

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI.

Original Application No.213 of 2015 (SZ)

C.P. Senthil

...Applicant

Versus

TNPCB,  
Rep, by its Chairman,  
Chennai and Ors.

...Respondent(s)

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Advocate for the Respondent: TNPCB  
Tr. Sai Sathya Jith, Advocate



JOINT COMMITTEE REPORT OF SEWAGE TREATMENT PLANT (STP) AT M/s ELYSIUM PROPERTIES INDIA PVT. LTD. AS PER THE DIRECTION OF NGT (SZ) DATED OCTOBER 4, 2021 IN THE MATTER OF ORIGINAL APPLICATION NO. 213 OF 2015

**1.0 Preamble**

The National Green Tribunal (NGT) Southern Zone, Chennai in the matter of O. A. No. 213 of 2015 in case of Sh. C. P. Senthil Vs Tamil Nadu Pollution Control Board and 2 others issued an order dated 04/10/2021 stating that:

*“...The 3rd respondent has filed their objection to the joint committee report. It is seen from the objection submitted by the 3rd respondent to the joint committee report that they have already engaged IIT Madras to study the existing STP and offer suggestions for upgradation of the present Sewage Treatment Plant (STP) to make it more environment friendly and comply with the prescribed norms, they want two months time for submitting the report.*

*It is seen from the report submitted by the Tamil Nadu Pollution Control Board that on account of certain modifications made project proponent, inlet and outlet norms of the Sewage Treatment Plant (STP) conform to the standards provided. This was seriously opposed by the counsel for the applicant stating that there is no possibility of improvement in the inlet water quality, as no upgradation has been done by them as suggested by the committee so far and he wanted that the same has to be considered by the joint committee appointed by this Tribunal and get further report in this regard.*

*Since the 3rd respondent also filed objection to the joint committee report, we feel that it is necessary to direct the Joint Committee to inspect the Sewage Treatment Plant (STP) in question again and on the basis of the temporary measures taken by them as mentioned in the report submitted by the Pollution Control Board which was referred to above, whether there was any improvement in the inlet and outlet norms of the water which is being discharged from the Sewage Treatment Plant (STP), so as to continue with the STP till the further study regarding upgradation is done as suggested by the IIT Madras based on their study.*

*As regards the environmental compensation and other aspects are concerned, we are not expressing any opinion at this stage, as if any show cause notice has been issued by the Pollution Control Board, then it is for the 3rd respondent to appear before them and submit their Page 9 of 10 explanation and in turn, it is for the Pollution Control Board to take appropriate decision on the same.*

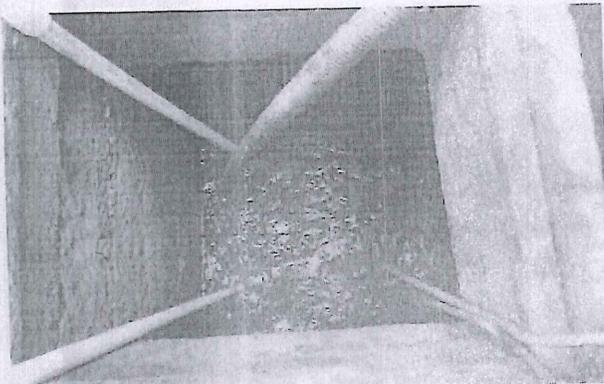
*The joint committee is directed to inspect the Sewage Treatment Plant (STP) in question and submit a further report regarding the improvement (if any) found on the basis of the improvements said to have been made by the 3rd respondent which was extracted in the report submitted by the Tamil Nadu Pollution Control Board and submit a report to this Tribunal on or before 10.11.2021*

*In the meantime, the 3rd respondent is also directed to approach the IIT Madras to expedite the study for providing proper design for upgradation of the Sewage Treatment Plant (STP) to meet the situation and for applying to the Pollution Control Board for renewal of their consent....”*

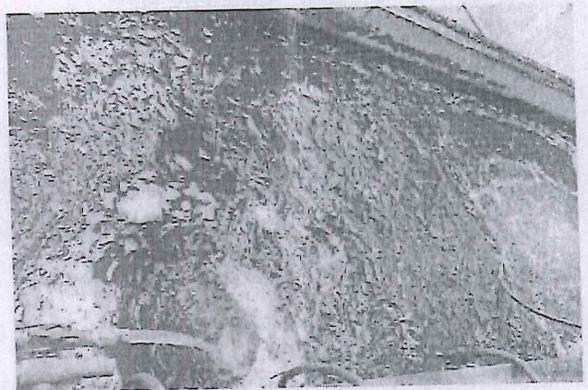
## **2.0 Joint inspection by the committee**

As per the order dated October 04, 2021 a joint inspection of STP facility located at Flushing Meadows, Vellanaipatty Village was carried out by the joint committee members: Smt. Poornima B M, Scientist “D”, (CPCB, Regional Directorate, Chennai) and Smt. D. Jeyalakshmi (DEE, TNPCB, Coimbatore North) along with Smt. V.P. Mohana Jeya Valli (AE, TNPCB, Coimbatore North) on December 07, 2021. The committee carried out inspection in and around the STP facility and interacted with the operators and 3<sup>rd</sup> respondent. During inspection, STP was in operation and samples were collected by STP components like Collection tank, aeration tank, outlet of the STP, ground water seepage and the Bore wells located at backside of the basketball court at Southern side & park at eastern side.

The Joint Committee submitted its report dated December 10, 2021 without the analysis results to Hon’ble NGT (SZ) Chennai on December 11, 2021.



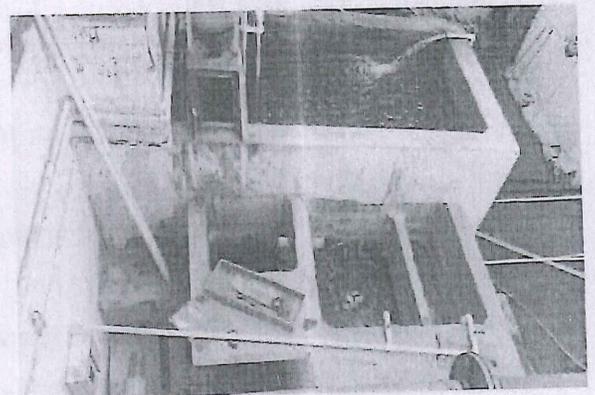
*Collection Cum equalization and Primary settling tank*



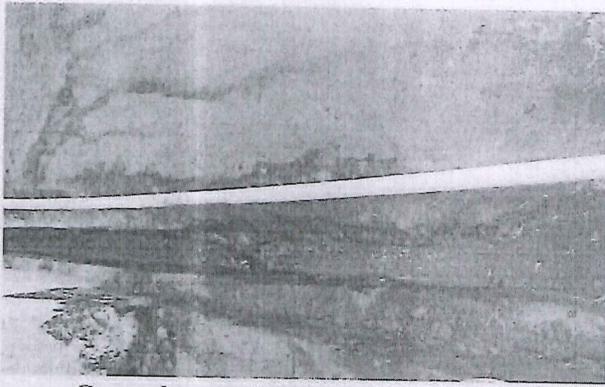
*Aeration tank*



*Secondary Clarifier and filter feed tank*



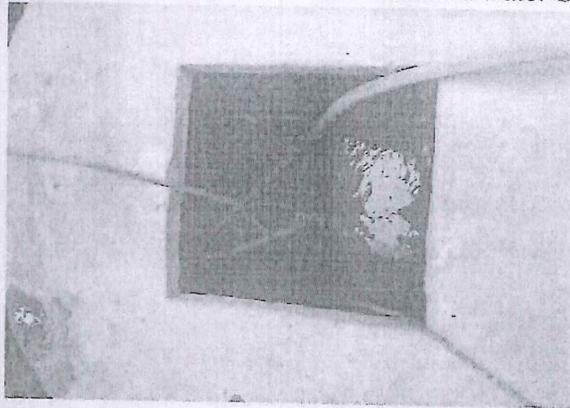
*Sludge Drying Bed and Treated water tank*



*Ground water Seepage near EB Room*



*Ground water Seepage near Aeration*



*Ground water Seepage Collection well inside the STP area*

### 3.0 Analysis results of the samples collected from STP and Bore wells from M/s Elysium properties

The analysis results of the Sewage Treatment Plant (STP) and Bore well samples taken from M/s Elysium properties received from TNPCB laboratory, Salem is depicted in table 1 & 2 below:

**Table 1: Analysis results of various units of STP**

Sl.No.	Parameters	Collection Tank	Aeration Tank	Treated Water Tank	Ground water seepage well	Discharge limit prescribed by TNPCB
1	pH	7.90	7.87	7.66	7.74	5.5-9.0
2	TSSmg/l	50	32.0	14.0	14.0	30
3	BODmg/l	22	14.0	3.0	2.0	20
4	CODmg/l	80	48.0	16.0	8.0	-
5	Ammonical Nitrogenmg/l	31.9	15.7	12.3	5.0	-
6	Total Nitrogenmg/l	1.0	2.69	1.87	2.91	-

7	Fecal ColiformMPN/100mL	2100	230	4.5	7.8	-
8	Total ColiformMPN/100mL	4300	790	17	26.0	-

The results show that, the STP outlet sample is complying with the standards prescribed by TNPCB.

**Table 2: Analysis results of Bore well samples within the Elysium properties**

S. No	Parameter	Bore Well at Eastern side	Bore Well at Southern side	Drinking water standards (BIS 10500 : 2012)
1.	Colour, Hazen units	Less than 5	Less than 5	5
2.	pH	8.11	7.45	6.5 – 8.5
3.	TDS, mg/l	1370	1880	500
4.	Chlorides	400	600	250
5.	Sulphates	209	280	200
6.	Total Residual Chlorine	< 1.0	< 1.0	0.2
7.	Nitrogen as Nitrate	1.86	1.93	45
8.	Fluoride	0.82	0.79	1.0
9.	Alkalinity	340	360	200
10.	Total Hardness	720	1230	200
11.	Calcium	108.2	152.3	75
12.	Magnesium	109.4	206.6	30
13.	Turbidity, NTU	< 1.0	< 1.0	1
14.	Total Iron	1.84	1.66	0.3
15.	Hexavalent Chromium	< 0.01	< 0.01	-
16.	Copper	0.2462	0.3488	0.05
17.	Zinc	0.5460	0.6188	5

From the table 2, the bore well samples are not meeting the BIS drinking water standards, may be due to use of treated STP water for irrigation.

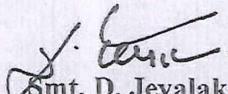
#### 4.0 Conclusions

- i. M/s Elysium properties has not carried out any renovation works for the STP, however M/s Eco Green Technology, Coimbatore have been engaged for the operation and maintenance of the STP. The operating process of aeration tank has been changed from MBBR technology to Conventional Activated Sludge Process.

- ii. The treated sewage is meeting the standard prescribed by TNPCB and however the bore well samples taken from the southern and eastern side Park of Elysium properties is not meeting the BIS drinking water standards.
- iii. M/s Elysium properties, submitted a report by IIT Madras and the conclusion of the report is as below and the copy of the report is enclosed as Annexure I:
  - a. The physical dimensions of the various treatment units existing at present in the STP are adequate to treat the wastewater generated in Elysium Flushing Meadows.
  - b. The BOD/COD ratio of the raw/influent wastewater indicates the suitability of the biological process-based treatment scheme adopted in the STP of EFM. Moreover, the effluent coming out of the STP is meeting most of the standards prescribed by TNPCB except FC and total phosphorous.
  - c. The standards can be met if the recommendations pertaining to chlorination, ACF and PSF are practiced systematically in everyday STP operation.
  - d. The measured noise levels at different residential locations closer to the STP are well within the limits prescribed by TNPCB.

Report dated March 11, 2022

Signatures of Joint Committee:

  
Smt. D. Jeyalakshmi  
District Environmental Engineer  
TNPC Board  
Coimbatore, North

  
Smt. Poornima B M  
Scientist D  
Central Pollution Control Board  
Regional Directorate - Chennai



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Advocate for the Respondent: TNPCB  
Tr. C. Sai Sathya Jith  
Chennai

Date: 14.03.2022

Date of hearing on: 31.03.2022

