There are only 229 industrial units out of 982 in Talaja MIDC generating effluent;
- ❖ Effluent generated from MIDC, Talaja is not meeting the desired inlet values of existing CETP;
- ❖ There are units generating effluent with high ammonical nitrogen content and high COD for which existing CETP is not equipped to deal with;
- ❖ Industrial units are discharging effluent in violation of consent conditions;
- ❖ CETP member industrial units are supposed to provide treatment/pre-treatment to the effluent generated but units are either lacking in adequate treatment system or reluctant to pay adequate attention to meet the treated effluent standards prescribed in consent or the inlet parameters of CETP, as the case may be;
- ❖ There are issues with maintenance of pipeline carrying effluent to CETP & from CETP to final disposal point;
- ❖ The existing final disposal point of treated effluent from CETP is not as per point decided in consultation with National Institute of Oceanography & mentioned in consent issued by MPCB.
- ❖ The existing CETP is not operated & maintained scientifically over the years;
- ❖ Structural units, pumps, equipments of CETP are not repaired & maintained regularly and have resulted in the situation of need for large scale overhaul.
- ❖ The CETP is lacking in trained manpower with suitable laboratory facilities for routine diagnostics for CETP;
- ❖ Improvement in performance of CETP resulted from temporary closure of certain industries by MPCB may be considered as temporary phenomena, unless these industries take effective measures for compliance at their end;

- ❖ The effluent collection sump of MIDC and treatment units of CETP are not cleaned regularly in the past and resulted in huge accumulation of sludge adversely affecting the performance of CETP;
- ❖ Sporadic incidences of unauthorized discharge of effluent through tankers in MIDC;
- ❖ Lack of coordination & inter-institutional synchronization between TMA, CETP & MIDC and absence of joint surveillance mechanism; and
- ❖ Limitations with MPCB pertaining to regulatory enforcement activities.

Considering the diverse nature of above listed core issues, committee is in the opinion of multi-pronged approach to address the issue of effluent management & effective operation of CETP of Taloja. Besides physical infrastructural improvements, strengthening of surveillance mechanism with inter-institutional coordination is required. The Committee has preferred to prepare this action plan in very lucid manner so that stakeholders do not face any difficulty with respect to understanding & implementation. The Committee has devised following schematic approach before detailing the draft action plan:



All stakeholders are expected to ensure while implementing the action plan that no stone is left unturned in their efforts to achieve the goal.

3.0 SUGGESTED ASPECT-WISE STRATGIC FRAMEWORK

3.1 Strengthening & Regulation of Effluent Treatment by Member Units

Provision of adequate effluent treatment or pre-treatment facility by the member units of CETP should be in accordance with the characteristics of the effluent stream generated and limits of concentration values prescribed for discharging to CETP in the consent issued by MPCB. Considering the fact of receipt of significantly higher concentration values of parameters in the influent of CETP over the years, it becomes imperative to examine the treatment facility available with the member units.

TMA & CETP shall jointly arrange awareness programme for CETP member units (SSI, MSI & LSI units) regarding aspects of pre-treatment/treatment of effluent by member units before sending it to CETP. Mechanism to deal with defaulter units by CETP shall also be communicated to member units during awareness programme. CETP shall prepare list of DOs & DONTs (in respect to effluent management) for circulation among member units. The awareness programme shall be arranged by **10th November, 2018**.

TMA is required to prepare the inventory of the member units in following prescribed format with real inputs from their member units and same shall be placed on the website of TMA & Taloja CETP by **31st October, 2018**:

S. No.	Name & Address of the Unit	LSI/MSI/SSI	Permitted quantity of effluent (in m ³ /day)	Name of the treatment units provided by unit in sequence with treatment capacity in terms of m ³ /day*	Typical characteristics of effluent generated in terms of parameters: pH, BOD, COD, Ammonical nitrogen, Suspended Solids, TDS/FDS and Oil & Grease	Typical concentration values achieved after treatment before sending to CETP in terms of parameters: pH, BOD, COD, Ammonical nitrogen, Suspended Solids, TDS/FDS and Oil & Grease	Limits Prescribed in Consent of unit for various parameters by MPCB
A	B	C	D	E	F	G	H
1.							

* Provide actual name of the treatment units and not to be mentioned as primary, secondary, tertiary. Do not give volumetric capacity of units. Provide treatment capacity of ETP in terms of m³/day only.

The inventory prepared in above format is to be examined by Technical Committee by **15th November, 2018** to see the prima-facie adequacy of the treatment facilities with the individual units considering the characteristics of effluent reported. Special attention shall also be paid to the units generating high COD and high Ammonical Nitrogen containing effluent. The list of units shortlisted with inadequacy of treatment/pre-treatment facilities shall be prepared for further examination & scrutiny by technical expert institution/agency. TMA and CETP shall jointly arrange for technical expert institution/agency in consultation with MIDC & MPCB for the works. The identified units shall augment/upgrade their treatment/pre-treatment facilities as per recommendations of the expert institution/agency. The timeframe for such augmentation/upgradation shall be permitted by MPCB on case to case basis.

Units identified with high COD concentration and/or high Ammonical Nitrogen concentration should be identified and listed separately to workout total generation of such effluent in MIDC Talaja. A separate plan for development of appropriate treatment & disposal facility at individual unit level or with CETP should be worked out by **30th November, 2018**. TMA & CETP may give opportunity for self declaration of such streams by industrial units by **31st October, 2018**.

All member units are expected to embrace themselves with adequate pre-treatment/treatment facility (as the case may be) for effluent by **01st December, 2018**.

TMA & CETP shall jointly take-up the work of assessment/review of 753 non-effluent generating units of the MIDC to verify the fact of no effluent generation. The water supplied by MIDC and their usage pattern may be examined carefully while doing the assessment. The task shall be completed by **30th April, 2019** and findings shall be placed on the website of TMA.

3.2 Cleaning, Repair & Maintenance of Existing CETP

The work of sludge removal from all the treatments units of CETP are required to be completed by **10th November**. In view of the reduction in hydraulic load in recent

months due to closure of certain industries & reduction in water supply by MIDC, by-passing with use of alternate units available in Phase-I & Phase-II of the CETP should be exercised while removing the sludge more effectively.

The works of replacement/repair of pumps, valves, flanges, leaking pipes and aeration system, clarifiers, decanters etc should be completed by **15th November, 2018**. Uniformity of lauders to prevent dead pockets, uniform aeration and operational parameters should be taken care while carrying out repair & maintenance works. The works of repair of civil structures, housekeeping, plantation, safety & cleanliness displays etc should also be completed in parallel. The movement of housekeeping, cleaning, plantation in CETP premises should be done on regular basis as joint movement by TMA with active contribution by member units.

Since, the CETP Management is also in the process of certification of Integrated Management System [ISO 9001:2015, ISO14001:2015 & ISO 45001:2008], the aspect of regular sludge removal from various treatment units of CETP & repair/maintenance aspect should be given due weightage in the document prepared for certification. Key Performance Indicators (KPI) of these aspects should be shared by CETP with MPCB & MIDC for regular reviews in future.

3.3 Development of Laboratory & Skilled Manpower for Operation of CETP & Surveillance

The MIDC & CETP Management should ensure that the laboratory of CETP is developed & well equipped to analyze the operation parameters of the CETP as well as the parameters prescribed by MPCB in consent. Engagement of skilled/trained manpower for operation of CETP and analysis in the laboratory should also be ensured. Training of existing manpower and their exposure to practices adopted by successfully running other CETPs of the state should also be arranged. This entire aspect of Laboratory & manpower strengthening should be addressed by MIDC & CETP Management by **30th November, 2018**.

3.4 Strengthening of Effluent Collection & Disposal System of the Estate

MIDC has already devised plan for replacement & augmentation of pipelines carrying effluent and presented before the committee. MIDC should prepare 'Standard Operating Procedure (SOP)' for identification & reporting of leakages in pipelines and repair of the same in time bound manner.

The MIDC should ensure the removal of the sludge from the existing collection sumps and disposal in the manner suggested by MPCB by **10th November, 2018**. The premises having collection sump should have sludge storage/drying beds with impervious base & leachate collection facility. MIDC should prepare a time schedule for regular removal of the sludge from sumps. The last date of removal of the sludge from the sumps and next due date should be prominently displayed near the sumps. All records of sludge removal and disposal should be submitted by MIDC to MPCB from time to time.

The works of extension of effluent disposal pipeline with diffuser system up to the point suggested by NIO is expected by MIDC for completion by December, 2020. However, the committee is in the opinion that the task should be expedited for completion **by November, 2019**.

SOPs for repair & maintenance of pipelines, cleaning of sumps and timelines for extension of pipelines should be placed by MIDC on website **by 15th November, 2018**.

3.5 Surveillance, Vigilance Mechanism & Information Dissemination

The MPCB has defined mechanism for surveillance of industries & CETP to verify the compliance. However, it could be ineffective in preventing shock loads on CETP due to non-compliance of the member industries due to negligence or intention. Moreover, any shock load on CETP due to negligence or ill-intention of the member industrial unit can disturb the biological treatment system of the CETP and may result in non-compliance for days together until it restore the effective operation. Therefore, it is imperative to develop a mechanism jointly by CETP management and TMA to keep a check on default by member industrial units while sending effluent to CETP. The

surveillance team should be equipped with transport, sampling & analytical facilities. Enough immunity should be given to the surveillance team to prevent any influence or pressure while carrying out designated task. The MPCB has system of coercive action against defaulters. The joint surveillance team of TMA & CETP can work out penal provisions for defaulter units causing disturbance to the operation of CETP. Such mechanism should be worked out by TMA and CETP and should be placed on the website of CETP **by 30th November, 2018**. The findings alongwith list of defaulter units as per norms given in consent (i.e. CCA) should be shared with MPCB on monthly basis by the joint surveillance team.

The CETP shall start submitting graphical presentation of daily average concentration values of effluent received and treated effluent disposed during previous month by **7th day of every month (starting from 07th November, 2018 onwards)** to the committee members through email. The graphs submitted shall be covering parameters COD, BOD, SS, TDS/FDS and Ammonical Nitrogen. Graph should be based on the analysis of the sample collected and analyzed in the laboratory. All the records pertaining to analysis of the samples including calculations shall be maintained by the CETP. Graphs with numerical values shall also be placed on the website of CETP.

3.6 Consent Management & Enforcement Issues

The Maharashtra Pollution Control Board shall strengthen the manpower & infrastructure facilities of the Regional & Sub-regional Office to make environmental enforcement more effective. The issues related with consent management in MIDC Taloja may be identified and streamlined by **31st December, 2018**. The coercive action against the defaulter units shall be prepared in ascending order by MPCB with clear defined criteria and shall be placed on the website of TMA and CETP for information of member industrial units.

All the industries under 17-categories and CETP are required to install online system for monitoring of effluent disposal in compliance of the guidelines and protocols prescribed by CPCB. The MPCB has also issued directions to the industrial units of Taloja regarding requirement of online system. Since, adequate time has

already been given for compliance in this regard; the units not complying should be issued closure order by MPCB. The MPCB shall continue the policy of not allowing any new industrial unit and expansion of existing industrial unit causing increase in hydraulic/pollution load in light of non-compliance of existing CETP. The monthly surveillance mechanism of MPCB is reportedly already in place. The MPCB shall place the list of units found with status of compliance or non-compliance with respect to effluent discharge by 15th day of every month on the website, based on findings of inspections done in previous month.

3.7 Check on Unauthorized Disposal of Chemicals/Effluent in MIDC Through Tankers

All the member industrial units of TMA, CETP Management, MIDC and MPCB shall be vigilant in observing occurrence of activities related with illegal discharge of chemicals/effluent through tankers in the MIDC area or in surroundings. Such incidents should be immediately reported to the Police with intimation to MPCB as well. District administration should also alert Police & Traffic Police of the area to keep a check on movement of effluent carrying tankers.

ZLD units are considered as potential source of unauthorized disposal of effluent in case of non-operation of their system. All the 15 ZLD units of Taloja MIDC shall ensure flow meters for effluent generated and flow meter for treated effluent used supported with data logger. The units with MEE, RO, Incineration etc to achieve ZLD shall provide separate energy meters for these facilities and daily records of hours of operation, power consumed, effluent treated, effluent reused, salt generated etc shall be maintained manually in log register. These registers shall be checked & verified by joint surveillance team of TMA & CETP for atleast once in a month on random basis. Any irregularities found should be brought into the notice of MPCB and MIDC authorities also. This practice shall be started **from 01st December, 2018** onwards.

4.0 Implementation & Review

All the stakeholders shall prepare the action points suggested above with time line in a tabular manner and submit the action taken/status report by 15th day of every


month to the members of the committee chaired by Hon'ble Justice V. M. Kanade through email for review **from 15th November, 2018** onwards.

Performance of the CETP based on online monitoring system shall be displayed on the website of CETP and MPCB on daily basis. The CETP shall also display date of calibration of the online monitoring system and next due date as well on the website.

The action plan suggested above shall not give liberty to any of the stakeholders to avoid execution of other responsibilities/activities mandated under various laws/rules/regulations enforced by other agencies. If any of the points suggested in strategic framework observed to be in contravention of any of the mandatory provisions by any of the stakeholders, it shall be brought to the notice of this committee immediately before acting on it.

The committee is in the opinion that any civil work related with increase of hydraulic capacity of the CETP from current consented capacity should be initiated only after consistent performance of the CETP for three consecutive months with atleast 90% of the consented hydraulic load.

....., Chairman of the Monitoring Committee
Justice V.M.Kanade, Former Judge of Bombay High Court


....., Member of the Monitoring Committee
Praseon Gargava, Scientist 'E', Central Pollution Control Board

....., Member of the Monitoring Committee
Dr Vijay Suryawanshi, District Collector, Raigad (Maharashtra)