

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

**Original Application No. 213 of 2015(SZ)**

C.P.Senthil,  
Flushing Meadows Villa No.4,  
Globus Gardens,  
Kaikopalayam,  
Coimbatore – 641 061.

...Applicant

**Vs**

Tamil Nadu State Pollution Control Board,  
Represented by its Chairman,  
No.76, Mount Salai, Guindy,  
Chennai-600032 & others.

...Respondents

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**Filed by  
Thiru. C. Kasirajan  
Advocate, Chennai.**



**Status report on the action taken and compliance of Sewage Treatment Plant (STP) at M/s. Elysium Properties India Pvt. ILtd as per the orders of the Hon'ble National Green Tribunal (SZ), Chennai dated: 03/12/2020**

The Hon'ble National Green Tribunal (Southern Zone) in Application No.213 of 2015 vide its order 03/12/2020, inter alia that

*"...The Tamil Nadu State Pollution Control Board is directed to ascertain as to whether the 3rd respondent is having all necessary permissions and clearances under the environmental laws and if there is non-compliance of the same, what is the action taken by them in respect of the same including the question of imposing environmental compensation as suggested by the Joint Committee and submit a detailed report in this regard.*

*The Tamil Nadu State Pollution Control Board as well 3<sup>rd</sup> respondent are directed to submit the further report regarding the operations of the STP including the further action taken by the Tamil Nadu State Pollution Control Board to this Tribunal on or before 09/01/2021 by e-filing along with necessary hard copies as per rules..."*

The unit of M/s Elysium properties has installed a STP of capacity 125 KLD to treat the sewage generated from the community and has obtained consent to operate from the TNPCB in the year 30/09/2014 with validity up to 30/06/2015, which was subsequently renewed on 29/06/2015 and was valid up to 30/06/2017 with specific condition to reuse 55 KLD treated sewage for toilet flushing. At present there is no valid consent to operate from the TNPCB.

Frequent complaints were received from the residents as well as Flushing Meadows Owners Association regarding improper operation and maintenance of the STP, disposal of untreated/ Partially treated sewage and intolerable bad smell/ odour and noise during the operation of the compressors and the pumps installed in the STP and requested suitable action.

Based on the complaints and the case filled by Thiru.C.P.Senthil before the Hon'ble NGT, Chennai vide O.A.No.213/ 2015, the JCEE(M), Coimbatore has inspected and recommended for the issue of suitable direction to the unit to revamp the STP and to operate and maintain the STP effectively and to comply with the consent order conditions vide Lr. Dated: 14/11/2018. Subsequently, the Board has issued Directions to the unit vide the Member Secretary's Proc.No.T2/TNPCB/F.28717/RLW/2018 dated: 04/12/2018 (Copy Enclosed).

Further, a Show cause notice was issued to the unit for " why the Board shall not levy and recover the environmental Compensation as suggested by the Joint Committee of Rs. 2,51,80,000/- (Rupees two crores, fifty one lakhs and eighty thousand only) and thereon Rs. 20,000/- (twenty thousand) each day of non compliance from 19/08/2020 onwards till compliance is achieved against you for the non compliance of the recommendations of the Joint Committee on 09/03/2017" vide the Chairman's Proc.No. T11/TNPCB/LAW/LAWII/NGT/001621/CBN/Show Cause Notice/2020 dated: 21/11/2020. The unit has requested furthermore 15 days time to submit the reply for the show cause notice issued to the unit. Now, the unit has furnished their reply vide unit's letter dated 01/01/2021. The remarks of the reply letter is submitted separately and the same was under progress.

The unit was inspected on 08/02/2021 and the following were observed,

1. The Sewage treatment plant was under operation.
2. The unit has provided bar screen in the bar screen chamber before collection tank and the same was under operation.
3. The unit has not utilized the existing equalization tank. The collection tank was used as collection cum equalization tank as informed by them.
4. The collection cum equalization tank is not provided with full fledged coarse bubble diffusers as suggested by joint committee and it was partially provided for equalizing the wastewater and the same was not under operation.
5. During the time of inspection it was noticed that, the unit has pumped the raw sewage from the collection cum equalization tank without any treatment using flexible hoses.
6. The unit has removed all the bio- media in the aeration tank. It was informed that they have changed from MBBR technology to Conventional Activated Sludge Process.
7. No MLSS is maintained in the aeration tank.
8. The unit has provided the observation/ inspection platform for aeration tank to verify the physical working.
9. The clarifier/ Settling tank was not revamped and not provided with Observation/ inspection platform.
10. In the settling tank and filter feed tank carryover of bio sludge are found to be floating which indicates the inefficient operation and maintenance of STP.
11. The unit has provided Electromagnetic Flow meters at the inlet of the aeration tank and final treated water tank and the same was under operation.
12. The unit has not maintained proper log books for the operation of STP.
13. The unit has provided two sludge drying beds. No Sludge was present in the sludge drying beds.
14. The unit has not provided dual piping system to reuse the treated water for toilet flushing.
15. The unit has provided provision of fresh water pipe to dilute the treated water in the final treated water tank.
16. The STP is constructed below the ground level and the ground water seepage is observed inside the STP. The unit has provided seepage water collection pit. Then the water is pumped into the pre filtration tank using flexible hose.

The status of Compliance as on 08/02/2021 of findings of the joint committee on 09/03/2017 as follows

No	Findings of the committee (09-03-2017)	Compliance status as on 18-08-2020	Compliance status as on 18-11-2020	Compliance status as on 08-02-2021
1	The STP is meeting the standard consented parameters (BOD and TSS) of TNPCB and the NH <sub>4</sub> -N reported at outlet is 11.26 mg/L. The MLSS in the	<b>Not Complied</b> The analysis result of sample collected on 18-08-2020 shows that the parameters of the STP outlet are meeting the standard prescribed by TNPCB. However, BOD and COD values are reported to be higher in the aeration tank	<b>Not Complied</b> The analysis result of sample collected on 04-11-2020 to 05-11-2020 reveals that except TSS of the STP outlet all the parameters are within the	The water samples were collected from various unit processes on 28/12/2020. The analysis report reveals that the parameters are within the

	<p>aeration tank is 58 mg/ L, which indicates the poor operation and maintenance of STP.</p>	<p>than the values reported in the raw sewage. BOD: COD ratio of raw sewage is usually 0.3 to 0.8, but in this case it is 0.16 which is very unusual. Ammonia content also was unusually high in the aeration tank. If the ammonia concentration is &gt; 1 mg/L, then a condition exists in the aeration tank that is limiting the complete conversion of the influent waste into bacterial cells. The nitrifying bacteria, which convert ammonia to nitrate, require adequate DO throughout the aeration tank environment. The above observations and the very poor MLSS in the aeration tank suggest serious flaws in the operation and maintenance of the STP. While collecting inlet sample from collection tank, the committee observed floating plastic bio-media rings, which implies that the water from the clarifier tank is pumped/ channelized to collection tank for dilution. The committee has pointed out the presence of plastic bio-media rings in clarifier tank in the 2017 report also. Bio-media is the active component of the aeration tank and it should be retained in the aeration/ bio-treatment tank for the optimal treatment of sewage. Presence of bio-media rings in clarifier/ collection tanks vouches to poor engineering/ design.</p>	<p>standards prescribed by TNPCB.</p>	<p>standards prescribed by TNPCB. However during inspection no MLSS was observed in the aeration tank; also, It is ascertained that all the parameters are not meeting the standards at all times consistently which shows that the STP is not operated and maintained effectively and continuously.</p>
2	<p>The STP has facility of tertiary treatment which includes disinfection and</p>	<p>TNPCB, District Office, Coimbatore could not sent the samples to TNPCB, Advanced Environmental Laboratory at Salem for total</p>	<p>The analysis result of treated water sample collected on 04-11-2020 to 05-11-2020 reveals</p>	<p>The water samples were collected from various unit processes on 28/12/2020. The</p>

	media filtration (pressure sand & activated charcoal filters), but treatment efficiency is very poor as the Total and Fecal Coliform counts are 79000 and 23000 MPN/ 100 mL respectively.	analysis due to prevailing COVID-19 pandemic situation.	Coliform counts are 84 MPN/100 ml which is within the standards prescribed by the CPCB.	reveals that the parameters are within the standards prescribed by TNPCB. However during inspection no MLSS was observed in the aeration tank; also, It is ascertained that all the parameters are not meeting the standards at all times consistently which shows that the STP is not operated and maintained effectively and continuously.
3	The existing STP is not constructed as per the engineering aspects and shall be augmented at the earliest for optimal and efficient treatment/operation.	<b>Not Complied</b> The STP has not augmented and is operating with the existing facility without any rectifications or augmentations.	<b>Not Complied</b> So far the STP has not been augmented and is operating with the existing facility without any rectifications or augmentations.	<b>Not Complied</b> So far the STP has not been augmented and is operating with the existing facility without any rectifications or augmentations.
4	The treatment components such as bar screen chamber, collection & equalization tanks, which are constructed below the ground level has to be provided with the facilities for periodic cleaning and removal of accumulated sludge.	<b>Not Complied</b> It was informed that the sludge is been removed once in six months by the third party engaged for the operation & maintenance of the STP. However no documents were provided for verification. During inspection, the appearance of the STP clearly shows sludge is not scientifically managed. MLSS levels in the aeration tank suggest	<b>Not Complied</b> It was informed that the sludge is been removed once in six months by the third party engaged for the operation & maintenance of the STP. However no documents were provided for verification.	<b>Not Complied</b> The unit has informed that the sludge is been removed once in six months by the third party engaged for the operation & maintenance of the STP. However no documents were provided during inspection for verification.

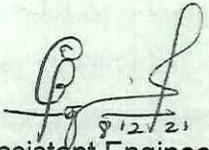
		poor sludge generation due to poor operation of STP.		
5	The equalization tank shall be provided with the coarse bubble diffusers for equalizing the wastewater before pumping into the aeration tank. Horizontal centrifugal, non-clog sludge, solids – handling pumps with open impellers shall be used which is more efficient and also reduces the noise pollution generated during operation. The pumps shall not be installed on tanks/ hollow space as it will amplify noise.	<b>Not Complied</b> The equalization tank is not provided with coarse bubble diffusers for equalizing the wastewater. The location of the pumps is also not changed.	<b>Not Complied</b> The unit has not utilized the existing equalization tank. The collection tank was used as collection cum equalization tank. The equalization tank is not provided with full fledged coarse bubble diffusers for equalizing the wastewater. The location of the pumps is also not changed.	<b>Not Complied</b> The unit has not utilized the existing equalization tank. The collection tank has been used as collection cum equalization tank as informed by them. The equalization tank is not provided with full fledged coarse bubble diffusers for equalizing the wastewater. The same was not under operation. The location of the pumps is also not changed.
6	Aeration tank shall be designed and operated properly so that the bio-media (floating plastic media) is not carried away by the sewage to the subsequent treatment units. A safe provision like observation platform shall be made for aeration tank to verify the physical working condition.	<b>Not Complied</b> It was stated by the operator, that the technology presently adopted is conventional activated sludge process (ASP). However the floating bio-media rings were observed in raw sewage collection tank. The sludge recirculation to aeration tank for the maintaining MLSS in the aeration tank is also not provided. Observation/ inspection platform for the aeration tank is not provided to verify regulatory compliance and to assess the physical working condition.	The unit has removed all the bio-media in the aeration tank. It was stated that they have changed from MBBR technology to Conventional Activated Sludge Process. Observation/ inspection platform for the aeration tank is provided to verify regulatory compliance and to assess the physical working condition.	The unit has removed all the bio-media in the aeration tank. It was stated that they have changed from MBBR technology to Conventional Activated Sludge Process. Observation/ inspection platform for the aeration tank is provided to verify regulatory compliance and to assess the physical working condition.

	be revamped & completely and constructed & operated scientifically.	The clarifier is not revamped	The clarifier is not revamped	The clarifier is not revamped
8	The sludge drying beds, filter press or sludge bio digester shall be incorporated to handle the excess sludge generated and not to divert the excess sludge to collection tank. Sludge/ MLSS return shall be scientifically managed with regular monitoring of aeration tanks parameters.	<b>Not Complied</b> It was informed that two sludge drying beds are provided. The operator could not show sludge/ MLSS return arrangement. The MLSS in the aeration tank was very poor on the day of inspection. This again indicates that the STP is not operated scientifically.	<b>Not Complied</b> It was informed that two sludge drying beds are provided but no sludge disposed in the sludge drying beds. No log book maintained regarding bio sludge disposal.	<b>Not Complied</b> The unit has provided 2 Nos of sludge drying beds but no sludge was found in the sludge drying beds. No log book was maintained regarding bio sludge disposal.
9	M/s Elysium shall be directed to engage a qualified firm/ agency for operating & maintaining the STP in consultation with TNPCB. The STP has to be operated regularly in a scientific manner to avoid septic conditions and resulting odour problems.	<b>Complied</b> M/s Elysium has engaged M/s. Eco Green Technology, Coimbatore for the operation & Maintenance of STP. However, operators are not well versed with the basics of operating an ASP based STP.	M/s Elysium has engaged M/s. Eco Green Technology, Coimbatore for the operation & Maintenance of STP. However, operators are not well versed with the basics of operating an ASP based STP.	M/s Elysium has engaged M/s. Eco Green Technology, Coimbatore for the operation & Maintenance of STP. However, operators are not well versed with the basics of operating an ASP based STP.
10	M/s Elysium shall also be directed to make all provision for avoiding the entry of storm water into the STP which hampers the regular and efficient	No information provided by the operator on the issue of storm water entry into STP. However, the unit has provided storm water drain in and around the premises.	The unit has provided storm water drain in and around the premises. No information provided by the operator on the	The unit has provided storm water drain in and around the premises.

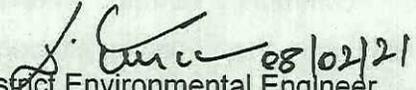
	operation of the treatment system.		issue of storm water entry into STP.	
11	The analysis of treated sewage shall be done periodically to know the performance of the STP and the results shall be submitted to TNPCB.	<b>Not complied</b>	<b>Not complied</b> No results of treated sewage furnished to the Board.	<b>Not complied</b> No results of treated sewage furnished to the Board.
12	A provision or dual piping system shall be installed in the gated community for utilizing the treated sewage for toilet flushing. The sewage treated shall be reused completely in the community and at no point of time discharged outside the premises.	<b>Not Complied</b> Dual piping system is not installed for utilizing the treated sewage for toilet flushing though TNPCB has given specific condition to utilize 55KLD of treated sewage for toilet flushing. It is informed that the treated sewage is used for gardening inside the premises.	<b>Not Complied</b> The unit has not provided dual piping system to utilizing the treated sewage for toilet flushing. It was informed that the entire swage of 90 KLD (35 KLD on land for irrigation +55 KLD Toilet fishing) was utilized for gardening. The unit has provided land of 1.2703 Hectare for gardening which is inadequate for the disposal of the entire sewage of 90 KLD as per the hydraulic loading rate of 35 KL/Hectare/Day.	<b>Not Complied</b> The unit has not provided dual piping system to utilizing the treated sewage for toilet flushing. It was informed that the entire swage of 90 KLD (35 KLD on land for irrigation +55 KLD Toilet fishing) was utilized for gardening. The unit has provided land of 1.2703 Hectare for gardening which is inadequate for the disposal of the entire sewage of 90 KLD as per the hydraulic loading rate of 35 KL/Hectare/Day.

<b>Parameters</b>	<b>Inlet: sewage collection tank</b>	<b>Aeration tank</b>	<b>Outlet: after dual media filter</b>	<b>Discharge limit</b>
pH	7.96	7.87	8.15	5.5-9.0
TSS (mg/l)	82	50	6	30
BOD (mg/l)	48	27	5	20
COD (mg/l)	320	216	48	-
Fecal Coliforms (MPN/100 ml)	2100	260	17	-
Total Coliforms (MPN/100 ml)	4800	700	58	-
NH <sub>4</sub> -N (mg/l)	39	11.8	<2	-
Total Nitrogen (mg/l)	1.05	7.95	11.83	-

It was ascertained from the observations that the unit M/s Elysium Properties India P Ltd, Flushing Meadows-Sewage Treatment Plant, S.F.No 36/1K & 37/6, Vellanaipatti Village, Annur Taluk, Coimbatore District on 08/02/2021, the unit has not complied most of the conditions mentioned in the joint committee report.



Assistant Engineer,  
Tamilnadu Pollution Control Board,  
Coimbatore North



District Environmental Engineer,  
Tamilnadu Pollution Control Board,  
Coimbatore North





**THE HON'BLE NATIONAL GREEN  
TRIBUNAL SOUTHERN ZONE,  
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AS PER THE ORDERS OF THE  
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03/12/2020.**

**Advocate for Respondent No.TNPCB  
Thiru. C. Kasirajan.**

**Date:10.02.2021**

