

**MAHARASHTRA POLLUTION CONTROL BOARD
REGIONAL OFFICE – PUNE**

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MPCB/ROPI / 20/210 - FTS - 0115

Date: 10/12/2020

To
Hon'ble Registrar,
National Green Tribunal (PB), New Delhi.

Sub. :- Action Taken Report by Maharashtra Pollution Control Board in
O. A. 55/2015 Subhash Ramkrishna Patil VS. MPCB & ORS. WITH O.
A. 26/2016 Vinay Ghule VS The Commissioner PMC & ORS. WITH O.
A. 37/2016 Shewalewadi Grampanchayat through its Sarpanch &
ANR. VS. The Commissioner, PMC in compliance of Order passed
by Hon'ble Tribunal on 18/07/2018 & 06/07/2020.

Ref. :- Order passed by Hon'ble NGT on 18/07/2018 & 06/07/2020.

Sir,

In compliance of the Order passed by Hon'ble Tribunal on
18/07/2018 & 06/07/2020., submitting herewith the report by Maharashtra
Pollution Control Board.

(Dr. J. B. Sangewar)
Regional Officer,
MPCB – Pune.

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
WESTERN ZONE BENCH, PUNE**

**O. A. 55/2015 SUBHASH RAMKRISHNA PATIL VS. MPCB & ORS.
WITH
O. A. 26/2016 VINAY GHULE VS THE COMMISSIONER PMC & ORS.
WITH
O. A. 37/2016 SHEWALEWADI GRAMPANCHAYAT THROUGH ITS
SARPANCH & ANR. VS. THE COMMISSIONER PMC**

**Action Taken Report in Compliance of Orders Passed by the Hon'ble NGT
dated 18/07/2018 and 06/07/2020**

1. The Hon'ble NGT vide order dtd. 06/07/2020 directed the Maharashtra Pollution Control Board to submit present status of the untreated water being discharged into the river and action taken report and the report in compliance of the order dated 18.07.2018.
2. The Hon'ble NGT vide Order dated 18th July, 2018, directed the MPCB to carry out monitoring of river water 04 times in a year to understand the quality of river water. Accordingly, the Board Officials at Pune have collected water samples from STP Outlets in PMC, PCMC and Pune Cantonment Board, Khadaki Cantonment Board area and from Mula, Mutha, Mula-Mutha, Pawana and Indrayani Rivers in the month of July, 2018 ; October, 2018 ; February, 2019 and July, 2019. The analysis report for the months of July, 2018 and October, 2018 are submitted before the Hon'ble Tribunal in the earlier affidavit.
3. **Pune Municipal Corporation:** The Officials of the Respondent Board at Pune have collected water samples from the STP outlets and the river flowing through the area of Pune Municipal Corporation in July, 2018; October, 2018; February, 2019 and July, 2019.

The results of STP outlet samples collected from PMC area were compared with the Consent Standards. It has been observed that the parameter like Faecal Coliform is exceeding in all samples collected on 27/02/2019 and 02/07/2019 at STP Outlets in PMC region and parameter like Biological Oxygen Demand is

exceeding from the samples collected on 04/07/2019 at Bopodi STP Outlet, Bopodi PMC STP and Bhairoba STP outlet.

After comparing the results of river water samples collected from the River Stretch flowing through the area of Pune Municipal Corporation with drinking water standards, it has been observed that at some of the places, the metal such as Iron (Fe) , Copper (Cu) , Magnesium (Mg) are exceeding the limits and there is increase in BOD and Faecal Coliform of the river when passing through Pune Municipal Corporation. . The analysis results of the river water samples, STP Outlet samples and Nalla water samples collected from the River Stretch flowing through the area of Pune Municipal Corporation are attached and annexed herewith as an "Annexure – I".

There is a considerable amount of sewage generated in PMC area, which is not treated as there is no capacity towards PMC to treat and the same is released untreated into the rivers. Entry of nallas into the rivers with high BOD load is a clear indicator of untreated sewage entering into the rivers.

4. **Khadki Cantonment Board and Pune Cantonment Board** :- The officials of the Respondent Board at Pune have collected water samples from the STP Outlets and the river flowing through the area in Khadaki Cantonment Board and Pune Cantonment Board in July, 2018; October, 2018; February, 2019 and July, 2019. The analysis results of river water samples collected from Khadaki Cantonment Board and Pune Cantonment Board area compared with Drinking Water standards, which shows that the parameters such as BOD and Faecal & Total Coliform are exceeding than the drinking water standards, this is mainly due to discharge of domestic effluents from local bodies.

The analysis results of STP outlet samples collected from Khadaki Cantonment Board and Pune Cantonment Board area compared with the consented standards, which shows that the STP outlet discharge into water body in all three seasons are exceeding parameters like BOD, Total coliform and Faecal coliform and marginally exceeding SS and COD except STP results of Pune

Cantonment Board. The analysis results of the river water samples; collected from River Stretch flowing through the area of Khadaki Cantonment Board and Pune Cantonment Board and STP water sample results are attached and annexed herewith as an **“Annexure – II”**.

5. **Pimpri Chinchwad Municipal Corporation** : The officials of Respondent Board at Pimpri Chinchwad have collected water samples from the STP outlets and the river flowing through the area of Pimpri Chinchwad Municipal Corporation in July, 2018; October, 2018; February, 2019 and June, 2019. After comparing results of STP outlet samples with the consented standards, which shows that parameter BOD of Kasarwadi STP-Phase II, Pimple Nilakh STP, Chikhali-I & II, Sangavi STP is exceeding, the parameter Faecal Coliform of all STP is exceeding. The analysis results of the samples of the STP outlets and the river water samples; collected from River Stretch flowing through the area of Pimpri Chinchwad Municipal Corporation are attached and annexed herewith as an **“Annexure – III”**.

In view of the above non-compliance, the Respondent Board has issued Warning notice on 10.7.2019 & 28.6.2019 to the PCMC STP Dapodi, Chikhali Phase I & II, Pimple Nilakh & Ravet STP.

6. **Present Status of the discharge of untreated sewage into the River & action taken by the MPCB**

(i) **Pune Municipal Corporation area.**

- a. The total Sewage Generation in Pune Municipal Corporation area is 750 MLD. In PMC area, there are total 10 nos. of STPs, having capacity to treat Sewage is 567 MLD. The total gap in the installed capacity of STP and Sewage generation is 183 MLD. However, these STPs are operated for capacity of 514 MLD sewage. In PMC area, total 236 MLD untreated Sewage is discharged into the rivers.

b. On 14/02/2019, Maharashtra Pollution Control Board informed the Commissioner, PMC that time to time it was observed that total 344 MLD untreated sewage was being discharged into the rivers in PMC area. Further the Respondent Board has issued directions vide letter dated 25/04/2019 under Sec. 41 of the Water (Prevention and Control of Pollution) Act, 1974 to the Manager, ICICI Bank, Bundgarden Road to freeze the amount of Rs. 15 Crore from the Bank Account of Pune Municipal Corporation and the ICICI Bank has frozen the said amount from PMC bank account.

(ii) **Khadki Cantonment Board, Pune Cantonment Board and Dehu Road Cantonment Board area.**

Sr. No	Name of the Cantonment Board.	Total raw water consumption	Total effluent generation.	Drainage Network in %	No. of STP Location	STP Capacity in MLD.	Total treated effluent	Total untreated effluent discharged into nalla.	Treated water reuse in MLD	Treated effluent disposal to river
1	Khadki Cantonment Board.	10 MLD	8 MLD	100	02 STPs	8 MLD and 1.2 MLD	8 MLD	0	2MLD	River Mula
2	Dehu Road Cantonment Board	10-11 MLD	8 MLD	0	0	0	0	8 MLD	0	River Pawana and Indrayani
3	Pune Cantonment Board.	15.0 MLD	12.0 MLD	99%	01 STP	20 MLD	9.25 MLD	2.75 MLD	0	River Mutha

The Respondent Board has filed a Criminal Case against Dehu Road Cantonment Board for violation of Provisions of the Water (Prevention and Control of Pollution) Act, 1974 vide Summary Criminal Case no. 44865/2018 MPCB vs. Dehu Road Cantonment Board for not providing STP and discharge of untreated domestic effluent into River Indrayani, a tributary of Pawana River.

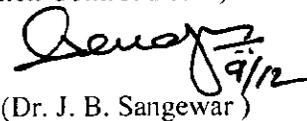
(iii) **Pimpri Chinchwad Municipal Corporation area :-**

Sewage is mixed into the River flowing through Pimpri Chinchwad Municipal Corporation area. Around 32 MLD untreated sewage is mixed into the river flowing through the Pimpri Chinchwad Municipal Corporation area.

The Respondent Board has issued Proposed Directions vide letters dtd.27.2.2019, 9.12.2019 & 15.1.2020 to PCMC as untreated Sewage discharge observed into River Pawana. A copy of the Proposed Directions are attached and annexed herewith as an "Annexure – IV" collectively.

The Respondent Board has filed Regular Criminal Case against PCMC under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 before the Hon'ble Chief Judicial Magistrate Court, Pune in the month of October, 2020.

For and on behalf of Maharashtra
Pollution Control Board,



(Dr. J. B. Sangewar)
Regional Officer-Pune

PMC - STP Analysis Results

Sr.No.	Parameters	STP Outlet standard as per consent issued Dtd. 1.08.2018	STP outlet sample, Vithalwadi STP, PMC STP					Erandwane STP Outlet sample, PMC STP						
			10.7.18	20.10.18	27.2.19	2.7.19	AVG.	11.7.18	20.10.18	27.2.19	2.7.19	AVG.		
1.00	Date of collection													
1.00	pH	6.5-9.0	7.30	7.87	8.08	7.30	7.64	7.10	7.57	8.22	7.50	7.60		
2.00	Dissolved Oxygen	...	6.10	3.50	4.20	1.50	3.83	5.10	3.20	4.50	3.20	4.00		
3.00	BOD	< 30.0	4.50	8.50	8.50	14.50	9.00	8.50	9.00	7.00	10.50	8.75		
4.00	COD	....	....	....	24.00	44.00	34.00	....	....	24.00	32.00	28.00		
5.00	SS	< 100.0	....	....	10.00	66.00	38.00	....	....	12.00	58.00	35.00		
6.00	Oil & Grease	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
7.00	TDS	...	....	....	456.00	...	456.00	....	....	....	...	...
8.00	Nitrate	...	1.00	3.20	9.40	2.00	3.90	6.40	3.80	5.00	6.00	5.30		
9.00	Phosphate	...	BDL	1.53	2.22	...	1.88	BDL	2.46	1.18	2.47	2.04		
10.00	Total Coliform	...	900.00	550.00	.....	.....	725.00	1800+	1800+	....	....	1800+		
11.00	Faecal Coliform	< 1000.0	250.00	130.00	1800+	1800.00	726.67	225.00	550.00	1800+	1800.00	858.33		

PMC - STP Analysis Results

Parameters	STP Outlet standard as per consent issued Dtd. 1.08.2018	New Naidu STP Outlet, PMC STP							Baner STP outlet sample, at- Baner						
		11.7.18	20.10.18	28.2.19	3.7.19	AVG.	12.7.18	22.10.18	28.2.19	4.7.19	AVG.				
Date of collection															
pH	6.5-9.0	7.00	7.60	8.26	7.70	7.64	7.10	7.52	8.10	7.75					
Dissolved Oxygen	...	4.90	1.30	4.10	2.50	3.20	4.20	2.90	4.20	3.90					
BOD	< 30.0	10.50	8.50	9.50	8.50	9.25	7.20	9.50	6.50	7.93					
COD	....	...	...	28.00	28.00	28.00	....	....	20.00	24.00				
SS	< 100.0	...	....	8.00	...	8.00	....	....	...	8.00				
Oil & Grease	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL					
TDS	...	....	....	...	...	...	....	....	...	...
Nitrate	...	---	4.20	4.00	5.00	4.40	3.10	---	7.50	3.97					
Phosphate	...	0.14	2.98	0.97	2.21	1.58	0.14	2.50	1.97	1.34					
Total Coliform	...	550.00	1800+	...	...	550.00	1800+	1800+	...	1800+				
Feacal Coliform	< 1000.0	195.00	900.00	1800+	1800.00	965.00	250.00	550.00	1800.00	866.67					

PMC - STP Analysis Results

Parameters	STP Outlet standard as per consent issued Dtd. 1.08.2018	Bhopodi STP Outlet sample, at Bhopodi PMC STP						Tanajiwadi STP outlet sample						
		12.7.18	22.10.18	28.2.19	4.7.19	AVG	12.7.18	22.10.18	28.2.19	4.7.19	AVG			
Date of collection														
pH	6.5-9.0	7.30	7.26	8.01	7.90	7.62	7.10	7.18	7.80	7.56				
Dissolved Oxygen	...	4.20	2.90	0.80	BDL	2.63	3.60	3.10	2.60	3.33				
BOD	< 30.0	14.50	8.00	22.00	85.00	32.38	18.50	9.00	13.50	12.63				
COD	....	....	....	60.00	256.00	158.00	....	....	40.00	36.00				
SS	< 100.0	....	....	20.00	...	20.00	....	....	...	12.00				
Oil & Grease	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL				
TDS	...	....	....	...	...	...	....	....	...	...
Nitrate	...	9.50	1.50	2.00	1.60	3.65	5.60	2.70	3.40	3.20				
Phosphate	...	0.13	2.67	1.97	2.68	1.86	0.12	3.03	2.24	1.71				
Total Coliform	...	1600.00	1600.00	...	...	1600.00	1800+	1800+	...	1800+				
Feacal Coliform	< 1000.0	200.00	170.00	1800+	1800.00	723.33	225.00	225.00	1800.00	750.00				

PMC - STP Analysis Results

Parameters	STP Outlet standard as per consent issued Dtd. 1.08.2018	Bhairoba STP outlet sample					Mundhawa STP outlet sample					Kharadi STP outlet sample				
		13.7.18	23.10.18	28.2.19	4.7.19	AVG	13.7.18	23.10.18	28.2.19	4.7.19	AVG	13.7.18	23.10.18	28.2.19	4.7.19	AVG
Date of collection																
pH	6.5-9.0	7.30	7.37	8.14	7.90	7.68	7.30	6.89	8.23	8.00	7.61	7.34	8.18	8.00	7.68	
Dissolved Oxygen	...	5.50	2.70	2.40	BDL	3.53	4.40	2.90	4.90	4.30	4.13	4.60	4.00	3.60	4.45	
BOD	< 30.0	4.50	8.50	11.50	105.00	32.38	11.00	7.50	7.20	7.50	8.30	3.50	9.50	10.50	6.88	
COD	....	....	....	32.00	304.00	168.00	....	....	28.00	28.00	28.00	....	36.00	32.00	34.00
SS	< 100.0	....	....	34.00	...	34.00	....	....	14.00	...	14.00	....	12.00	...	12.00
Oil & Grease	...	BDL	BDL	BDL	0.80	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
TDS	...	....	....	..	...	....	....	....	608.00	...	608.00	....	442.00	...	442.00
Nitrate	...	3.00	1.40	0.30	2.00	1.68	3.80	3.20	1.40	7.20	3.90	4.10	1.70	6.90	3.98	
Phosphate	...	0.14	5.27	0.92	2.24	2.14	0.20	1.20	1.16	1.96	1.13	0.15	0.91	2.21	1.12	
Total Coliform	...	1800+	1800+	....	....	1800+	1600.00	1600.00	....	....	1600.00	1800+	....	....	1700+
Feacal Coliform	< 1000.0	200.00	250.00	1800+	1800.00	750.00	225.00	250.00	1800+	1800.00	758.33	250.00	1800+	1800.00	766.67	

		PMC Region- River water Sample Analysis results										
		1.00					2.00					
Sr.No.	Parameters	standard for Drinking water as per Indian standard Specifications IS: 10500	Mutha river water sample, Nandedgaon near Nanded city U/S of PMC Boundary									
	Date of collection		10.7.18	20.10.18	27.2.19	2.7.19	AVG	10.7.18	20.10.18	27.2.19	2.7.19	AVG
1.00	pH	6.5-8.5	7.10	7.09	7.98	7.90	7.52	7.20	7.56	8.08	7.80	7.66
2.00	Dissolved Oxygen	...	5.20	1.40	2.20	4.80	3.40	4.90	NIL	NIL	2.10	3.50
3.00	BOD	...	7.50	10.00	11.50	5.50	8.63	9.50	35.00	44.00	22.00	27.63
4.00	COD	...	20.00	36.00	36.00	16.00	27.00	28.00	92.00	124.00	60.00	76.00
5.00	SS	...	12.00	4.00	10.00	14.00	10.00	36.00	60.00	68.00	16.00	45.00
6.00	Oil & Grease	...	---	---	---	---	---	---	---	---	---	---
7.00	TDS	...	240.00	314.00	286.00	320.00	290.00	326.00	438.00	410.00	432.00	401.50
8.00	Sodium	...	14.90	20.70	22.00	18.10	18.93	30.01	35.40	35.60	28.60	32.40
9.00	Potassium	...	2.70	4.75	4.95	4.00	4.10	5.20	7.48	8.35	4.50	6.38
10.00	Total Chromium	...	0.05	BDL	0.03	BDL	0.04	0.05	0.02	0.03	BDL	0.03
11.00	Nickel	...	0.00	0.01	0.01	0.03	0.01	0.01	0.03	0.02	0.03	0.02
12.00	Cadmium	0.01	BDL	BDL	BDL	BDL	BDL	0.01	BDL	BDL	BDL	0.01
13.00	Lead	0.10	BDL	BDL	BDL	BDL	BDL	0.01	BDL	0.02	BDL	0.02
14.00	Copper	0.05	BDL	0.03	0.02	0.03	0.02	0.03	0.07	0.04	0.03	0.04
15.00	Zinc	5.00	BDL	BDL	0.02	0.02	0.02	0.00	0.04	0.04	0.01	0.02
16.00	Iron	0.30	0.04	0.02	0.14	0.29	0.12	0.30	1.13	0.25	0.24	0.48
17.00	Nitrate	45.00	4.20	2.50	1.10	5.40	3.30	8.20	1.10	2.00	7.20	4.63
18.00	Phosphate	...	0.21	1.91	1.84	1.05	1.25	1.60	2.21	2.25	1.34	1.85
19.00	Manganese	0.10	0.01	0.01	0.09	BDL	0.04	0.02	0.04	0.18	0.01	0.06
20.00	Cobalt	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.00	Total Coliform	...	550.00	1800+	1800+	250.00	400.00	1800+	1800+	1800+	1800.00	1800.00
22.00	Feacal Coliform	...	55.00	195.00	1800+	17.00	89.00	250.00	550.00	1800+	1800.00	866.67
23.00	Mercury	...										

		PMC Region- River water Sample Analysis results									
		5.00					6.00				
Parameters	standard for Drinking water as per Indian standard specifications IS: 10500	Mutha river water sample after STP outlet discharge to river									
Date of collection		10.7.18	20.10.18	27.2.19	3.7.19	AVG	11.7.18	20.10.18	27.2.19	2.7.19	AVG
pH	6.5-8.5	7.30	7.64	8.11	7.50	7.64	6.90	7.63	7.98	7.80	7.58
Dissolved Oxygen	...	3.20	NIL	NIL	2.30	2.75	2.90	NIL	NIL	2.10	2.50
BOD	...	8.50	28.00	65.00	14.50	29.00	28.00	22.00	42.00	15.50	26.88
COD	...	28.00	88.00	180.00	44.00	85.00	88.00	68.00	124.00	48.00	82.00
SS	...	30.00	50.00	100.00	16.00	49.00	44.00	60.00	82.00	18.00	51.00
Oil & Grease	...	---	--	--	--	--	---	--	--	--	--
TDS	...	446.00	420.00	444.00	528.00	459.50	326.00	410.00	352.00	330.00	354.50
Sodium	...	31.80	34.30	36.60	15.00	29.43	30.60	32.80	30.60	24.30	29.58
Potassium	...	6.50	7.16	9.35	2.90	6.48	5.20	7.06	6.92	4.40	5.90
Total Chromium	...	0.05	0.03	0.03	BDL	0.04	0.05	0.05	0.02	BDL	0.04
Nickel	...	0.01	0.01	0.02	0.03	0.02	BDL	0.01	0.02	0.03	0.02
Cadmium	0.01	0.00	BDL	BDL	BDL	0.00	0.00	BDL	BDL	BDL	0.00
Lead	0.10	0.02	BDL	BDL	BDL	0.02	0.03	BDL	BDL	0.01	0.02
Copper	0.05	0.02	0.08	0.06	0.03	0.05	0.02	0.06	0.06	0.03	0.04
Zinc	5.00	0.02	0.03	0.04	0.02	0.03	0.01	0.02	0.02	0.02	0.02
Iron	0.30	0.33	1.24	0.34	0.23	0.54	0.28	0.64	0.28	0.20	0.35
Nitrate	45.00	9.50	3.70	2.10	6.00	5.33	3.00	1.30	1.60	5.70	2.90
Phosphate	...	0.65	3.09	2.16	1.27	1.79	1.60	2.52	2.03	1.24	1.85
Manganese	0.10	0.17	0.18	0.21	BDL	0.19	0.13	0.16	0.22	0.03	0.13
Cobalt	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	...	1600.00	1800+	1800+	1800.00	1700.00	1800+	1800+	1800+	1800.00	1800.00
Faecal Coliform	...	200.00	350.00	1800+	1800.00	783.33	350.00	550.00	1800+	1800.00	900.00
Mercury	...										

Mutha river water sample After erandwane nalla mixing to river

Mutha river water sample after STP outlet discharge to river

PMC Region- River water Sample Analysis results													
Parameters	standard for Drinking water as per Indian standard specifications IS: 10500	7.00						8.00					
		11.7.18	20.10.18	27.2.19	3.7.19	AVG	11.7.18	20.10.18	28.2.19	3.7.19	AVG		
Date of collection													
pH	6.5-8.5	7.00	7.58	8.02	7.50	7.53	6.90	7.63	8.11	7.40	7.51		
Dissolved Oxygen	...	2.10	NIL	NIL	2.20	2.15	2.30	NIL	NIL	1.10	1.70		
BOD	...	38.00	26.00	44.00	19.00	31.75	32.00	17.50	28.00	22.00	24.88		
COD	...	104.00	84.00	128.00	64.00	95.00	92.00	52.00	80.00	76.00	75.00		
SS	...	50.00	58.00	154.00	16.00	69.50	96.00	20.00	40.00	12.00	42.00		
Oil & Grease	...	---	--	--	--	--	---	--	--	--	--		
TDS	...	322.00	408.00	364.00	428.00	380.50	278.00	376.00	412.00	396.00	365.50		
Sodium	...	28.50	33.60	30.70	32.50	31.33	30.50	37.70	32.90	33.70	33.70		
Potassium	...	4.90	7.13	6.95	5.40	6.10	7.20	6.80	8.03	...	7.34		
Total Chromium	...	0.05	0.05	0.03	BDL	0.04	0.05	---	0.02	BDL	0.03		
Nickel	...	0.00	0.01	0.02	0.03	0.02	0.01	0.03	0.02	0.03	0.02		
Cadmium	0.01	0.00	BDL	BDL	BDL	0.00	0.01	BDL	BDL	BDL	0.01		
Lead	0.10	0.01	BDL	BDL	BDL	0.01	0.03	BDL	BDL	BDL	0.03		
Copper	0.05	0.02	0.07	0.07	0.04	0.05	0.04	0.04	0.05	0.05	0.05		
Zinc	5.00	0.01	0.03	0.03	0.01	0.02	0.00	0.01	0.03	0.01	0.01		
Iron	0.30	0.26	1.15	0.46	0.30	0.54	0.28	0.19	0.36	0.35	0.29		
Nitrate	45.00	1.70	1.90	1.40	2.00	1.75	1.30	1.60	1.50	3.00	1.85		
Phosphate	...	1.40	2.02	1.83	1.47	1.68	1.90	1.72	1.45	1.47	1.64		
Manganese	0.10	0.15	0.18	0.25	0.02	0.15	0.19	0.21	0.20	0.05	0.16		
Cobalt	...	0.01	BDL	BDL	BDL	0.01	BDL	BDL	BDL	BDL	BDL		
Total Coliform	...	1800+	1800+	1800+	1800.00	1800.00	1800+	1800+	1800+	1800.00	1800.00		
Faecal Coliform	...	350.00	350.00	1800+	1800.00	833.33	425.00	350.00	1800+	1800.00	858.33		
Mercury	...									BDL	BDL		

		PMC Region- River water Sample Analysis results									
		11.00					12.00				
Parameters	standard for Drinking water as per Indian standard specifications IS: 10500	Ram river water sample at Baner					Mula river water sample at Aundh				
		12.7.18	22.10.18	28.2.19	4.7.19	AVG	12.7.2018	22.10.18	28.2.19	4.7.19	AVG
Date of collection											
pH	6.5-8.5	7.20	7.41	8.27	8.10	7.75	7.30	7.49	8.36	7.60	7.69
Dissolved Oxygen	...	3.10	3.00	NIL	4.10	3.40	6.10	2.70	NIL	2.10	3.63
BOD	...	16.00	7.50	15.00	5.50	11.00	5.50	8.50	55.00	13.50	20.63
COD	...	44.00	24.00	44.00	20.00	33.00	16.00	32.00	160.00	44.00	63.00
SS	...	8.00	12.00	16.00	6.00	10.50	74.00	28.00	74.00	64.00	60.00
Oil & Grease	...	---	---	---	---	---	---	---	---	---	---
TDS	...	548.00	472.00	566.00	538.00	531.00	202.00	574.00	644.00	588.00	502.00
Sodium	...	42.60	39.40	46.70	43.80	43.13	9.00	45.80	52.30	40.60	36.93
Potassium	...	7.70	9.28	11.10	6.30	8.60	1.40	9.65	12.10	8.60	7.94
Total Chromium	...	0.04	----	0.01	BDL	0.03	0.06	0.03	0.02	BDL	0.03
Nickel	...	0.01	BDL	BDL	0.03	0.02	0.01	BDL	BDL	0.03	0.02
Cadmium	0.01	0.01	BDL	BDL	BDL	0.01	0.01	BDL	BDL	BDL	0.01
Lead	0.10	BDL	BDL	BDL	BDL	BDL	0.03	BDL	BDL	BDL	0.03
Copper	0.05	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.05	0.03	0.03
Zinc	5.00	BDL	BDL	BDL	0.01	0.01	0.15	BDL	0.11	0.02	0.10
Iron	0.30	1.46	----	0.28	0.19	0.64	1.77	0.44	0.80	0.22	0.81
Nitrate	45.00	8.00	3.20	1.60	5.90	4.68	2.10	3.50	1.40	2.40	2.35
Phosphate	...	0.21	2.42	1.77	1.07	1.37	1.20	1.30	1.52	1.72	1.44
Manganese	0.10	0.05	0.05	0.51	0.02	0.16	0.10	0.12	0.21	0.03	0.12
Cobalt	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	...	1800+	1800+	1800+	1800.00	1800.00	1800+	1800+	1800+	1800.00	1800.00
Feacal Coliform	...	250.00	350.00	1800+	1800.00	800.00	195.00	275.00	1800+	1800.00	756.67
Mercury	...										

PMC Region- River water Sample Analysis results						
Parameters	standard for Drinking water as per Indian standard specifications IS: 10500	15.00				
Mutha river water sample at Khadakwasia Dam						
Date of collection		13.7.18	20.10.18	28.2.19	2.7.19	AVG
pH	6.5-8.5	7.20	7.22	7.70	6.40	7.13
Dissolved Oxygen	...	5.10	4.80	7.00	5.60	5.63
BOD	...	4.00	5.00	2.00	3.50	3.63
COD	...	16.00	20.00	8.00	12.00	14.00
SS	...	6.00	8.00	6.00	6.00	6.50
Oil & Grease	...	---	---	---	---	---
TDS	...	98.00	102.00	74.00	60.00	83.50
Sodium	...	4.30	6.13	4.20	4.20	4.71
Potassium	...	0.70	0.75	0.59	0.40	0.61
Total Chromium	...	0.07	BDL	0.03	BDL	0.05
Nickel	...	0.04	BDL	0.01	0.02	0.02
Cadmium	0.01	BDL	BDL	BDL	BDL	BDL
Lead	0.10	0.03	BDL	BDL	BDL	0.03
Copper	0.05	0.03	0.02	0.01	0.02	0.02
Zinc	5.00	0.04	0.01	0.01	0.02	0.02
Iron	0.30	0.74	0.23	0.10	0.20	0.32
Nitrate	45.00	0.80	0.40	0.50	0.60	0.58
Phosphate	...	0.22	3.22	0.59		1.34
Manganese	0.10	BDL	0.03	BDL	0.01	0.02
Cobalt	...	BDL	BDL	BDL	BDL	BDL
Total Coliform	...	900.00	1800+	1800+	80.00	490.00
Faecal Coliform	...	120.00	140.00	1800+	8.00	89.33
Mercury	...					

		PMC - Nalla Water Sample Analysis results											
		1					2						
Sr.No.	Parameters	Nala Water sample, At Wadgaon Khurd Near Bangalore Pune NH Bridge					Nala Water sample, at NH, Warje						
	Date of collection	10.7.2018	20.10.2018	27.2.19	2.7.19	10.7.2018	20.10.2018	27.2.19	2.7.19	10.7.2018	20.10.2018	27.2.19	2.7.19
1	pH	7.1	7.3	8.4	7.7	7.2	7.4	8.4	7.5	7.2	7.4	8.4	7.5
2	Dissolved Oxygen	0.8	NIL	NIL	1.2	2.2	NIL	NIL	0.9	2.2	NIL	NIL	0.9
3	BOD	92	75.0	190.0	26.0	36	32.0	165.0	23.0	36	32.0	165.0	23.0
4	COD	264	220.0	556.0	80.0	104	92.0	476.0	68.0	104	92.0	476.0	68.0
5	SS	142	150.0	404.0	12.0	122	56.0	372.0	28.0	122	56.0	372.0	28.0
6	O & G	--	--	--	--	--	--	--	--	--	--	--	--
7	TDS	414	574.0	542.0	594.0	320	354.0	536.0	588.0	320	354.0	536.0	588.0
8	Sodium	51.61	54.4	49.7	46.7	24.97	35.3	49.8	47.0	24.97	35.3	49.8	47.0
9	Potassium	10.7	12.9	12.2	8.3	4.2	5.30	12.20	8.00	4.2	5.30	12.20	8.00
10	Total Chromium	0.065	BDL	0.034	BDL	0.027	0.011	0.036	BDL	0.027	0.011	0.036	BDL
11	Nickel	0.015	BDL	0.012	0.03	0.001	0.019	0.017	0.04	0.001	0.019	0.017	0.04
12	Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Lead	0.01	BDL	0.015	BDL	0.02	BDL	0.031	BDL	0.02	BDL	0.031	BDL
14	Copper	0.009	0.053	0.027	0.02	0.008	0.035	0.037	0.03	0.008	0.035	0.037	0.03
15	Zinc	0.049	BDL	0.047	0.05	0.004	0.043	0.083	0.06	0.004	0.043	0.083	0.06
16	Iron	0.505	0.013	0.421	0.41	1.275	0.798	0.707	0.45	1.275	0.798	0.707	0.45
17	Nitrate	1.2	0.6	3.2	2.7	12.6	0.3	3.2	5.0	12.6	0.3	3.2	5.0
18	Phosphate	0.67	1.99	2.95	1.52	1.40	2.41	2.35	1.34	1.40	2.41	2.35	1.34
19	Manganese	0.16	0.214	0.263	0.14	0.03	0.044	0.310	0.06	0.03	0.044	0.310	0.06
20	Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Total Coliform	1800+	1800+	1800+	1800.0	1800+	1800+	1800+	1800.0	1800+	1800+	1800+	1800.0
22	Feacal Coliform	275	1800+	1800+	1800.0	250	1800+	1800+	1800.0	250	1800+	1800+	1800.0

Parameters	3				4			
	Hingne Nalla water sample, at Hingane				Erandwane Nalla water sample, Near Erandwane STP			
Date of collection	10.7.2018	20.10.2018	27.2.19	2.7.19	11.7.2018	20.10.2018	27.2.19	2.7.19
pH	7.3	7.5	7.7	7.6	7	7.7	8.1	7.6
Dissolved Oxygen	2.3	NIL	NIL	2.5	2.5	NIL	NIL	0.9
BOD	27	15.5	55.0	23.0	32	18.5	16.5	26.0
COD	80	44.0	168.0	60.0	92	56.0	48.0	84.0
SS	24	30.0	32.0	22.0	20	20.0	78.0	16.0
O & G	--	--	--	--	--	--	--	--
TDS	290	312.0	284.0	598.0	288	336.0	270.0	398.0
Sodium	30.3	34.5	23.1	31.1	32.3	38.5	19.5	31.7
Potassium	4	5.22	4.39	4.70	4.6	5.87	3.25	4.90
Total Chromium	0.058	0.021	0.021	BDL	0.05	0.027	0.016	BDL
Nickel	BDL	0.016	0.017	0.03	0.006	BDL	0.017	0.03
Cadmium	0.002	BDL	BDL	BDL	0.002	BDL	BDL	BDL
Lead	BDL	BDL	0.031	BDL	BDL	BDL	BDL	BDL
Copper	BDL	0.027	0.017	0.02	0.007	0.029	0.025	0.03
Zinc	BDL	0.051	0.019	0.07	0.004	0.014	0.055	0.02
Iron	0.18	0.487	0.162	0.45	0.107	0.419	0.232	0.26
Nitrate	7	0.8	1.2	3.9	1.5	1.3	0.8	4.7
Phosphate	0.94	1.57	1.24	1.94	0.94	3.16	0.93	1.34
Manganese	0.03	0.046	0.201	0.15	0.195	0.206	0.141	0.02
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800.0	1800+	1800+	1800+	1800.0
Feacal Coliform	275	900	1800+	1800.0	275	1800+	1800+	1800.0

Parameters	5					6				
	Ambilodha nalla water sample					Nalla water sample of Nagzarinalla, zuna bazar, Kasaba peth				
Date of collection	11.7.2018	20.10.2018	27.2.19	3.7.19		11.7.2018	20.10.2018	28.2.19	3.7.19	
pH	7	7.5	8.1	7.4		7	7.6	7.9	7.6	7.6
Dissolved Oxygen	2.2	NIL	NIL	0.8		2	NIL	NIL	0.7	0.7
BOD	35	35.0	28.0	28.0		40	46.0	140.0	27.0	27.0
COD	108	100.0	80.0	88.0		116	116.0	392.0	88.0	88.0
SS	46	154.0	46.0	14.0		80	74.0	290.0	20.0	20.0
O & G	--	--	--	--		--	--	--	--	--
TDS	216	444.0	348.0	394.0		302	394.0	488.0	408.0	408.0
Sodium	35.2	32.6	31.8	35.7		34.7	37.9	34.7	35.1	35.1
Potassium	6.9	6.1	6.9	6.0		16.5	10.6	8.2	5.8	5.8
Total Chromium	0.057	0.033	0.037	BDL		0.072	0.017	0.019	BDL	BDL
Nickel	0.001	0.021	0.017	0.03		0.004	0.013	0.020	0.03	0.03
Cadmium	0.002	BDL	BDL	BDL		0.003	BDL	BDL	BDL	BDL
Lead	0.01	BDL	BDL	0.010		0.02	BDL	BDL	BDL	BDL
Copper	0.029	0.086	0.134	0.06		0.017	0.089	0.055	0.06	0.06
Zinc	0.007	0.017	0.014	0.02		0.063	0.054	0.036	0.02	0.02
Iron	0.264	0.852	0.178	0.30		0.600	1.844	0.476	0.30	0.30
Nitrate	1.2	1.0	1.4	2.0		1.9	1.0	1.7	2.1	2.1
Phosphate	2.2	2.76	1.47	1.54		2.2	1.82	1.81	1.27	1.27
Manganese	0.074	0.094	0.157	0.03		0.164	0.176	0.253	0.12	0.12
Cobalt	0.01	BDL	BDL	BDL		BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800.0		1800+	1800+	1800+	1800.0	1800.0
Feecal Coliform	850	1800+	1800+	1800.0		550	1800+	1800+	1800.0	1800.0

Parameters	7				8			
	Nala water sample at Botanical garden				naila water sample at Tanajiwadi			
	12.7.2018	22.10.2018	28.2.19	4.7.19	12.7.2018	22.10.2018	28.2.19	4.7.19
Date of collection								
pH	7.1	7.3	8.4	7.8	6.5	7.3	8.3	7.6
Dissolved Oxygen	4.1	NIL	NIL	4.1	NIL	NIL	NIL	1.1
BOD	22	15.5	55.0	17.5	175	35.0	15.5	11.0
COD	68	44.0	160.0	48.0	536	108.0	44.0	36.0
SS	4	84.0	74.0	16.0	104	38.0	22.0	8.0
O & G								
TDS	454	550.0	644.0	266.0	628	530.0	478.0	460.0
Sodium	35.5	44.3	52.3	14.5	44.3	38.3	44.4	37.3
Potassium	5.6	8.6	12.1	2.7	10.4	7.24	9.47	10.40
Total Chromium	0.053	0.028	0.020	BDL	0.056	0.025	0.015	BDL
Nickel	0.008	BDL	BDL	0.03	0.067	BDL	BDL	0.03
Cadmium	0.006	BDL	BDL	BDL	0.006	BDL	BDL	BDL
Lead	0.03	BDL	BDL	BDL	0.03	BDL	BDL	BDL
Copper	0.012	0.024	0.052	0.03	0.017	0.010	0.025	0.03
Zinc	BDL	0.011	0.114	0.01	0.108	BDL	0.012	0.01
Iron	0.182	0.615	0.795	0.71	0.104	0.572	0.235	0.28
Nitrate	2.1	1.1	1.4	4.5	2	0.9	0.8	6.5
Phosphate	1.6	2.5	1.52	1.47	1.65	3.44	1.26	1.37
Manganese	0.14	0.148	0.214	0.03	0.251	0.282	0.409	0.01
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800.0	1800+	1800+	1800+	1800.0
Feacal Coliform	225	350	1800+	1800.0	350	1800+	1800+	1800.0

Parameters	9					10				
	Bhairoba Nalla water sample at bhairoba STP					Keshwanagar Nalla water sample at Mundhawa STP				
	Date of collection	13.7.2018	23.10.2018	28.2.19	4.7.19	13.7.2018	23.10.2018	28.2.19	4.7.19	
pH	7.3	7.3	7.3	7.6	7.6	7.2	7.4	8.0	7.6	
Dissolved Oxygen	5.3	NIL	NIL	BDL	BDL	3.3	NIL	NIL	1.6	
BOD	4.5	52.0	245.0	10.5	32	32	32.0	38.0	11.0	
COD	20	160.0	728.0	32.0	100	100	108.0	112.0	36.0	
SS	8	204.0	608.0	20.0	88	88	128.0	110.0	6.0	
O & G		.....	BDL				588.0	BDL	
TDS	366	560.0	604.0	308.0	710	710	36.2	396.0	4210.0	
Sodium	42.8	39.6	48.5	27.3	86.7	86.7	8.4	34.5	34.7	
Potassium	10.1	10.9	9.8	3.5	11.5	11.5	0.027	7.6	5.3	
Total Chromium	0.075	0.025	0.078	BDL	0.068	0.068	BDL	0.010	BDL	
Nickel	0.038	BDL	0.010	0.030	0.023	0.023	BDL	BDL	0.020	
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Lead	0.01	BDL	0.017	BDL	0.046	0.046	0.021	BDL	BDL	
Copper	0.037	0.023	0.399	0.030	0.046	0.046	0.013	0.041	0.020	
Zinc	0.043	0.055	0.386	0.050	0.04	0.04	0.489	0.018	0.030	
Iron	0.8	0.909	4.171	1.830	0.5	0.5	2.2	0.283	0.160	
Nitrate	3.8	1.7	2.3	5.4	3.1	3.1	1.58	1.4	6.3	
Phosphate	1.7	4.49	2.40	1.48	1	1	0.106	1.69	1.21	
Manganese	0.216	0.230	0.351	0.160	0.09	0.09	BDL	0.113	0.010	
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	1800+	BDL	BDL	
Total Coliform	1800+	1800+	1800+	1800.0	1800+	1800+	1800+	1800+	1800.0	
Faecal Coliform	275	1800+	1800+	1800.0	350	350		1800+	1800.0	

SRO P 2 - River Analysis Results

Annexure II ⁷⁰⁹

Location	standard for Drinking water	Mula Mutha River at U/s. of Agakhan Bridge at Koregaon Park Crematorium				
Parameters	Date	27.07.2018	25.10.2018	22.02.2019	09.07.2019	Average
pH	6.5-8.5	7.5	7.0	8.1	7.4	7.5
Disolved Oxygen	...	3.9	NIL	NIL	2.6	3.3
B.O.D.27 C (3 days)	...	10.5	35.0	110.0	10.5	41.5
COD	...	32.0	96.0	288.0	32.0	112.0
Suspended Solids	...	54.0	30.0	200.0	80.0	91.0
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	300.0	360.0	488.0	248.0	349.0
Sodium	...	20.13	34.90	43.60	15.0	28.4
Potassium	...	3.48	8.0	10.80	2.5	6.2
Total Amm. Nitrogen	...	---	---	---	---	---
Total Chromium	...	0.068	BDL	0.013	BDL	0.041
Nickel	...	BDL	BDL	0.020	0.02	0.0
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.0
Lead	0.1 mg/ltr	BDL	BDL	BDL	BDL	0.0
Copper	0.05 mg/ltr	0.019	0.021	0.042	0.02	0.026
Zinc	5 mg/ltr	0.012	0.015	0.072	0.01	0.027
Iron	0.3 mg/ltr	0.614	0.641	1.076	0.49	0.705
Nitrate	45 mg/ltr	0.8	1.3	0.419	4.4	1.7
Phosphate	...	0.2097	2.91	2.67	1.95	1.9
Manganese	0.1 mg/ltr	0.116	0.187	0.099	0.04	0.111
Cobalt	...	BDL	BDL	BDL	BDL	0.0
Total Coliform	...	1600.0	1800+	1800+	1800	1700.0
Feacal Coliform	...	225.0	550+	1800+	1800	1012.5

The above results show parameters such as BOD and Feacal & total Coliform exceeding the drinking water standards, this is mainly due to discharge of domestic effluents from local bodies.

Location	standard for Drinking water	Mula Mutha River at D/s. of Agakhan Bridge (About 1.0 km) Near Mahadev Temple				
Parameters	Date	27.07.2018	25.10.2018	22.02.2019	09.07.2019	Average
pH	6.5-8.5	7.7	7.2	7.9	7.3	7.5
Disolved Oxygen	...	4.9	1.6	NIL	2.8	3.1
B.O.D.27 C (3 days)	...	8.0	11.5	26.0	8.5	13.5
COD	...	20.0	36.0	80.0	28.0	41.0
Suspended Solids	...	12.0	22.0	76.0	112.0	55.5
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	270.0	422.0	422.0	244.0	339.5
Sodium	...	19.88	37.6	40.3	14.1	28.0
Potassium	...	3.03	7.8	9.45	2.4	5.7
Total Amm. Nitrogen	....	---	---	---	---	---
Total Chromium	...	0.069	0.076	BDL	BDL	0.073
Nickel	...	BDL	BDL	0.021	0.02	0.021
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.0
Lead	0.1 mg/ltr	BDL	BDL	BDL	BDL	0.0
Copper	0.05 mg/ltr	0.030	0.013	0.027	0.01	0.020
Zinc	5 mg/ltr	0.010	0.010	0.036	0.01	0.017
Iron	0.3 mg/ltr	0.684	0.427	1.295	0.60	0.752
Nitrate	45 mg/ltr	4.8	1.2	0.639	4.0	2.7
Phosphate	...	0.1988	1.36	2.24	1.45	1.312
Manganese	0.1 mg/ltr	BDL	0.229	0.142	0.02	0.130
Cobalt	...	BDL	BDL	BDL	BDL	0.0
Total Coliform	...	1800+	1800+	1800+	1800	1800.0
Feacal Coliform	...	250.0	550+	1800+	1800	1025.0

Location	standard for Drinking water	Mula river-Rajiv Nagar, Smashan Bhoomi & U/s. of STP 8.0 MLD				
Parameters	Date	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Average
pH	6.5-8.5	7.9	6.8	7.9	7.3	7.5
Disolved Oxygen	...	3.7	2.2	3.6	1.9	2.9
B.O.D.27 C days) (3	...	120.0	9.5	11.5	15.5	39.1
COD	...	36.0	32.0	32.0	48.0	37.0
Suspended Solids	...	38.0	4.0	16.0	24.0	20.5
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	226.0	512.0	512.0	294.0	386.0
Sodium	...	9.49	47.60	52.50	16.4	31.50
Potasium	...	1.35		10.70	2.4	4.82
Total Amm. Nitrogen	....	1.28	---	---	---	1.28
Total Chromium	...	0.011	0.034	BDL	BDL	0.023
Nickel	...	0.027	0.020	0.018	0.04	0.026
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.000
Lead	0.1 mg/ltr	0.030	BDL	BDL	0.01	0.020
Copper	0.05 mg/ltr	0.032	0.033	0.017	BDL	0.027
Zinc	5 mg/ltr	0.010	0.016	0.090	0.01	0.032
Iron	0.3 mg/ltr	0.435	0.723	0.504	0.18	0.461
Nitrate	45 mg/ltr	3.2	4.3	1.9	3.9	3.3
Phosphate	...	0.2249	1.42	1.85	1.22	1.179
Manganese	0.1 mg/ltr	BDL	0.319	0.29	0.08	0.231
Cobalt	...	BDL	BDL	BDL	0.02	0.020
Total Coliform	...	1800+	1800+	1800+	1800	1800.0
Feacal Coliform	...	250.0	1800+	1800+	1800	1025.0

Location	standard for Drinking water	Mula River Water of 512 Army Base Workshop D/s. of STP of 8-MLD, Gadi Adda Nala & Rajiv Nagar Nala				
Parameters	Date	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Average
pH	6.5-8.5	7.9	6.9	8.2	During visit the approach road to said location was closed, hence sampling could not be carried out.	7.7
Disolved Oxygen	...	3.6	1.2	2.0		2.3
B.O.D.27 C (3 days)	...	9.5	12.5	14.0		12.0
COD	...	28.0	36.0	44.0		36.0
Suspended Solids	...	6.0	10.0	8.0		8.0
Oil & Grease	...	---	---	---		---
Total Dissolved Solids	...	230.0	516.0	504.0		416.7
Sodium	...	8.41	47.9	47.1		34.5
Potasium	...	1.10	9.02	10.0		6.7
Total Amm. Nitrogen	....	0.58	---	---		0.6
Total Chromium	...	0.013	0.030	BDL		0.022
Nickel	...	0.020	BDL	0.019		0.020
Cadmium	0.01 mg/ltr	BDL	BDL	BDL		0.0
Lead	0.1 mg/ltr	0.021	BDL	BDL		0.021
Copper	0.05 mg/ltr	0.022	0.029	0.016		0.022
Zinc	5 mg/ltr	0.013	BDL	0.060		0.037
Iron	0.3 mg/ltr	0.425	0.425	0.706		0.519
Nitrate	45 mg/ltr	2.7	4.3	1.5		2.8
Phosphate	...	0.2576	1.83	2.61		1.566
Manganese	0.1 mg/ltr	0.028	0.036	0.17		0.079
Cobalt	...	BDL	BDL	BDL	0.0	
Total Coliform	...	1800+	1800+	1800+	0.0	
Feacal Coliform	...	275	900	1800+	587.5	

Location	standard for Drinking water	Mula River Near Bhaiyawadi Ghat D/s. of 1.2 MLD STP (East Khadaki)				
Parameters	Date	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Average
pH	6.5-8.5	7.8	6.9	8.2	7.3	7.6
Disolved Oxygen	...	3.0	1.5	1.5	3.1	2.3
B.O.D.27 C days) (3	...	19.0	13.5	22.0	8.5	15.8
COD	...	56.0	40.0	60.0	28.0	46.0
Suspended Solids	...	16.0	8.0	16.0	20	15.0
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	220.0	510.0	468.0	280.0	369.5
Sodium	...	7.6	45.1	45.3	16.8	28.7
Potassium	...	0.900	8.88	9.35	3.4	5.6
Total Amm. Nitrogen	....	---	---	---	---	---
Total Chromium	...	0.014	0.038	BDL	BDL	0.026
Nickel	...	0.028	0.018	0.019	0.01	0.019
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.0
Lead	0.1 mg/ltr	0.028	BDL	BDL	BDL	0.028
Copper	0.05 mg/ltr	0.031	0.027	0.014	0.02	0.023
Zinc	5 mg/ltr	0.015	BDL	0.039	0.01	0.021
Iron	0.3 mg/ltr	0.525	0.382	1.32	0.19	0.605
Nitrate	45 mg/ltr	2.5	5.8	1.6	3.3	3.3
Phosphate	...	0.2509	2.16	1.89	1.45	1.4377
Manganese	0.1 mg/ltr	0.010	0.022	0.14	0.02	0.048
Cobalt	...	BDL	BDL	BDL	BDL	0.0
Total Coliform	...	1800+	1800+	1800+	1800	1800.0
Feacal Coliform	...	250	900	1800+	900	683.3

Location	standard for Drinking water	Mula River Water Near Wakadewadi U/s. of Raja Road Nala				
		Date	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Average
Parameters						
pH	6.5-8.5	7.9	6.9	8.3	7.5	7.6
Disolved Oxygen	...	5.1	2.6	NIL	0.9	2.9
B.O.D.27 C (3 days)	...	7.5	8.5	24.0	22.0	15.5
COD	...	20.0	24.0	68.0	68.0	45.0
Suspended Solids	...	18.0	14.0	24.0	32.0	22.0
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	218.0	416.0	464.0	660.0	439.5
Sodium	...	--	45.2	44.5	106.0	65.2
Potassium	...	--	9.0	9.20	11.8	10.0
Total Amm. Nitrogen	....	---	---	---	---	---
Total Chromium	...	0.029	0.032	BDL	BDL	0.031
Nickel	...	0.031	0.029	0.023	0.03	0.028
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.0
Lead	0.1 mg/ltr	0.025	BDL	BDL	BDL	0.025
Copper	0.05 mg/ltr	0.032	0.038	0.015	0.02	0.026
Zinc	5 mg/ltr	0.012	0.012	0.023	0.03	0.019
Iron	0.3 mg/ltr	0.421	0.614	0.443	1.96	0.860
Nitrate	45 mg/ltr	2.9	4.6	1.6	9.4	4.6
Phosphate	...	BDL	2.49	2.27	1.41	2.057
Manganese	0.1 mg/ltr	0.024	0.036	0.086	0.01	0.039
Cobalt	...	BDL	BDL	BDL	BDL	0.0
Total Coliform	...	1600.0	1800+	1800+	1800	1700.0
Feacal Coliform	...	250.0	550.0	1800+	900	566.7

Location	standard for Drinking water	Mula River Water at Old Holkar Bridge D/s. of Raja Road Nala				
		Date	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Average
pH	6.5-8.5	7.9	6.9	8.2	7.2	7.5525
Disolved Oxygen	...	4.9	2.5	1.5	2.6	2.875
B.O.D.27 C (3 days)	...	8.5	7.5	23.0	10.5	12.375
COD	...	24.0	20.0	64.0	32.0	35
Suspended Solids	...	16.0	14.0	12.0	18.0	15
Oil & Grease	...	---	---	---	---	---
Total Dissolved Solids	...	210.0	410.0	470.0	290.0	345
Sodium	...	--	45.0	47.7	16.9	36.5
Potasium	...	--	8.89	9.61	2.4	7.0
Total Amm. Nitrogen	...	---	---	---	---	---
Total Chromium	...	0.020	0.046	BDL	BDL	0.033
Nickel	...	0.041	0.024	0.013	0.03	0.027
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	0.0
Lead	0.1 mg/ltr	0.018	BDL	BDL	0.02	0.019
Copper	0.05 mg/ltr	0.016	0.034	0.015	0.02	0.021
Zinc	5 mg/ltr	BDL	0.010	0.053	0.01	0.024
Iron	0.3 mg/ltr	0.372	0.368	0.465	0.17	0.34375
Nitrate	45 mg/ltr	2.8	2.8	1.5	4.0	2.775
Phosphate	...	BDL	1.12	1.76	1.60	1.49
Manganese	0.1 mg/ltr	0.010	0.028	0.128	0.04	0.0515
Cobalt	...	0.010	BDL	BDL	BDL	0.01
Total Coliform	...	1800+	1800+	1800+	1800	1800
Feacal Coliform	...	350.0	550	1800+	1800	900

Parameters	STP Outlet standard discharge to water body	1					2				
		Khadki STP 8-MLD Kadki Bazar-Outlet					Khadki STP 1.2 MLD Outlet				
Date of collection		25.7.2018	16.10.2018	26.02.2019	15.07.2019	Avg	25.7.2018	16.10.2018	26.02.2019	15.07.2019	Avg
pH	6.5 - 8.5	7.4	6.9	8.1	7.5	7.5	7.4	6.8	8.1	7.2	7.4
Suspended Solids	<20 mg/ litre	---	12.0	28.0	240.0	93.3	---	---	132.0	30.0	81.0
Dissolved Oxygen	...	1.2	3.2	3.0	BDL	2.5	3.1	NIL	NIL	BDL	3.1
BOD	< 10.0	27.5	12.5	17.0	85.0	35.5	18.5	65.0	85.0	55.0	55.9
COD	<50 mg/Lit	---	48.0	-	256.0	152.0	---	188.0	---	164.0	176.0
T A N	<5.0 mg/lit	---	---	-	0.2	0.2	---	---	---	0.2	0.2
Oil & Grease	...	BDL	BDL	BDL	---	0.0	BDL	BDL	BDL	---	0.0
Total Coliform	...	1800+	1800+	1800+	1800.0	1800.0	1800+	1800+	1800	1800.0	1800.0
Feacal Coliform	<230 MPN/100 ml	225	1800+	1800+	1800.0	1012.5	225.0	1800+	1800+	1800.0	1012.5

STP outlet discharge to water body in all 03 seasons exceeding w.r.t. BOD, Total coliform and faecal coliform and marginally exceeding SS and COD (except STP results of Pune Cantonment Board)

		3				
Parameters	STP Outlet standard discharge to water body	Pune Conontment SBR 20MLD STP				
Date of collection		27.7.2018	25.10.2018	22.02.2019	09.07.2019	Avg
pH	6.5 - 8.5	7.9	7.2	8.4	7.9	7.9
Suspended Solids	<20 mg/ litre	6.0	8.0	8.0	28	12.5
Dissolved Oxygen	...	4.1	2.7	6.2	4.6	4.4
BOD	< 10.0	12.5	6.0	3.8	20	10.6
COD	<50 mg/Lit	36.0	24.0	---	20	26.7
T A N	<5.0 mg/lit	0.37	2.5	---	0.4	1.1
Oil & Grease	...	BDL	BDL	BDL	BDL	0.0
Total Colliform	...	1800+	1800+	1800+	225	225.0
Feacal Colliform	<230 MPN/100 ml	350.0	425.0	195	7	244.3

SRO P2 Nala Analysis Results

Parameters	1						2					
	Nala Near Hindu Smashan Bhoomi						Nala Water of Gadi Adda at Khadaki					
	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Avg		25.07.2018	16.10.2018	26.02.2019	15.07.2019	Avg	
Date of collection												
pH	7.6	6.7	8.3	7.2	7.5		7.5	6.5	8.2	6.9	7.3	
Dissolved Oxygen	1.2	NIL	NIL	BDL	1.2		NIL	NIL	NIL	BDL	0.0	
B.O.D. 27° C (3 days)	55.0	105.0	140.0	95.0	98.8		120.0	140.0	180.0	155.0	148.8	
Chemical Oxygen Dimand	156.0	292.0	388.0	280.0	279.0		336.0	428.0	528.0	492.0	446.0	
Suspended Solids	28.0	102.0	148.0	24.0	75.5		68.0	96.0	244.0	56.0	116.0	
Oil & Grease	--	--	--	--	--		--	--	--	--	--	
Total Dissolved Solids	750.0	674.0	634.0	804.0	715.5		526.0	572.0	528.0	594.0	555.0	
Sodium	59.33	86.3	81.7	90.9	79.6		46.40	81.4	63.6	140.0	82.9	
Potassium	6.13	14.5	16.5	12.0	12.3		9.09	16.4	14.6	17.0	14.3	
Total Amm. Nitrogen	--	--	--	--	--		14.45	--	--	--	14.5	
Total Chromium	0.011	0.043	BDL	BDL	0.027		0.065	0.020	BDL	BDL	0.043	
Nickel	0.017	0.017	0.021	0.02	0.0		0.034	BDL	0.017	0.03	0.0	
Cadmium	BDL	BDL	BDL	BDL	0.0		BDL	BDL	BDL	BDL	0.0	
Lead	0.015	BDL	BDL	BDL	0.015		0.013	BDL	BDL	BDL	0.0	
copper	0.030	0.041	0.024	0.02	0.029		0.056	0.065	0.032	0.02	0.043	
Zinc	0.025	0.033	0.092	0.02	0.043		0.058	0.029	0.097	0.01	0.049	
Iron	0.435	1.079	0.514	0.28	0.577		1.528	0.759	2.494	0.28	1.265	
Nitrate	2.1	0.8	1.0	3.3	1.80		3.9	0.9	1.4	2.5	2.175	
Phosphate	0.341	3.230	3.85	1.48	2.225		0.418	3.380	2.79	1.31	1.975	
Manganese	0.240	0.216	0.153	0.15	0.190		0.342	0.314	0.131	0.12	0.227	
Cobalt	BDL	BDL	BDL	BDL	0.00		BDL	BDL	BDL	BDL	0.0	
Total Coliform	1800+	1800+	1800+	1800	1800.0		1800+	1800+	1800+	1800	1800.0	
Faecal Coliform	350.0	1800+	1800+	1800	1075.0		550.0	1800+	1800+	1800	1175.0	

Parameters	3 Nalla near Rajiv nagar Vasant Nala Khadki at Gurudwara						4 Mula River Near Shanti Nagar area U/s. of STP 1.2 MLD					
	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Avg		25.07.2018	16.10.2018	26.02.2019	15.07.2019	Avg	
Date of collection												
pH	7.7	6.7	7.9	7.3	7.4		7.7	6.9	7.8	7.2	7.4	
Dissolved Oxygen	2.8	1.2	NIL	BDL	2.0		4.1	1.8	1.4	2.1	2.4	
B.O.D. 27° C (3 days)	22.0	32.0	110.0	118.0	70.5		12.5	10.5	18.5	13.5	13.8	
Chemical Oxygen Dimand	64.0	96.0	284.0	324.0	192.0		36.0	36.0	52.0	40.0	41.0	
Suspended Solids	6.0	204.0	980.0	2236.0	856.5		12.0	14.0	12.0	12.0	12.5	
Oil & Grease	--	--	--	--	--		--	--	--	--	--	
Total Dissolved Solids	620.0	442.0	628.0	680.0	592.5		228.0	544.0	508.0	310.0	397.5	
Sodium	31.26	42.3	56.4	84.8	53.7		8.21	49.3	49.9	17.7	31.3	
Potassium	6.75	9.3	12.7	9.1	9.5		1.21	10.0	10.7	2.2	6.0	
Total Amm. Nitrogen	16.50	---	---	---	16.5		--	--	--	--	--	
Total Chromium	0.023	0.043	BDL	BDL	0.033		0.016	--	BDL	BDL	0.016	
Nickel	0.021	BDL	0.026	0.03	0.026		0.027	--	0.015	0.03	0.024	
Cadmium	BDL	BDL	BDL	BDL	0.0		BDL	--	BDL	BDL	0.000	
Lead	BDL	BDL	BDL	0.01	0.01		0.022	--	BDL	0.01	0.016	
copper	0.034	0.031	0.017	0.02	0.026		0.024	--	0.019	0.02	0.021	
Zinc	0.018	0.012	0.081	0.01	0.030		0.012	--	0.108	0.02	0.047	
Iron	0.650	0.846	0.741	0.3	0.634		0.619	--	0.539	0.17	0.443	
Nitrate	1.2	2.8	0.7	5.3	2.500		2.9	4.5	1.7	3.6	3.2	
Phosphate	0.344	1.580	3.16	1.19	1.569		0.2215	2.09	1.77	2.06	1.535	
Manganese	0.331	0.342	0.101	0.20	0.244		BDL	0.042	0.102	0.11	0.085	
Cobalt	BDL	BDL	BDL	BDL	0.0		BDL	BDL	BDL	BDL	0.0	
Total Coliform	1800+	1088+	1800+	1800	1800.0		1800+	1800+	1800+	1800	1800.0	
Faecal Coliform	350.0	1800+	1800+	1800	1075.0		200.0	550.0	1800+	1800	850.0	

Parameters	5 Nala Water Near Raja Road Behind Nikshin Vihar Colony					6 Nala Near DRDO (Kateshwar Wadi)				
	25.07.2018	16.10.2018	26.02.2019	15.07.2019	Avg	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg
Date of collection										
pH	8.2	7.1	8.0	7.6	7.7	8.0	7.3	8.1	7.5	7.7
Dissolved Oxygen	4.8	1.5	NIL	2.3	2.9	5.4	NIL	5.2	2.6	4.4
B.O.D. 27° C (3 days)	9.5	14.0	55.0	11.5	22.5	6.5	14.5	4.8	14.5	10.1
Chemical Oxygen Demand	28.0	44.0	172.0	44.0	72.0	24.0	44.0	20.0	44.0	33.0
Suspended Solids	8.0	16.0	326.0	14.0	91.0	18.0	8.0	8.0	40.0	18.5
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	520.0	428.0	438.0	652.0	509.5	420.0	452.0	438.0	482.0	448.0
Sodium	--	39.6	41.3	43.1	41.3	9.34	31.80	39.5	26.2	26.7
Potassium	--	5.830	8.110	3.4	5.8	1.27	6.64	8.5	3.7	5.0
Total Amm. Nitrogen	--	--	--	--	--	0.76	1.99	0.1	--	1.0
Total Chromium	0.017	0.028	BDL	BDL	0.023	0.019	0.063	0.205	BDL	0.1
Nickel	0.025	0.018	0.014	0.02	0.019	0.027	0.017	0.014	0.010	0.017
Cadmium	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
Lead	0.016	BDL	BDL	BDL	0.016	0.034	BDL	BDL	BDL	0.034
copper	0.026	0.034	0.019	0.02	0.025	0.034	0.024	0.018	0.03	0.027
Zinc	0.010	BDL	0.061	0.01	0.027	0.016	BDL	0.045	0.01	0.024
Iron	0.307	0.325	0.45	0.18	0.316	0.429	0.399	4.344	0.29	1.366
Nitrate	5.4	4.2	1.7	8.2	4.9	--	0.9	0.134	5.3	2.111
Phosphate	BDL	1.67	1.77	1.37	1.6	0.1966	1.07	1.24	1.65	1.039
Manganese	0.090	0.084	0.22	BDL	0.131	0.041	0.234	0.162	0.02	0.114
Cobalt	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.0
Total Coliform	1800+	180+	1800+	1800	1800.0	1800+	1800+	1800+	1800	1800.0
Fecal Coliform	350.0	1600.0	1800+	1800	1250.0	275.0	1800+	1800+	1800	1037.5

Parameters	7 Indrayani River-U/s. of Nala Near DRDO (Kateshwar Wadi) at Indrayani River					8 Indrayani River-D/s. of Nala Near DRDO (Kateshwar Wadi) at Indrayani River				
	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg
Date of collection										
pH	8.0	7.5	8.3	7.3	7.8	7.9	7.5	8.3	7.7	7.9
Dissolved Oxygen	4.4	3.4	6.4	3.5	4.4	3.9	1.5	5.5	2.3	3.3
B.O.D. 27° C (3 days)	9.0	5.5	3.6	7.5	6.4	13.5	10.5	4.4	15.5	11.0
Chemical Oxygen Dimand	28.0	20.0	16.0	24.0	22.0	36.0	40.0	20.0	48.0	36.0
Suspended Solids	36.0	8.0	6.0	16.0	16.5	16.0	14.0	10.0	10.0	12.5
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	118.0	230.0	206.0	140.0	173.5	150.0	292.0	238.0	158.0	209.5
Sodium	7.86	15.20	14.3	6.8	11.0	10.34	17.80	16.7	7.4	13.06
Potassium	1.02	2.16	1.2	0.9	1.32	1.35	3.10	1.4	1.0	1.71
Total Amm. Nitrogen	0.64	0.301	BDL	...	0.47	0.62	0.92	BDL	...	0.77
Total Chromium	0.031	0.071	0.022	BDL	0.041	0.027	0.076	0.021	BDL	0.041
Nickel	0.036	0.023	0.013	0.010	0.021	0.028	0.027	0.016	0.01	0.020
Cadmium	BDL	BDL	BDL	BDL	0.000	BDL	BDL	BDL	BDL	0.000
Lead	1.311	BDL	0.006	BDL	0.659	0.059	BDL	BDL	BDL	0.059
copper	0.034	0.033	0.021	0.04	0.032	0.028	0.029	0.016	0.02	0.023
Zinc	0.012	BDL	0.026	0.01	0.016	BDL	0.011	0.037	0.01	0.019
Iron	0.178	0.261	0.633	0.45	0.381	1.208	0.310	0.198	0.60	0.579
Nitrate	--	0.5	BDL	1.1	0.8	--	0.5	BDL	1.1	0.800
Phosphate	0.1583	1.24	1.26	1.58	1.060	0.1971	0.90	1.39	1.97	1.114
Manganese	0.020	0.112	0.242	BDL	0.125	0.031	0.282	0.012	0.02	0.086
Cobalt	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.0
Total Coliform	1800+	1800+	1800+	1800	1800.0	1800+	1800+	1800+	1800	1800.0
Faecal Coliform	200.0	350.0	550.0	350	362.5	350.0	550.0	1600.0	900	850.0

Parameters	9 Shelarwadi Nala					10 Indrayani River-U/s. Shelarwadi Nala at Indrayani River				
	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg
Date of collection										
pH	8.1	7.4	8.3	7.7	7.9	8.2	7.6	8.4	7.6	7.9
Dissolved Oxygen	4.5	1.2	0.6	2.4	2.2	3.8	2.0	6.2	3.1	3.8
B.O.D. 27° C (3 days)	8.5	12.0	35.0	14.5	17.5	13.0	9.0	3.8	11.5	9.3
Chemical Oxygen Demand	20.0	44.0	108.0	44.0	54.0	36.0	28.0	16.0	36.0	29.0
Suspended Solids	18.0	210.0	28.0	8.0	66.0	20.0	10.0	12.0	16.0	14.5
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	440.0	458.0	636.0	472.0	501.5	120.0	304.0	242.0	174.0	210.0
Sodium	28.40	27.80	55.8	25.7	34.4	7.71	18.7	17.2	9.8	13.4
Potassium	3.95	5.57	20.6	2.4	8.1	0.90	3.19	1.7	1.3	1.77
Total Amm. Nitrogen	0.72	4.33	BDL	...	2.53	0.42	1.07	0.156	...	0.549
Total Chromium	0.023	0.070	0.019	BDL	0.037	0.101	0.071	0.016	BDL	0.063
Nickel	0.033	0.018	0.017	BDL	0.023	0.036	0.034	0.016	BDL	0.029
Cadmium	BDL	BDL	BDL	BDL	0.000	BDL	BDL	BDL	BDL	0.000
Lead	0.057	BDL	BDL	BDL	0.057	0.043	BDL	BDL	BDL	0.043
copper	0.036	0.022	0.021	0.02	0.025	0.034	0.028	0.019	0.02	0.025
Zinc	0.011	BDL	0.135	0.01	0.052	0.010	BDL	0.020	BDL	0.015
Iron	0.999	0.365	0.172	0.18	0.429	0.815	0.402	0.4	0.19	0.462
Nitrate	--	0.6	0.2	2.2	1.000	--	0.8	BDL	1.4	1.100
Phosphate	0.2781	0.92	3.24	1.37	1.452	0.2263	0.88	1.69	1.48	1.069
Manganese	0.017	0.149	0.014	0.01	0.048	0.017	0.149	0.155	BDL	0.107
Cobalt	0.010	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.0
Total Coliform	1800+	1800+	1800+	1800	1800.0	1600.0	1800+	1800+	1600	1600.0
Feecal Coliform	275.0	1800+	1800+	1800	1037.5	195.0	350.0	1800+	1600	715.0

Parameters	11 Indrayani River-D/s. Shelarwadi Nala at Indrayani River					12 Nalla Near Shitalanagar Smashabhumi at Dehurad				
	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg
Date of collection										
pH	8.0	7.6	8.4	7.8	7.9	7.6	7.3	8.3	7.5	7.7
Dissolved Oxygen	4.3	1.8	4.1	2.8	3.3	4.5	0.8	1.5	2.3	2.3
B.O.D. 27° C (3 days)	14.5	10.5	6.2	13.5	11.2	12.5	14.5	18.5	21.0	16.6
Chemical Oxygen Demand	40.0	32.0	20.0	40.0	33.0	36.0	44.0	64.0	60.0	51.0
Suspended Solids	14.0	28.0	12.0	22.0	19.0	220.0	44.0	28.0	60.0	88.0
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	130.0	308.0	244.0	152.0	208.5	554.0	472.0	502.0	540.0	517.0
Sodium	8.49	18.4	17.6	8.3	13.2	44.11	20.9	45.7	37.6	37.1
Potassium	1.24	3.14	1.49	1.1	1.7	4.63	2.07	7.3	4.8	4.7
Total Amm. Nitrogen	0.90	1.015	BDL	...	0.96	6.70	2.19	0.114	...	3.00
Total Chromium	0.022	0.068	0.018	BDL	0.036	0.011	0.080	0.024	BDL	0.038
Nickel	0.033	0.027	0.011	BDL	0.024	0.048	0.038	0.016	0.01	0.028
Cadmium	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.0
Lead	0.037	BDL	BDL	BDL	0.037	BDL	BDL	BDL	BDL	0.0
copper	0.031	0.065	0.022	0.02	0.035	0.155	0.093	0.027	0.03	0.076
Zinc	0.011	0.017	0.013	0.01	0.013	0.029	0.061	0.052	0.02	0.041
Iron	0.815	0.357	0.185	0.34	0.424	1.185	0.583	0.235	0.28	0.571
Nitrate	--	0.9	BDL	1.3	1.1	--	1.1	0.157	7.1	2.8
Phosphate	BDL	0.96	1.58	1.49	1.34	BDL	1.8000	1.54	1.43	1.590
Manganese	0.014	0.206	BDL	0.01	0.077	0.499	0.298	BDL	0.01	0.269
Cobalt	BDL	BDL	BDL	BDL	0.0	0.015	BDL	BDL	BDL	0.015
Total Coliform	1800+	1800+	1800+	1800	1800.0	1800+	1800+	1800+	1800	1800.0
Feecal Coliform	275.0	550.0	1600.0	1800	1056.3	200.0	1800+	1800+	1800	1000.0

Parameters	13 Nata Near Kinhai Village					14 Indrayani River-U/s. of Nala Near Kinhai Village at Indrayani River				
	26.07.2018	29.10.2018	21.02.2019	16.7.2019	Avg	26.07.2018	29.10.2018	21.02.2019	16.7.2019	Avg
Date of collection										
pH	8.2	7.5	8.6	7.8	8.0	8.2	8.0	8.5	7.8	8.1
Dissolved Oxygen	4.8	1.0	2.0	BDL	2.6	3.6	3.1	4.2	3.2	3.5
B.O.D. 27° C (3 days)	10.0	12.0	10.5	55.0	21.9	11.5	5.5	5.0	8.5	7.6
Chemical Oxygen Demand	28.0	40.0	32.0	204.0	76.0	32.0	20.0	16.0	24.0	23.0
Suspended Solids	14.0	10.0	12.0	44.0	20.0	22.0	18.0	8.0	12.0	15.0
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	420.0	492.0	444.0	476.0	458.0	128.0	256.0	278.0	168.0	207.5
Sodium	21.17	20.5	24.1	19.1	21.2	8.86	18.6	18.6	8.4	13.6
Potassium	2.64	3.66	6.27	3.0	3.9	1.30	2.62	1.84	1.9	1.9
Total Amm. Nitrogen	0.280	0.85	BDL	...	0.6	0.22	0.26	BDL	...	0.2
Total Chromium	0.013	0.083	0.025	BDL	0.04	0.018	0.071	0.024	BDL	0.0
Nickel	0.040	0.036	0.014	0.01	0.03	0.028	BDL	0.018	BDL	0.023
Cadmium	BDL	BDL	BDL	BDL	0.00	BDL	BDL	BDL	BDL	0.0
Lead	BDL	BDL	0.010	BDL	0.01	BDL	0.027	BDL	BDL	0.027
copper	0.028	0.031	0.026	0.02	0.03	0.027	0.027	0.026	BDL	0.027
Zinc	0.015	BDL	0.02	BDL	0.02	0.010	0.013	0.017	0.01	0.013
Iron	0.532	0.633	0.98	0.50	0.66	0.675	0.317	0.372	0.26	0.406
Nitrate	--	0.5	BDL	3.3	1.9	--	0.4	BDL	1.3	0.9
Phosphate	BDL	1.07	1.34	1.21	1.2	BDL	0.750	1.37	1.64	1.25
Manganese	0.024	0.115	0.145	0.02	0.076	0.023	0.093	0.022	1.90	0.510
Cobalt	0.017	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
Total Coliform	1800+	1800+	1800+	1800	1800.0	1600.0	1800+	1800+	1800	1700.0
Faecal Coliform	250.0	1800+	1800+	1800	1025.0	170.0	350.0	550.0	1800	717.5

Parameters	15 Indrayani River-D/s. of Nala Near Kinhai Village at Indrayani River					16 Manik Nala at about 100 mtr. D/s. of STP Disposal (PCB STP)				
	26.07.2018	29.10.2018	21.02.2019	16.07.2019	Avg	27.07.2018	25.10.2018	22.02.2019	9.07.2019	Avg
Date of collection	8	8	9							
pH	8.0	8.0	8.5	7.7	8.1	7.5	7.0	8.1	7.0	7.4
Dissolved Oxygen	3.4	1.2	3.6	3.2	2.9	1.2	NIL	NIL	BDL	1.2
B.O.D. 27° C (3 days)	13.0	10.5	8.6	8.5	10.2	45.0	45.0	115.0	42.0	61.8
Chemical Oxygen Demand	36.0	36.0	28.0	24.0	31.0	140.0	140.0	356.0	128.0	191.0
Suspended Solids	22.0	20.0	10.0	10.0	15.5	60.0	36.0	56.0	66.0	54.5
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	122.0	296.0	288.0	162.0	217.0	370.0	504.0	336.0	456.0	416.5
Sodium	8.42	18.8	19.20	8.1	13.6	35.45	39.8	35.4	35.2	36.5
Potassium	1.01	2.58	1.91	1.1	1.7	6.68	8.60	8.0	5.9	7.3
Total Amm. Nitrogen	0.25	0.21	BDL	...	0.23	--	--	--	--	--
Total Chromium	0.023	0.083	0.017	BDL	0.041	0.071	0.057	0.014	BDL	0.047
Nickel	0.026	0.016	0.017	0.01	0.017	0.020	BDL	0.019	0.02	0.020
Cadmium	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
Lead	BDL	0.011	BDL	BDL	0.011	BDL	BDL	BDL	BDL	0.000
copper	0.023	0.024	0.026	0.02	0.023	0.031	0.011	0.024	0.02	0.022
Zinc	0.012	0.011	0.032	0.02	0.019	0.029	0.033	0.05	0.01	0.029
Iron	0.960	0.325	0.185	0.53	0.500	0.914	0.500	2.383	0.23	1.007
Nitrate	--	0.4	BDL	1.1	0.8	1.1	1.1	0.491	6.9	2.398
Phosphate	BDL	0.81	1.30	1.12	1.08	0.3202	3.10	2.18	1.37	1.743
Manganese	0.033	0.288	0.010	0.01	0.085	0.131	1.1	0.012	0.07	0.328
Cobalt	0.010	BDL	BDL	BDL	0.010	BDL	BDL	BDL	BDL	0.0
Total Coliform	1800+	1800+	1800+	1800	1800.0	1800+	1800+	1800+	1800	1800.0
Faecal Coliform	225.0	550.0	275.0	1800	712.5	425.0	1800+	1800+	1800	1112.5

Parameters	17 Bhairoba Nala Near Anand Theater, Camp Pune					18 Shewalewadi nala at Bhapkar Mala				
	27.07.2018	25.10.2018	22.02.2019	9.07.2019	Avg	31.07.2018	26.10.2018	25.02.2019	17.07.2019	Avg
Date of collection	8	8	9							
pH	7.5	7.1	8.1	7.3	7.5	7.5	7.5	8.3	7.4	7.7
Dissolved Oxygen	Nil	Nil	0.6	BDL	0.6	Nil	Nil	Nil	BDL	0.0
B.O.D. 27° C (3 days)	65.0	70.0	145.0	55.0	83.8	92.0	75.0	105.0	35.0	76.8
Chemical Oxygen Demand	200.0	220.0	452.0	168.0	260.0	284.0	232.0	304.0	440.0	315.0
Suspended Solids	198.0	110.0	170.0	100.0	144.5	158.0	168.0	250.0	440.0	254.0
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	496.0	366.0	552.0	534.0	487.0	760.0	1120.0	834.0	1120.0	958.5
Sodium	46.37	45.5	49.7	43.2	46.2	78.70	77.20	77.16	100.6	83.42
Potassium	7.34	10.3	12.5	7.7	9.5	13.36	10.80	14.60	28.3	16.77
Total Amm. Nitrogen	--	--	--	--	--	56.00	6.597	20.736	3.7	21.76
Total Chromium	0.072	0.073	0.014	BDL	0.1	0.070	0.070	BDL	BDL	0.070
Nickel	0.023	BDL	0.018	0.02	0.020	0.011	0.018	0.013	0.02	0.016
Cadmium	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
Lead	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
copper	0.035	0.014	0.035	0.01	0.024	0.031	0.037	0.020	0.01	0.025
Zinc	0.038	0.040	0.105	0.01	0.048	0.026	0.013	0.065	0.02	0.031
Iron	0.806	0.505	0.530	0.25	0.523	1.108	0.338	0.909	0.31	0.666
Nitrate	1.6	2.2	0.639	9.8	3.560	--	0.8	0.195	5.5	2.2
Phosphate	0.3792	2.66	2.48	1.48	1.750	0.52	2.11	1.49	1.95	1.518
Manganese	0.184	0.184	0.061	0.040	0.117	0.225	0.240	0.17	0.06	0.174
Cobalt	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.000
Total Coliform	1800+	1800+	1800+	1800	1800.0	1800+	1800+	1800+	1800+	3.700
Fecal Coliform	350.0	1800+	1800+	1800	1075.0	550.0	1800+	1800+	1800	1475.0

Parameters	19					20				
	Rangicha Odha at Bhapkar Mala					Mula-Mutha River-D/s. of Nala (Rangich/Shewalwadi) at Mula-Mutha River				
Date of collection	31.07.2018	26.10.2018	25.02.2019	17.07.2019	Avg	31.07.2018	26.10.2018	25.02.2019	17.07.2019	Avg
pH	7.7	7.5	8.3	7.7	7.8	7.4	7.4	8.1	7.4	7.6
Dissolved Oxygen	Nil	Nil	Nil	1.1	1.1	4.6	Nil	2.0	2.1	2.9
B.O.D. 27° C (3 days)	54.0	40.0	62.0	14.5	42.6	10.5	14.5	10.0	155.0	47.5
Chemical Oxygen Demand	168.0	128.0	188.0	108.0	148.0	28.0	44.0	28.0	36.0	34.0
Suspended Solids	160.0	112.0	198.0	40.0	127.5	20.0	16.0	20.0	14.0	17.5
Oil & Grease	--	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	888.0	1236.0	1174.0	1158.0	1114.0	334.0	470.0	460.0	394.0	414.5
Sodium	81.50	110.60	105.40	96.1	98.40	27.90	40.60	46.35	36.1	37.7
Potassium	9.18	6.52	15.60	28.3	14.90	4.04	7.54	9.75	4.0	6.33
Total Amm. Nitrogen	59.00	6.87	12.0080	3.7	20.4	12.65	3.10	5.196	0.1	5.26
Total Chromium	0.069	0.073	BDL	BDL	0.071	0.068		BDL	BDL	0.1
Nickel	0.013	0.012	0.013	0.02	0.015	BDI	0.054	BDL	BDL	0.054
Cadmium	BDL	BDL	BDL	BDL	0.0	BDL	BDL	BDL	BDL	0.0
Lead	BDL	BDL	BDL	BDL	0.0	0.015	BDL	BDL	BDL	0.015
copper	0.031	0.031	0.019	0.01	0.023	0.020	0.033	0.023	0.010	0.022
Zinc	0.018	BDL	0.150	0.02	0.063	0.017	BDL	0.038	0.020	0.025
Iron	0.741	0.293	0.364	0.31	0.427	0.886	0.502	0.340	0.820	0.637
Nitrate	--	0.5	0.149	5.5	2.0	--	0.9	BDL	6.1	3.5
Phosphate	0.74	2.84	1.68	1.95	1.80	0.23	2.46	1.68	1.06	1.36
Manganese	0.263	0.185	0.097	0.06	0.151	0.074	0.238	0.128	0.10	0.135
Cobalt	BDL	BDL	BDL	BDL	0.000	BDL	BDL	BDL	BDL	0.0
Total Coliform	1800+	1800+	1800+	3.7	3.700	1800+	1800+	1800+	1800	1800.0
Faecal Coliform	425.0	1800+	1800+	1800	1112.5	275.0	550.0	1800+	1800	875.0

Parameters	Mula-Mutha River-U/s. of Nala (Rangich/Shewalwadi) at Mula-Mutha River						
	31.07.2018	26.10.2018	25.02.2019	17.07.2019	Avg		
Date of collection							
pH	7.4	7.3	8.0	7.6	7.6		7.6
Dissolved Oxygen	5.6	1.6	1.2	2.3	2.7		2.7
B.O.D. 27° C (3 days)	5.5	11.5	12.5	BDL	9.8		9.8
Chemical Oxygen Dimand	16.0	36.0	40.0	44.0	34.0		34.0
Suspended Solids	8.0	14.0	22.0	14.0	14.5		14.5
Oil & Grease	--	--	--	--	--		--
Total Dissolved Solids	316.0	440.0	468.0	466.0	422.5		422.5
Sodium	24.98	36.9	42.11	22.5	31.6		31.6
Potassium	4.02	7.55	9.67	3.1	6.09		6.09
Total Amm. Nitrogen	12.35	3.104	7.207	...	7.554		7.554
Total Chromium	0.074	0.069	BDL	BDL	0.072		0.072
Nickel	BDL	0.023	0.013	0.01	0.015		0.015
Cadmium	BDL	BDL	BDL	BDL	0.0		0.0
Lead	0.010	BDL	BDL	BDL	0.010		0.010
copper	0.030	0.034	0.017	0.01	0.023		0.023
Zinc	0.024	BDL	0.026	0.01	0.020		0.020
Iron	0.624	0.540	0.396	0.21	0.443		0.443
Nitrate	--	1.0	0.189	4.7	2.0		2.0
Phosphate	0.39	3.02	1.34	1.70	1.61		1.61
Manganese	0.123	0.360	0.103	0.01	0.149		0.149
Cobalt	BDL	BDL	BDL	BDL	0.000		0.000
Total Coliform	1800+	1800+	1800+	0.1	0.1		0.1
Faecal Coliform	200.0	350	1800+	1800	783.3		783.3

Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey pertaining to SRO-PIMPRI CHINCHWAD.

Location	standard for Drinking water	Pawna River Near Dehu Pumping Station U/s. of PCMC Boundry				Pawana River D/s. of Kivale Nala			
		Date	20.7.2018	23.10.2018	12.02.2019	16.06.2019	20.7.2018	23.10.2018	12.02.2019
Parameters	Date	20.7.2018	23.10.2018	12.02.2019	16.06.2019	20.7.2018	23.10.2018	12.02.2019	18.06.2019
pH	6.5-8.5	7.5	7.2	7.4	7.3	7.5	7.6	8.3	7.7
Disolved Oxygen	...	5.7	3.2	6.8	4.6	5.4	2.5	4.0	4.5
B.O.D.27 C (3 days)	10 mg/ltr	5.0	5.5	2.5	9.5	6.5	7.5	5.0	8.5
COD	...	20.0	24.0	12.0	28.0	28.0	32.0	20.0	28.0
Suspended Solids	...	50.0	10.0	14.0	10.0	48.0	8.0	12.0	18.0
Oil & Grease	...	-	-	-	-	-	-	-	-
Total Dissolved Solids	...	364.0	110.0	122.0	102.0	164.0	128.0	396.0	108.0
Sodium	...	8.19	6.17	8.68	6.0	7.94	6.59	33.0	5.6
Potassium	...	0.77	0.81	0.40	0.8	0.78	0.57	5.52	0.7
Total Chromium	...	0.082	0.07	0.023	BDL	0.118	0.055	0.022	BDL
Nickel	...	0.029	0.037	0.023	BDL	0.022	0.038	0.023	0.01
Cadmium	0.01 mg/ltr	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.1 mg/ltr	0.051	0.031	BDL	BDL	0.072	0.013	0.014	0.12
Copper	0.05 mg/ltr	0.030	0.051	0.022	BDL	0.038	0.048	0.023	BDL
Zinc	5 mg/ltr	0.023	0.014	0.025	0.2	0.020	0.010	0.057	0.04
Iron	0.3 mg/ltr	0.974	0.370	0.197	0.15	1.775	0.232	0.254	0.12
Nitrate	45 mg/ltr	1.600	0.6	BDL	1.0	1.500	0.4	BDL	0.9
Phosphate	...	0.14	1.08	1.14	0.4	0.21	2.24	1.56	0.13
Manganese	0.1 mg/ltr	0.056	0.011	0.026	BDL	0.077	BDL	0.033	0.14
Cobalt	...	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	...	1800+	900	1800+	1800	1600.0	1800+	1800+	1800.0
Feacal Coliform	...	200.0	140.0	1800+	1800	150.0	350.0	1800+	1800.0

Regional Office Pune has issued Proposed Direction on 27.2.2019, 15.1.2020 & 9.12.2019 to PCMC as untreated Domestic discharge observed into River Pawana.

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Pawna River D/s. of Ravet Nala				Pawana River Subhash Ghat, D/s. of Garware Nala			
	20.7.2018	23.10.2018	12.02.2019	18.06.2019	21.7.2018	24.10.2018	14.02.2019	19.06.2019
Parameters	7.6	7.2	8.2	7.7	7.4	7.0	8.1	7.9
pH	7.6	7.2	8.2	7.7	7.4	7.0	8.1	7.9
Disolved Oxygen	5.3	3.0	3.0	2.1	3.3	Nil	2.8	1.1
B.O.D.27 C (3 days)	6.5	6.0	32.0	17.0	11.0	18.0	13.5	28.0
COD	20.0	24.0	96.0	52.0	32.0	56.0	40.0	88.0
Suspended Solids	42.0	8.0	58.0	18.0	28.0	22.0	44.0	28.0
Oil & Grease	-	-	-	-	-	BDL	-	-
Total Dissolved Solids	200.0	278.0	390.0	214.0	290.0	-	-	458.0
Sodium	10.57	15.00	34.79	12.1	16.94	-	41.82	36.2
Potassium	1.03	2.06	5.07	2.5	2.30	-	9.36	8.6
Total Chromium	0.080	0.053	0.016	BDL	0.085	1.100	-	0.14
Nickel	0.024	BDL	0.012	BDL	0.019	-	-	0.02
Cadmium	BDL	BDL	BDL	BDL	BDL	-	-	BDL
Lead	0.053	BDL	BDL	BDL	BDL	-	-	BDL
Copper	0.019	0.033	0.020	BDL	0.027	-	-	BDL
Zinc	0.020	BDL	0.057	0.01	0.032	-	-	0.04
Iron	0.870	0.277	0.260	0.49	0.534	-	-	0.58
Nitrate	1.9	1.4	BDL	1.0	3.6	-	0.12	2.2
Phosphate	0.11	1.20	1.84	0.09	0.44	-	2.37	0.03
Manganese	0.146	0.044	0.017	0.19	0.562	-	-	0.30
Cobalt	BDL	BDL	BDL	BDL	BDL	-	-	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	275.0	350.0	1800+	1800	350.0	350.0	425.0	1800

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Pawna River D/s. of Kalasagar Nala Kasarwadi, Creamatorium				Pawana River Below Empicfe Estte Bride D/s. of Gavade Colony & Chinchwad Nala			
	21.7.2018	24.10.2018	14.02.2019	19.06.2019	21.7.2018	24.10.2018	14.02.2019	19.06.2019
Parameters	7.4	7.0	8.0	7.9	7.3	7.0	7.9	7.6
pH	7.4	7.0	8.0	7.9	7.3	7.0	7.9	7.6
Dissolved Oxygen	4.4	1.2	2.0	BDL	3.6	Nil	3.0	2.6
B.O.D.27 C (3 days)	10.5	11.5	12.0	58.0	11.0	17.0	42.0	21.0
COD	36.0	36.0	36.0	172.0	36.0	52.0	120.0	68.0
Suspended Solids	32.0	16.0	34.0	24.0	32.0	44.0	92.0	94.0
Oil & Grease	-	-	-	-	-	-	-	-
Total Dissolved Solids	280.0	452.0	458.0	480.0	370.0	480.0	426.0	520.0
Sodium	17.02	40.00	48.96	42.3	25.07	36.8	41.4	37.8
Potassium	2.19	7.41	10.20	9.0	3.39	12.60	10.30	9.8
Total Chromium	0.037	0.080	0.235	BDL	0.078	0.223	0.061	0.61
Nickel	BDL	0.025	0.018	0.03	0.20	BDL	0.015	0.03
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.011	BDL	0.023	BDL	BDL	BDL	0.015	0.02
Copper	BDL	0.029	0.030	BDL	0.029	BDL	0.018	BDL
Zinc	BDL	0.026	0.091	0.05	0.034	0.024	0.186	0.13
Iron	BDL	0.806	8.530	0.57	0.417	0.671	0.415	1.24
Nitrate	3.4	0.9	BDL	4.6	4.200	0.9	0.12	2.1
Phosphate	0.37	1.61	2.06	0.11	0.26	1.28	1.99	0.13
Manganese	BDL	0.313	0.237	0.29	0.890	0.112	0.155	0.35
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	350.0	550.0	1800+	1800	275.0	350.0	1800+	1800

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Pawna River Entry of Mula River Sangvi Dapodi Bridge				Pawna River Sandvik Nala			
	23.7.2018	24.10.2018	21.02.2019	20.06.2019	23.7.2018	24.10.2018	21.02.2019	20.06.2019
Parameters								
pH	7.5	7.2	7.5	8.0	7.5	7.1	7.7	7.7
Dissolved Oxygen	4.1	1.0	2.8	1.9	4.6	2.6	1.0	1.2
B.O.D.27 C (3 days)	14.5	11.5	15.0	18.5	16.0	11.5	17.5	28.0
COD	44.0	36.0	48.0	56.0	52.0	36.0	52.0	88.0
Suspended Solids	18.0	40.0	24.0	16.0	28.0	18.0	34.0	124.0
Oil & Grease	-		-	-	-	-	-	-
Total Dissolved Solids	240.0	610.0	478.0	838.0	240.0	466.0	474.0	532.0
Sodium	13.4	48.2	48.30	70.5	14.01	43.20	50.10	43.5
Potassium	1.590	8.54	10.51	14.3	1.82	7.93	10.5	10.3
Total Chromium	0.019	0.069	BDL	BDL	0.034	0.068	0.021	0.01
Nickel	0.033	0.035	0.024	0.01	0.034	0.021	0.020	0.02
Cadmium	0.011	BDL	BDL	-	BDL	BDL	BDL	BDL
Lead	0.134	BDL	BDL	BDL	0.108	BDL	BDL	BDL
Copper	0.032	0.031	0.018	BDL	0.024	0.026	0.026	BDL
Zinc	0.014	BDL	0.091	BDL	0.040	0.011	0.091	0.03
Iron	0.280	0.639	0.248	0.21	0.572	0.639	0.446	0.82
Nitrate	3.1	-	0.280	2.3	2.8	1.1	0.186	2.2
Phosphate	0.51	2.57	1.27	0.25	0.400	2.91	1.94	0.14
Manganese	BDL	0.586	0.142	0.41	0.026	0.063	0.083	0.38
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	
Feacal Coliform	350.0	550.0	1800+	1800	275.0	550.0	1800+	

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Mula River Pimple Nilakh				Mula River Wakad Bridge U/s. of PCMC Boundry			
	23.7.2018	24.10.2018	21.02.2019	20.06.2019	23.7.2018	24.10.2018	21.02.2019	20.06.2019
Parameters	23.7.2018	24.10.2018	21.02.2019	20.06.2019	23.7.2018	24.10.2018	21.02.2019	20.06.2019
pH	7.7	7.3	7.8	8.0	7.6	7.3	7.8	7.9
Disolved Oxygen	4.8	Nil	0.4	BDL	4.2	3.1	Nil	2.1
B.O.D.27 C (3 days)	13.0	40.0	46.0	62.0	8.5	7.5	14.5	24.0
COD	40.0	120.0	140.0	180.0	24.0	24.0	44.0	72.0
Suspended Solids	20.0	34.0	46.0	170.0	24.0	24.0	12.0	10.0
Oil & Grease	-	-	-	-	-	-	-	-
Total Dissolved Solids	140.0	720.0	526.0	738.0	112.0	474.0	584.0	846.0
Sodium	7.48	61.60	49.05	55.1	6.15	41.0	57.74	BDL
Potasium	0.75	12.70	10.700	14.0	0.62	8.23	8.33	13.0
Total Chromium	0.012	0.060	BDL	BDL	BDL	0.061	0.012	BDL
Nickel	0.032	0.029	0.021	0.02	0.026	0.027	0.02	0.03
Cadmium	0.010	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.108	BDL	BDL	BDL	0.128	BDL	BDL	BDL
Copper	0.024	0.037	0.024	BDL	0.021	0.033	0.20	BDL
Zinc	0.013	0.013	0.035	0.05	0.015	0.012	0.38	0.01
Iron	0.409	0.417	0.300	1.11	0.512	0.778	0.662	0.30
Nitrate	1.2	1.2	BDL	2.6	1.0	0.5	0.314	4.6
Phosphate	0.18	3.0	1.6		0.7	2.7	1.61	0.23
Manganese	BDL	0.331	0.148	0.22	0.015	0.286	0.185	0.36
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	350.0	550.0	1800+	1800	275	350	1800+	1800

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Mula River D/s. of Kaspate Wasti Nala Wakad Road				D/s. of Mula & Pawana River 1Km			
	23.7.2018	24.10.2018	21.02.2019	20.06.2019	24.7.2018	25.10.2018	26.02.2019	28.06.2019
Parameters	7.7	7.2	8.3	8.0	7.5	7.4	8.2	-
pH	7.7	7.2	8.3	8.0	7.5	7.4	8.2	-
Disolved Oxygen	4.4	1.1	NIL	1.8	3.8	4.6	2.2	2.8
B.O.D.27 C (3 days)	9.0	17.5	105.0	17.0	10.5	3.8	17.0	10.5
COD	28.0	52.0	300.0	52.0	32.0	16.0	52.0	32.0
Suspended Solids	24.0	32.0	310.0	16.0	24.0	24.0	14.0	24.0
Oil & Grease	-	-	-	-	-	-	-	-
Total Dissolved Solids	148.0	630.0	656.0	-	208.0	-	510.0	798.0
Sodium	5.87	55.7	35.1	68.2	9.6	-	46.10	41.8
Potassium	0.57	11.3	2.5	14.5	1.240	-	10.50	10.2
Total Chromium	0.019	BDL	BDL	BDL	0.022	-	BDL	BDL
Nickel	0.028	0.013	BDL	0.02	0.025	-	0.031	0.03
Cadmium	BDL	BDL	BDL	BDL	BDL	-	BDL	BDL
Lead	0.111	BDL	BDL	BDL	BDL	-	BDL	0.01
Copper	0.029	0.015	0.016	BDL	0.038	-	0.014	0.02
Zinc	0.013	BDL	0.021	0.01	0.014	-	0.056	0.01
Iron	0.398	0.028	0.324	0.23	0.439	-	0.457	0.25
Nitrate	0.8	0.7	BDL	2.7	2.5	-	1.6	1.4
Phosphate	0.16	2.87	4.49	0.24	0.30	-	2.29	0.16
Manganese	0.013	0.972	0.181	0.38	0.015	-	0.167	0.06
Cobalt	BDL	BDL	BDL	BDL	BDL	-	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	350.0	350.0	1800+	1800	275.0	350.0	1800+	1800

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	D/s of Indryani River - 1Km				Indryani River U/s. of PCMC Boundry			
	24.7.2018	25.10.2018	26.02.2019	28.06.2019	24.7.2018	25.10.2018	26.02.2019	20.06.2019
Parameters								
pH	7.7	7.5	8.2	7.7	7.6	7.3	8.2	8.2
Disolved Oxygen	3.5	2.9	3.6	6.2	4.3	1.2	5.5	4.7
B.O.D.27 C (3 days)	14.5	6.5	12.5	2.5	7.5	14.0	6.0	8.5
COD	40.0	24.0	36.0	12.0	20.0	40.0	24.0	24.0
Suspended Solids	30.0	12.0	80.0	24.0	30.0	24.0	10.0	20.0
Oil & Grease	-	-	-	-	-	-	-	-
Total Dissolved Solids	134.0	532.0	594.0	358.0	110.0	572.0	204.0	234.0
Sodium	6.56	48.30	55.63	24.5	5.84	41.5	14.02	10.2
Potassium	0.99	8.80	7.8	-	0.76	10.9	BDL	1.7
Total Chromium	0.013	0.010	BDL	BDL	0.015	0.10	BDL	BDL
Nickel	0.011	0.09	0.019	0.02	0.032	0.18	BDL	0.02
Cadmium	BDL	BDL	BDL	BDL	0.010	BDL	BDL	BDL
Lead	BDL	BDL	BDL	BDL	0.132	BDL	BDL	BDL
Copper	0.025	0.021	0.012	0.02	0.032	0.24	0.011	BDL
Zinc	0.017	0.014	0.047	0.01	0.018	0.018	0.065	BDL
Iron	0.489	0.362	0.763	0.20	2.150	1.412	0.339	0.22
Nitrate	1.5	3.0	1.7	1.4	1.1	-	0.7	1.0
Phosphate	0.12	-	2.29	0.07	0.180	-	2.87	0.02
Manganese	0.010	0.020	0.169	0.04	0.065	0.211	0.027	0.03
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800.0
Feacal Coliform	275.0	350.0	1800+	1800	275.0	275.0	1800+	350.0

**Analysis Results of River(Mula, Pawana & Indrayani) in the matter of NGT Court matter Survey
pertaining to SRO-PIMPRI CHINCHWAD.**

Location	Indryani River D/s. of Moshi Nala				Indryani River D/s. of Ramdbara Nala			
	24.7.2018	25.10.2018	26.02.2019	28.06.2019	24.7.2018	25.10.2018	26.02.2019	28.06.2019
Parameters								
pH	7.5	7.3	8.3	7.5	7.6	7.2	8.4	7.4
Dissolved Oxygen	3.4	1.2	1.5	3.5	4.8	1.1	1.4	5.6
B.O.D.27 C (3 days)	14.0	14.0	16.5	6.5	8.0	15.0	15.5	3.5
COD	40.0	40.0	48.0	28.0	24.0	44.0	44.0	-
Suspended Solids	24.0	24.0	30.0	26.0	24.0	10.0	16.0	32.0
Oil & Grease	-	-	-	-	-	-	-	-
Total Dissolved Solids	192.0	572.0	472.0	294.0	144.0	-	354.0	
Sodium	10.57	41.5	41.94	18.8	7.27	BDL	27.21	19.0
Potassium	2.32	10.9	6.39	4.0	1.02	-	5.14	3.7
Total Chromium	0.037	0.010	BDL	BDL	0.020	-	BDL	BDL
Nickel	0.029	0.018	0.012	0.02	0.013	-	0.009	0.03
Cadmium	BDL	BDL	BDL	BDL	BDL	-	BDL	BDL
Lead	BDL	BDL	BDL	0.01	BDL	-	BDL	BDL
Copper	0.030	0.024	0.015	0.02	0.027	-	0.016	0.02
Zinc	0.016	0.018	0.065	0.01	0.018	-	0.049	0.01
Iron	1.942	1.412	0.837	0.23	0.495	-	1.246	0.32
Nitrate	3.0	-	2.0	1.5	1.5	-	1.3	1.8
Phosphate	0.360	-	1.88	0.03	0.2	-	2.46	0.05
Manganese	0.253	0.211	0.322	0.08	0.017	-	0.014	0.02
Cobalt	BDL	BDL	BDL	BDL	BDL	-	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	275.0	275.0	1800+	1800	350.0	550.0	1800+	1800

Analysis Results of STP Outlet samples in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	STP Outlet standard as per consent Dtd. 24.9.2019	Akurdi STP					Chinchwad Ph-II STP Outlet				
		20.7.2018	23.10.2018	12.02.2019	18.06.2019	AVG	20.7.2018	23.10.2018	12.02.2019	18.06.2019	AVG
Parameters	Date	7.1	7.1	8.4	7.8	7.6	7.2	7.3	8.4	7.9	7.7
pH	6.5-8.5	7.1	7.1	8.4	7.8	7.6	7.2	7.3	8.4	7.9	7.7
Disolved Oxygen	....	6.0	3.2	4.4	3.2	4.2	5.9	2.2	4.2	4.6	4.225
B.O.D.27 C (3 days)	Not to exceed 10mg/ltr	5.4	5.5	7.6	12.5	7.75	8.4	7.0	8.6	8.5	8.1
COD	Not to exceed 50 mg/ltr	20.0	20.0	24.0	40.0	26	24.0	28.0	28.0	24.0	26
Suspended Solids	...	8.0	4.0	12.0	34.0	14.5	8.0	8.0	8.0	10.0	8.5
Oil & Grease	Not to exceed 5 mg/ltr	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	BDL
Total Dissolved Solids	...	-	-	384.0	-	384	-	-	430.0	-	430
Sodium		-	-	-	-	-	-	-	-	-	-
Total Amm. Nitrogen	Not to exceed 5 mg/ltr	0.31	0.31	0.97	0.3	0.4725	0.55	2.72	0.158	0.1	0.882
Nitrate	Not to exceed 10 mg/ltr	-	-	BDL	4.0	4	-	-	BDL	5.4	5.4
Phosphate	Not to exceed 2.0 mg/ltr	-	-	-	-	-	-	2.8	-	-	2.8
Total Coliform	.....	1800	1800	1800	25	1356.3	1800	1800	1800	20	1355
Faecal Coliform (MPN/100ml)	Not to < 230	225	225.0	1800.0	2.0	563	200.0	195.0	1800.0	2.0	549.25

Analysis Results of STP Outlet samples in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	STP Outlet standard as per consent Dtd. 24.9.2019	Ravet STP Outlet						Kasarwadi STP Ph-I						Kasarwadi STP Ph-II					
		20.7.2018	23.10.2018	12.02.2019	18.06.2019	AVG	21.07.2018	24.10.2018	14.02.2019	19.06.2019	AVG	21.07.2018	24.10.2018	14.02.2019	19.06.2019	AVG			
Parameters	Date	7.3	7.2	8.1	7.9	7.625	7.8	7.2	8.0	7.9	7.725	7.5	6.9	8.2	7.8	7.6			
pH	6.5-8.5																		
Disolved Oxygen	....	5.9	3.5	4.6	2.6	4.15	4.9	3.6	4.6	3.8	4.225	3.8	3.5	4.1	3.5	3.725		
B.O.D.27 C (3 days)	Not to exceed 10mg/ltr	5.5	4.5	6.2	17.5	8.425	8.0	6.0	6.2	10.5	7.675	15.0	5.5	8.6	12.5	10.4			
COD	Not to exceed 50 mg/ltr	16.0	20.0	20.0	52.0	27	20.0	20.0	20.0	-	20	40.0	24.0	28.0	36.0	32			
Suspended Solids	...	6.0	6.0	12.0	26.0	12.5	8.0	12.0	22.0	16.0	14.5	10.0	8.0	12.0	28.0	14.5			
Oil & Grease	Not to exceed 5 mg/ltr	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL	-	BDL			
Total Dissolved Solids	...	-	-	288.0	-	288	544.0	-	-	-	544	558.0	-	-	-	558			
Sodium	...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total Amm. Nitrogen	Not to exceed 5 mg/ltr	0.41	2.50	-	4.80	2.57	0.42	1.40	-	0.1	0.64	0.28	1.10	0.12	0.2	0.425			
Nitrate	Not to exceed 10 mg/ltr			0.8	3.0	1.9			BDL	10.4	10.4			BDL	9.4	9.4			
Phosphate	Not to exceed 2.0 mg/ltr			-	-	-	-	-	-	-	-			-	-	-			
Total Coliform	.....	1800.0	1800.0	1800.0	1800.0	1800	1800	1800	1800	1800	1800	1800.0	1800.0	1800.0	1800	1800		
Faecal Coliform (MPN/100ml)	Not to < 230	250.0	225.0	1800.0	1800.0	1019	225	225	1800	1800	1012.5	200.0	195.0	1800.0	1800	998.75			

Analysis Results of STP Outlet samples in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	STP Outlet standard as per consent Dtd. 24.9.2019	Kasarwadi STP Ph-III					Chinchwad Ph-I STP Outlet					Pimple Nilakh STP Outlet				
		21.07.2018	24.10.2018	14.02.2019	19.06.2019	AVG	21.7.2018	24.10.2018	14.02.2019	19.06.2019	AVG	23.7.2018	24.10.2018	21.02.2019	26.06.2019	AVG
Parameters	Date	7.5	7.0	8.3	8.1	7.725	7.5	7.3	8.2	7.7	7.675	7.4	7.3	8.2	7.9	7.7
pH	6.5-8.5	7.5	7.0	8.3	8.1	7.725	7.5	7.3	8.2	7.7	7.675	7.4	7.3	8.2	7.9	7.7
Disolved Oxygen	....	5.4	3.6	4.4	5.2	4.65	4.9	3.1	4.1	5.1	4.3	5.8	3.1	4.1	1.6	3.65
B.O.D.27 C (3 days)	Not to exceed 10mg/ltr	8.5	5.0	7.2	6.0	6.675	8.5	7.5	10.5	5.5	8	10.5	11.0	8.8	36.0	16.575
COD	Not to exceed 50 mg/ltr	20.0	20.0	24.0	20.0	21	28.0	28.0	32.0	20.0	27	32.0	36.0	28.0	116.0	53
Suspended Solids	...	8.0	8.0	6.0	14.0	9	10.0	10.0	14.0	8.0	10.5	8.0	8.0	20.0	42.0	19.5
Oil & Grease	Not to exceed 5 mg/ltr	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	BDL	BDL	BDL	BDL
Total Dissolved Solids	...	522.0	-	-	-	522	-	-	408.0	-	408	470.0	-	628.0	-	549
Sodium	...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Amm. Nitrogen	Not to exceed 5 mg/ltr	0.38	1.60	BDL	0.1	0.693333	-	2.60	BDL	0.1	1.35	-	2.40	-	1.1	1.75
Nitrate	Not to exceed 10 mg/ltr	-	-	-	2.3	2.3	-	-	BDL	9.5	9.5	-	-	-	-	-
Phosphate	Not to exceed 2.0 mg/ltr	-	-	BDL	-	-	-	-	-	-	-	-	-	-	1.96	-
Total Coliform	.....	900.0	1600.0	1800.0	350.0	1162.5	1800	1800	900.0	1800.0	1575	900.0	900.0	1800.0	1800.0	1350
Feecal Coliform (MPN/100ml)	Not to < 230	195.0	140.0	1800.0	25.0	540	225.0	195.0	-	740	740	195.0	140.0	120.0	1800.0	563.75

Analysis Results of STP Outlet samples in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	STP Outlet standard as per consent Dtd. 24.9.2019	Sangvi STP Outlet					Dapodi STP Outlet					Chikhali STP Ph-I Outlet				
		23.7.2018	24.10.2018	21.02.2019	20.06.2019	AVG	23.7.2018	24.10.2018	21.02.2019	20.06.2019	AVG	24.7.2018	25.10.2018	26.02.2019	20.6.19	AVG
Parameters	Date															
pH	6.5-8.5	7.3	6.9	7.8	7.9	7.475	7.4	7.1	8.3	7.8	7.65	7.6	7.5	7.7	8.0	7.7
Dissolved Oxygen	....	3.2	3.6	4.2	3.6	3.65	5.1	3.8	4.0	3.7	4.15	3.2	2.8	4.3	2.2	3.125
B.O.D.27 C (3 days)	Not to exceed 10mg/ltr	25.0	5.5	7.6	10.5	12.15	8.5	4.5	9.4	10.5	8.225	12.5	8.5	12.5	18.5	13
COD	Not to exceed 50 mg/ltr	76.0	20.0	24.0	32.0	38	20.0	16.0	28.0	32.0	24	36.0	28.0	36.0	56.0	39
Suspended Solids	...	10.0	8.0	10.0	8.0	9	8.0	8.0	16.0	8.0	10	8.0	8.0	14.0	22.0	13
Oil & Grease	Not to exceed 5 mg/ltr	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids	...	408.0	408.0	388.0	-	401.3333	384.0	-	460.0	-	422	460.0	-	-	-	460
Sodium		-	-	-	-	-	-	-	-	-	-	-	48.3	-	-	-
Total Amm. Nitrogen	Not to exceed 5 mg/ltr	0.64	3.10	-	0.1	1.28	0.34	2.80	BDL	0.1	1.08	0.34	2.20	0.186	4.1	1.7065
Nitrate	Not to exceed 10 mg/ltr	-	-	-	4.0	4	-	-	-	-	-	-	-	9.0	4.2	6.6
Phosphate	Not to exceed 2.0 mg/ltr	-	3.7	-	2.04	-	-	-	-	1.74	-	-	-	-	-	-
Total Coliform	.....	550.0	130.0	1800.0	1800.0	1070	550.0	900.0	1800.0	275.0	881.25	350.0	550.0	1800.0	1800.0	1125
Faecal Coliform (MPN/100ml)	Not to < 230	110.0	14.0	1800.0	170.0	523.5	95.0	40.0	1800.0	20.0	488.75	70.0	95.0	1800.0	1800.0	941.25

Analysis Results of STP Outlet samples in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	STP Outlet standard as per consent Dtd. 24.9.2019	Chikhali STP Ph-II Outlet					Charoli STP Outlet				
		24.7.2018	25.10.2018	26.02.2019	20.6.2019	AVG	24.7.2018	25.10.2018	26.02.2019	28.6.19	AVG
Parameters	Date	24.7.2018	25.10.2018	26.02.2019	20.6.2019	AVG	24.7.2018	25.10.2018	26.02.2019	28.6.19	AVG
pH	6.5-8.5	7.8	7.5	8.1	8.0	7.85	7.7	7.3	7.7	7.6	7.575
Dissolved Oxygen	....	3.5	3.0	2.0	4.9	3.35	3.6	3.3	4.6	6.2	4.425
B.O.D.27 C (3 days)	Not to exceed 10mg/ltr	22.0	6.5	12.5	6.5	11.875	13.0	5.0	8.5	5.5	8
COD	Not to exceed 50 mg/ltr	64.0	24.0	36.0	20.0	36	36.0	20.0	28.0	24.0	27
Suspended Solids	...	10.0	6.0	14.0	10.0	10	8.0	4.0	24.0	46.0	20.5
Oil & Grease	Not to exceed 5 mg/ltr	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Dissolved Solids	...	540.0	-	-	-	540	300.0	-	-	-	300
Sodium	...	-	-	-	-	-	-	-	-	-	-
Total Amm. Nitrogen	Not to exceed 5 mg/ltr	0.53	1.80	0.186	0.6	0.779	0.83	1.7	13.435	1.8	4.44125
Nitrate	Not to exceed 10 mg/ltr	-	-	9.0	2.6	5.8	-	-	2.0	8.8	5.4
Phosphate	Not to exceed 2.0 mg/ltr	-	-	-	1.78	-	-	-	-	2.04	-
Total Coliform	.....	425.0	900.0	1800.0	550.0	918.75	1800.0	1800.0	1800.0	1800	1800
Feacal Coliform (MPN/100ml)	Not to < 230	95.0	140.0	200.0	35.0	117.5	250.0	350.0	425.0	1800	706.25

Analysis Results of Nalla in the matter of NGT Court matter Survey pertaining to SRO-PC.
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Location	Kivale Nala Backs of Symbiosis Unversity Kivale				Ravet Nala Near Ravet STP			
	20.7.2018	23.10.2018	12.02.2019	18.06.2019	20.7.2018	23.10.2018	12.02.2019	18.06.2019
Parameters								
pH	7.3	7.3	8.0	7.8	7.5	7.3	8.3	7.9
Dissolved Oxygen	5.5	3.1	5.4	1.2	57	2.8	3	1.5
B.O.D.27 C (3 days)	4.0	6.0	6.0	28.0	6.5	7.0	32.0	26.0
COD	16.0	28.0	20.0	80.0	16.0	28.0	96.0	76.0
Suspended Solids	16.0	14.0	22.0	274.0	32.0	6.0	58.0	86.0
Total Dissolved Solids	320.0	530.0	430.0	440.0	380.0	408.0	390.0	504.0
Sodium	29.39	37.9	34.20	34.5	19.66	23.20	34.79	36.4
Potassium	3.37	5.18	5.33	6.6	1.34	2.61	5.07	8.5
Total Chromium	0.065	0.053	0.025	BDL	0.094	0.056	0.016	BDL
Nickel	0.021	0.047	0.018	0.02	0.035	0.049	0.012	0.01
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.066	0.032	BDL	BDL	0.046	0.054	BDL	BDL
Copper	0.023	0.051	0.020	BDL	0.024	0.043	0.020	BDL
Zinc	0.018	0.017	0.029	0.02	0.022	0.010	0.057	0.02
Iron	0.430	0.402	0.325	0.37	0.627	0.229	0.260	0.93
Nitrate	6.000	1.4	BDL	3.9	3.6	1.4	BDL	2.3
Phosphate	1.14	2.96	1.68	0.08	0.27	2.16	1.84	0.03
Manganese	0.179	0.358	0.016	0.03	0.049	0.018	0.017	0.19
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	900	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	140.0	275.0	1800+	1800	350.0	275.0	1800+	1800

Analysis Results of Nalla in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	Garware Nala Near Bhatnagar				Kalasagar Nala			
	21.7.2018	24.10.2018	14.02.2019	19.06.2019	21.7.2018	24.10.2018	14.02.2019	19.06.2019
pH	7.4	7.2	8.1	7.7	7.5	7.0	8.0	7.7
Disolved Oxygen	3.1	Nil	2.5	BDL	3.1	Nil	0.8	BDL
B.O.D.27 C (3 days)	20.5	19.5	28.0	36.0	14.5	35.0	72.0	34.0
COD	64.0	60.0	84.0	108.0	48.0	100.0	212.0	96.0
Suspended Solids	20.0	26.0	56.0	44.0	40.0	50.0	182.0	68.0
Total Dissolved Solids	448.0	432.0	444.0	434.0	302.0	526.0	506.0	578.0
Sodium	38.47	35.2	47.6	42.6	46.37	49.80	56.48	49.3
Potasium	4.38	6.27	7.61	7.3	6.53	9.40	11.6	9.1
Total Chromium	0.082	0.062	0.023	BDL	0.080	0.058	0.066	BDL
Nickel	0.012	BDL	BDL	0.03	0.036	BDL	0.099	0.05
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.018	BDL	BDL	0.02	0.010	BDL	0.027	BDL
Copper	0.045	BDL	0.015	BDL	0.037	0.023	0.307	BDL
Zinc	0.046	0.042	0.023	0.08	0.097	0.132	2.830	0.21
Iron	0.518	0.44	0.459	0.87	1.925	2.177	0.331	3.20
Nitrate	5.8	1.4	BDL	1.7	2.7	0.4	BDL	1.4
Phosphate	0.46	3.50	2.09	0.09	0.32	2.50	2.41	0.11
Manganese	0.407	0.314	0.150	0.32	1.029	0.628	0.058	0.65
Cobalt	BDL	BDL	BDL	BDL	0.018	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	425.0	1800+	1800+	1800	425.0	1800+	1800+	1800

Analysis Results of Nalla in the matter of NGT Court matter Survey pertaining to SRO-PC.
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Location	Chinchwad Nala Near SBR 30 MLD STP				Gavade Colony Nala Near Manikbag (Chinchwad)			
	21.7.2018	23.10.2018	12.02.2019	18.06.2019	21.7.2018	23.10.2018	14.02.2019	18.06.2019
Parameters								
pH	7.2	7.2	8.2	7.6	7.2	7.1	7.9	7.7
Disolved Oxygen	3.2	Nil	2.0	1.8	Nil	Nil	1.8	2.2
B.O.D.27 C (3 days)	28.0	22.0	55.0	28.0	42.0	17.5	105.0	24.0
COD	80.0	64.0	160.0	84.0	140.0	52.0	308.0	72.0
Suspended Solids	28.0	40.0	212.0	42.0	406.0	26.0	130.0	40.0
Total Dissolved Solids	502.0	504.0	498.0	480.0	410.0	392.0	412.0	492.0
Sodium	38.67	46.2	52.0	43.9	30.84	34.1	43.8	44.9
Potassium	5.99	9.64	10.40	11.8	4.45	6.48	10.31	12.3
Total Chromium	0.156	0.103	0.058	0.11	0.085	0.048	0.036	0.21
Nickel	0.018	BDL	0.030	0.04	0.015	BDL	0.019	0.08
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.014	BDL	0.010	BDL	BDL	BDL	0.016	0.08
Copper	0.029	0.021	0.027	BDL	0.037	0.012	0.023	BDL
Zinc	0.106	0.121	0.065	0.51	0.020	BDL	0.092	1.17
Iron	0.814	0.451	0.402	0.72	1.596	0.538	0.283	1.43
Nitrate	1.200	1.2	BDL	1.7	0.900	0.9	0.205	1.6
Phosphate	1.40	3.4	1.7	0.09	0.19	2.8	2.75	0.13
Manganese	0.328	0.246	0.022	0.39	0.890	BDL	0.114	0.35
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feecal Coliform	350	1800+	1800+	1800	275.0	1800+	1800+	1800

Analysis Results of Nalla in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	Kaspate Wasti Nala Near Wakad				Nala Near Sandvik			
	23.7.2018	24.10.2018	21.02.2019	20.6.2019	23.7.2018	24.10.2018	14.02.2019	20.06.2019
Parameters								
pH	7.3	7.3	8.0	8.1	7.3	7.1	7.94	7.8
Disolved Oxygen	Nil	Nil	Nil	BDL	2.4	Nil	2.5	BDL
B.O.D.27 C (3 days)	95.0	42.0	58.0	38.0	35.0	44.0	35.0	35.0
COD	276.0	120.0	172.0	120.0	100.0	132.0	112.0	108.0
Suspended Solids	54.0	24.0	26.0	40.0	20.0	140.0	142.0	164.0
Total Dissolved Solids	800.0	866.0	732.0		562.0	574.0	456.0	510.0
Sodium	63.18	68.6	66.94	56.5	42.46	53.20	57.11	41.6
Potassium	10.26	9.84	14.4	12.7	8.98	12.90	14.36	11.8
Total Chromium	0.015	0.050	BDL	BDL	0.020	0.103	0.044	BDL
Nickel	0.026	0.025	0.012	0.02	0.069	0.047	0.100	0.03
Cadmium	BDL	BDL	BDL	BDL	0.011	BDL	0.075	BDL
Lead	0.115	BDL	BDL	BDL	0.101	BDL	0.025	BDL
Copper	0.028	0.026	0.020	0.04	0.026	0.061	0.163	BDL
Zinc	0.030	BDL	0.056	0.03	0.035	0.093	1.018	0.07
Iron	0.516	0.381	0.255	0.35	1.001	1.199	0.552	2.55
Nitrate	1.9	2.8	0.096	2.1	1.2	1.8	0.16	1.5
Phosphate	2.03	2.98	5.84		2.010	2.62	2.28	0.10
Manganese	0.201	0.634	0.130	0.34	0.429	0.394	0.048	0.58
Cobalt	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	425.0	1800+	1800+	1800	350.0	900.0	1800+	1800

Analysis Results of Nalla in the matter of NGT Court matter Survey pertaining to SRO-PC.

Location	Ramdbara Nala Chikhli				Moshi Nala			
	24.7.2018	24.10.2018	26.02.2019	20.06.2019	24.7.2018	25.10.2018	26.02.2019	26.06.2019
pH	7.2	7.2	8.3	7.9	7.5	7.0	8.3	7.6
Disolved Oxygen	3.0	Nil	NIL	BDL	3.6	1.0	0.4	2.9
B.O.D.27 C (3 days)	45.0	42.0	92.0	35.0	13.5	15.5	45.0	10.5
COD	144.0	128.0	288.0	104.0	40.0	48.0	140.0	32.0
Suspended Solids	126.0	56.0	152.0	110.0	12.0	14.0	80.0	44.0
Total Dissolved Solids	640.0	-	572.0	612.0	490.0	568.0	506.0	322.0
Sodium	42.90	3.40	52.13	65.7	27.04	42.70	43.01	33.0
Potassium	5.34	-	12.30	14.5	4.16	8.36	10.71	8.5
Total Chromium	0.087	-	BDL	0.18	0.022	0.0	BDL	BDL
Nickel	0.019	-	0.022	0.02	0.019	0.8	0.013	0.03
Cadmium	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL
Lead	0.033	-	BDL	BDL	BDL	BDL	BDL	BDL
Copper	0.030	-	0.014	0.08	0.024	0.18	0.029	0.02
Zinc	0.119	-	0.499	1.94	0.013	0.10	0.074	0.01
Iron	3.574	-	0.185	3.77	0.272	0.218	0.356	0.39
Nitrate	0.9	-	2.4	1.9	2.6	1.1	2.4	2.9
Phosphate	0.5	-	1.87	0.13	1.2	-	1.83	0.13
Manganese	0.720	-	0.016	0.44	0.098	0.106	0.061	0.72
Cobalt	BDL	-	BDL	BDL	BDL	BDL	BDL	BDL
Total Coliform	1800+	1800+	1800+	1800	1800+	1800+	1800+	1800
Feacal Coliform	425.0	1800+	1800+	1800	275.0	1800+	1800+	1800

**MAHARASHTRA POLLUTION CONTROL BOARD
REGIONAL OFFICE - PUNE**

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MPCB/ROP/ 190227-FTS-0304

Date: 27/02/2019

To
The Commissioner,
Pimpri Chinchwad Municipal Corporation,
Pimpri, Pune.

Sub: Proposed Directions under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981 & Hazardous and Other Waste (M & TM) Rules, 2016.

Ref: 1) News published on 06/02/2019 in daily Marathi newspaper about fish kill incidence occurred in Pawana River.
2) Visit of the board officials to your industry on 06/02/2019
3) Action proposal submitted by Sub Regional Officer Pimpri Chinchwad vide 190208-FTS-0070, Dtd. 08/02/2019

Sir,

WHEREAS, your municipal corporation is located in 'Pollution Prevention Area' under Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of) Act, 1981 & Hazardous & Other Waste (Management & TM) Rules, 2016.

AND WHEREAS, the Board had granted the consent to operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974, under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous Wastes (MH & TM) Rules, 2016 and amendments thereof. And, it is obligatory on your part to provide pollution control systems as it warranted and to operate and maintain the same continuously and effectively so as to achieve the standards prescribed in the consent.

AND WHEREAS, the board officials has visited to the location and carried out inspection on 06/02/2019, **AND WHEREAS**, during visit of the Board Officials following non-compliances / violations under the Water (P&CP) Act, 1974 were observed,

1. There was fish kill at Kejubai Bandhara, Theraon, in Pawana River.
2. The untreated domestic effluent was being directly discharge into the River Pawana at different 05 points, colour of river water was blackish & greenish.
3. The foul smell was noticed and water hyacinth/ jalparni grown into Pawana River in huge amount.
4. The drainage lines found broken at few places & untreated sewage being discharged in the Pawana River.
5. Sewage pumping station located at Walhekarwadi found non-operational & the sewage of PCNTDA area was found directly discharging into River

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AND WHEREAS, from the record of this office and observations made during the visit, I came to the conclusion that you are not complying with the consent condition and the provision of Water (Prevention & Control of Pollution) Act, 1974 thereby causing grave injury to the environment.

NOW THEREFORE, in exercise of the powers conferred upon me under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981, I, Dilip Khedkar, Regional Officer of the Board, at Pune hereby issue directions as under-

1. Why the competent authorities shall not be directed to disconnect Water / electricity supply of your municipal corporation?
2. Why the prosecution proposal shall not be filled against your municipal corporation before the court of Law under section 41(2), 43, 44 & 48 read with sections 33A, 24, 25, 26 of the Water (P&CP) Act, 1974 & under section 15 of the Environment (Protection) Act, 1986 ?

You are directed to remain present for **personal hearing on 07th March, 2019 at 12.30 pm in the office of Regional Officer, M. P. C. Board, Jog centre, 3rd floor, wakadewadi, Pune-03** along with action plan, failing of which, further necessary legal action may be initiated against you, which may please be noted.

Further you are directed to stop discharge of untreated / partly treated domestic effluent into River Pawana immediately & report the compliance.

For and on behalf of
Maharashtra Pollution Control Board



(Dilip Khedkar)
Regional Officer

Copy Submitted for information to
1. Joint Director(WPC), M.P.C. Board, Mumbai.

Copy to-

The Sub-Regional Officer, M.P.C.Board,Pimpri Chinchwad :- You are directed to serve this directions to corporation & keep the necessary follow up and also report the compliance from time to time.

**MAHARASHTRA POLLUTION CONTROL BOARD
REGIONAL OFFICE - PUNE**

Phone No. 020-25811694
Fax No. 020-25811701
e-mail : ropune@mpcb.gov.in
visit us : www.mpcb.gov.in



Jog Centre, 3rd Floor,
Wakdewadi,
Old-Pune Mumbai Road,
Pune- 411003

MPCB/ROPI PD/19/2090002

Date: 09/12/19

To
The Commissioner,
Pimpri Chinchwad Municipal Corporation,
Pimpri, Pune.

Sub: Proposed Directions under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981 & Hazardous and Other Waste (M & TM) Rules, 2016.

Ref : 1) Interim Direction issued by Board vide no. ROP/190316-FTS-022 dated 16.03.2019.
2) This office has received telephonic information from Mr. Rahul Sarode regarding Fish kill incidence occurred at Kejubai Bandhara, Thergaon, Pune Dtd. 04.12.2019
3) Visit of the Board Official's to nearby area of Kejubai Bandhara, Thergaon, Pune on Dtd. 05.12.2019.
4) Action proposal submitted by Sub Regional Officer Pimpri Chinchwad vide 091219001.

Sir,

WHEREAS, your municipal corporation is located in 'Pollution Prevention Area' under Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of) Act, 1981 & Hazardous & Other Waste (Management & TM) Rules, 2016.

AND WHEREAS, the Board had granted the consent to operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974, under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous Wastes (MH & TM) Rules, 2016 and amendments thereof. And, it is obligatory on your part to provide pollution control systems as it warranted and to operate and maintain the same continuously and effectively so as to achieve the standards prescribed in the consent.

AND WHEREAS, telephonic Complaint information from Mr. Rahul Sarode regarding Fish kill incidence occurred at Kejubai Bandhara, Thergaon, Pune dated 04.12.2019.

AND WHEEREAS, the board officials has visited to the location and carried out inspection on 05.12.2019, **AND WHEREAS**, during visit of the Board Officials following non-compliances / violations under the Water (P&CP) Act, 1974 were observed,

1. There was fish kill at Kejubai Bandhara, Thergaon, in Pawana River.
2. The untreated domestic effluent was being directly discharge into the River Pawana at different 04 points, colour of river water was greenish.
3. The foul smell was noticed at Kejubai Bandhara, Thergaon and Thathavade area, Pawana River.
4. There was dead Tortoise observed at Tathwade Crematorium in Pawana River.

[Handwritten Signature]

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5. PCMC has not taking any corrective step to prevent contamination of water of River Pawana due to disposal of untreated domestic effluent in and around Kejubai Bandhara, Thergaon, River Pawana, as frequently (twice a year) fish kill incidence occur at same place.
6. Operation & maintenance of PCMC Ravet STP - 20 MLD was poor, treated water quality of STP outlet was turbid (greenish). Also screening not found in operation, floating matter observed in SBR tank.
7. PCMC has not submitted the BG of Rs.5.0 lacs, towards compliance of Interim Direction dtd. 16.03.2019 till date.

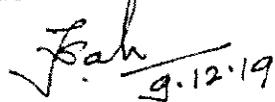
AND WHEREAS, from the record of this office and observations made during the visit, I came to the conclusion that you are not complying with the consent condition and the provision of Water (Prevention & Control of Pollution) Act, 1974 thereby causing grave injury to the environment.

NOW THEREFORE, in exercise of the powers conferred upon me under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981, I, J. S. Salunkhe, Regional Officer of the Board, at Pune hereby issue directions as under-

1. Why the competent authorities shall not be directed to disconnect Water / electricity supply of your municipal corporation?
2. Why the prosecution proposal shall not be filled against your municipal corporation before the court of Law under section 41(2), 43, 44 & 48 read with sections 33A, 24, 25, 26 of the Water (P&CP) Act, 1974 & under section 15 of the Environment (Protection) Act, 1986 ?

NOW THEREFORE, you are hereby directed to immediately stop discharge of untreated / partly treated domestic effluent into River Pawana & report the compliance along with action plan, failing of which, further necessary legal action may be initiated against you, which may please be noted.

For and on behalf of
Maharashtra Pollution Control Board


(J. S. Salunkhe)
Regional Officer, Pune

Copy Submitted for information to :-

1. Joint Director(WPC), M.P.C. Board, Mumbai.

Copy to- The Sub-Regional Officer, M.P.C.Board,Pimpri Chinchwad :- You are directed to serve this directions to corporation & keep the necessary follow up and also report the compliance from time to time.

**MAHARASHTRA POLLUTION CONTROL BOARD
REGIONAL OFFICE - PUNE**

Phone No. 020-25811694
Fax No. 020-25811701
e-mail : ropune@mpcb.gov.in
visit us : www.mpcb.gov.in



Jog Centre, 3rd Floor,
Wakdewadi,
Old-Pune Mumbai Road,
Pune- 411003

MPCB/ROPI/20015-FTS-0120

Date: 15/01/2020

To
The Commissioner,
Pimpri Chinchwad Municipal Corporation,
Pimpri, Pune.

Sub: Proposed Directions under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981 & Hazardous and Other Wastes (M & TM) Rules, 2016.

- Ref :**
- 1) Interim Direction issued by Board vide no. ROP/190316-FTS-022 dated 16.03.2019.
 - 2) Proposed Direction issued by Board no.MPCB/ROP/PD/19/2090002 dtd.9.12.2019.
 - 3) Consent granted by the Board office. On 24.9.2019 valid upto 31.12.2021.
 - 4) E-mail received to this office from Shri.Gajanan Babar Ex. Member of Parliament Maval Loksabha, Dist-Pune.

WHEREAS, Pimpri-Chinchwad Municipal Corporation is located in 'Pollution Prevention Area' under Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of) Act, 1981 & Hazardous & Other Wastes (Management & TM) Rules, 2016.

AND WHEREAS, the Board had granted the consent to operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974, under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous & Other Wastes (M & TM) Rules, 2016 and amendments thereof. And, it is an obligatory on your part to provide pollution control systems as it warranted and to operate and maintain the same continuously and effectively so as to achieve the standards prescribed in the consent.

AND WHEREAS, E- mail was received from Shri.Gajanan Babar Ex. Member of Parliament Maval Loksabha, Dist-Pune regarding Water Pollution caused due to discharge of 47 MLD untreated domestic effluent into Rivers Pawana, Indrayani & Mula which resulting into growing of Water hyacinth (Jalparni) in the river bed & damage to aquatic life

AND WHEEREAS, as per the information submitted by yourself from time to time it is noted that, Water Consumption is 520 MLD however, Water Consumption shown in Consent application submitted by you & subsequently Consent granted by the Board office is 450 MLD. Which is contradictory.

AND WHEREAS, Fish Kill incidents were occurred three times in last one year due to untreated discharge of 47 MLD domestic sewage in to the River.

(Handwritten Signature)

AND WHEREAS, You have not submitted Short terms measures for diversion of Nallas to prevent Contamination of River Water due to discharge of 47 MLD untreated domestic sewage. Also, Board has issued SCN & Warning Notices from time to time regarding improvement in O & M of existing Sewage Treatment Plants to achieve the prescribed standards.

AND WHEREAS, you have not submitted the BG of Rs.5.0 lakh, towards compliance of Interim Direction dtd. 16.03.2019 till date.

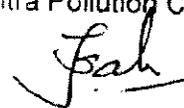
AND WHEREAS, from the record of this office and observations made during the visit, I came to the conclusion that you are not complying with the consent condition and the provision of Water (Prevention & Control of Pollution) Act, 1974 thereby causing grave injury to the environment.

NOW THEREFORE, in exercise of the powers conferred upon me under section 33 A of Water (Prevention & Control of Pollution) Act, 1974, 31 A of Air (Prevention & Control of Pollution) Act, 1981, I, J. S. Salunkhe, Regional Officer of the Board, at Pune hereby issue directions as under-

1. Why the competent authorities shall not be directed to disconnect Water / electricity supply of your municipal corporation?
2. Why the prosecution proposal shall not be filled against your municipal corporation before the court of Law under section 41(2), 43, 44 & 48 read with sections 33A, 24, 25, 26 of the Water (P&CP) Act, 1974 & under section 15 of the Environment (Protection) Act, 1986?

NOW THEREFORE, you are hereby directed to immediately stop discharge of untreated / partly treated domestic effluent into River Pawana, Indrayani & Mula & report the compliance along with action plan with Short term measures to this office, failing of which, further necessary legal action may be initiated against you, which may please be noted.

For and on behalf of
Maharashtra Pollution Control Board



(J. S. Salunkhe)
Regional Officer, Pune

Copy Submitted for information to :-

1. Joint Director(WPC), M.P.C. Board, Mumbai.

Copy to- The Sub-Regional Officer, M.P.C. Board, Pimpri Chinchwad :- You are directed to serve this directions to Pimpri Chinchwad Municipal corporation & keep the necessary follow up and also report the compliance from time to time.