

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

**MISC. APPLICATION NO. 19/2021(WZ)  
IN  
ORIGINAL APPLICATION NO. 197/2017(WZ)  
(DISPOSED ON 14-10-2020)**

**IN THE MATTER OF;**

**VANSHAKTI & ANR**

**APPLICANT**

**VERSUS**

**MUNICIPAL CORPORATION OF  
GREATER MUMBAI & ORS.**

**RESPONDENT(S)**

**INDEX**

<b>S. No.</b>	<b>Particulars</b>	<b>Page No.</b>
1.	Compliance report of CPCB for the period Dec 2020-June2021 in the Hon'ble NGT matter MA No. 19 of 2021(WZ) in OA No. 197 of 2021(WZ) titled Vanshakti & Anr. Vs Municipal Corporation of Greater Mumbai & Ors.	
2.	<b>Annexure-I:</b> Compiled Analysis results of monitored parameters of the 08 STPs for the month of December, 2020	
3.	<b>Annexure-II:</b> Analysis results of monitored parameters of the Colaba STP during Jan-June 2021	
4.	<b>Annexure-III:</b> Analysis results of monitored parameters of the Worli STP during Jan-June 2021	
5.	<b>Annexure-IV:</b> Analysis results of monitored parameters of the Bandra STP during Jan-June 2021	
6.	<b>Annexure-V:</b> Analysis results of monitored parameters of the Varsova STP during Jan-June 2021	
7.	<b>Annexure-VI:</b> Analysis results of monitored parameters of the Malad STP during Jan-June 2021	
8.	<b>Annexure-VII:</b> Analysis results of monitored parameters of the Charkop STP during Jan-June 2021	
9.	<b>Annexure-VIII:</b> Analysis results of monitored parameters of the Bhandup STP during Jan-June 2021	
10.	<b>Annexure-IX:</b> Analysis results of monitored parameters of the Ghatkopar STP during Jan-June 2021	



(Bharat K. Sharma)  
Regional Director  
Regional Directorate – Pune  
Central Pollution Control Board

Date: 01<sup>st</sup> October, 2021

Place: Pune

**COMPLIANCE REPORT IN THE MATTER OF O.A NO 197/2017(WZ) (VANSHAKTI&ANR. VS MUNICIPAL CORPORATION OF GREATER MUMBAI&ORS) BEFORE HON'BLE NGT**

**1.0 Introduction**

Vanshakti & Anr. filed an original application No. 197/2017 (WZ) before Hon'ble National Green Tribunal (NGT). The matter is mainly related to the management of wastewater in Mumbai Municipal Corporation area. The Hon'ble NGT passed various directions vide order dated 14/10/2020 in the aforesaid matter mainly to the Respondent No. 1 i.e. Municipal Corporation of Greater Mumbai (MCGM). CPCB/MPCB have also been directed vide the said order to monitor and place the progress report at the interval of 03 months before the Hon'ble Tribunal.

In order to comply with the aforesaid order of the Hon'ble NGT, MPCB issued directions dated 09/12/2020 under section 33A of the Water (Prevention and Control of Pollution) Act, 1974 to the Municipal Commissioner, MCGM, to comply with directions of the Hon'ble NGT as passed vide the said order dated 14/10/2020.

**The said order dated 14/10/2020 also comprises of the following directions passed vide para 38 of the said order w.r.t. sewage treatment plants and environmental compensation which have been monitored by CPCB:**

***"38(i)....***

*(ii) Where the operational deficiencies of the existing STPs has not been rectified and untreated is being discharged into the water bodies, the environmental compensation at the rate of Rs. 10 lakhs per month per STP be deposited to the CPCB. The CPCB is directed to examine all the STPs, CETPs within the Mumbai Municipal Corporation and calculate the amount of environmental compensation in accordance with law and to proceed to recover the amount and communicate this Tribunal within fortnight.*

*(iii) With regard to the situation where works with regard to STP, sewerage network and its connectivity not yet started, the Mumbai Municipal Corporation has to pay an*

*environmental compensation at the rate of Rs. 10 lakhs per month per STP, sewerage network and its connectivity after 31.12.2020 for the delay in setting up of the same. It will be open to the Municipal Corporation to recover the said amount from the erring officers/contractors.*

*(iv)...*

*(v) 100% treatment of sewage may be ensured as directed by the Principal Bench of this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017, Paryavaran Suraksha Samiti & Anr. Vs Union 102 of India & Ors. and time line for completing all steps of action plans including completion of setting up STPs and their commissioning till 31st March, 2021, in terms of order dated 08.04.2019 and in case of default compensation laid down in the order of the Principal Bench of this Tribunal dated 22.08.2019 in the case of River Ganga i.e. Rs.10 lakhs per month per STP.*

*(xiv)The amount so paid by the BMC as environmental compensation/ environmental damage, be deposited in accordance with Section 7A(3) of the Public Liability Insurance Act, 1991 read with Section 24 of the NGT Act, 2010.*

*(xv)The CPCB is directed to proceed in accordance with Section 7A of Public Liability Insurance Act, 1991 read with Section 24(1) of the NGT Act, 2010 “*

CPCB filed first report dated 04/1/2021 on “Examination of STPs and CETPs in Mumbai Municipal Corporation area and calculation of amount of environmental compensation in compliance of Hon’ble NGT order dated 14.10.2020 in OA No. 197/2017” to the Hon’ble NGT. Subsequent to the aforesaid first report, CPCB has monitored progress of the aforesaid directions (ii); (iii); (v); (xiv) and (xv) passed vide para 38 of the said order dated 14/10/2020. In this regard CPCB held meetings with the officials of MPCB and MCGM on 05.01.2021, 06.04.2021, 12.07.2021, 16.07.2021 and 30.07.2021 besides other e-mail communications. Another meeting was also held through video conference on 23.08.2021 with the officials of MCGM. This report outlines progress report during December, 2020 to June, 2021 based on the information provided by MCGM and MPCB vide e-mail dated 26.08.2021 and 28.08.2021.

## 2.0 About existing and proposed STPs for management of sewage in MCGM area

MCGM informed that total area under MCGM is 454.40 sq.km. out of which 322.81 sq. km. area falls under Development Zone and the remaining 131.59 sq. km. is the Non-development Zone. There are seven sewerage zones under MCGM.

It was also informed by MCGM that Non-development Zone comprising of Forests, Mangroves, Salt Pansarea etc. No regular development is permitted in these zones. Hence, sewerage network/STP not required in such Non-development Zone as there is no sewer line is proposed in these zones.

## 2.1 Management of sewage in Development Zone of MCGM area and existing and proposed new STPs

Currently, 08 STPs are operational in the Development Zone of the total development zone area of 322.81 sq. km, such STPs have 269.38 sq. km. sewerage network coverage. Details of the same are given in Table 1 below:

**Table-1: Details of existing 8 STP's with sewerage network and connectivity in MCGM's Development Zone**

Sl. No.	Sewerage Zone	Name of STP	Area having sewerage network connected with the STP (in sq. km.)	Area not having sewerage network and connectivity with the STP (in sq. km.)
1	I	Colaba	4.48	0.00
2	II	Worli	48.75	0.00
3	III	Bandra	46.84	7.67
4	IV	Versova	15.19	1.73
5	V	Malad	72.06	25.14
6		Charkop		
7	VI	Bhandup	35.58	7.60
8	VII	Ghatkopar	46.47	11.30
		<b>Total</b>	<b>269.38</b>	<b>53.43</b>

Out of the 53.43 sq km. unsewered area, details of proposal of 9.37 sq km. sewerage area and their connectivity with the existing operational STPs along with their status as informed vide email dated 26.08.2021 and 28.08.2021 by MCGM are given in Table 2.

**Table-2: Details of proposal of 9.37 sq km. sewerage area and their connectivity with the existing operational STPs along with their status in Development Zone of MCGM**

Proposal for sewerage network connected with existing 7 STPs							
Sl. No.	Name of the existing STP to which the sewerage network will be connected	Proposed sewerage network area work started insq. km.	Period since when work started w.r.t column (3)	Proposed completion time w.r.t column (3)	Proposed sewerage area network work will be started in sq. km.	Period since when work will be started w.r.t column (5)	Proposed completion time w.r.t column (5)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Colaba	0.094*	October 2016	October 2024	0.000	Tendering process for these works is in progress. The time period for these works will be from 6 to 24 months <sup>5</sup> after issuance of Work Order	
2	Worli	0.159*			0.136*		
3	Bandra	1.789			0.015		
4	Versova	0.530			0.137		
5	Malad	1.509			0.544		
6	Bhandup	0.806			0.536		
7	Ghatkopar	2.003			1.110		
<b>Total</b>		<b>6.89</b>			<b>2.48</b>		
<b>9.37 sq. km.</b>							

*\*Only upsizing works i.e. the existing sewer network of 230mm / 450mm/600 mm dia is being upsized to higher diameter (800mm /1200mm), in order to cater to the increased population. <sup>5</sup> Status as informed by MCGM vide email dated 26.08.2021and 28.08.2021*

For the remaining unsewered area of the Development Zone i.e. 53.43 sq. km. – 9.37 sq. km. = 44.06 sq. km. and also to prevent discharge of untreated sewage/dry weather flow from storm water drain/nallas directly into water bodies (rivers/creeks/sea) which causes water pollution, MCGM has undertaken major projects which include either diversion of dry weather flow(DWF) to MCGM sewerage system or by providing on-site treatment to such DWF through Decentralized STPs under various package works of Mithi River and other rivers rejuvenation project. MCGM has various proposals of installing various sewerage network/tunnel. Besides, there is proposal to install sewerage network and their connectivity with the existing STPs also. Details of the same are given in Table-3.

**Table-3: Details and status of proposal for the remaining unsewered area of 44.06 sq. km. of the Development Zone and also to prevent discharge of untreated waste water from storm water drain/nallas directly into water bodies (rivers/creeks/sea)**

Proposal for the remaining unsewered area of 44.06 sq. km. of the Development Zone and also to prevent discharge of untreated waste water from storm water drain/nallas directly into water bodies (rivers/creeks/sea)					
Sl. No.	Name/Nos. of STP or other treatment facilities	Name of Projects and their details	Period since work started w.r.t column (2)	Proposed completion time w.r.t column (2)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1.	02 nos. of STPs (Total capacity of 6.5 MLD)	<u>Rejuvenation project of Dahisar River:</u> 4.42km length of sewer network and interceptors to intercept DWF into the Dahisar River	Information yet to be provided		Financial bids for Dahisar, Poisar and Oshiwara / Walbhat Rivers are opened and approval of Competent Authority for appointing Agency is under process.
2.	10 nos. of STPs (Total capacity of 33.5 MLD)	<u>Rejuvenation project of Poisar River:</u> 8.67 km length of sewer network and nalla interceptors	Information yet to be provided		
3.	05 nos. of STPs (Total capacity of 20.5 MLD)	<u>Rejuvenation project of Walbhat / Oshiwara River:</u> 4.72 km length of sewer network and 6 nos of interceptors	Information yet to be provided		
4.	01 no. of STP (Total capacity of 8 MLD)	<u>Mithi River Package-I work:</u> sewer lines of 1.65 km length along the banks of Mithi River	October, 2018	31/12/2021	-
5.	01 no. of STP (Total capacity of 418 MLD at Dharavi)	<u>Mithi River Package – IV:</u> 2.6m diameter and 6.5km long Tun-nel for diversion of intercepted Dry Weather Flow (168 MLD)	01/10/2021	Information yet to be provided	-
6.	Bandra STP	<u>Mithi River Package-II work:</u> 8.07 km length of sewer line along and nearby Mithi River and 102 nos. of minor interceptors to divert DWF from minor nallas to the existing Municipal sewer network system	December 2020	Information yet to be provided	-

7.	Bandra STP	<b>Mithi River Package-III work:</b> Training of river (Construction of Retaining Wall & Service Road), Sewage Pumping Stations, laying of sewer lines of length 8.13 km, Interceptions & Diversion works for diverting Dry Weather Flow (DWF) of various outfalls / nallas into the existing Municipal Sewer networks	Information yet to be provided	Tendering for these works is in progress.
----	------------	---	--------------------------------	---

## 2.2 Management of sewage/dry weather flow in drains and rivers

It was informed by MCGM that there are 92 drains and 03 rivers. 42 drains and 03 rivers will be covered under the aforesaid river rejuvenation projects and 02 drains by diversions to the existing Worli STP. Details of management of sewage/dry weather flowing the said 95 drains/rivers are given in Table-4.

**Table-4: Details of management of sewage/dry weather flow in the said 95 drains/rivers**

Sl. No.	Details	Nos. of Drains/Rivers
1.	Drains covered under river rejuvenation project	42 Nos
2.	Rivers covered under river rejuvenation project	03 Nos
3.	Dry Weather Flow from LGP Nalla is partly diverted to existing STP and part dry weather flow will be diverted in the augmentation work of Worli waste treatment facility work	01 No
4.	Dry Weather Flow from Haji Ali outfall is already diverted to Love Grove Sewage Pumping station which further leads to Worli STP	01 No
5.	Drains which are connecting to Creek and Sea tendering work is in process to appoint the consultants for suggestion on bioremediation and/ or phytoremediation or any other remedial measures for treatment of sewage water flows and technology for removal of floating material in the storm water drains and remedial measures as suggested by the consultants will be carried out at the earliest.	48 Nos
<b>Total</b>		<b>95 Nos</b>

## 3.0 Performance/operational deficiencies of the existing 8 STP's

MPCB has monitored the existing 08 operational STPs monthly during December, 2020 to June, 2021 for parameters pH, BOD, Suspended Solids, Oil Grease, Copper, Lead, Nickel, Mercury,

Zinc, Total Chromium and Percentage Sodium in inlet and outlet of the said STPs. Month-wise monitoring results of the said 08 STPs and standards of the said monitored parameters prescribed vide the respective Consent to Operate (CTO) granted by MPCB are given in **Annexure I to Annexure IX**. Compliance status in brief of the said eight existing STPs w.e.f. December, 2020 to June, 2021 is compiled and given in Table-5 to Table-7 as below:

**Table-5: Compliance status of existing 8 STP's for December, 2020**

Sl. No	Name of STP	Monitored parameters not complied with respective prescribed standards as per CTO granted by MPCB	Remarks
1.	Colaba	All the monitored parameters are complied	Complied
2.	Worli	All the monitored parameters are complied	Complied
3.	Bandra	All the monitored parameters are complied	Complied
4.	Versova	%Na	Not complied
5.	Malad	BOD	Not complied
6.	Charkop	All the monitored parameters are complied	Complied
7.	Bhandup	% Na	Not complied
8.	Ghatkopar	% Na	Not complied

**Table-6: Compliance status of existing 8 STP's from January, 2021 to March, 2021**

Sl. No.	Name of STP	Jan		Feb		Mar	
		Monitored parameters not complied with CTO granted by MPCB	Remarks	Monitored parameters not complied with CTO granted by MPCB	Remarks	Monitored parameters not complied with CTO granted by MPCB	Remarks
1.	Colaba	All the monitored parameters are complied	Complied	All the monitored parameters are complied	Complied	All the monitored parameters are complied	Complied
2.	Worli	BOD	Not complied	BOD	Not complied	BOD	Not complied
3.	Bandra	BOD, TSS	Not complied	BOD	Not complied	BOD	Not complied
4.	Versova	BOD, TSS	Not complied	BOD, TSS	Not complied	BOD, TSS	Not complied
5.	Malad	BOD, TSS	Not complied	BOD, TSS	Not complied	BOD, TSS	Not complied
6.	Charkop	BOD, TSS	Not complied	All the monitored	Complied	All the monitored	Complied

				parameters are complied		parameters are complied	
7.	Bhandup	BOD	Not complied	BOD, TSS	Not complied	BOD	Not complied
8.	Ghatkopar	BOD, TSS	Not-Complied	BOD, TSS	Not complied	BOD, TSS	Not complied

**Table-7: Compliance status for existing 8 STP's from April, 2021 to June, 2021**

Sl. No.	Name of STP	April		May		June	
		Monitored parameters not complied with CTO granted by MPCB	Remarks	Monitored parameters not complied with CTO granted by MPCB	Remarks	Monitored parameters not complied with CTO granted by MPCB	Remarks
1.	Colaba	All the monitored parameters are complied	Complied	All the monitored parameters are complied	Complied	All the monitored parameters are complied	Complied
2.	Worli	BOD, TSS	Not complied	BOD, TSS	Not complied	BOD, TSS	Not complied
3.	Bandra	BOD	Not complied	All the monitored parameters are complied	Complied	BOD, TSS	Not complied
4.	Versova	BOD, TSS	Not complied	BOD, TSS	Not-Complied	BOD	Not complied
5.	Malad	All the monitored parameters are complied	Complied	*	*	BOD, TSS	Not complied
6.	Charkop	BOD, TSS	Not complied	*	*	All the monitored parameters are complied	Complied
7.	Bhandup	BOD	Not complied	BOD, TSS	Not complied	BOD, TSS	Not complied
8.	Ghatkopar	BOD	Not complied	All the monitored parameters are complied	Complied	TSS	Not complied

*Note: As informed by MCGM the proposed rectification works shall be done by upgrading the existing STPs in order to meet the discharge standards as per Hon'ble NGT order dated 30.04.2019 and also by carrying out regular maintenance of plant and equipment.*

*\*As per the results provided by MPCB vide dated 27.08.2021, it is observed that sample was not collected in May, 2021 due to COVID-19 pandemic.*

**Upgradation plan for the existing STPs:** Upgradation plan was informed by the MCGM for the 6 of the 8 STPs viz. Worli, Bandra, Versova, Malad, Bhandup and Ghatkopar. The details of upgradation plan are given in Table-8.

Among the remaining 02 STPs viz. Colaba and Charkop, Colaba is consistently complied to the monitored parameters. Whereas, Charkop is being intermittently reported non-compliance to the monitored parameters.

**Table-8: Details related to upgradation plan for 06 STPs**

Sl. No.	Name of STP	Plant capacity in MLD	Tertiary Treatment in MLD	Peak Flow In MLD	Design, Build Period in years
1	Worli	500	250	1000	5
2	Bandra	360	180	720	5
3	Versova	180	90	405	4
4	Malad	454	227	908	6
5	Bhandup	215	108	461	4
6	Ghatkopar	337	170	699	4

#### **4.0 Environmental Compensation computed for the various non-compliances**

##### **4.1 Environmental compensation in compliance with direction given at para 38 (ii) of Hon'ble NGT order dated 14.10.2021 for the operational deficiencies of existing STPs**

Based on non-compliances reported during December, 2020 to June, 2021 as given at Table-5 to Table-7, details of applicable Environmental Compensation @ Rs. 10 Lakh among the 08 no. of existing operational STPs as applicable and for non-rectification of STPs/dischARGE of effluent into the water bodies not meeting the prescribed discharge standards as per CTO granted by MPCB is given at Table-9. The monthly analysis result of the following 8 no. of STPs as provided by MPCB is given at **Annexure-I to Annexure-IX** for kind ready reference.

**Table-9: Environmental compensation in compliance with direction given at para 38 (ii) of Hon'ble NGT order dated 14.10.2021 for the operational deficiencies of existing STPs**

Sl. No.	Name of the operational deficient STP	Months in which the non-compliances wr.t. CTO	Total No. of months in which violation is observed	Environmental Compensation at the rate Rs. 10 Lakh per month per STP	Total Compensation in Rs.
1	Colaba	NIL	NIL	NIL	NIL
2	Worli	Jan, Feb, Mar, Apr, May & June of 2021	06	1000000	6000000
3	Bandra	Jan, Feb, Mar, Apr & June of 2021	05	1000000	5000000
4	Versova	Dec, 2020; Jan, Feb, Mar, Apr, May & June of 2021	07	1000000	7000000
5	Malad	Dec, 2020; Jan, Feb, Mar & June of 2021	05	1000000	5000000
6	Charkop	Jan & Apr of 2021	02	1000000	2000000
7	Bhandup	Dec, 2020; Jan, Feb, Mar, Apr, May & June of 2021	07	1000000	7000000
8	Ghatkopar	Dec, 2020; Jan, Feb, Mar, Apr, May & June of 2021	07	1000000	7000000
<b>Environmental compensation in compliance with direction given at para 38 (ii) of Hon'ble NGT order dated 14.10.2021 for the operational deficiencies of existing STPs</b>					<b>39000000</b>

**4.2: Environmental compensation in compliance with direction given at para 38 (iii) of Hon'ble NGT order dated 14.10.2020 for works w.r.t.sewerage network and its connectivity not started on or before 31.12.2020.**

The works for sewerage network of 6.89 sq. km. as started w.e.f. October, 2016 in the 07 no. of existing operational STPs. Thus, the environmental compensation @ Rs. 10 Lakh per month per STP w.e.f. January, 2021 may not be applicable to such cases in accordance with direction given at para 38 (iii) of the Hon'ble NGT order dated 14.10.2020. However, the works of the proposed sewerage area network of 2.48 sq. km. in 06 of the existing 07 operational STPs have not yet started as given at Col. No. 6 to Col.No. 8 of the Table-2, above. Therefore, environmental compensation of Rs. 10 Lakh per month per STP may be applicable on the said 06 STPs. Further,

among the 20 STPs, as given at Table-3 above, the works of the 01 no. of STP under Mithi River Package-I has started from October, 2018 and, therefore, among the various proposed STPs, as given at Table-3 above, environmental compensation @ Rs. 10 lakh per month per STP w.e.f. January, 2021 may be applicable on 18 STPs only since Bandra STP has already been covered under said 06 STPs. The details of environmental compensation applicable have accordingly been compiled and given in Table-10.

**Table-10: Details of environmental compensation applicable on STPs where works w.r.t. sewerage network and its connectivity not started on or before 31.12.2020 in compliance with direction given at para 38 (iii) of Hon'ble NGT order dated 14.10.2020**

Sl. No.	Nos. of the STPs and their details	Nos. of months w.e.f. January, 2021	Environmental Compensation @ Rs. 10 Lakh/month/STP
<b>A. Works not started on or before 31/12/2021 w.r.t. existing STPs</b>			
1.	Worli	6	6000000
2.	Bandra	6	6000000
3.	Versova	6	6000000
4.	Malad	6	6000000
5.	Bhandup	6	6000000
6.	Ghatkopar	6	6000000
<b>B. Works not started on or before 31/12/2021 w.r.t. various proposals* as given at Table-3</b>			
7.	02 nos. of STPs under Rejuvenation project of Dahisar River	6	12000000
8.	10 nos. of STPs under Rejuvenation project of Poisar River	6	60000000
9.	05 nos. of STPs under Rejuvenation project of Walbhat/Oshiwara River	6	30000000
10.	01 no. of STP under Mithi River Package IV	6	6000000
<b>Environmental compensation applicable on STPs where works w.r.t. sewerage network and its connectivity not started on or before 31.12.2020 in compliance with direction given at para 38 (iii) of Hon'ble NGT order dated 14.10.2020</b>			<b>144000000</b>

\* Bandra STP has not been considered to avoid duplicity as the same has already been considered under existing STPs under A, above.

**4.3. Environmental compensation in compliance with direction given at para 38 (v) of Hon'ble NGT order dated 14.10.2020 for not completing all steps including commissioning of STP still 31/3/2021 to ensure 100% treatment of sewage**

The works for sewerage network of 6.89 sq. km. or 2.86 sq. km. w.r.t. 07 existing STPs, as given at Table-2 above, have not been completed till June, 2021. Further, none of the 19 STPs

(excluding Bandra STP which has already been covered under the said 07 existing STPs), as given at Table-3 above, have also not been completed till June, 2021. Thus, such 07+19=26 STPs have not been commissioned till 31/3/2021. Therefore, environmental compensation @ Rs. 10 Lakh per month per STP w.e.f. April, 2021 may be applicable to such 26 STPs in compliance with direction given at para 38 (v) of the Hon'ble NGT order dated 14.10.2020. The details of environmental compensation applicable have accordingly been compiled and given in Table-11.

**Table-11: Environmental compensation in compliance with direction given at para 38 (v) of Hon'ble NGT order dated 14.10.2020 for not completing all steps including commissioning of STP still 31/3/2021 to ensure 100% treatment of sewage**

Sl. No.	Nos. of the STPs and their details	Nos. of months w.e.f. March, 2021	Environmental Compensation @ Rs. 10 Lakh/month/STP
<b>C. Works not commissioned on or before 31/03/2021 w.r.t. existing STPs</b>			
1.	Colaba	3	3000000
2.	Worli	3	3000000
3.	Bandra	3	3000000
4.	Versova	3	3000000
5.	Malad	3	3000000
6.	Bhandup	3	3000000
7.	Ghatkopar	3	3000000
<b>D. Works not commissioned on or before 31/03/2021 w.r.t. various proposals* as given at Table-3</b>			
8.	02 nos. of STPs under Rejuvenation project of Dahisar River	3	6000000
9.	10 nos. of STPs under Rejuvenation project of Poisar River	3	30000000
10.	05 nos. of STPs under Rejuvenation project of Walbhat/Oshiwara River	3	15000000
11.	01 no. of STP under Mithi River Package I	3	3000000
12.	01 no. of STP at Dharavi under Mithi River Package IV	3	3000000
<b>Environmental compensation in compliance with direction given at para 38 (v) of Hon'ble NGT order dated 14.10.2020 for not completing all steps including commissioning of STP still 31/3/2021 to ensure 100% treatment of sewage</b>			<b>78000000</b>

\* Bandra STP has not been considered to avoid duplicity as the same has already been considered under existing STPs under C, above.

## 5.0 Conclusions and Recommendations

(a) The status of start of various works and their completion w.r.t. sewerage network and connectivity with new/existing STPs to manage sewage/dry weather flow in MCGM area are given under paras 2.1 and 2.2, above. The environmental compensation as applicable on MCGM w.e.f. December, 2020 till June, 2021 in compliance with directions passed vide para 38 (ii), (iii) and (v) of Hon'ble NGT order dated 14.10.2020 are given under paras 3 and 4 (4.1, 4.2 & 4.3), above and the same are as given below:

Sl. No.	Directions passed by the Hon'ble NGT vide order dated 14/10/2020	Environmental Compensation in Rs., as applicable, as on June, 2021
1	<i>Para 38(ii): Where the operational deficiencies of the existing STPs has not been rectified and untreated is being discharged into the water bodies, the environmental compensation at the rate of Rs. 10 lakhs per month per STP be deposited to the CPCB. The CPCB is directed to examine all the STPs, CETPs within the Mumbai Municipal Corporation and calculate the amount of environmental compensation in accordance with law and to proceed to recover the amount and communicate this Tribunal within fortnight.</i>	39000000
2	<i>Para 38(iii):With regard to the situation where works with regard to STP, sewerage network and its connectivity not yet started, the Mumbai Municipal Corporation has to pay an environmental compensation at the rate of Rs. 10 lakhs per month per STP, sewerage network and its connectivity after 31.12.2020 for the delay in setting up of the same. It will be open to the Municipal Corporation to recover the said amount from the erring officers/contractors.</i>	144000000
3	<i>Para 38 (v): 100% treatment of sewage may be ensured as directed by the Principal Bench of this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017, Paryavaran Suraksha Samiti &amp; Anr. Vs Union 102 of India &amp; Ors. and time line for completing all steps of action plans including completion of setting up STPs and their commissioning till 31st March, 2021, in terms of order dated 08.04.2019 and in case of default compensation laid down in the order of the Principal Bench of this Tribunal dated 22.08.2019 in the case of River Ganga i.e. Rs.10 lakhs per month per STP.</i>	78000000
	<b>Total Environmental Compensation in Rs., as applicable, as on June, 2021</b>	261000000

As per CPCB first report dated 04/01/2021 filed in compliance with the Hon'ble NGT order dated 14.10.2020 in OA No. 197/2017, environmental compensation w.r.t. operational deficiencies in various STPs have been reported Rs. 21,000,000/- on November, 2020.

**Therefore, cumulative environmental compensation as applicable on MCGM as on June, 2021 works out be (Rs.21,000,000+ Rs. 261,000,000) Rs. 282,000,000/-.**

**(b)** MCGM has so far not paid environmental compensation amount to CPCB. The aforesaid environmental compensation amount of Rs.282,000,000/- may be paid by MCGM to CPCB in compliance with direction passed vide paras 38(ii), (iii) and (v) of the order dated 14/10/2020 of the Hon'ble NGT.

In addition to the above, MCGM has also not paid environmental compensation to CPCB in compliance with directions passed by the Hon'ble NGT w.r.t. bioremediation and/or phytoremediation or any other remediation measures not yet taken for treatment of sewage water. The said environmental compensation is to be paid to CPCB as per MPCB calculation in compliance with directions passed vide para 38(i) read with para 38(xiii) of the said order dated 14/10/2020 of the Hon'ble NGT.

**(c)** Among the 08 existing operational STPs, the Colaba STP is consistently complying since the reporting period of November, 2020 till June 2021 and the Charkop STP is being intermittently reported non-compliances to the monitored parameters and respective standards prescribed under Consent to Operate granted by MPCB.

MCGM has proposal to upgrade the remaining 06 STPs viz. Worli, Bandra, Versova, Malad, Ghatkopar and Bhandup. However, proposed completion of upgradation works to such 06 STPs is 04 to 06 years and the same needs to be expedited ensuring compliance to the prescribed standards. Further, MCGM may also identify and rectify operational deficiencies in the intermittently complying Charkop STP ensuring compliance with the prescribed standards.

(d) MCGM has not yet provided time target for completion of various works w.r.t. proposed 19 new STPs and existing Bandra STP under various projects such as River Rejuvenation Projects and Mithi River Packages except Mithi River Package-I works given in Table-3, above. MCGM may work out the said time target for completion ensuring completion of the same as expeditious as possible.

Further, MCGM may also work out expeditious completion of sewerage network and their connectivity with the existing 07 operational STPs, as given in Table-2 above, as early as possible against the target completion date of October, 2024.

(e) For 48 drains which are connecting to Creek and Sea, MCGM has reported that tendering work is in process to appoint the consultants for suggestion on bioremediation and/ or phytoremediation or any other remedial measures for treatment of sewage water flows and technology for removal of floating material in the storm water drains. Remedial measures as suggested by the consultants will be carried out at the earliest. However, time target for the said tendering and selection of consultants is yet to be provided by MCGM. The same may also be completed as expeditious as possible.

\*\*\*\*\*

## Annexure I

## Compiled analysis results of monitored parameters of the 08 STPs for the month of December, 2020

STP Name	Date	Observed at	Parameter										
			PH	Suspended Solids	BOD	Oil & Grease	% Sodium	Mercury	Lead	Copper	Zinc	Nickel	Total Chromium
STP's with Marine Outfall													
Colaba	30.12.2020	Inlet	7	140	72	1.8	69.01	0.003	BDL	0.05	0.07	BDL	0.06
		Outlet	7.1	12	18	BDL	73.94	0.005	BDL	0.05	0.09	BDL	0.05
Worli	30.12.2020	Inlet	6.9	98	32	BDL	74.23	0.003	BDL	0.05	0.07	BDL	0.03
		Outlet	6.9	99	30	BDL	77.09	0.003	BDL	0.03	0.04	BDL	0.02
Bandra	Dec-20	Inlet	Not Collected due to Covid-19										
		Outlet											
↑ STP Discharge Standard*			5.5 to 9	≤100	≤100	-	-	≤0.01	≤2	≤3	≤15	≤5	≤2
Versova	22.12.2020	Inlet	6.7	200	32	BDL	60.6	0.001	BDL	0.03	BDL	BDL	BDL
		Left Outlet	7.1	28	20	BDL	<b>64.82</b>	BDL	BDL	0.03	0.01	BDL	BDL
		Right Outlet	7	40	22	BDL	<b>60.14</b>	0.002	0.02	0.13	0.03	0.07	0.08
Malad	31.12.2020	Inlet	6.8	30	230	1	53.49	BDL	0.01	BDL	0.01	0.05	0.09
		Outlet	6.7	40	<b>205</b>	1	52.1	BDL	BDL	0.01	0.01	0.03	0.07
Charkop	31.12.2020	Inlet	6.6	30	116	1	71.93	BDL	BDL	0.03	0.08	0.06	0.07
		Outlet	7.2	12	4	BDL	16.73	BDL	BDL	BDL	0.01	BDL	0.05
Bhandup	11.12.2020	Inlet	6.5	98	70	BDL	61.17	-	-	0.05	0.15	-	0.07
		Outlet	6.7	26	20	BDL	<b>60.75</b>	-	-	0.03	0.09	-	0.08
Ghatkopar	11.12.2020	Inlet	6.4	120	48	BDL	61.36	-	-	0.03	0.12	-	0.05
		Outlet	6.6	12	21	BDL	<b>60.6</b>	-	-	0.03	0.05	-	0.04
↑ STP Discharge Standard*			5.5 to 9	≤50	≤50	≤50	≤60%	≤0.01	≤2	≤3	≤15	≤50	≤50

\* As per GSR 1265 (E) dated 13.10.2017 all the STP having marine outfall is mandated to discharge treated effluent conforming to the general discharge standard and other STP having any other mode of disposal has to dispose the treated sewage conforming to GSR 1265 (E) dated 13.10.2017. The GSR 1265 (E) dated 13.10.2017 stipulates that, "These Standards shall apply to all STPs to be commissioned on or after the 1<sup>st</sup> June, 2019 and the old/existing STPs shall achieve these standards within a period of five years from date of publication of this notification in the Official Gazette."

Therefore, as per the GSR 1265 (E) dated 13.10.2017 notification, the notified standards is at present applicable to only Colaba STP as it is commissioned in April 2020. However, this STP has marine outfall and hence general discharge standard is applicable. Therefore, the prescribed standard stipulated in Consent order issued by MPCB Content to Operate No. 1.0/BO/JD(WP)/CC/-1805001473 dated 28.05.2018 as well as general discharge standard is taken to examine the performance of STP and sewage treatment facility based on available data.

## Annexure II

Compiled analysis results of monitored parameters during January to June, 2021 of Colaba STP (Marine Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
29.01.2021	Inlet	7	110	56
	Outlet	7.7	27	34
26.02.2021	Inlet	6.9	170	36
	Outlet	7.8	6	12
Mar-21	Inlet	Not Collected due to Covid-19		
	Outlet			
22.04.2021	Inlet	7.1	86	76
	Outlet	7.4	7	10
19.05.2021	Inlet	7.3	40	94
	Outlet	7.6	5	12
21.06.2021	Inlet	7.2	200	338
	Outlet	7.3	8	16
STP Discharge Standard*		5.5 to 9.0	≤ 30	≤ 50

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure III

Compiled analysis results of monitored parameters during January to June, 2021 of Worli STP (Marine Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
21.01.2021	Inlet	8	180	50
	Outlet	8.2	<b>210</b>	44
25.02.2021	Inlet	6.8	165	42
	Outlet	6.9	<b>175</b>	44
24.03.2021	Inlet	6.9	170	42
	Outlet	6.9	<b>160</b>	44
22.04.2021	Inlet	7.1	90	56
	Outlet	7.2	<b>110</b>	<b>62</b>
19.05.2021	Inlet	7.2	50	96
	Outlet	7.2	<b>48</b>	<b>94</b>
21.06.2021	Inlet	7.2	240	316
	Outlet	7.3	<b>210</b>	<b>228</b>
STP Discharge Standard*		5.5 to 9.0	≤ 30	≤ 50

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure IV

Compiled analysis results of monitored parameters during January to June, 2021 of Bandra STP (Marine Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
18.01.2021	Inlet	7	75	70
	Outlet	7	<b>95</b>	<b>60</b>
01.02.2021	Inlet	6.8	80	36
	Outlet	6.7	<b>135</b>	40
02.03.2021	Inlet	6.7	86	38
	Outlet	6.8	<b>106</b>	42
27.04.2021	Inlet	7.1	60	24
	Outlet	7.1	<b>56</b>	28
04.05.2021	Inlet	7	50	54
	Outlet	7	8	40
30.06.2021	Inlet	7.4	90	78
	Outlet	7.3	<b>80</b>	<b>70</b>
STP Discharge Standard*		5.5 to 9.0	≤ 30	≤ 50

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure V

Compiled analysis results of monitored parameters during January to June, 2021 of Varsova STP (Malad Creek Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
18.01.2021	Inlet	6.8	130	80
	Left Outlet	7.1	<b>50</b>	<b>30</b>
	Right Outlet	7.1	<b>35</b>	<b>36</b>
01.02.2021	Inlet	Not Provided		
	Left Outlet	6.8	<b>70</b>	<b>18</b>
	Right Outlet	6.9	<b>40</b>	20
01.03.2021	Inlet	6.5	105	44
	Left Outlet	6.8	<b>38</b>	<b>40</b>
	Right Outlet	6.7	<b>47</b>	<b>42</b>
27.04.2021	Inlet	7	47	52
	Left Outlet	7.3	<b>42</b>	<b>28</b>
	Right Outlet	7.2	<b>40</b>	<b>38</b>
04.05.2021	Inlet	6.9	140	78
	Left Outlet	7.2	<b>22</b>	<b>30</b>
	Right Outlet	7.1	<b>15</b>	<b>30</b>
30.06.2021	Inlet	7.3	150	88
	Left Outlet	7.5	<b>50</b>	20
	Right Outlet	7.5	<b>30</b>	16
STP Discharge Standard*		5.5 to 9.0	≤ 10	≤ 20

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure VI

Compiled analysis results of monitored parameters during January to June, 2021 of Malad STP (Malad Creek Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
08.01.2021	Inlet	Not provided		
	Outlet	6.7	245	60
26.02.2021	Inlet	Not provided		
	Outlet	6.5	<b>135</b>	<b>28</b>
26.03.2021	Inlet	Not provided		
	Outlet	6.7	<b>120</b>	<b>42</b>
24.04.2021	Inlet	6.8	108	58
	Outlet	7.1	7	10
May-21	Inlet	sample not collected due to Covidpandemic		
	Outlet			
23.06.2021	Inlet	6.6	200	90
	Outlet	6.8	<b>80</b>	<b>70</b>
STP Discharge Standard*		5.5 to 9.0	≤ 10	≤ 20

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure VII

Compiled analysis results of monitored parameters during January to June, 2021 of Charkop STP (Gorai Creek Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
08.01.2021	Inlet	Not provided		
	Outlet	6.7	<b>108</b>	<b>44</b>
26.02.2021	Inlet	6.9	85	38
	Outlet	6.5	7	20
26.03.2021	Inlet	6.7	75	32
	Outlet	7.3	5	10
20.04.2021	Inlet	7	8	76
	Outlet	6.8	<b>110</b>	<b>46</b>
May-21	Inlet	sample not collected due to Covidpandemic		
	Outlet			
23.06.2021	Inlet	6.8	130	74
	Outlet	7.3	5	14
STP Discharge Standard*		5.5 to 9.0	≤ 10	≤ 20

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure VIII

Compiled analysis results of monitored parameters during January to June, 2021 of Bhandup STP (Thane Creek Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
08.01.2021	Inlet	6.7	26	30
	Outlet	6.8	<b>17</b>	20
04.02.2021	Inlet	7.4	80	68
	Outlet	6.6	<b>46</b>	<b>78</b>
09.03.2021	Inlet	7.2	60	28
	Outlet	7.5	<b>80</b>	18
09.04.2021	Inlet	7.4	74	30
	Outlet	7.5	<b>30</b>	20
06.05.2021	Inlet	7.6	55	54
	Outlet	7.6	<b>20</b>	<b>26</b>
14.06.2021	Inlet	7.3	20	50
	Outlet	7	<b>14</b>	<b>54</b>
STP Discharge Standard*		5.5 to 9.0	≤ 10	≤ 20

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021

## Annexure IX

Compiled analysis results of monitored parameters during January to June, 2021 of Ghatkopar STP (Thane Creek Outfall)

Date	Observed at	Parameter		
		pH	BOD	TSS
08.01.2021	Inlet	6.8	70	30
	Outlet	6.8	<b>23</b>	<b>36</b>
04.02.2021	Inlet	7	80	68
	Outlet	7	85	72
09.03.2021	Inlet	6.6	150	42
	Outlet	6.5	<b>135</b>	<b>32</b>
09.04.201	Inlet	7.3	30	20
	Outlet	7.6	<b>36</b>	2.95
06.05.2021	Inlet	7.6	22	40
	Outlet	7.8	7	18
14.06.2021	Inlet	7.2	5	64
	Outlet	7.1	6	<b>30</b>
STP Discharge Standard*		5.5 to 9.0	≤ 10	≤ 20

\* Standard as prescribed by MPCB vide Content to Operate No. RED L.S.I (Mun) No:- Format 1.0/CAC/UAN No. 0000105331/CR217000088 dated 01.07.2021