BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 797 OF 2023

IN THE MATTER OF :-

"HOW GARBAGE IS CHOKING N-CHOE IN CHANDIGARH"

VERSUS

UNION OF INDIA & ORS. …RESPONDENT(S)

NDOH: 17.05.2024

I N D E X

THROUGH

Advocate on behalf of Resp. No.2/CPCC

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PLACE: NEW DELHI

DATE: 10.05.2024.

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 797 OF 2023

Serial No. of Register 1044
Dated 7/5/2024

IN THE MATTER OF :-

"HOW GARBAGE IS CHOKING N-CHOE IN CHANDIGARH"

VERSUS

UNION OF INDIA & ORS. ...RESPONDENT(S)

OBJECTIONS AND ADDITIONAL AFFIDAVIT ON BEHALF OF RESPONDENT NO. 2 CHANDIGARH POLLUTION CONTROL COMMITTEE.

I, Anil Kumar, Junior Scientific Assistant, Office: Chandigarh Pollution Control Committee, being well conversant with the facts of the case in my official capacity and being competent to swear this affidavit on behalf of Respondent No. 2/ CHANDIGARH POLLUTION CONTROL COMMITTEE (CPCC), do hereby solemnly affirm and declare as under:

1. That I am authorised representative of respondent no. 2., Chandigarh Pollution Control Committee (CPCC), I am filing this affidavit in terms of order of this Hon'ble dated

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PARYAVARAN BHAWAN, MADHYA MARG

20.03.2024 on behalf of Respondent No. 2 hereby making submissions in the case.

2. That vide order dated 20.03.2024 in O.A. 797 of 2023 the Chandigarh pollution Control Committee was given an opportunity to file objections to the report dated 19.03.2024 filed by the CPCB. The order dated 20.03.2024 is reproduced hereinunder for the reference of this Hon'ble Tribunal

xxxxx-----xxxxx-----xxxxx

"1. Learned Counsel appearing for Chandigarh Pollution Control Committee (hereinafter referred to as 'CPCC') stated that report dated 19.03.2024 filed by CPCB was not served upon him and he has not been able to go through it as it has been filed only yesterday at 10.58 a.m.

2. The report is available on website and can be downloaded by CPCC. He may file objections, if any, within two weeks.

3. We allow respondent nos. 3 and 4 also to file their objection, if any, to the said report by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

4. List on 17.05.2024.

xxxxx-----xxxxx-----xxxxx

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SECTOR 19-B, CHANDIGARH 160019

3. That before making submissions it would be appropriate to clarify certain crucial facts. The N-Choe is a natural formation which acts as a rain water drainage channel originating near Punjab Civil Secretariat in Sector 2 and running through the center of Chandigarh before entering Mohali from Sector 53 onwards.

4. That the contention made by the CPCB in its report dated 19.03.2024 that the N-Choe is an interstate drain carrying sewage, storm water, etc. is incorrect and hereby denied.

5. That to clarify the issue of high coliform numbers in the N-Choe it is submitted that the entire course of the N-choe within the limits of Chandigarh is surrounded by trees planted along the boundary of the N-Choe.

6. That the N-choe passes through the various parks such as Bougainvillea Garden, Leisure valley, etc. all the way to Sector 53, where it exits Chandigarh. All along the N-Choe there are trees lining the N-Choe and within the parks multiple species of squirrels, mongoose, monkeys, rats, dogs, cats, birds, reptiles, butterflies, micro-organisms, insects etc reside on these trees and in the parks from where the N-choe flows.

7. That these animals are a part of the natural ecosystem of the area and the fecal matter of these animals ultimately falls directly into the N-choe.

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8. That no human waste or sewage flowing into the N-Choe at any juncture within the city of Chandigarh.

9. That it is submitted that during the pre-monsoon and dry seasons waste from these small animals and birds remains in concentrated quantities thereby, leading to a higher fecal coliform content. This since the N-Choe does not have free flowing water in it during the dry season which leads to concentration of fecal matter. The water that enters the N-Choe is from the running off from watering the parks, fresh water or tertiary treated water which enters the N-Choe in small quantities leading to concentration of fecal matter.

10. That further with the onset of monsoon as more rainwater enters the N-Choe, the Fecal Coliform content starts decreasing due to dilution of the previously concentrated quantities of waste.

11. That it is submitted that due to bacteria entering the N-Choe through direct discharge of waste from free ranging mammals and birds from surface and storm water runoff, the naturally occurring Fecal Coliform content in the N-Choe remains in the range of 10^2 to 10^3.

12. Therefore, the higher Fecal Coliform levels depicted in the report of the CPCB as well as of the answering respondent

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is on account of natural causes and not due to the any human factors or intervention.

13. That the deponent would like to humbly submit that since the N-choe is a natural formation which runs through the city of Chandigarh, the norms laid down for STP's would not be applicable in the present case. The N-choe cannot be classified as a sewerage drain as no water from the sewerage lines or the STP's enters the N-choe.

14. That the deponent humbly submits that at best the Schedule VI of Environment (Protection) Rules, 1986 can be taken as a reference for the purposes of water quality. Previously water quality for drains was regulated by parameters for discharge under inland surface water as per the Schedule VI of Environment (Protection) Rules,1986 as no specific norms for drains were notified. Further it is submitted there are no norms defined for Fecal Coliform within the said rules as well.

A copy of the Schedule VI of Environment (Protection) Rules, 1986 is Annexed herewith as **ANNEXURE R-1.**

15. That in 2015 directions were issued by CPCB to all the Municipal Corporations for the existing and upcoming STPs to meet with the prescribed parameters under the draft notification dated 24.11.2015 by way of which Fecal Coliform was introduced as a parameter. Thereafter, the

Arif Kumar
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relaxation in the aforesaid norms were stayed by this Hon'ble tribunal vide judgment dated 30.04.2019 in O.A. No. 1069 of 2018, Nitin Shankar Deshpande Vs. UOI & Ors.

A true copy of the order dated 30.04.2019 in O.A. No. 1069 of 2018, Nitin Shankar Deshpande Vs. UOI & Ors. is annexed herewith as **ANNEXURE R-2.**

16. That further this Hon'ble Tribunal vide its order dated 15.06.2020 in the matter of Stench Grips Mansa's Sacred Ghaggar River clearly mentioned that for Fecal Coliform norms of 100 MPN/100 ml will be applicable but only to STP's.

A true copy of the order dated 15.06.2020 in the matter of Stench Grips Mansa's Sacred Ghaggar River bearing OA No. 138/2016 is annexed herewith as **ANNEXURE R-3.**

17. That at this juncture it would be pertinent to mention that the city of Chandigarh has separate pipeline systems for draining storm water and for sewage. The water from the storm water drainage systems eventually flows into the N-choe or the Sukhna Choe or the Patiala ki Rao whereas the sewage flows directly to the STPs for treatment.

18. That the deponent submits that sewage water in the city of Chandigarh flows into the STPs for treatment. Further it is submitted that the treated water from the STPs is not

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discharged into the N-choe in Chandigarh but is discharged at other sources such as the Sukhna choe. As per directions of the Hon'ble NGT all the eight STPs have been upgraded as per the latest norms i.e. BOD< 10 mg/l and Fecal Coliform< 100MPN/100ml along with other parameters.

A true copy of the data showing quality of treated sewage water discharged from the STP's is annexed herewith as **ANNEXURE R-4.**

19. That the deponent would like to humbly submit that at present there is no untreated or treated sewage being discharged into the N-choe within the limits of U.T. Chandigarh.

20. The aforementioned averment is substantiated by the conjoint reading of the Fecal Coliform and BOD values in the N-choe. It is submitted that an increase in the BOD Value along with an increase in the fecal coliform count would be reflective of discharge of sewage water into the N-choe.

21. That according to the report dated 19.03.2024 the BOD values detected at both units of assessment, I.e., NCC-01 & NCC-02 (sector 36, adjacent to government school, Chandigarh and at exit location of Sector 53, garden of spring boundary, Chandigarh) were 28 mg/l and 22 mg/l

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respectively and are well within the parameters prescribed under the Schedule VI of Environment (Protection) Rules,1986. The said figures supplement the argument of the CPCC that there is no discharge of sewage water or human waste into the N-choe.

22. That the deponent submits that the heap of solid and C&D waste present on the bank of the drain at Sector 36 Hibiscus garden (Near Central Forensic Science laboratory) as reported by the CPCB has been removed.

23. That it is submitted that regarding installation of Net (Jaali) at all the culvert points wherever drain is crossing the road, Engineering Department, Chandigarh Administration with the directions of the CPCC have complied with and further modifications are being carried out by the Engineering Department as directed by the CPCC.

24. That further it is submitted that as per the report dated 19.03.2024 it was duly recorded that the breakage of sewage pipeline near sector 36 was restored. It was observed by the CPCB that:

xxxxx-----xxxxx-----xxxxx

The team observed that in Chandigarh sector 36 end point sewage pipe line crossing the drain has been repaired now which was broken earlier and sewage flowing in N-Choe drain. All

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the discharge points located at Sector 36 (Hibiscus garden) and sector 42 were found tapped. No discharge of the sewage was observed, at the time of visit which was mentioned in article of the Indian Express dated 15.12.2023.

xxxxx-----xxxxx-----xxxxx

25. That the deponent submits that a higher Fecal coliform content is not attributable to any human factor as there is no discharge of sewage into the N-choe within the limits of Chandigarh.

26. That the deponent prays that he may further be allowed to file a detailed affidavit, if so required and if so directed by this Hon'ble Tribunal.

DEPONENT

CHANDIGARH POLLUTION CONTROL COMMITTEE
PARYAVARAN BHAWAN, MADHYA MARG,
SECTOR 19-B, CHANDIGARH 160019

VERIFICATION:

I, Anil Kumar, the deponent above named do hereby verify and declare that the facts stated in the above paras are true to my knowledge.

Verified at on this day of May, 2024.

07 MAY 2024

DEPONENT

CHANDIGARH POLLUTION CONTROL COMMITTEE
PARYAVARAN BHAWAN, MADHYA MARG,
SECTOR 19-B, CHANDIGARH 160019

ATTESTED
A Sharma
Notary Public, Chandigarh

07 MAY 2024

ANNEXURE R-1

[1][SCHEDULE – VI]

(See rule 3A)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS

PART A: EFFLUNETS

S. No.	Parameters	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
1.	Colour and odour	See 6 of Annexure-I	--	See 6 of Annexure-I	See 6 of Annexure-I
2.	Suspended solids mg/l, Max.	100	600	200	(a) For process waste water-100
					(b) For cooling water effluent10 percent above total suspended matter of influent.
3.	Particulate size of suspended solids	Shall pass 850 micron IS Sieve	--	--	(a) Floatable solids, max. 3 mm.
					(b) Settleable solids, max. 850 microns
[2][4.	***	*	--	***	--
5.	pH Value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	shall not exceed 5 °C above the receiving water temperature	--	--	shall not exceed 5 °C above the receiving water temperature
7.	Oil and grease mg/l Max.	10	20	10	[1][10]
8.	Total residual chlorin mg/l Max.	1.0	--	--	1.0
9.	Ammonical nitrogen (as N), mg/l Max.	50	50	--	50
10.	Total Kjeldahl Nitrogen (as NH_3) mg/l, Max.	100	--	--	100
11.	Free ammonia	5.0	--	--	5.0

[1] Schedule VI inserted by Rule 2(d) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

[2] Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No.G.S.R.801(E), dated 31.12.1993.

S. No.	Parameters	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
	(as NH_3) mg/l, Max.				
12.	Biochemical Oxygen Demand [1][3 days at 27 °C] mg/l	30	350	100	100
13.	Chemical Oxygen Demand, mg/l, max.	250	--	--	250
14.	Arsenic (as As), mg/l, max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg), mg/l, Max.	0.01	0.01	--	0.01
16.	Lead (as Pb) mg/l, Max.	0.1	1.0	--	2.0
17.	Cadmium (as Cd) mg/l, Max.	2.0	1.0	--	2.0
18.	Hexavalent Chromium (as Cr+6), mg/l max.	0.1	2.0	--	1.0
19.	Total chromium (as Cr.) mg/l, Max.	2.0	2.0	--	2.0
20.	Copper (as Cu) mg/l, Max.	3.0	3.0	--	3.0
21.	Zinc (As Zn.) mg/l, Max.	5.0	15	--	15
22.	Selenium (as Se.) mg/l, Max.	0.05	0.05	--	0.05
23.	Nickel (as Ni) mg/l, Max.	3.0	3.0	--	5.0
[2][24.	***	*	*	*	*
25.	***	*	*	*	*
26.	***	*	*	*	*]
27.	Cyanide (as	0.2	2.0	0.2	0.2

[1] Substituted by Rule 2 of the Environment (Protection) Amendment Rules, 1996 notified by G.S.R. 176, dated 2.4.1996 may be read as BOD (3 days at 27 °C) wherever BOD 5 days 20 °C occurred.

[2] Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No.G.S.R.801(E), dated 31.12.1993.

S. No.	Parameters	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	3			
		(a)	(b)	(c)	(d)
	CN) mg/l Max.				
[1][28.	***	*	*	*	*]
29.	Fluoride (as F) mg/l Max.	2.0	15	--	15
30.	Dissolved Phosphates (as P), mg/l Max.	5.0	--	--	--
[1][31.	***	*	*	*	*]
32.	Sulphide (as S) mg/l Max.	2.0	--	--	5.0
33.	Phenoile compounds (as C_6H_5OH) mg/l, Max.	1.0	5.0	--	5.0
34.	Radioactive materials:				
	Alpha emitter micro curie/ml.	10^{-7}	10^{-7}	10^{-8}	10^{-7}
	Beta emitter micro curie/ml.	10^{-6}	10^{-6}	10^{-7}	10^{-6}
35.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
36.	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
37.	Iron (as Fe)	3 mg/l	3 mg/l	--	3 mg/l
38.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
39.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l
[1][40.	***	*	*	*	*

(Shubham Bhalla)
//TRUE COPY//

[1] Omitted by Rule 2(d)(i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No. G.S.R. 801(E) dated 31.12.1993.

ANNEXURE R-2

Item No. 04 Court No.1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 1069/2018
(M.A. No. 1792/2018, M.A. No. 1793/2018, I.A. No. 150/2019 & I.A. No. 151/2019)

Nitin Shankar Deshpande Applicant(s)

Versus

Union of India &Ors. Respondent(s)

Date of hearing: 30.04.2019

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s): Ms. Ekta Sikri and Ms. K. Gayatri, Advocates

For Respondent (s): Mr. Rajkumar, Advocate for CPCB
Mr. Gigi C. George, Advocate for MoEF&CC
Mr. Dhruv Mehta, Sr. Advocate with Mr. Ashish Wad and Mr. Sidharth Mahajan, Advocates

ORDER

1. The issue for consideration is effluent discharge standards for STPs as laid down vide Notification dated 13.10.2017 by way of Environment (Protection) Amendment Rules, 2017 against Serial No. 105 of Schedule-I to the Environment (Protection) Rules, 1986.

2. Vide order dated 21.12.2018, this Tribunal noted that untreated or partially treated sewage is a major source of pollution in the country.

The Hon'ble Supreme Court in the case of *Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors.*[1] directed taking of steps so that huge gap in sewage generated and treated is bridged.

3. The Tribunal also noted that the proposed standards as per Draft Notification dated 24.11.2015 issued by Ministry of Environment, Forest & Climate Change (MoEF & CC) are sought to be diluted by the impugned Notification as follows:

Sr. No.	**Parameters**	**Old Norms 1986**	**Draft Norms Nov., 15**	**MoEF& CC Notification October 2017**
1.	Biochemical Oxygen Demand (BOD) (mg/l)	<30	<10	<30 and <20 (metro cities)
2.	Chemical Oxygen Demand (COD) (mg/l)	<250	50	No limit
3.	Total Suspended Solids (TSS) (mg/l)	<100	<20	<100 and <50 (metro cities)
4.	Total Nitrogen (mg/l)	<100	<10	No limit
5.	Ammonical Nitrogen (mg/l)	<50	<5	No limit
6.	Total Phosphorus (mg/l)	No limit	No limit	No limit
7.	Fecal Coliform MPN/100 ml	No limit	<100	<1000

4. The Tribunal also noted that the relaxed standards will deteriorate the water quality and degrade the environment and be a retrograde

[1](2017) 5 SCC 326

step. The dilution will also affect the human life and the water quality of the rivers.

5. Accordingly, the Tribunal constituted an Expert Committee comprising the nominees from IIT Kanpur, IIT Roorkee, NEERI and CPCB which was to give its report after examining the best available technologies and best practices and after referring to the Experts study on the subject particularly CPCB Report on "River Stretches for Restoration of Water Quality, 2014-15" and the order of this Tribunal on the subject of polluted river stretches dated 20.09.2018 in Original Application No. 673/2018 in the matter of News item published in *"The Hindu" authored by Shri Jacob Koshy titled "More river stretches are now critically polluted : CPCB"*. The Tribunal also directed stay of operation of the impugned Notification and application of pre-revised standards till further orders.

6. Accordingly, report has been received from CPCB vide e-mail dated 30.04.2019 forwarding the Expert Committee report. The report noted the current status of water quality of rivers which flows in India and the fact that 351 river stretches out of 323 rivers were polluted. There was need for revised standards for BOD and COD with a view to protect the water quality of the rivers/streams. There was also a need for revised standards for TSS, for Nitrogen (Ammonia & Nitrates) and Phosphorus and for Fecal Coliform.

7. The Committee while discussing the need for revised the Standards for BOD and COD observed that:

"Inclusion of COD in sewage discharge certainly offers advantages in terms of early diagnosis on functioning of STPs and thus helps in resorting immediate measures/corrective actions. This is because analysis of COD is completed within 5 Hours as against 5 days at 20°c or 3 days at 27°C for BOD (Sawyer & Mccarty, V. Edition). Moreover, if Government wishes to regulate STPs across the county through online monitoring system in future, inclusion of COD in Discharge Standards will prove beneficial for the reason that COD sensors are quite reliable and readily available in Indian market, however the same is not the case with BOD sensors. Thus, from regulatory point of view also, COD is an important parameter and needs to be included in sewage Discharge Standards."

While discussing the need for revised standards for TSS the Committee has observed that:

" The Microbial quality of wastewater could be linked with the TSS concentration. The larger the Suspended solids, the larger shall be the presence of bacteria, protozoa and viruses. High TSS wastewater cannot be easily disinfected, as the suspended particles "hide" these microorganisms and also react with chemical disinfectants."

Further the committee observed:

"A well designed and operated conventional sewage treatment system such as activated sludge process can meet 20 mg/L effluent TSS discharge standards. Many STPs bases on secondary wastewater treatment all over the globe are able to achieve 10-20mg/L. TSS without any tertiary treatment."

Further with regard to the need for revised standard for Nitrogen (Ammonia & Nitrates) and Phosphorus it has been elaborated by Committee that:

"Nitrogen and phosphorus in all forms are major rate limiting elements essential for the growth of alage and other vegetation in water bodies leading to a state called eutorphication. The greenish color water with large vegetation growth is common sight for not only lakes and ponds but also slow moving rivers.

Eutrophication arises from the oversupply of nutrients (N & P), which leads to overgrowth of plants and alage. Degradation of dead alage and plants by microbes consumes dissoloved oxygen in the water, thereby creating the state of hypoxie.

Eutrophication leads to many problems related to water quality:

- *Large Dissolved oxygen variation leads to fish kills*
- *Filling the water body with dead algae and other vegetation.*
- *Decomposition of dead algae and vegetation at the bottom causing oxygen depletion and further release of nutrient.*
- *Release of algal toxins and odors causing substances make the water unsuitable for human and animal consumption."*

The Committee has also observed that:

Due to the absence of dilution and worsening of our rivers and lakes, it is necessary to move towards nutrients (nitrogen and phosphorus) regulations in water bodies.

The Committee while discussing the revised standards for Fecal Coliforms observed:

"As per "Houses and Household Amenities, Latrine Facility, Census of India - 2011, Registrar General and Commissioner, India" available at http://censusindia.gov.in/ 2011census/hlo/ Data sheet/ India / Latrine. Pdf; Out of 7.9 Crores Urban Households (UHH), nearly 1.7 Crores UHH (i.e. 20 %) lacks adequate sanitation. At the same time more than 5 lakhs villages in the country are now open defecation free (ODF) (https:// sbm.gov.in/sbmdashboard / ODF.aspx.) Although rural parts are covered through sanitary toilets, effluent from septic tanks from newly built 9.2 crores toilets across the country is unavoidable. This may pose very high health risk owing to the fact that "Sanitation" including collection, conveyance and treatment is either absent or inadequate in such areas. ***Relaxing FC pose risk to downstream cities/town/villages that rely on drinking water source on same water body in case of rivers. It appears quite reasonable to say that FC Standards be prescribed to 100 MPN/100 ml. considering its impact on human health in general and readiness of Indian wastewater sector to handle the same (Recommended value of FC in CPHEE0 Manual, 2013 is MPS230/100 mI.).*** *(emphasis added)*

Hence, CPHEE0 2013 recommended the following guidelines for treated sewage discharge into surface water which after some travel may join a ***drinking water source to be used as source of supply for drinking water as given in following Table 5.20***

Table 5.20 Recommended Guidelines for Treated Sewage if Discharged into Surface Water to be used as source of Drinking Water.

Parameter	*MoEF Standards (A)*	*Recommended Values*
BOD, mg/L	*30*	*Less than 10*
SS, mg/L	*100*	*Less than 10*
TN, mg/L	*100*	*Less than 10*
Dissolved P, mg/L	*5*	*Less than 2*
Faecal Coliforms, MPN/100 mL	*Not specified*	*Less than 230*

(A) General Standards, Environmental Protection Rule, 1986 & as authorized by PCB

• *In order to achieve the above values, the treatment process would need to be designed for nutrient removal in addition to the conventional BOD and SS removal. It has also been reported that if the nutrients were removed to the levels mentioned in Table 3.20, then the amount of chlorine required for disinfection would be less at about 5 mg/ l.*

Considering aforementioned analysis, the Chairman CPCB directed all State Pollution Control Boards to make it mandatory for local bodies to set up sewerage systems for treatment and disposal of sewage to meet the prescribed standards ie., pH 6.5-9, BOD (mg/L): Not more than 10, COD (mg/L): Not more than 50, TSS (mg/L) : Not more than 20, NH_4-N (mg/L): Not more than 5, N-total (mg/L) Not more than 10 ,Fecal Coliforms (MPN/100 ml) Less than 230. The details are provided in Annexure 1."

8. The report further mentions that the stringent standards in terms of Draft Notification dated 24.11.2015 are not only economically viable

and technically feasible, the cost will not be significantly high. In this regard, it was observed:

"7.0 ECONOMIC VIABILITY & RESOURCE POSITION

1. For Nitrification (Conversion of ammonia to nitrate), 20-30% larger aeration tanks are required with additional 40-50 % aeration demand. The Total capital and O&M cost of the system increases by 10-20 & 5-10 % respectively.

2. For further removal of nitrate from wastewater, denitrification (conversion of nitrate to Nitrogen gas) is needed by additional anoxic tank in the system. The capital cost further increases by 5-10 %. Nevertheless, denitrification gives 25 % oxygen credit which reduces 25 % aeration requirement.

3. Finally, overall capital and operational cost implications for achieving standards for metropolitan and class-I cities shall be 20-30 %.

4. Typical total unit costs for wastewater treatment based on experience gained in Western Europe and the USA is presented in Figure XX (WHO/ UNEP 1997), The total unit cost for secondary treatment (BOD < 20-30 mg/L, & TSS < 50-100 mg/L) varies between 1.5-2.0 US$/m3, while for tertiary treatment (BOD, TSS & TN < 10 mg/L) it is 2.0-2.5 US$/m3. The additional burden is approximately 25-33 % which matches with Indian experience as well.

5. In recent years, many STPs are constructed based on effluent BOD, TSS & TN < 10 mg/L) and all the well operated and maintained STPs are providing the desired effluent quality. Some of these STPs are monitored by lIT Roorkee in recent years under several research projects and NGT reports. The performance evaluation results for 20 MGD Nilothi STP, 20 MLD Pappan Kalan STP, 15 MLD Delhi Gate STP and 5 MGD Kapashera STP of Delhi submitted to NGT alongwith 3.0 MID

STP, Rishikesh, 1 MGD STP, Delhi, 27 MGD STP, Haridwar etc., monitored under various research projects is attached as Annexure 3.

6. CPCB has also conducted study on technological achievability of proposed standards. Delhi Jal Board has installed and commissioned 04 STPs on advanced treatment technology along with coliform reduction facilities.

7. In addition, the following STPs all over India are producing the desired quality: 1.5 MLD STP, Cubbon Park, Bangalore, 2.0 MLD STP, Pahalgam, 3.5 MLD STP, Tapovan, Rishikesh, 4.0 MLD STP, IIT' Madras, 12.5 MLD STP, Tonca, Goa, 15.0 MLD STP, Gorakhpur, 17.3 MLD STP, Zirakpur, Punjab, 18 MLD STP, Sarai, Haridwar, 20.0 MLD STP, Hyderabad, 20.0 MLD Sangvi, Pune, 30 MLD STP, Hyderabad, 37.5 MLD STP, UP Housing Board, Lucknow, 40.0 MLD Kharadi, Pune, 40.0 MLD STP, Hubbali, Karnataka, 45 MLD STP, Mundhwa, Pune, 50 MLD STP Kalamboli, Navi Mumbai, 54 MLD STP, Noida, 55.0 MLD, Singanpure, Surat, 56 MLD STP, Indirapuram, Ghaziabad, 68.0 MLD STP, Dehradun, 100 MLD STP, Vashi Navi Mumbai, 130 MLD STP, Nagpur, 137 MLD STP, Greater Noida, 245 MLD STP Indore, etc.

8. In practical experience with actual tendered cost, the experience has been quite differing. Many tenders based on old and less stringent quality standards have been awarded at much higher per MLD cost as compared to STPs having more stringent standards. Plus on a long term basis, new technologies have lower life cycle costs. Other factors which are encouraging most corporations and contractors to adopt new technologies are more compact designs, less land requirement, less construction time, better material of construction, less maintenance cost, automation and less dependency on expensive trained manpower to operate plants in remote locations."

9. Accordingly, the Committee further observed that:

"● The new stringent standards are devised considering the deterioration condition of water bodies and unavailability of adequate dilution water in our water bodies. If not stringent quality standards are not implemented then in the coming future with more population burden on rivers, situation will further deteriorate.

- *The greatest benefit of these standards is to achieve all purpose non-portable reuse quality effluent. Each STP is to be treated as a source of water for reuse and recycling, helping in mitigating drought/climate change in the country. It will also reduce exploitation of groundwater reserves and dependency on rainfall which has become quite unpredictable in the past few years. Climate change is a reality that should be addressed and adopted for in the coming future. It will go a long way in reducing agricultural dependency on bore well water.*
- *If treatment of wastewater is not carried out with intention of reuse and recycle expenditure on conveyance/long distance transport of water/sewage will be much higher. Even as on toady in many cities cost of conveyance of water is much higher than the treatment of sewage to make it fit for most uses including domestic uses. For example the cost of transporting water from Narmada to fulfil water supply needs of Indore city (approximately @ Rs. 20/cum) is much higher than the cost of treating sewage to tertiary level."*

In view of above and severity of depletion of aquatic resources vis-a-vis the financial aspects related to conveyance and treatment of water/sewage the committee recommended that the effluent discharge for STPs to be as follows:

"

Sl. No.	*Industry*	*Parameters*	*Standards (Applicable to all mode of disposal)*			
1	*2*	*3*	*4*			
	Sewage Treat-ment Plants (STPs)		*Mega and Metropolitan Cities*	*Class I Cities*	*Others*	*Deep Marine Outfall*
		pH	*5.5-9.0*	*5.5-9.0*	*5.5-9.0*	*5.5-9.0*
		Bio-Chemical Oxygen Demand (BOD)	*10*	*20*	*30*	*30*
		Total Suspended Solids (TSS)	*20*	*30*	*50*	*50*
		Chemical Oxygen Demand (COD)	*50*	*100*	*150*	*150*
		Nitrogen-Total	*10*	*15*	*-*	*-*
		Phosphorus-Total(For Discharge into Ponds, Lakes)	*1.0*	*1.0*	*1.0*	
		Fecal Coliform (FC) (Most Probable	*Desireable-100 Permissible-*	*Desireable-230 Permissi*	*Desireable-1000 Permissible-*	*Desirable-1000 Permissibl*

		Number per 100 mililiter, MPN/100 ml	*230*	*ble-1000*	*10,000*	*e-10,000*

Note:

(i) *Mega-Metropolitan Cities have population more than 1 crore, Metropolitan Cities-Population more than 10 Lakhs and Class-1 Population more than 1 Lakh.*

(ii) *All value in mg/l except for pH and Fecal Coliform.*

(iii) *These standards will be applicable for discharge into water bodies as well as for land disposal/applications.*

(iv) *These Standards shall apply to all new STPs for which construction is yet to be initiated.*

(v) *The existing/under construction STPs shall achieve these standards within 07 years from the date of notification.*

(vi) *In case where the marine outfall provides a minimum initial dilution of 150 times at the point of discharge and a minimum dilution of 1500 times at a point 100m away from discharge point, then norms for deep sea marine discharge shall be applied.*

(vii) *Reuse/Recycling of treated effluent shall be encouraged.*

(viii) *State Pollution Control Boards/Pollution Control Committees may make these norms more stringent taking into account the local conditions.*

"

10. We have heard Learned Counsel for the parties.

11. Learned Counsel for the applicant submits that while the Expert Committee is fully justified in suggesting parameters as per its report for Mega-Metropolitan Cities, there is no justification for different and diluted standards for Class-I cities, Other cities or Deep Marine Outfall and to that extent the report of the Expert Committee fall short of the required scientific logic and database. While

recommending the diluted standards for Class-I cities, Other cities or Deep Marine Outfall the Committee has not given any explanation with regard to the existing pollution load in these areas, the available systems in place, the efficacy of the systems in terms of meeting of norms, the population impacted by deteriorating water quality and likely consequences on health of people if these diluted norms are permitted. There is no scientific justification offered for diluting the norms for these areas in which the majority of country's population resides. Also such standards we feel must apply not only to new STPs but also to the existing ones. Further, there is no justification for non-application of such standards for seven years for existing STPs.

12. Learned Counsel for CPCB and interveners are unable to justify dilution of standards for areas other than Mega Metropolitan Cities or for existing STPs.

13. We find that there is no justification for diluted standards for areas other than Mega and Metropolitan Cities. The water quality standards are required to be same for the population of major cities or other cities. No justification has been shown for different standards for persons living in cities other than Mega and Metropolitan Cities. Major population of this country will be affected by diluted standards and only persons in Mega and Metropolitan Cities will have comparatively better standards without any valid reason or distinction. We may note that filters, UV filters etc. are facilities

mainly available in major cities and not in smaller cities or villages where the standards are proposed to be diluted.

14. Accordingly, we accept the report of the Expert Committee with the modification that the standards recommended for Mega and Metropolitan Cities will also apply to rest of the country. We also direct that the standards will apply not only for new STPs but also for existing/under construction STPs without any delay and giving of seven years time stands disapproved.

MoEF & CC may issue an appropriate Notification in the matter within one month from today.

The Application is disposed of.

Adarsh Kumar Goel, CP

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

April 30, 2019
Original Application No. 1069/2018
SN

(Shubham Bhalla)
//TRUE COPY//

ANNEXURE R-3

Item No. 01 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(By Video Conferencing)

Original Application No. 138/2016 (T_{NHRC})
(Case No.559/19/11/14)

(With Fifth Report dated 16.04.2020)

Stench Grips Mansa's Sacred Ghaggar River

Date of hearing: 15.06.2020

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Respondent(s): Mr. Rajkumar, Advocate for CPCB
Ms. Richa Kapoor, Advocate for Punjab PCB with Mr. Karunesh Garg, Member Secretary, PPCB
Mr. Rahul Khurana, Advocate for State of Haryana
Mr. Shubham Bhalla, Advocate for UT Chandigarh
Mr. Sanjay Kumar, Advocate for HP State PCB

ORDER

1. This order is being passed in continuation of order dated 20.01.2020 on the subject of effective steps for making Ghaggar river pollution free. The river originates in the State of Himachal Pradesh and ends in the State of Rajasthan. The river is included by the Central Pollution Control Board (CPCB) in 351 polluted river stretches of the country in priority – I category, which is a category of highest pollution, having BOD more than 30 mg/l as against the prescribed standard of 3mg/l. The issue of control of pollution in all the said 351 river stretches is also being dealt with generally by this Tribunal in *O.A. No. 673/2018*. The present matter however involves a specific polluted river stretch.

2. Proceedings in this matter were initiated before this Tribunal on a reference received from the National Human Rights Commission (NHRC). The NHRC took *Suo-Motu* action on the basis of a news item appearing in 'The Tribute' dated 12.05.2014 under the caption "*Stench Grips Mansa's Sacred Ghaggar River*" to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents - industrial as well as municipal. The NHRC considered the matter in the light of reports from the States of Punjab and Haryana as well as the State of Himachal Pradesh. Vide letter dated 17.03.2016, the NHRC sent the record of the matter to this Tribunal.

3. Pursuant to the order of this Tribunal dated 09.12.2016, a joint inspection was carried out by the representatives of the Central Pollution Control Board, Punjab State Pollution Control Board, Haryana Pollution Control Board, Himachal Pradesh State Pollution Control Board. Officials of Union Territory, Chandigarh also joined the said inspection team. The findings of the joint inspection report showed that values of various parameters such as BOD, TSS, Feacal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

4. The matter was reviewed vide order dated 07.08.2018 and noticing failure of the Regulatory Authorities in taking remedial steps by way of prevention of pollution and proceeding against the polluters, the Tribunal directed constitution of a Special Task Force (STFs) at the District level as well as at the State level. The State level STF was to be headed by Chief Secretary. The Tribunal directed

preparation of action plans with firm timelines so as to ensure that water quality is as per norms within the targeted time. The Tribunal also constituted an Executing Committee, under Section 25 of the National Green Tribunal Act, 2010, headed by a former Judge of Punjab and Haryana High Court, Justice Pritam Pal. The Executing Committee was to furnish an interim report to this Tribunal. Accordingly, report dated 28.02.2019 under the cover letter dated 01.03.2019 was received and considered on 11.04.2019.

5. The Committee has given four reports dated 28.02.2019, 14.06.2019, 01.10.2019 and 8.1.2020 which were dealt with by this Tribunal vide earlier orders. The Fifth Report of the Committee dated 16.04.2020 has been filed which has been taken up for consideration today.

6. The Fifth Report is in pursuance of order dated 20.01.2020. In the said order, reference was also made to the four earlier reports noticing the gaps, sewage management, polluted level of water on account of several sources of pollution and recommendations with regard to the steps required to be taken to remedy the situation. It will be appropriate to refer to the observations in the said order:-

> *"7. Gap in report of sewage management, as per report dated 28.02.2019 of the Executing Committee, was found to be as follows:-*
>
> *(i) Himachal Pradesh – Parwanoo and Kala Amb*
>
> *The gap for Parwanno is 569.414 KLD*
> *The gap for Kala Amb is 1046.24 KLD*
>
> *(ii) With regard to Chandigarh the gap is 23.225 MLD*
>
> *(iii) With regard to Punjab the gap is 75.92 MLD*
>
> *(iv) With regard to Haryana the gap is 42.9 MLD*

> *8. The Tribunal also considered the deteriorated water quality, status of STPs in Himachal Pradesh, Haryana, Punjab and UT Chandigarh and directed action to be taken by the Himachal Pradesh, Haryana, Punjab and UT Chandigarh to be monitored by the Chief Secretaries and required a further report from the Executing Committee with reference to the status on the ground after six months or as and when considered necessary by the Committee.***"**

7. Thereafter, report dated 08.01.2020 was further dealt with in the light of the conclusions and recommendations of the Committee in respect of States of Punjab, Haryana and Himachal Pradesh and UT Chandigarh and following directions were issued:-

> ***"****11. The Tribunal also considered the deteriorated water quality, status of STPs in Himachal Pradesh, Haryana, Punjab and UT Chandigarh and directed action to be taken by the Himachal Pradesh, Haryana, Punjab and UT Chandigarh to be monitored by the Chief Secretaries and required a further report from the Executing Committee with reference to the status on the ground after six months or as and when considered necessary by the Committee.*
>
> *12.* ***The Committee may simultaneously give a copy of its report to the concerned Chief Secretaries and PCBs/PCC who may give their respective response to this Tribunal within two weeks thereafter. The response may particularly focus on existing STP being compliant with the norms with regard to faecal coliform, bridging of gap in terms of sewage generated and treated, secondary use of STP treated water, bridging of gap in terms of solid waste generated and treated, remediation of legacy waste sites etc.***

8. We may now refer to the Fifth Report of the Committee. Conclusion and recommendations are as follows:-

> ***"4.2.5 Conclusions and Recommendations***
>
> *In view of the discussion held with Distt. Level officers and District Level Special Task Forces of various districts of State of Punjab, Haryana, Himachal Pradesh and UT. Chandigarh and State Level Officers of these States and UT. Chandigarh, visits to pollution sources,*

information collected from various departments w.r.t performance of existing STPs, installation of new STPs, upgradation of existing STPs, irrigation schemes to utilize the treated sewage for irrigation, installation of STPs in rural areas, status of health check up camps, water quality in river Ghaggar, water quality of the groundwater sources located in the vicinity of river Ghaggar, IEC activities and environmental flow etc, ***the Executing Committee has made the following conclusions and recommendations.***

4.2.5.1 State of Punjab

1) *Punjab water Supply and Sewerage Board shall complete and commission 08 New STPs for 6 towns (Boha, Dhuri, Sangrur, Bassi Pathana, Sirhind and Patiala), whose work has been completed upto 10-41%, should be completed by 31.12.2020.*

2) *Sewage treatment plants for 19 towns for which funds have been tied up should be completed and commissioned by 31.03.2021.*

3) *For upgradation of existing sewage treatment plants for the towns namely Bareta (3 MLD), Bhikhi (3 MLD) and Sardulgarh (4 MLD), funds may be arranged by the Department of Local Government by 31.05.2020 and Punjab Water Supply and Sewerage Board shall ensure that these STPs should be upgraded by 31.03.2021.*

4) *GMADA shall upgrade its existing STP of capacity 45.5 MLD at Mohali by 31.03.2021.*

5) *The authority of Military Engineering Services (MES) shall install and commission new STP's of capacity 6 MLD and 1 MLD for MES Patiala and MES Nabha, respectively, by 31.03.2021.*

6) ***The Executing Committee has observed that there is gap in Sewage Quantity to be treated is 86.26 MLD of 17 towns.*** *It is recommended that the Department of Local Government shall make necessary arrangements for planning, designing and installation of new sewage treatment plants to treat the gap in sewage quantity by 31.03.2021.*

7) *Water Quality of river Ghaggar has been monitored by Punjab pollution Control Board during November-2019 to February-2020 and* ***it has been observed that no significant improvement in water quality of river Ghaggar w.r.t. BOD and DO parameters and no improvement w.r.t Coliform Parameter has been observed at 12 locations out of 14 locations of river Ghaggar.***

8) *PPCB has carried out ground water sampling at 11 locations located in the vicinity of river Ghaggar after monsoon.* ***The analysis results indicate that water of 1 tubewell is not potable and as such this tubewell is required to be capped. Also, the concentration of iron in 1 handpump sample has been found much beyond the prescribed limits. Therefore, the Executing Committee recommends that these 02 ground water sources should be capped by PPCB by 07.04.2020 and display boards with caption "Water is not fit for drinking", may be erected at these sites****.*

9) *The Executing Committee has observed that in order to utilize the treated sewage of STP's of 2 towns, irrigation schemes are under progress and the work of the same has been completed upto 80%. The Executing Committee recommends that the irrigation schemes should be completed by 31.05.2020.*

10) *To utilize the treated sewage (51 MLD) of 4 towns (Mandi Gobindgarh, Patiala, Dhuri and Sangrur) for irrigation having command area of 1961 hectares, the Department of soil and water conservation shall take up the matter with the Department of Finance, Punjab for early release of funds and work of laying of irrigation network may be started by 01.05.2020 and the same shall be completed by 30.09.2020.*

11) *The funds for laying of irrigation network to utilize the treated sewage of 24 STPs of 20 towns for irrigation may be tied up by the State of Punjab 31.05.2020 and funds for irrigation network for these towns may be released by 31.08.2020 so that irrigation schemes may be completed by 31.03.2021 i.e. simultaneously along with the commissioning of STPs.*

12) *The Executing Committee has observed that the treated sewage of 4 towns namely Budhlada: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD and MC Derabassi: 4 MLD cannot be utilized for irrigation due to non feasibility because of urbanized land and no command area available. Therefore, these urban local bodies may utilize their treated sewage for construction activities, gardenings, vehicle cleaning, road cleaning and toilet flushing etc. The Department of Local Government shall issue necessary directions in this regard.*

13) *The Monitoring of Sewage Treatment Plants of the towns carried out by PPCB during the period December-2019 to February-2019 indicates that 7 STP's (Banur: 4 MLD, Zirakpur: 17 MLD, Dera Bassi: 4 MLD, Dera Bassi (PSIEC): 2 MLD, Sardulgarh: 3 MLD, Bhikhi: 3 MLD and Bareta: 3 MLD) are not achieving the standards w.r.t BOD and F.Coli parameters. Therefore, the Executing Committee recommends as under:*

The Executing Committee recommends that following departments shall take immediate action to improve the functioning of STPs.

i) *PWSSB shall improve the performance of STPs Banur (4MLD), Dera Bassi (4 MLD) and Zirakpur (17 MLD) by 30.04.2020.*

ii) *PSIEC shall improve the functioning of 2 MLD STP for Derabassi by 30.04.2020 and utilize the treated sewage for irrigation by 31.05.2020.*

iii) *STPs for the towns Sardulgarh (3MLD), Bhikhi (3 MLD) and Bareta (3MLD), which are based on WSP technology, should be upgraded by 31.03.2021.*

14) *It has been observed that no inspections of the industries/ Pollution sources have been carried out by District Level Special task Force. PPCB has inspected 23 industries during December-2019 to February-2020 and none of the industries was found non compliant. Therefore, PPCB and District Level Special Task force of Districts namely SAS Nagar, Patiala, Sangrur and Mansa shall continue to carry out inspections of industries and other Pollution Sources and action against the defaulting industries/ Pollution*

sources be taken under the provisions of the Water Act, 1974.

15) *It has been reported by the Department of Rural Development and Panchayat that out of 87 villages taken in Phase-1 for installation of sewage treatment plants, treatment systems have been installed in 23 villages and in 5 villages, treatment plants are under construction.*

The Executing Committee recommends that the STPs of 5 villages should be completed by 30.06.2020. For the treatment of sewage of remaining 59 villages, funds amounting to Rs 50 crores have been sanctioned but the funds have not been released so far. The Department of Rural Development and Panchayat shall take up the matter with Department of Finance, Punjab for early release of funds.

16) *The data w.r.t. health checkup camps organized in 4 districts (SAS Nagar, Patiala, Sangrur and Mansa) located in the catchment area of river Ghaggar during the period December-2019 to February-2019 indicate that out of total 3126 patients checked during these camps, 94 patients have been found suffered with water borne diseases.*

Therefore, the Executing Committee recommends that safe drinking water be supplied to the villages by the department of Water Supply and Sanitation, where the patients have been found suffered with water borne diseases by 30.06.2020.

17) *To create awareness among the public about water quality of river Ghaggar, water quality of ground water sources located along river Ghaggar, water borne diseases, utilization of treated sewage for irrigation and less consumption of water for domestic usage, more IEC activities may be carried out by PPCB, Department of Local Government and Department of Rural Development and Panchayat.*

18) ***In order to maintain Environment Flow in river Ghaggar, Department of Soil and Water Conservation shall construct check dams/ storage ponds in the catchment area of river Ghaggar so as to regulate the flow***

in river Ghaggar for whole of the year to maintain environment flow in the river.

19) For septage and faecal sludge management, the Executing Committee recommends that PPCB shall take following actions

a) To identify the source of generation of Septage and Faecal sludge from rural and urban area and the quantity of septage /Faecal sludge extracted per month by 31.05.2020.
b) To prepare comprehensive plan to dispose off these materials in environmently sound manner by 30.06.2020.
c) To identify the nearby STPs where the regulated quantity of septage/ faecal sludge can be taken for treatment by 30.06.2020.

20) For removal of solid waste from river Ghaggar and drains/nallahs falling into it, the Executing Committee recommends that PPCB, Department of Rural Development and Panchayat and Department of Water Resources (Drainage) shall jointly survey river Ghaggar and its tributaries and identify its stretches, where the solid waste is found dumped. The survey may be completed by 31.03.2020 and action to lift these solid waste from river Ghaggar and its tributaries be taken by the Department of Water Resources by 31.05.2020.

4.2.5.2 <u>U.T. Chandigarh</u>

1) *The data w.r.t. performance of 6 existing sewage treatment plants (Raipur Khurd: 5.63 MLD, 3 BRD :49.5 MLD, Raipur Kalan: 22.5 MLD, Dhanas: 7.5 MLD, Maloya: 22.5 MLD and Diggian: 135 MLD) of U.T. Chandigarh, as monitored by CPCC during the period December-2019 to February-2020 indicate that* ***STPs: Raipur Kalan (22.5 MLD), Dhanas (7.5 MLD) and Diggian (135 MLD) are not meeting with the prescribed limits for BOD parameter. However, none of the STP's is meeting with F-coli parameter.***

2) The sewage treatment plants of capacity 5 MLD, being installed at industrial area Phase III, Raipur Kalan, has been completed upto 90%, the said STP should be completed by 30.06.2020 2 MLD STP to treat the gap in sewage quantity of U.T. Chandigarh should be completed by 31.12.2020.

3) *In order to meet with the stringent parameters, the Executing Committee recommends that 6 STP's (Raipur Khurd: 5.63 MLD, 3 BRD (49.5 MLD), Raipur Kalan: 22.5 MLD, Dhanas: 7.5 MLD, Maloya: 22.5 MLD and Diggian: 135 MLD) should be technologically upgraded by 31.03.2021.*

4) *CPCC shall continue to carry out inspection of industries located in the catchment area of river Ghaggar and action against the violating industries/polluting sources be taken as per the provisions of the Water Act 1974.*

5) *Municipal Corporation Chandigarh shall utilize the treated sewage of STPs for gardening, watering of parks and golf course and vehicle washing etc so as to control the discharge of treated sewage into choes/nallahs/drains further leading to river Ghaggar.*

6) *The data provided by CPCC, as mentioned at point 4.2.2.8, indicate that there is no improvement in river Ghaggar water w.r.t. BOD and F.Coli parameters. Therefore, the Executing Committee recommends that Municipal corporation Chandigarh should upgrade its existing STPs to meet with the stringent standards for BOD, F.Coli and other parameters by 31.03.2021.*

4.2.5.3 State of Himachal Pradesh

1) *The Executing Committee recommends that the Executing agency of the sewage treatment plants of State of Himachal Pradesh shall ensure that 2 STPs each of capacity 1 MLD to treat the sewage of Parwanoo area, 1 STP of capacity 1.15 MLD to treat the sewage of Trilokpur (Kala Amb area) and 1 CETP cum STP of capacity 5 MLD to treat the industrial and domestic wastewater of Kala Amb area should be completed and commissioned by 31.12.2020.*

2) *Sewage treatment plants for 4 villages of Kala Amb area, District Sirmour should be completed by 31.12.2020.*

3) *HPPCB shall identify more villages, which are located in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanda and prepare comprehensive plan for treatment of sewage of these villages by 31.05.2020.*

4) *HPPCB shall continue to make surprise inspection of industries located in the catchment area of Sukhna Nallah, Jattanwala Nallah and Markanda*

river further leading to river Ghaggar and action against the defaulting industries be taken as per the provisions of the Water Act, 1974.

5) *Water Quality of Sukhna Nallah in terms of BOD, DO and T.Coli, as monitored by HPPCB, during December-2019 to Februaray-2020 indicate that there is improvement of in water Quality of Sukhna Nallah in terms of said parameters.*

6) *Monitoring of Water Quality of river Markanda was carried out by HPPCB during December-2019 to February-2020 and its analysis results indicate that water qualtity of River Markanda downstream of Jattanwala Nallah has been degraded in terms of BOD and F-coli parameter because in Jattanwala Nallah,* ***the values of BOD and F-coli have been found varied between 37.3-54.6 mg/l and 58333-74400 MPN/100 ml. The Executing Committee recommends that HPPSB shall identify the sources countributing high value of BOD and F-coli by 7.04.2020 and shall take action against the defaulting industries/ agencies by 15.05.2020.***

7) *The data w.r.t. health check up camps organized by Department of Health during December-2019 to February-2020 indicate that out of 410 patients checked in District Solan, 47 patients were found suffered with water borne diseases. Similarly, in district Sirmour, 432 patients were checked out of which 9 patients were found affected with water borne diseases.*

Therefore, the Executing Committee recommends that in catchment area of river Markanda and Sukhna Nallah, where the ***patients have been found suffered with water borne diseases, should be provided with potabale and safe drinking water supply to the residents by the Department of public Health.***

8) *HPPCB shall continue to create public awareness about water quality of river Markanda, Jattanwala Nallah and Sukhna Nallah, Ground water quality of water sources located in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanda and status of health check up camps organized by Department of Health.*

9) *In order to maintain environmental flow in river Markanda and Sukhna Nallah, the Department of irrigation shall explore the possibility of providing*

check dams/ storage ponds in the vicinity of river Markanda and Sukhna Nallah by 30.04.2020 so as to discharge the regulated flow in the Nallah/River to maintain E-Flow.

10) For septage and Faecal Slugde Management, HPPCB shall taken up the matter with DDPOs of Districts Solan and District Sirmour w.r.t. improvement in the performance of Septic Tanks and degradation of sepatage and faecal sludge so that there is no illegal disposal of septage and faecal sludge into any nallah/river. HSPPCB shall make surprise inspections in the catchment area of Sukhna Nallah, Jattanwala Nallah and river Markanada and ensure that there is no illegal disposal of sepatage and faecal sludge from septic tanks into said Nallahs/rivers.

4.2.5.4 State of Haryana

1) *Performance study of existing Sewage Treatment Plants carried out by HSPCB indicates that out of 61 STPs, 51 STPs were monitored w.r.t. BOD, TSS and F.Coli parameters. Out of these 51 STPs,* ***40 STPs were not found complying with the standards prescribed for F.Coli parameters. 51 STPs were found meeting with the standards prescribed for BOD and TSS parameters.***

The Executing Committee recommends that Local body Department, HSVP and Public Health Engineering Department shall upgrade their existing 40 STPs to meet with the prescribed standards of F.coli parameters by 31.12.2020.

2) With regard to construction of new STPs, it has been reported that 6 STPs (Baretta: 4 MLD, Jind: 7 MLD, Urban state, Thanesar: 15 MLD, Kurukshetra: 25 MLD, Sirsa: 20 MLD and Fatehbad: 3 MLD) have been commissioned but are under stabilization. The Executing Committee recommends that these STPs should be put into operation by 15.04.2020.

Poor progress has been made w.r.t. construction of 4 New STPs [Billa{0.75 MLD}:7%, Khuda Khurd Ambala{12 MLD}:5%,Babyal{10 MLD}:3% and Shahpur Machhonda {7.5 MLD}:2%. *The Urban Local Bodies, HSVP and Public Health Engineering Department of State of Haryana shall take proactive steps to ensure that these STPs should be completed by 30.09.2020. The remaining STPs,*

whose progress is almost more than 74% except STP for Ambala (5 MLD), where progress has been achieved upto 30%, should also be completed and commissioned by 30.06.2020.

4) For technologically upgaradation of STPs of State of Haryana, only 1 STP of Sector 20, panchkula having capacity of 57 MLD has been considered for upgradation. However, the Executing Committee recommends that State of Haryana should make comprehensive proposal to upgrade its STPs to achieve stringent parameters (BOD:10mg/l) including F.Coli parameters. The comprehensive proposal should be prepared by 30.06.2020 and work of upgradation of existing STPs should be completed by 31.03.2021.

5) *State of Haryana through HSPCB has claimed that there is only gap of 15.8 MLD untreated sewage of Ambala area for which sewage treatment plants has been proposed to be installed,* ***whereas the monitoring data of river Ghaggar water, carried out by HSPCB during December-2019 to February-2019, indicate that values of BOD and F.Coli parameters vary between 56-78 mg/l and 300000-486667 MPN/100ml, which indicate that untreated sewage of some of the areas is entering into River Ghaggar.***

Therefore, the Executing Committee recommends that the Department of Irrigation and HSPCB shall jointly identify the drains carrying untreated sewage into river Ghaggar and quantity of sewage flowing into these drains should be measured and necessary directions be issued to the concerned departments of State of Haryana to prepare DPR for installation of STPs and ensure that STPs for gap in sewage quantity should be installed by 31.03.2021 so that water quality of river Ghaggar may be improved.

6) For the treatment of sewage of villages, there is proposal to install STPs in 45 villages, the estimated cost of which is about Rs 718.50 crore. These STPs for treatment of sewage of villages should be completed by 31.12.2020.

7) HSPCB shall continue to make surprise inspection of industries/polluting sources and action against the defaulting industries be taken under the provisions of the Water Act, 1974.

8) ***The data w.r.t. water quality of ground water sources located in the catchment area of river Ghaggar indicate that out of 76 Ground Water samples analyzed, 40 ground water samples have been found complying with the norms. 36 Ground Water Samples have been found non complying.*** *Therefore, the Executing Committee recommends that HSPCB shall re-monitor ground water quality of those ground water samples which were found non compliant atleast one time more before making any conclusion on the water quality monitoring report.* ***In case, these ground water samples are again found non compliant, HSPCB may cap these ground water sources and potable and safe drinking water be supplied to the persons / inhabitants which depend upon these ground water sources by the Department of Public Health.***

9) *The data w.r.t. health check up camps organized during the months December-2019 to February-2020 and provided by HSPCB indicate that 52 Health Check up camps were organized during December-2019 to February-2020. In these health checks up camps, 3787 patients were examined, out of which* ***332 patients were found suffered with water borne diseases****. Therefore, the Executing Committee recommends that affected inhabitants should be supplied safe drinking water by the Department of Public Health.*

10) *To create awareness among the public about water quality of river Ghaggar, water quality of ground water sources located along river Ghaggar, water borne diseases, utilization of treated sewage for irrigation and less consumption of water for domestic usage, more IEC activities may be carried out by HSPCB, Urban Local Bodies Department and Department of Rural Development and Panchayat.*

11) *In order to maintain Environment Flow in river Ghaggar, Department of Irrigation shall construct check dams/ storage ponds in the catchment area of river Ghaggar so as to regulate the flow in river Ghaggar for whole of the year to maintain environment flow in the river.*

12) *With regard to management of septage and faecal sludge, the data submitted by HSPCB indicate that septage and faecal sludge of 13 towns with*

quantity of 5-300 KLD in the month of December-2019, 5-200 KLD in January-2020 and 5-200 KLD in the month of Februaray-2020 was transported to the existing STPs through the tankers. However, the Executing Committee recommends as under:

a) The tankers deployed for collection and transportation of sepatage and faecal sludge to STPs should be properly covered.

b) All the tankers should be provided with GPS with its connectivity to HSPCB and urban local bodies Department so that movement of the trucks may be checked at any time.

c) To identify the nearby STPs where the regulated quantity of septage/ faecal sludge can be taken for treatment by 30.06.2020.

13) To utilize the treated sewage for irrigation, the Government of Haryana has prepared a consolidated project costing Rs. 1098.25 crore to utilize 1828 MLD of treated sewage out of total 2795.2 MLD of treated wastewater from 207 STPs (Ghaggar and Yamuna). 1828 MLD treated sewage shall be utilized for irrigation in command area 162000 hectares. The completion period of the project is 5 years which also depends upon the availability of funds.

Out of these 207 STPs, 35 STPs have been chosen for Rs 500 crores MI projects under NABARD assisted Micro Irrigation Projects. The remaining funds of Rs 598.25 crore (Rs 1098.25 crores-Rs 500 crores) shall be made available under annual budget as the project stands approved by the State Government.

The Executing Committee recommends that Urban Local Body Department, HSVP and Public Health Engineering Department shall supply the details along with capacity of STPs of the towns located in the catchment area of river Ghaggar, where STPs are in operation to the Department of Irrigation. The Department of Irrigation shall ensure that the treated sewage of the towns located on river Ghaggar should be covered under the consolidated project or separate schemes for utilization of treated sewage for irrigation may be prepared, constructed and commissioned by 31.03.2021.”

9. We regretfully note flagrant violation of mandate of the Water (Prevention and Control Pollution) Act, 1974 and the Waste Management Rules framed under the Environment (Protection) Act, 1986 as well as repeated directions given by the Hon'ble Supreme Court and this Tribunal. There is repeated failure by the concerned States and its authorities in performing their constitutional obligation in ensuring that no pollution is discharged into the rivers or drains connected thereto. The timeline fixed by the Hon'ble Supreme Court in its judgement in *Paryavaran Suraksha case, (2017) 5 SCC 326* to ensure treatment of sewage and effluent is by 31.03.2018 which has expired since long.

10. It may be appropriate to note the directions of the Hon'ble Supreme Court:-

> "***7.*** *Having effectuated the directions recorded in the foregoing paragraphs, the next step would be, to set up common effluent treatment plants.* ***We are informed, that for the aforesaid purpose, the financial contribution of the Central Government is to the extent of 50%, that of the State Government concerned (including the Union Territory concerned) is 25%. The balance 25%, is to be arranged by way of loans from banks****. The above loans, are to be repaid, by the industrial areas, and/or industrial clusters.* ***We are also informed that the setting up of a common effluent treatment plant, would ordinarily take approximately two years (in cases where the process has yet to be commenced). The reason for the above prolonged period, for setting up "common effluent treatment plants", according to the learned counsel, is not only financial, but also, the requirement of land acquisition, for the same****.*
>
> ***10. Given the responsibility vested in municipalities under Article 243-W of the Constitution, as also, in Item 6 of Schedule XII, wherein the aforesaid obligation, pointedly extends to "public health,***

sanitation conservancy and solid waste management", we are of the view that the onus to operate the existing common effluent treatment plants, rests on municipalities (and/or local bodies). Given the aforesaid responsibility, the municipalities (and/or local bodies) concerned, cannot be permitted to shy away from discharging this onerous duty. In case there are further financial constraints, the remedy lies in Articles 243-X and 243-Y of the Constitution. It will be open to the municipalities (and/or local bodies) concerned, to evolve norms to recover funds, for the purpose of generating finances to install and run all the "common effluent treatment plants", within the purview of the provisions referred to hereinabove. Needless to mention that such norms as may be evolved for generating financial resources, may include all or any of the commercial, industrial and domestic beneficiaries, of the facility. The process of evolving the above norms, shall be supervised by the State Government (Union Territory) concerned, through the Secretaries, Urban Development and Local Bodies, respectively (depending on the location of the respective common effluent treatment plant). The norms for generating funds for setting up and/or operating the "common effluent treatment plant" shall be finalised, on or before 31-3-2017, so as to be implemented with effect from the next financial year. In case, such norms are not in place, before the commencement of the next financial year, the State Governments (or the Union Territories) concerned, shall cater to the financial requirements, of running the "common effluent treatment plants", which are presently dysfunctional, from their own financial resources.

11. *Just in the manner suggested hereinabove, for the purpose of setting up of "common effluent treatment plants", the State Governments concerned (including, the Union Territories concerned) will prioritise such cities, towns and villages, which discharge* ***industrial pollutants and sewer, directly into rivers and water bodies.***

12. *We are of the view that in the manner suggested above,* ***the malady of sewer treatment, should also be dealt with simultaneously.*** *We, therefore, hereby direct that "sewage treatment plants" shall also be set up and made functional, within the timelines and the format, expressed hereinabove.*

13. We are of the view that mere directions are inconsequential, unless a rigid implementation mechanism is laid down. *We, therefore, hereby*

provide that the directions pertaining to continuation of industrial activity only when there is in place a functional "primary effluent treatment plants", and the setting up of functional "common effluent treatment plants" within the timelines, expressed above, shall be of the Member Secretaries of the Pollution Control Boards concerned. ***The Secretary of the Department of Environment, of the State Government concerned (and the Union Territory concerned), shall be answerable in case of default. The Secretaries to the Government concerned shall be responsible for monitoring the progress and issuing necessary directions to the Pollution Control Board concerned, as may be required, for the implementation of the above directions.*** *They shall be also responsible for collecting and maintaining records of data, in respect of the directions contained in this order. The said data shall be furnished to the Central Ground Water Authority, which shall evaluate the data and shall furnish the same to the Bench of the jurisdictional* ***National Green Tribunal.***

14. *To supervise complaints of non-implementation of the instant directions, the Benches concerned of the National Green Tribunal, will maintain running and numbered case files, by dividing the jurisdictional area into units. The abovementioned case files will be listed periodically****. The Pollution Control Board concerned is also hereby directed to initiate such civil or criminal action, as may be permissible in law, against all or any of the defaulters.****"*

(emphasis supplied)

11. As already noted, this Tribunal has dealt with the matter in O.A. No. 593 of 2017, *Paryavaran Suraksha Samiti & Anr. Vs. UOI & Ors.*, for monitoring the situation in pursuance to the directions of the Hon'ble Supreme Court and noted the disappointment for failure in this regard by almost all the States and Union Territories. Vide order dated 21.05.2020, this Tribunal observed as follows:-

"*8. Before proceeding further, we may also note further order of this Tribunal dated 06.12.2019 in O.A. No. 673/2018 directing as follows:*

"XII. Directions:

47. *We now sum up our directions as follows:*

i. ***100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 atleast to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP.***

ii. ***Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.***

iii. *We further direct that an institutional mechanism be evolved for ensuring compliance of above directions. For this purpose, monitoring may be done by the Chief Secretaries of all the States/UTs at State level and at National level by the Secretary, Ministry of Jal Shakti with the assistance of NMCG and CPCB.*

iv. ***For above purpose, a meeting at central level must be held with the Chief Secretaries of all the States/UTs atleast once in a month (option of video conferencing facility is open) to take stock of the progress and to plan further action. NMCG will be the nodal agency for compliance who may take assistance of CPCB and may give its quarterly report to this Tribunal commencing 01.04.2020.***

v. *The Chief Secretaries may set up appropriate monitoring mechanism at State level specifying accountability of nodal authorities not below the Secretary level and ensuring appropriate adverse entries in the ACRs of erring officers. Monitoring at*

State level must take place on fortnightly basis and record of progress maintained. The Chief Secretaries may have an accountable person attached in his office for this purpose.

vi. *Monthly progress report may be furnished by the States/UTs to Secretary, Ministry of Jal Shakti with a copy to CPCB. Any default must be visited with serious consequences at every level, including initiation of prosecution, disciplinary action and entries in ACRs of the erring officers.*

vii. As already mentioned, procedures for DPRs/tender process needs to be shortened and if found viable business model developed at central/state level.

viii. Wherever work is awarded to any contractor, performance guarantee must be taken in above terms.

ix. *CPCB may finalize its recommendations for action plans relating to P-III and P-IV as has been done for P-I and P-II on or before 31.03.2020. This will not be a ground to delay the execution of the action plans prepared by the States which may start forthwith, if not already started.*

x. *The action plan prepared by the Delhi Government which is to be approved by the CPCB has to follow the action points delineated in the order of this Tribunal dated 11.09.2019 in O.A. No. 06/2012.*

xi. *Since the report of the CPCB has focused only on BOD and FC without other parameters for analysis such as pH, COD, DO and other recalcitrant toxic pollutants having tendency of bio magnification, a survey may now be conducted with reference to all the said parameters by involving the SPCB/PCCs within three months. Monitoring gaps be identified and upgraded so to cover upstream and downstream locations of major discharges to the river. CPCB may file a report on the subject before the next date by e-mail at judicial-ngt@gov.in.*

xii. *Rivers which have been identified as clean may be maintained."*

(emphasis supplied)

13. The above report shows that some steps have been initiated against non-compliant ETPs/CETPs/STPs while further steps need to be taken. With regard to industries not having ETP or not connected to CETP, pending construction of CETPs as mentioned in the above report, the State PCBs/PCCs may ensure that

there is no discharge of any untreated pollutants by the industries and such polluting activities must be stopped and compensation recovered for the non-compliance, if any, apart from any other legal action in accordance with law. As regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, atleast in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

26. ***Summary of directions:***

i. All States/UTs through their concerned departments such as Urban/Rural Development, Irrigation & Public Health, Local Bodies, Environment, etc. may ensure formulation and execution of plans for sewage treatment and utilization of treated sewage effluent with respect to each city, town and village, adhering to the timeline as directed by Hon'ble Supreme Court. STPs must meet the prescribed standards, including faecal coliform.

CPCB may further continue efforts on compilation of River Basin-wise data. Action plans be firmed up with Budgets/Financial tie up. Such plans be overseen by Chief Secretary and forwarded to CPCB before 30.6.2020. CPCB may consolidate all action plans and file a report accordingly.

Ministry of Jal Shakti and Ministry of Housing and Urban Affairs may facilitate States/UTs for ensuring that water quality of rivers, lakes, water bodies and ground water is maintained.

As observed in para 13 above, 100% treatment of sewage/effluent must be ensured and strict coercive action taken for any violation to enforce rule of law. Any party is free to move the Hon'ble Supreme Court for continued violation of its order after the deadline of 31.3.2018. This order is without prejudice to the said remedy as direction of the Hon'ble Supreme Court cannot be diluted or relaxed by this Tribunal in the course of execution. PCBs/PCCs are free to realise compensation for violations but from 1.7.2020, such compensation must be realised as per

direction of this Tribunal failing which the erring State PCBs/PCCs will be accountable.

ii. The CPCB may study and analyse the extent of reduction of industrial and sewage pollution load on the environment, including industrial areas and rivers and other water bodies and submit its detailed report to the Tribunal.

iii. During the lockdown period there are reports that the water quality of river has improved, the reasons for the same may be got studied and analysed by the CPCB and report submitted to this Tribunal. If the activities reopen, the compliance to standards must be maintained by ensuring full compliance of law by authorities statutorily responsible for the same.

iv. Accordingly, we direct that States which have not addressed all the action points with regard to the utilisation of sewage treated water may do so promptly latest before 30.06.2020, reducing the time lines in the action plans. The timelines must coincide with the timelines for setting up of STPs since both the issues are interconnected. The CPCB may compile further information on the subject accordingly.

v. Needless to say that since the issue of sources of funding has already been dealt with in the orders of the Hon'ble Supreme Court, the States may not put up any excuse on this pretext in violation of the judgment of the Hon'ble Supreme Court.

27. The CPCB may furnish its report by 15.09.2020 giving the status of furnishing of action plans and their execution as on 31.08.2020 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF."

12. The Tribunal has also been monitoring the situation in O.A. No. 606/2018 wherein the Chief Secretaries of the all the States/ UTs have appeared in person before this Tribunal and directions have been issued to comply with the mandate of law. In O.A. No. 673 of 2018, the issue of polluted river stretches is being dealt with, as

already noted above. Further, in O.A. No. 148 of 2016, *Mahesh Chandra Saxena Vs. South Delhi Municipal Corporation & Ors*., the issue of utilization of treated water is being dealt with and the last order was passed by this Tribunal on 21.05.2020. In O.A. No. 325/2015, *Lt. Col. Sarvadaman Singh Oberoi Vs. Union of India & Ors.,* the issue of restoration of water bodies has been dealt with and the last order passed by this Tribunal is of 01.06.202020. It will be appropriate that the States/UTs take further prompt action in the matter and hold erring officers responsible and accountable. The Chief Secretaries of the States/UTs may monitor the situation with the assistance of Environment Cells directly under them as per observations in the orders of the Hon'ble Supreme Court, referred to in the orders of this Tribunal in O.A. No. 606/2018.

13. The States have not filed their response even though the report of the Committee was made available in pursuance of direction in paragraph 12 of order dated 20.01.2020 quoted above.

14. We note the presence of learned counsel for the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh who have nothing meaningful to expain the persistent defaults. Learned counsel for the State of Himachal Pradesh submitted that he is not able to get complete instructions on account of the lock down. Learned counsel for the UT Chandigarh states that certain further steps have been taken in the matter of plugging of the outlets and upgradation of STPs but the steps for use of treated water and action in terms of recommendations of the Committee are yet to be taken. Learned counsel for the State of Punjab and the Member Secretary State PCB stated that there is some progress but we find

the progress to be highly inadequate and unsatisfactory. Learned counsel for the State of Haryana states that the State of Haryana is not even aware of the standards of fecal coliform and has yet to lay down the standards. We are surprised at this statement. The standard of fecal coliform has been dealt with by this Tribunal vide order dated 30.04.2019 in O.A. No. 1069 of 2018, *Nitin Shankar Deshpande Vs. UOI & Ors.* The Tribunal noted the standards proposed in the draft Notification dated 24.11.2015 by the MoEF&CC and held that dilution of the standards by Notification in October, 2017 was against the recommendation of the Expert Committee referred to therein. Such relaxed standards led to deterioration of water quality, adversely affecting the environment and public health. The Tribunal observed as follows:-

> **"***13. We find that there is no justification for diluted standards for areas other than Mega and Metropolitan Cities. The water quality standards are required to be same for the population of major cities or other cities. No justification has been shown for different standards for persons living in cities other than Mega and Metropolitan Cities. Major population of this country will be affected by diluted standards and only persons in Mega and Metropolitan Cities will have comparatively better standards without any valid reason or distinction. We may note that filters, UV filters etc. are facilities mainly available in major cities and not in smaller cities or villages where the standards are proposed to be diluted.*
>
> *14. Accordingly, we accept the report of the Expert Committee with the modification that the standards recommended for Mega and Metropolitan Cities will also apply to rest of the country. We also direct that the standards will apply not only for new STPs but also for existing/under construction STPs without any delay and giving of seven years time stands disapproved.*
>
> *MoEF & CC may issue an appropriate Notification in the matter within one month from today.***"**

The norms are <100 MPN(Most Probable Number)/100 ml

15. In view of the above, we direct that the directions already issued by this Tribunal in O.A. No. 673/2018, 606/2018, 148/2016, O.A. No. 325/2015 and 593/2017 and the recommendations of the Committee may be complied with. The Compliance Status may be verified by the Executing Committee and the next report may be furnished by 30.09.2020 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. Simultaneously copy of the report be furnished to the Chief Secretaries/ PCBs and PCCs of the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh who may give their response within two weeks thereafter.

List for further consideration on 28.10.2020.

Adarsh Kumar Goel, CP

Sheo Kumar Singh, JM

Dr. Nagin Nanda, EM

June 15, 2020
O.A. No. 138/2016 (T_{NHRC})
A

(Shubham Bhalla)
//TRUE COPY//

(2023-2024)

STP 3 BRD OUTLET

Sr. No.	Parameters	Unit	Stds.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar
1.	Temp	°C	--	20.3	25.8	27	28	28.9	29.8	24	24.6	20.1	17.8	18.5	18
2.	pH	-	6.5-9	7.3	7.2	7.1	7.1	7.7	7.8	7.5	7.5	6.9	7	7.2	7.1
3.	DO	mg/l	-	6.2	4.3	6.1	5.9	4.9	3	2.9	4.4	3.6	4.7	5.7	5.9
4.	COD	mg/l	50	12	17	15	31	41	16	31	24	47	38	36	33
5.	BOD	mg/l	10	<1	3.5	1	2.1	2.9	2.2	3.1	1.1	3.5	4.8	3.1	3.8
6.	TSS	mg/l	10	7	5	5	8	7	3	5	4	9	3	2	2
7.	NH_3-N	mg/l	5	4.70	4.50	1.6	2.10	0.28	0.54	0.32	0.22	0.53	0.63	2	0.30
8.	PO_4-P	mg/l	1	0.96	0.37	0.40	0.05	0.04	0.13	0.03	0.04	0.23	0.07	0.05	0.03
9.	Total Coliform	MPN/ 100ml	--	<1.8	4.6	3.3	4.6	2	8.3	9.2	1.8	6	6	12	17
10.	Fecal coliform	MPN/ 100ml	<100	<1.8	7.8	4.5	6.8	6.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

STP DHANAS OUTLET

Sr. No.	Parameters	Unit	Stds	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan	Feb	Mar
1	Temp	°C	--	24.9	20.7	27.4	28.2	28.7	29.5	24.1	24.9	20.1	17.9	17.6	18.5
2	pH	-	6.5-9	7.3	7.5	7.3	7.4	7.7	7.1	7	7	7.3	7.1	7	7.3
3	DO	mg/l	-	3.4	2.9	3.3	3.2	1.6	4.4	3.1	4.6	2.9	4.2	6.4	6
4	COD	mg/l	50	34	49	29	42	49	26	48	25	42	47	38	30
5	BOD	mg/l	10	4	8.4	2.1	3.5	7.4	1.9	9	1.3	3.7	8.9	4.1	<1
6	TSS	mg/l	10	6	10	8	7	4	8	9	5	9	3	6	5
7	NH_3-N	mg/l	5	4.70	4.5	0.7	4.1	4.3	2.8	0.69	1.8	2.5	23	3.2	8.8
8	PO_4-P	mg/l	1	0.96	1	0.77	0.97	0.96	0.60	0.42	0.22	0.73	**1.7**	0.68	2.70
9	Total Coliform	MPN/ 100ml	--	<1.8	7	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
10	Faecal Coliform	MPN/ 100ml	<100	<1.8	1.1	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

STP MALOYA OUTLET

Sr. No.	Parameters	Unit	Stds.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan	Feb	Mar
1	Temp	°C	--	25.3	20.4	27.3	28.1	30	29.5	24	24.9	20.1	17.8	18.7	18
2	pH	-	6.5-9	7.2	7.3	6.9	7.4	6.3	6.8	7	7	6.8	6.9	7	6.9
3	DO	mg/l	-	3.4	3.9	4.1	3.4	5.6	5.3	4.3	5.0	4.5	4.7	4.7	3.8
4	COD	mg/l	50	39	32	18	35	20	37	40	27	39	38	35	31
5	BOD	mg/l	10	5.8	5.0	<1	<1	<1	1	4.8	1.3	4.4	5.7	3	1.8
6	TSS	mg/l	10	5	4	3	4	2	8	8	8	9	4	5	5
7	NH_3-N	mg/l	5	4.8	4.7	0.45	4.4	0.52	0.20	0.20	0.86	0.41	0.30	0.47	0.11
8	PO_4-P	mg/l	1	0.97	0.63	0.97	0.98	0.78	0.25	0.73	0.94	0.24	0.91	0.20	0.09
9	Total Coliform	MPN/ 100ml	--	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
10	Fecal Coliform	MPN/ 100ml	<100	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

(2023-2024)

STP RAIPUR KALAN-II OUTLET

Sr. No.	Parameters	Unit	Stds.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar
1	Temp	°C	--	29	26.2	28	30.1	32	30	26	21	20.2	15	19	17.5
2	pH	-	6.5 -9	7.7	7.5	7.5	7.1	7.3	7.5	7.5	7.9	7.2	7.3	7.1	7.1
3	DO	mg/l	-	4.7	5.5	6.0	6.9	6.8	7.8	6.4	6.6	7.1	5.3	5.2	7.1
4	COD	mg/l	50	42	30	19	13	20	34	39	35	24	27	32	30
5	BOD	mg/l	10	2.6	2.2	<1	<1	<1	1.0	1.50	<1	<1	<1	1.3	<1
6	TSS	mg/l	10	9	5	7	5	6	9	12	8	10	7	4	3
7	NH_3-N	mg/l	5	4.50	4.30	4.50	0.40	0.47	2.20	0.68	3.80	1.10	1.60	0.33	0.68
8	PO_4-P	mg/l	1	0.85	0.82	0.96	0.16	0.44	0.97	0.63	0.46	0.17	0.33	0.19	0.97
9	Total Coliform	MPN/ 100ml	--	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
10	Faecal Coliform	MPN/ 100ml	<100	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

(2023-2024)

STP KISHANGARH OUTLET

Sr. No.	Parameters	Unit	Stds.	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar
1	Temp	°C	--	29	26.2	27.9	...	...	...	--	--	--	--	--	17.5
2	pH	-	6.5 -9.0	8.1	7.7	8	...	...	...	--	--	--	--	--	7
3	DO	mg/l	-	6.7	7.1	8.1	...	...	...	--	--	--	--	--	8.4
4	COD	mg/l	50	15	14	9	...	...	...	--	--	--	--	--	28
5	BOD	mg/l	10	2.1	1.6	<1	...	...	...	--	--	--	--	--	<1
6	TSS	mg/l	10	7	3	7	...	...	...	--	--	--	--	--	2
7	NH_3-N	mg/l	5	3.8	0.28	0.35	...	...	...	--	--	--	--	--	0.6
8	PO_4-P	mg/l	1	0.66	0.97	0.94	...	...	...	--	--	--	--	--	0.17
9	Total Coliform	MPN/ 100ml	--	<1.8	<1.8	7.8	...	...	...	--	--	--	--	--	<1.8
10	Fecal Coliform	MPN/ 100ml	<100	<1.8	<1.8	<1.8	...	...	...	--	--	--	--	--	<1.8

(Shubham Bhalla)
//TRUE COPY//