

**BEFORE THE NATIONAL GREEN TRIBUNAL SITTING AT SOUTHERN BENCH**

**Original Application No. 53 of 2020**

**Between**

Olympia Grande Apartment Owners' Welfare  
Association, Pallavaram Registration No. 569/2016  
Represented by its Secretary Mr. S. Chandrasekar  
No. 328, GST Road, Pallavaram, Chennai- 600 043  
Email id: [ogaowa2016@gmail.com](mailto:ogaowa2016@gmail.com)  
Phone No. 93810 11008

**... Applicant**

**AND**

1. M/s. KSM Nirman Private Limited  
Represented by its Managing Director  
No. 1, SIDCO Industrial Estate, Guindy  
Chennai- 600 032.  
Email id: [sales@olympiagroup.in](mailto:sales@olympiagroup.in)  
Phone No. 044 - 4356 3773.
2. Tamil Nadu Pollution Control Board  
Represented by its Member Secretary  
No. 76, Mount Salai Guindy  
Chennai- 600 032.  
Email id: [tnpcb-chn@gov.in](mailto:tnpcb-chn@gov.in)  
Phone No. 044 – 2235 3134.
3. State Level Environment Impact Assessment Authority, Tamil Nadu  
Represented by its Member Secretary  
3<sup>rd</sup> Floor, Panagal Maaligai  
No. 1 Jeenis Road, Saidapet,  
Chennai- 600 015.  
Email id: [mstnseiaa@yahoo.com](mailto:mstnseiaa@yahoo.com)  
Phone No. 044 – 2435 9973

**... Respondents**

**ADDITIONAL TYPESET OF PAPERS**

<b>Serial Number</b>	<b>Date</b>	<b>Document</b>	<b>Page Number</b>
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6.		Log of 315 KLD STPS of February 2022 Production Report- Olympia Grande.	40

Dated this the 18<sup>th</sup> of April 2022.

**COUNSEL FOR THE 1<sup>st</sup> RESPONDENT**

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.*<sup>1</sup> 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

<sup>1</sup>(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 algae and other vegetation in water bodies leading to a state called eutrophication. 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 algae. Degradation of dead algae and plants by microbes consumes dissolved 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](http://censusindia.gov.in/2011census/hlo/Data%20sheet/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](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 CPHEEO Manual, 2013 is MPS230/100 ml.).** (emphasis added)

Hence, CPHEEO 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<sub>4</sub>-N (mg/L): Not more than 5, N-total (mg/L) Not more than 10, Faecal 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\$/m<sup>3</sup>, while for tertiary treatment (BOD, TSS & TN < 10 mg/L) it is 2.0-2.5 US\$/m<sup>3</sup>. 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 IIT 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, Hubballi, 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:

SI. No.	Industry	Parameters	Standards (Applicable to all mode of disposal)			
			1	2	3	4
	Sewage Treatment 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 Permissible-	Desireable-1000 Permissible-	Desireable-1000 Permissible-

	Number per 100 milliliter, MPN/100 ml	230	ble-1000	10,000	e-10,000
<i>Note:</i>					
(i) <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.</i>					
(ii) <i>All value in mg/l except for pH and Fecal Coliform.</i>					
(iii) <i>These standards will be applicable for discharge into water bodies as well as for land disposal/applications.</i>					
(iv) <i>These Standards shall apply to all new STPs for which construction is yet to be initiated.</i>					
(v) <i>The existing/under construction STPs shall achieve these standards within 07 years from the date of notification.</i>					
(vi) <i>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.</i>					
(vii) <i>Reuse/Recycling of treated effluent shall be encouraged.</i>					
(viii) <i>State Pollution Control Boards/Pollution Control Committees may make these norms more stringent taking into account the local conditions.</i>					

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



DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE  
CHIEF WATER ANALYSIS LABORATORY, KING INSTITUTE CAMPUS,  
GUINDY, CHENNAI-32

FROM

Tmt.L.Sujatha M.Sc.,M.A.B.Ed.,  
CHIEF WATER ANALYST  
Chief Water Analysis Laboratory,  
King Institute Campus, Guindy,  
Chennai-32.

TO

Thiru. Manokaran, Sr. Engg.,  
Olympia Grande Residential Complex,  
No.328, GST Road,  
Pallavaram,  
Chennai - 600 043

R.No.1963/C/2021 Dated : 11.11.2021

Sir,

Sub: Analysis of STP treated water -- Results furnished -- Regarding.

Ref: Yours Lr.No.Nil Dated : 21.10.2021

\*\*\*\*\*

Two samples of STP treated water stated to have been collected on 22.10.2021 from the STP UF and Treated water (315KLD) located with in the premises of Olympia Grande Residential Complex, No.328, GST Road, Pallavaram, Chennai -43 was received at this laboratory on the same day for analysis of specific parameters.

The results of the analysis are furnished overleaf.

*[Signature]*  
CHIEF WATER ANALYST,  
Chief Water Analysis Laboratory,  
Guindy, Chennai-32.

Copy to: File & Lab.  
T.S

*[Signature]*  
T.S



CHIEF WATER ANALYSIS LABORATORY, KING INSTITUTE CAMPUS,  
GUINDY, CHENNAI-32

RESULTS OF ANALYSIS OF SEWAGE SAMPLES: Lab. No.S-28 & S-29

From  
Thiru. Manokaran, Senior Engineer,  
Olympia Grande Residential Complex,  
No.328, GST Road, Pallavaram,  
Chennai - 600 043

Date of Collection : 22.10.2021  
Date of Receipt : 22.10.2021  
Collected by : Thiru.Manokaran, Senior Engineer.  
Sample Particulars : 1.STP UF Water  
2.STP - Treated Water  
Olympia Grande Residential Complex, 328, GST  
Road, Pallavaram, Chennai - 600 043

Sl. No.	Parameters		Results	
			STP located at Olympia Grande Residential Complex, No.328 GST Road, Pallavaram, Chennai - 43	
			STP - UF Water Lab.No.S-28	STP Treated Water Lab. No.S-29
01	Colour and appearance		Sl. Whitish and Turbid	Sl. Whitish and Turbid
02	Total Suspended Solids	mg/l.	10	10
03	Total Dissolved Solids	mg/l.	1290	1290
04	p <sup>H</sup> Value		6.6	6.6
05	Oxygen consumed from N/8- KMnO <sub>4</sub>	3 minutes mg/l.	1.2	1.0
		4 Hours mg/l.	2.6	2.6
06	Bio-Chemical Oxygen demand (5 <sup>th</sup> day at 20° C)	mg/l.	8	6
07	Chemical Oxygen demand	mg/l.	38	37
08	Chlorides as Cl.	mg/l.	316	308
09	Oil & Grease	mg/l.	Nil	Nil

Copy to:File & Lab

*[Signature]*  
12/11/2021  
CHIEF WATER ANALYST  
Chief Water Analysis Laboratory,  
Guindy, Chennai-32.

*[Signature]*  
12/11



# Santhome Enviro services

NABL (ISO / IEC 17025:2005) Accredited &  
(A CONSTITUENT BOARD OF QUALITY COUNCIL OF INDIA)

ISO 9001:2015 Certified Laboratory

No.3/4, Pillayar Koil Street, Jafferkhanpet, Chennai-600083.

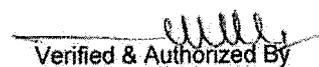
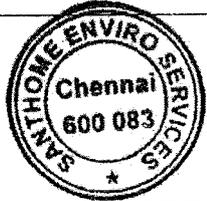
Ph : 044 - 42181525 / Mob: 9791530069

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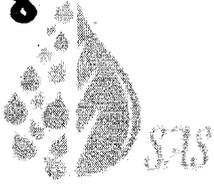


17

## TEST REPORT

Sample Ref No : SASM/132/01				Report No. : 132/01	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Report Date : 24.01.2022 Page: 1 of 1	
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /18.01.2022 Customer's Reference : Letter Dated on 18.01.2022 Sample Mark : A9 - STP Treated Water Sample Location : Olympia Grande				Received On : 18.01.2022 Commenced On : 18.01.2022 Completed On : 24.01.2022	
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.42	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	14.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	48.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	8.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	6.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	2.0	5.0	IS:3025 P.34 1988 R.2009
APHA - American Public Health Association, IS- Indian Standard					
End of Report for <b>SANTHOME ENVIRO SERVICES</b>					
 Verified & Authorized By M. Maria Frank Omer - Quality Manager					

- NOTE: 1. Test results shown in this test report relate only to the items tested.  
2. This test report shall not be reproduced anywhere except in full and in same format without the approval of the laboratory  
3. Unless informed by the customer the test items will not be retained for more than 10 days from the date of issue of test report (exceptional for Microbiology and wastewater for which retaining time 7 days.)



**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. :SAS/W/132/01

Report No. : 132/01

Report Date : 24.01.2022

Page: 1 of 1

SI. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	64	100	IS:1622-1981 Amd.4 RA 2009

**End of Report**

**IS- Indian Standard**

**MPN- Most Probable Number, NGT= National Green Tribunal**

**for SANTHOME ENVIRO SERVICES**

*M. Maria Frank Omer*  
Verified & Authorized By

M.Maria Frank Omer - Quality Manager



- NOTE: 1. Test results shown in this test report relate only to the items tested.  
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# Santhome Enviro services

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## TEST REPORT

Sample Ref No : SAS/W133/01				Report No. : 133/01	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Report Date : 24.01.2022 Page: 1 of 1	
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /18.01.2022 Customer's Reference : Letter Dated on 18.01.2022 Sample Mark : A9 - UF Treated Water Sample Location : Olympia Grande				Received On : 18.01.2022 Commenced On : 18.01.2022 Completed On : 24.01.2022	
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.38	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	4.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	32.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	5.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	4.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	1.0	5.0	IS:3025 P.34 1988 R.2009
BDL= Below Detectable Limit; DL= Detection Limit					
APHA - American Public Health Association, IS- Indian Standard					
End of Report for SANTHOME ENVIRO SERVICES					
Verified & Authorized By M.Maria Frank Omer - Quality Manager					

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**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. : SAS/W/133/01

Report No. : 133/01

Report Date : 24.01.2022

Page: 1 of 1

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	Absent	100	IS:1622-1981 Amd.4 RA 2009
<b>End of Report</b>					
<b>IS- Indian Standard</b>					
<b>MPN- Most Probable Number, NGT= National Green Tribunal</b>					
for <b>SANTHOME ENVIRO SERVICES</b>					
 Verified & Authorized By <b>M. Maria Frank Omer - Quality Manager</b>					
					

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## TEST REPORT

Sample Ref No : SAS/W/134/01

Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd.,  
Address : No.13, 2<sup>nd</sup> Main Road,  
New Colony, Chrompet,  
Chennai-600 044

Report No. : 134/01

Report Date :  
Page: 1 of 1

Sample Description : Sewage Water  
Sample Drawn By/ Date : Customer /18.01.2022  
Customer's Reference : Letter Dated on 18.01.2022  
Sample Mark : F1 -STP Treated Water  
Sample Location : Olympia Grande

Received On : 18.01.2022  
Commenced On : 18.01.2022  
Completed On : 24.01.2022

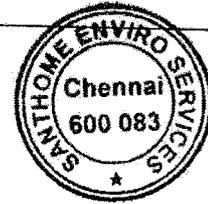
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.52	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>7</sup> B
2	Total Suspended Solids	mg/l	16.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	43.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	6.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	7.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	4.0	5.0	IS:3025 P.34 1988 R.2009

APHA -American Public Health Association, IS- Indian Standard

End of Report

for SANTHOME ENVIRO SERVICES

Verified & Authorized By  
M.Maria Frank Omer - Quality Manager



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## TEST REPORT

Sample Ref No : SASW/135/01	Report No. : 135/01
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044	Report Date : 24.01.2022 Page: 1 of 1
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /18.01.2022 Customer's Reference : Letter Dated on 18.01.2022 Sample Mark : F1 - UF Treated Water Sample Location : Olympia Grande	Received On : 18.01.2022 Commenced On : 18.01.2022 Completed On : 24.01.2022

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.28	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	4.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	25.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	3.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	2.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	1.0	5.0	IS:3025 P.34 1988 R.2009

BDL= Below Detectable Limit; DL= Detection Limit

APHA -American Public Health Association, IS- Indian Standard

End of Report

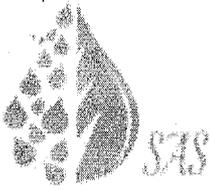
for SANTHOME ENVIRO SERVICES



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M.Maria Frank Omer - Quality Manager

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**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. : SAS/W/135/01

Report No. :135/01

Report Date : 24.01.2022

Page: 1 of 1

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	Absent	100	IS:1622-1981 Amd.4 RA 2009

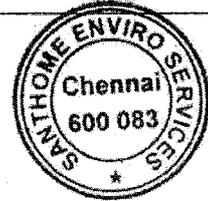
End of Report

IS- Indian Standard

MPN- Most Probable Number, NGT= National Green Tribunal

for **SANTHOME ENVIRO SERVICES**

  
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## TEST REPORT

Sample Ref No : SAS/W/085/02	Report No. : 085/02
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044	Report Date : 16.02.2022 Page: 1 of 1
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /11.02.2022 Customer's Reference : Letter Dated on 11.02.2022 Sample Mark : A9 - 165KLD-STP Treated Water Sample Location : Olympia Grande	Received On : 11.02.2022 Commenced On : 11.02.2022 Completed On : 16.02.2022

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.42	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	6.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	44.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	5.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	5.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	3.0	5.0	IS:3025 P.34 1988 R.2009

APHA -American Public Health Association, IS- Indian Standard

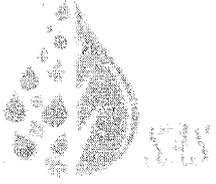
End of Report

for SANTHOME ENVIRO SERVICES

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TEST REPORT - MICROBIOLOGICAL EXAMINATION					
Sample Ref No. : SASM/085/02			Report No. : 085/02 Report Date : 16.02.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	48	100	IS:1622-1981 Amd.4 RA 2009
<b>End of Report</b>					
IS- Indian Standard					
MPN- Most Probable Number, NGT= National Green Tribunal for <b>SANTHOME ENVIRO SERVICES</b>					
 Verified & Authorized By M. Maria Frank Omer - Quality Manager					

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## TEST REPORT

Sample Ref No : SAS/W/086/02				Report No. : 086/02	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd.,				Report Date : 16.02.2022	
Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Page: 1 of 1	
Sample Description : Sewage Water				Received On : 11.02.2022	
Sample Drawn By/ Date : Customer / 11.02.2022				Commenced On : 11.02.2022	
Customer's Reference : Letter Dated on 11.02.2022				Completed On : 16.02.2022	
Sample Mark : A9-165 KLD- UF Treated Water					
Sample Location : Olympia Grande					
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.04	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	10.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	46.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	5.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	6.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	3.0	5.0	IS:3025 P.34 1988 R.2009

BDL= Below Detectable Limit; DL= Detection Limit

APHA -American Public Health Association, IS- Indian Standard

End of Report

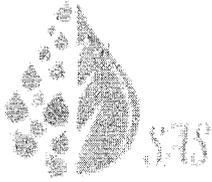
for **SANTHOME ENVIRO SERVICES**

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TEST REPORT - MICROBIOLOGICAL EXAMINATION					
Sample Ref No. : SASW/086/02			Report No. : 086/02 Report Date : 16.02.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	8	100	IS:1622-1981 Amd.4 RA 2009
<b>End of Report</b>					
<b>IS- Indian Standard</b>					
MPN- Most Probable Number,NGT= National Green Tribunal					
for SANTHOME ENVIRO SERVICES					
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## TEST REPORT

Sample Ref No : SASW/087/02	Report No. : 087/02
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044	Report Date : 16.02.2022 Page: 1 of 1
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /11.02.2022 Customer's Reference : Letter Dated on 11.02.2022 Sample Mark : F1 -315 KLD- STP Treated Water Sample Location : Olympia Grande	Received On : 11.02.2022 Commenced On : 11.02.2022 Completed On : 16.02.2022

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.41	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	12.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	46.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	7.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	8.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	3.0	5.0	IS:3025 P.34 1988 R.2009

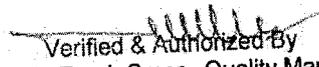
APHA -American Public Health Association, IS- Indian Standard

End of Report

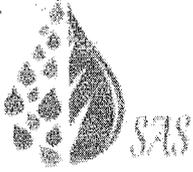
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TEST REPORT - MICROBIOLOGICAL EXAMINATION					
Sample Ref No. : SAS/W/087/02			Report No. : 087/02 Report Date : 16.02.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	85	100	IS:1622-1981 Amd.4 RA 2009
End of Report					
<b>IS- Indian Standard</b>					
MPN- Most Probable Number, NGT= National Green Tribunal for <b>SANTHOME ENVIRO SERVICES</b>					
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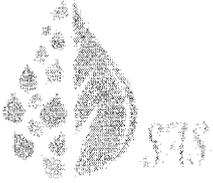


## TEST REPORT

Sample Ref No : SAS/W/088/02				Report No. :088/02	
Customer Name:M/s.Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Report Date : 16.02.2022 Page: 1 of 1	
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /11.02.2022 Customer's Reference : Letter Dated on 11.02.2022 Sample Mark : F1-315 KLD- UF Treated Water Sample Location : Olympia Grande				Received On : 11.02.2022 Commenced On : 11.02.2022 Completed On : 16.02.2022	
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.52	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	3.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	38.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	4.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	4.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	2.0	5.0	IS:3025 P.34 1988 R.2009
BDL= Below Detectable Limit; DL= Detection Limit					
APHA -American Public Health Association, IS- Indian Standard					
End of Report					
for SANTHOME ENVIRO SERVICES					
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**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. : SASW/088/02			Report No. :088/02 Report Date : 16.02.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	6	100	IS:1622-1981 Amd.4 RA 2009
<b>End of Report</b>					
<b>IS- Indian Standard</b>					
<b>MPN- Most Probable Number,NGT= National Green Tribunal</b>					
for <b>SANTHOME ENVIRO SERVICES</b>					
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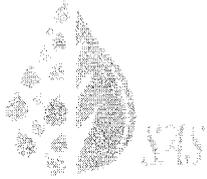
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## TEST REPORT

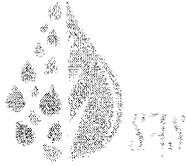
Sample Ref No : SAS/W/235/03				Report No. : 235/03	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Report Date : 29.03.2022 Page: 1 of 1	
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /25.03.2022 Customer's Reference : Letter Dated on 25.03.2022 Sample Mark : A9 - 165KLD-STP Treated Water Sample Location : Olympia Grande				Received On : 25.03.2022 Commenced On : 25.03.2022 Completed On : 29.03.2022	
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.58	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	12.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	48.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	8.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	7.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	3.0	5.0	IS:3025 P 34 1988 R.2009
APHA - American Public Health Association, IS- Indian Standard					
End of Report					
for SANTHOME ENVIRO SERVICES					
 Verified & Authorized By M. Maria Frank Omer - Quality Manager					

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TEST REPORT - MICROBIOLOGICAL EXAMINATION					
Sample Ref No. : SAS/W/235/03			Report No. : 235/03 Report Date : 29.03.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	65	100	IS:1622-1981 Amd.4 RA 2009
End of Report					
IS- Indian Standard					
MPN- Most Probable Number, NGT= National Green Tribunal					
for <b>SANTHOME ENVIRO SERVICES</b>					
 Verified & Authorized By M. Maria Frank Omer - Quality Manager					

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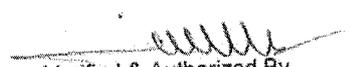
No.3/4, Pillayar Koil Street, Jafferkhanpet, Chennai-600083.

Ph : 044 - 42181525 / Mob: 9791530069

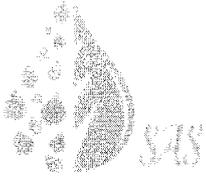
Email ID: santhomeenviro@gmail.com | Website : www.santhomeenvirolab.in



## TEST REPORT

Sample Ref No : SAS/W/236/03				Report No. : 236/03	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd.,				Report Date : 29.03.2022	
Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Page: 1 of 1	
Sample Description : Sewage Water				Received On : 25.03.2022	
Sample Drawn By/ Date : Customer /25.03.2022				Commenced On : 25.03.2022	
Customer's Reference : Letter Dated on 25.03.2022				Completed On : 29.03.2022	
Sample Mark : A9 - 165 KLD- UF Treated Water					
Sample Location : Olympia Grande					
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.14	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>1</sup> B
2	Total Suspended Solids	mg/l	6.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	29.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	3.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	4.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	2.0	5.0	IS:3025 P.34 1988 R.2009
BDL= Below Detectable Limit; DL= Detection Limit					
APHA -American Public Health Association, IS- Indian Standard					
End of Report					
for SANTHOME ENVIRO SERVICES					
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**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. : SAS/W/236/03

Report No. : 236/03

Report Date : 29.03.2022

Page: 1 of 1

Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	10	100	IS:1622-1981 Amd.4 RA 2009

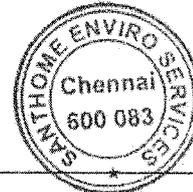
**End of Report**

IS- Indian Standard

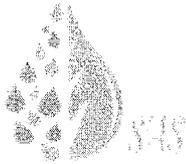
MPN- Most Probable Number, NGT= National Green Tribunal

for **SANTHOME ENVIRO SERVICES**

  
 Verified & Authorized By  
 M. Maria Frank Omer - Quality Manager



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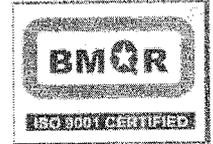
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## TEST REPORT

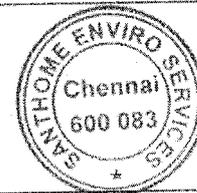
Sample Ref No : SASW/237/03				Report No. : 237/03	
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044				Report Date : 29.03.2022 Page: 1 of 1	
Sample Description : Sewage Water Sample Drawn By/ Date : Customer /25.03.2022 Customer's Reference : Letter Dated on 25.03.2022 Sample Mark : F1 -315 KLD- STP Treated Water Sample Location : Olympia Grande				Received On : 25.03.2022 Commenced On : 25.03.2022 Completed On : 29.03.2022	
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.54	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>1</sup> B
2	Total Suspended Solids	mg/l	10.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	46.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	7.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	8.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	3.0	5.0	IS:3025 P.34 1988 R.2009

APHA -American Public Health Association, IS- Indian Standard

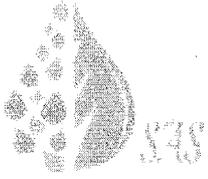
End of Report

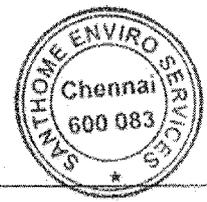
for SANTHOME ENVIRO SERVICES

Verified & Authorized By  
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TEST REPORT - MICROBIOLOGICAL EXAMINATION					
Sample Ref No. : SAS/W/237/03			Report No. : 237/03 Report Date : 29.03.2022 Page: 1 of 1		
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	92	100	IS:1622-1981 Amd.4 RA 2009
End of Report					
IS- Indian Standard					
MPN- Most Probable Number, NGT= National Green Tribunal					
for SANTHOME ENVIRO SERVICES					
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## TEST REPORT

Sample Ref No : SAS/W/238/03			Report No. : 238/03		
Customer Name: M/s. Clar Aqua Engineering Services pvt Ltd., Address : No.13, 2 <sup>nd</sup> Main Road, New Colony, Chrompet, Chennai-600 044			Report Date : 29.03.2022 Page: 1 of 1		
Sample Description : Sewage Water			Received On : 25.03.2022		
Sample Drawn By/ Date : Customer /25.03.2022			Commenced On : 25.03.2022		
Customer's Reference : Letter Dated on 25.03.2022			Completed On : 29.03.2022		
Sample Mark : F1 - 315 KLD- UF Treated Water					
Sample Location : Olympia Grande					
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per CPCB	TEST METHOD
1	pH value at 25°C	-	7.58	6.5 to 9.0	APHA 23 <sup>rd</sup> Edn :2017 4500 H <sup>+</sup> B
2	Total Suspended Solids	mg/l	4.0	20	IS:3025: P.17:1984:R.2012
3	COD	mg/l	24.0	50	APHA 23 <sup>rd</sup> Edn :2017 5220 B
4	BOD at 27°C for 3 days	mg/l	3.0	10	IS: 3025 P. 44 1993 R. 2009
5	Oil & Grease	mg/l	<1.0	10	IS 3025 P.39 1991 R.2009
6	Total Nitrogen as N	mg/l	3.0	10	IS:3025 P.34 1988 R.2009
7	Ammonical nitrogen as NH <sub>4</sub> - N	mg/l	1.0	5.0	IS:3025 P.34 1988 R.2009

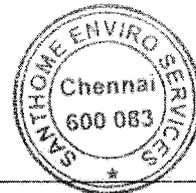
BDL= Below Detectable Limit; DL= Detection Limit

APHA -American Public Health Association, IS- Indian Standard

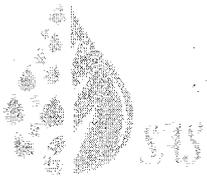
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**TEST REPORT - MICROBIOLOGICAL EXAMINATION**

Sample Ref No. : SASM/238/03

Report No. : 238/03

Report Date : 29.03.2022

Page: 1 of 1

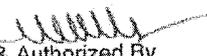
Sl. No	PARAMETERS	UNITS	RESULTS	Tolerance limits for Treated Outlet as per NGT	PROTOCOL
<b>MICROBIOLOGICAL EXAMINATION</b>					
1	Faecal Coliforms	MPN / 100ml	12	100	IS:1622-1981 Amd.4 RA 2009

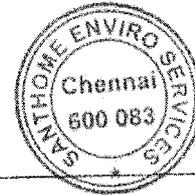
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IS- Indian Standard

MPN- Most Probable Number, NGT= National Green Tribunal

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## 315 KLD STP MONTH OF FEB'2022 PRODUCTION REPORT-OLYMPIA GRANDE

DATE	RWP FLOW METER READING			FFP FLOW METER READING		
	INITIAL	CLOSING	TOTAL IN KLD	INITIAL	CLOSING	TOTAL IN KLD
01.2.2022	97943	98220	277	103331	103592	261
02.2.2022	98220	98370	150	103592	103721	129
03.2.2022	98370	98575	205	103721	103884	163
04.2.2022	98575	98725	150	103884	104002	118
05.2.2022	98725	98896	171	104002	104170	168
06.2.2022	98896	99082	186	104170	104304	134
07.2.2022	99082	99259	177	104304	104525	221
08.2.2022	99259	99446	187	104525	104657	132
09.2.2022	99446	99557	111	104657	104783	126
10.2.2022	99557	99690	133	104783	104861	78
11.2.2022	99690	99860	170	104861	105028	167
12.2.2022	99860	100001	141	105028	105164	136
13.2.2022	100001	100149	148	105164	105333	169
14.2.2022	100149	100341	192	105333	105520	187
15.2.2022	100341	100537	196	105520	105709	189
16.2.2022	100537	100641	104	105709	105779	70
17.2.2022	100641	100760	119	105779	105888	109
18.2.2022	100760	100990	230	105888	106077	189
19.2.2022	100990	101187	197	106077	106297	220
20.2.2022	101187	101321	134	106297	106474	177
21.2.2022	101321	101543	222	106474	106657	183
22.2.2022	101543	101671	128	106657	106768	111
23.2.2022	101671	101821	150	106768	106922	152
24.2.2022	101821	102010	189	106922	107087	165
25.2.2022	102010	102156	146	107087	107261	174
26.2.2022	102156	102410	254	107261	107496	235
27.2.2022	102410	102496	86	107496	107545	49
28.2.2022	102496	102705	209	107545	107750	205