No. 6836/NGT/SLMC/SCI/2021/492

GOVERNMENT OFPUDUCIHERRY
DEPARTMENT OF SCIENCE, TECHNOLOGY AND ENVIRONMENT
PUDUCHERRY POLLUTION CONTROLCOMMITTEE
3"'Floor, I-Housing Board Complex, Anna Nagar, Puducherry-5.
Telephone: (0413) 2201256; Telefax: (0413) 2203494
***

Puducherry, the 27 APR 2021

To

Shri. D. P. Mathuria
Executive Director (Tech)
National Mission for Clean Ganga
Ministry of Jai Shakti,
P' Floor, Major Dhyan Chand National Stadium,
India Gate, New Delhi – 110 002.

Sir,

Sub: DSTE/PPCC– Submission of Progress Report on Restoration of Polluted River Stretches – Reg.

Ref: Your Letter No. Legal/OA No. 673/2018/NMCG/2019 dated 08.10.2020.

With reference to the above mentioned subject, Progress Report for the month of March 2021 is enclosed for kind perusal.

Yours sincerely,

(Dr. S. DINESH KANNAN, IFS)
Member Secretary
Puducherry Pollution Control Committee

Encl: as stated above

O/C 27/4

Copy to:

1. The Member Secretary,
   Central Pollution Control Board,
   Parivesh Bhawan, C.B.D. Cum-Office Complex,
   East Arjun Nagar, Delhi — 110 032.

2. Guard File.

S. Babu 27/4/2021
DESPATCHED

Format for submission of Monthly Progress Report in the NGT Matter
OA. No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)
For the State of Puducherry

Overall status of the State:

I. Total Population: 1244464

Urban Population: 850123

Rural Population: 394341

II. Estimated Sewage Generation (MLD): 92 MLD (URBAN)

III. Details of Sewage Treatment Plant:

1.	Existing no. of STPs and Treatment Capacity (in MLD): at Puducherry (68.5MLD)	3 Nos. of SBR – 51 MLD 2 Nos. of UASB – 5 MLD Oxidation Ponds – 12.5 MLD
2.	Capacity Utilization of existing STPs:	54.5 MLD (79%)
3.	MLD of sewage being treated through Alternate technology:	37.5 MLD (on site sanitation like septic tank and soak pit etc.,)
4.	Gap in Treatment Capacity in MLD:	23.5 MLD (92MLD-68.5MLD)
5.	No. of Operational STPs:	4 Nos. including oxidation ponds
6.	No. of Complying STPs:	3
7.	No. of Non-complying STPs:	1

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1.	Puducherry	68.5 MLD	79%	4 Nos.	3- Nos complying . 1- No Not complying
2.	Karaikal	-	-	-	-
3.	Mahe	-	-	-	-
4.	Yanam	-	-	-	-

Details of under construction STPsin theState

Sl. No.	Location	Capacity of the plant in KLD	Physical Progressin%	Status of I & D or House sewer connections	Completion Timeline
Nil					

Details of proposed STPs in the State

S. No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/Under Tendering/Work to be Awarded)	Likely Date of Completion
1.	Puducherry	3 MLD (Abating river pollution at Sankarabarani River)	Confirmation from M/s WAPCOS, Chennai has been received for DPR preparation and estimate for an amount of Rs.41.30 lakhs has been submitted for the approval of the Government.	by March 2022
2.	Karaikal	3 MLD (Abating river pollution at Arasalar River)		
3.	Puducherry (Left out areas)	"EOI for Selection of Consultant for Formulation of Detailed Project Report for the Underground Sewerage scheme including **Sewage Treatment Plant** for the left out Urban and Peri Urban areas of Puducherry and New Project for the entire region of Karaikal, Mahe and Yanam of U.T. of Puducherry"- Opened on 31.12.2020 and is under scrutiny		-
4.	Karaikal (URBAN)			
5.	Mahe			
6.	Yanam			

II. Details of Industrial Pollution:

1.	No. of industries in the State:	3271
2.	No. of water polluting industries in the State:	98
3.	Quantity of effluent generated from the industries in MLD:	4.75 MLD
4.	Quantity of Hazardous Sludge generated from the Industries in TPD:	3.43TPD
5.	Number of industrial units having ETPs:	97
6.	Number of industrial units connected to CETP:	Nil
7.	Number and total capacity of ETPs (details of existing/ under construction/ proposed)	Existing–97 Capacity – 4.75MLD
8.	Compliance status of the ETPs:	87
9.	Number and total capacity of CETPs (details of existing/ under construction/proposed)	Nil
10.	Status of compliance and operation of the CETPs	Nil

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction &proposed)
Puducherry	3271	4746.2KLD	Existing-97	Nil

III. Solid Waste Management:

1.	Total number of Urban Local Bodies and their Population.	**Annexure I**	
2.	Current Municipal Solid Waste Generation.	406TPD	
3.	Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg.,-Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), bio-methanation, MRF etc.	Composting	36TPD
		Vermi Composting	1TPD
		Bio-gas	2TPD
		Material recovered/Recycled	22TPD
4.	Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap> 20%).	Proposed to have Energy recovery plant. A proposal for waste processing has been sent to GOI for financial Assistance for Yanam Municipality.	
5.	No. and capacity of C&D waste processing Plants in TPD (existing, proposed and under construction).	There is no processing plant of C&D waste. At present C&D waste is being Collected & stored in earmarked area. C&D waste Generation–29.35TPD	
6.	Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source.	Total No. of wards : 121 In all wards door to door collection is being practiced. There is a proposal to practice segregation at source.	
7.	Details of MSW treatment facilities proposed and under construction (no. capacity and technology).	2	
8.	No. and area (in acres) of uncontrolled Garbage dumpsites and Sanitary Landfills.	3Nos. Puducherry : 23.0 Acres Karaikal : 8.32 Acres Yanam : 0.618 Acres Total 31.938 Acres	
9.	No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers.	Nil	
10.	No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers.	All the drains that reaches the Sankaraparani and Arasalar rivers were identified and in-situ remediation of providing grill gratings and bar screen are completed in all the 172 drains.	

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation inTPD	Total MSW being processed in TPD	Existing MSW facilities	Utilization Capacity of the existing MSW facilities	Proposed MSW Facilities & Completion Timeline
5	406	61TPD	3	15%	6months

IV. Bio-medicalWasteManagement:

1	Total Bio-medical generation:	4391kg/day
2	No. of Hospitals and Health Care Facilities:	255
3	Status of Treatment Facility /CBMWTF:	One Common Bio-Medical Waste Treatment Facility functional.

V. HazardousWasteManagement:

1	Total Hazardous Waste generation:	34052TPA
2	No. of Industries generating Hazardous waste	140 industries obtained authorisation.
3	Treatment Capacity of all TSDFs	-
4	Avg. Quantity of Hazardous waste reaching the TSDFs and Treated.	TSDF: Landfillable Waste reached- (i) M/s. Mother Earth Enviro Tech, Bangalore – 245.19 Tons
5	Details of on-going or proposed TSDF	The TSDF located in neighboring states is being shared.

VI. PlasticWasteManagement:

1	Total Plastic Waste generation:	11753TPA
2	Treatment/Measures adopted for reduction or management of plastic waste:	Government of Puducherry has imposed total ban on single use plastics with effect from02/08/2019. Surprise inspections are being carried out. Action Plan for Phasing out of Single Use Plastic has been prepared and circulated to Head of all Departments for implementation. Standard Operating Procedure (SOP) for implementation of Action Plan for Phasing out of SUP in the U.T. of Puducherry has

		been framed. During 2020 675 MT of Plastic waste and MLP were disposed through CO-processing and recycling.

IX	Details of Alternate Treatment Technology being adopted by the State/UT	Nil
X	Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment:	All the drains that reaches the Sankaraparani and Arasalar Rivers were identified and in-situ remediation of providing grill gratings and barscreen are completed in all the 172 drains.
XI	Details of Nodal Officer appointed by Chief Secretary in the State/UT:	Secretary (Envt.)DSTE
XII	Details of meetings carried under the Chairmanship of Chief Secretary in the State/UT:	3rd State Level Monitoring Committee was held on 04.02.2020.
XIII	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	Chunnambar River, Arasalar River Water Quality Data, Common STP Water Quality Data and Drain Water Quality Data are given in **Annexure–II.**
XIV	Ground water regulation:	Pondicherry Ground Water Authority had closed 6 Nos. of tubewells in Puducherry region and 2 Nos. of tubewells in Karaikal Region during the past 5 years due to illegal Extraction of groundwater.
XV	Good irrigation practices being adopted by the State:	**Annexure- III**
XVI	Rain Water Harvesting:	**Annexure–IV**
XVII	Demarcation of Flood plain and removal of Illegal encroachments:	**Annexure – V**

<table>
<tr><td>XVIII</td><td>Maintaining minimum –flow of river:</td><td>Illegal sand mining affect e-flow in the rivers. Hence, DCR (South) has imposed Prohibitory order u/s 144 of CrPc on 1st April, 2019 prohibiting lorries, vans, two wheelers, bullock art sand any similar load carrying vehicles. Check dams were constructed to regulate the flow.</td></tr>
<tr><td>XIX</td><td>Plantation activities along the rivers:</td><td>Forest Department has planted 4000 mangroves plant on the bank of Chunnambar River bed.

No. of Trees planted on the Arasalar River Bank

<table><tr><th>Sl.No</th><th>Year</th><th>Nos</th></tr><tr><td>1</td><td>2017</td><td>2023</td></tr><tr><td>2</td><td>2018</td><td>7859</td></tr><tr><td>3</td><td>2019</td><td>7362</td></tr></table></td></tr>
<tr><td>XX</td><td>Development of bio-diversity park:</td><td>Bio-diversity park has been demarked on the bank of Arasalar, Karaikal. Necessary notification will be issued in this regard.</td></tr>
<tr><td>XXI</td><td>Reuse of Treated Water:</td><td>Annexure-VI</td></tr>
<tr><td>XXII</td><td>Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:</td><td>Chunnambar River -Sankarabarani</td></tr>
<tr><td>XXIII</td><td>Status of Preparation of Action Plan by the 13 Coastal States:</td><td>Action plan for Coastal Pollution Management submitted to CPCB dt. 08.12.2020.</td></tr>
<tr><td>XXIV</td><td>Regulation of Mining Activities in the State/UT:</td><td>DCR (South) has imposed Prohibitory order u/s 144 of CrPc on1st April,2019 prohibiting lorries, vans, two wheelers, bullock carts and any similar load carrying vehicles.</td></tr>
<tr><td>XXV</td><td>Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring.</td><td>-</td></tr>
</table>

ANNEXURE-I

Details of Solid Waste Generation in Urban Local Bodies (Municipalities)

Sl.No	Name of the Municipality	Total Population as per census 2011	Total Quantity of waste generation inTPD
1.	Puducherry	2,44,700	170
2.	Oulgaret	3,00,104	170
3.	Karaikal	86,838	40
4.	Mahe	41,816	10
5.	Yanam	55,628	16
Total			**406**

ANNEXURE-II

Chunnambar River Water Quality Data			
S.No	**Parameters**	**Mar-21**	**Standard limit as per the Primary Water Quality Criteria for bathing water - Class of Water B**
1	**Date of sampling**	11.03.2021	
2	**Time**	01.10 P.M	
3	**Temp °C**	33.0	
4	**pH**	8.27	6.5-8.5
5	**DO (mg/l)**	10.1	5 or more
6	**BOD (mg/l)**	2.5	3 or less
7	**Total Coliform MPN/100 ml**	280	500 or less
8	**Faecal Coliform MPN/100ml**	30	500 (Desirable) and 2500 (Max. Permissible)
9	**Faecal Streptococci MPN/100ml**	<2	100 (Desirable) and 500 (Max. Permissible)

Arasalar River Water Quality Data			
S.No	**Parameters**	**Mar-21**	**Standard limit as per the Primary Water Quality Criteria for bathing water - Class of Water B**
1	**Date of sampling**	18.03.2021	
2	**Time**	07.00 A.M	
3	**Temp °C**	26.4	
4	**pH**	7.97	6.5-8.5
5	**DO (mg/l)**	5.1	5 or more
6	**BOD (mg/l)**	1.0	3 or less
7	**TotalColiform MPN/100 ml**	280	500orless
8	**FaecalColiform MPN/100ml**	<2	500 (Desirable) and 2500 (Max. Permissible)
9	**Faecal StreptococciMPN/100ml**	<2	100 (Desirable) and500 (Max. Permissible)

MPN-Most ProbableNumber

Drainage Water Quality Data - Puducherry						
S.No.	**Parameters**	**Vaithikuppam**	**Kurusukuppam**	**Grand Canal Near Pallivasal**	**Uppanar Near Water Tank**	**Thengaithittu Lagoon**
1	**Sample ID**	**1217**	**1218**	**1219**	**1220**	**1221**
2	Date of Sampling	11.03.2021	11.03.2021	11.03.2021	11.03.2021	11.03.2021
3	Date of Time	11.00 A.M	11.25 A.M	12.00 P.M	12.10 P.M	12.40 P.M
4	Temp °C	33.0	31.0	32.0	32.0	32.0
5	pH	7.07	7.45	7.51	7.52	7.55
6	TSS (mg/l)	32.0	12.0	18.0	13.0	40.0
7	BOD (mg/l)	80.0	21.0	33.0	18.0	39.0
8	COD (mg/l)	134.6	63.4	51.5	63.4	87.1
9	NO_3-N (mg/l)	1.26	2.05	1.43	2.42	3.59
10	NO_2-N (mg/l)	BDL (DL - 0.02)				
11	NH_3-N(mg/l)	13.63	16.26	9.05	29.79	16.45
12	Nitrate as NO_3 (mg/l)	5.56	9.05	6.34	10.73	15.88
13	Phosphate as PO_4 (mg/l)	4.45	4.15	3.25	4.68	4.85
14	Sulphate (mg/l)	102.0	75.5	83.4	90.6	104.6
15	Total Coliform MPN/100ml	-	500	300	1600	300
16	Faecal Coliform MPN/100ml	-	110	80	350	170
17	Faecal Streptococci MPN/100ml	-	70	23	140	50

BDL – Below Detectable Limit; DL – Detection Limit

OFFICE OF THE EXECUTIVE ENGINEER
PUBLIC HEALTH DIVISION
P.W.D., PUDUCHERRY

* * *

No 398 /PW/PHD/EE/F. /2021-22 DT. 21.4.21

To

The Member Secretary,
Department of Science and Technology and Environment (DSTE),
Puducherry Pollution Control Committee (PPCC)
Puducherry.

Sir,

Sub: PW – PH – EE – Test reports of STPs at Puducherry furnished - Reg.

* * *

With reference subject mentioned above, the inlet and outlet used water samples of all the 3 STPs were tested in the Chennai Testing Laboratory Private Limited, Guindy, which is Accredited by NABL [illegible]. The test reports are enclosed herewith for your kind reference.

Encl: As stated above

Yours faithfully,

EXECUTIVE ENGINEER

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

CHENNAI TESTING LABORATORY PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

A-SUPER 19, TVK INDUSTRIAL ESTATE, GUINDY, CHENNAI, TAMIL NADU, INDIA

in the field of

TESTING

Certificate Number: TC-6133

Issue Date: 08/06/2019

Valid Until: 07/06/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

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TESTING LABORATORY PRIVATE LIMITED

www.ctllabs.in
www.foodenvironmenttesting.com

CIN : U74999TN2008PTC067568

TEST REPORT

Report Number and date	**CTL/CH/N-13891/2020-21 & 09.04.2021**		
Sample Number	**N-13891/20-21**		
Customer Name & Address	**M/s.Ramky Infrastructure Ltd,**		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	**Raw Sewage Water (Kanaganeri)**		
Sampling Date	29.03.2021	**Sampled By**	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	**Sampling Method**	CTL/QSP/09
Date of Receipt	29.03.2021	**Sample Condition**	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	**Analysis Completion Date**	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S.NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	4500-H^+-B APHA 23rd Edn.2017	–	7.0
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	332
3	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	5210-B APHA 23rd Edn.2017	mg/l	90
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	275
5	Oil & Grease	5520-O&G-B APHA 23rd Edn.2017 (Partition Gravimetric Method)	mg/l	< 2
6	Ammonical Nitrogen as N	4500-NH_3-B,C-APHA 23rd Ed.2017	mg/l	31.2
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	43.7
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Edn.2017	mg/l	7.6
9	Dissolved Oxygen	4500-O-C-APHA 23rd Edn.2017	mg/l	3.4
10	Free Ammonia as NH_3	4500-NH_3 –B,C,-APHA 23rd Edn.2017	mg/l	1.33
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	3.1
Microbiology:				
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	140
13	Total Coliform		MPN/100ml	300

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

A. RAJKUMAR
Technical Manager
(CHEMICAL)

The Report shall not be used to malign, defame and for any malicious purpose.
The Report is meant only for sole use of the addressee to promote his/her own business.

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

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www.foodenvironmenttesting.com

CIN : U74999TN2008PTC067568

TEST REPORT

Report Number and date	CTL/CH/N-13892/2020-21 & 09.04.2021		
Sample Number	N-13892/20-21		
Customer Name & Address	M/s.Ramky Infrastructure Ltd,		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	Treated Sewage Water (Kanaganeri)		
Sampling Date	29.03.2021	**Sampled By**	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	**Sampling Method**	CTL/QSP/09
Date of Receipt	29.03.2021	**Sample Condition**	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	**Analysis Completion Date**	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	4500-H+-B APHA 23rd Edn.2017	-	7.5	6.5 to 9.0
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	3	NMT 100
3	Biochemical Oxygen Demand (BOD) 3 days at 27°C	5210-B APHA 23rd Edn.2017	mg/l	10	NMT 30
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	38	-
5	Oil & Grease	5520-B APHA 23rd Ed.2017 (Partition Gravimetric Method)	mg/l	< 2	
6	Ammonical Nitrogen as NH_4-N	4500-NH_3-B,C-APHA 23rd Edn.2017	mg/l	3.4	-
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	7.1	-
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Ed.2017	mg/l	2.6	-
9	Dissolved Oxygen	4500-O-C-APHA 23rd Ed.2017	mg/l	5.9	-
10	Free Ammonia as NH_3	4500-NH_3 -B,C,-APHA 23rd Edn.2017	mg/l	BDL(DL:0.1)	-
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	0.74	-
Microbiology:					
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	< 2	< 1000
13	Total Coliform		MPN/100ml	23	-

BDL - Below Detection Limit; DL - Detection Limit,NMT - Not More Than.

*Limits as Per MoEF & CC Notification, October 2017 for Treated Sewage

REMARKS: The Sample meets the requirement with respect to the parameters tested.

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory
N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory
A. RAJKUMAR
Technical Manager
(CHEMICAL)

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CIN : U74999TN2008PTC067568

TEST REPORT

Report Number and date	**CTL/CH/N-13893/2020-21 & 09.04.2021**		
Sample Number	**N-13893/20-21**		
Customer Name & Address	**M/s.Ramky Infrastructure Ltd,**		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	**Raw Sewage Water (Lawspet)**		
Sampling Date	29.03.2021	**Sampled By**	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	**Sampling Method**	CTL/QSP/09
Date of Receipt	29.03.2021	**Sample Condition**	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	**Analysis Completion Date**	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S.NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	4500-H^+-B APHA 23rd Edn.2017	–	7.1
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	188
3	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	5210-B APHA 23rd Edn.2017	mg/l	68
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	214
5	Oil & Grease	5520-O&G-B APHA 23rd Edn.2017 (Partition Gravimetric Method)	mg/l	< 2
6	Ammonical Nitrogen as N	4500-NH_3–B,C-APHA 23rd Ed.2017	mg/l	22.5
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	36.2
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Edn.2017	mg/l	7.3
9	Dissolved Oxygen	4500-O-C-APHA 23rd Edn.2017	mg/l	3.7
10	Free Ammonia as NH_3	4500-NH_3 –B,C,-APHA 23rd Edn.2017	mg/l	1.3
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	3.1
Microbiology:				
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	900
13	Total Coliform		MPN/100ml	> 1600

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

A. RAJKUMAR
Technical Manager
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CIN : U74999TN2008PTC067568

TEST REPORT

Report Number and date	CTL/CH/N-13894/2020-21 & 09.04.2021		
Sample Number	N-13894/20-21		
Customer Name & Address	M/s.Ramky Infrastructure Ltd,		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	Treated Sewage Water (Lawspet)		
Sampling Date	29.03.2021	Sampled By	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	Sampling Method	CTL/QSP/09
Date of Receipt	29.03.2021	Sample Condition	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	Analysis Completion Date	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	4500-H+-B APHA 23rd Edn.2017	-	7.4	6.5 to 9.0
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	5	NMT 100
3	Biochemical Oxygen Demand (BOD) 3 days at 27°C	5210-B APHA 23rd Edn.2017	mg/l	4	NMT 30
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	15	-
5	Oil & Grease	5520-B APHA 23rd Ed.2017 (Partition Gravimetric Method)	mg/l	< 2	
6	Ammonical Nitrogen as NH_4-N	4500-NH_3-B,C-APHA 23rd Edn.2017	mg/l	1.2	-
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	2.7	-
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Ed.2017	mg/l	0.89	-
9	Dissolved Oxygen	4500-O-C-APHA 23rd Ed.2017	mg/l	6.1	-
10	Free Ammonia as NH_3	4500-NH_3 -B,C,-APHA 23rd Edn.2017	mg/l	BDL(DL:0.1)	-
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	2.2	-
Microbiology:					
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	110	< 1000
13	Total Coliform		MPN/100ml	240	-

BDL - Below Detection Limit; DL - Detection Limit,NMT - Not More Than.

*Limits as Per MoEF & CC Notification, October 2017 for Treated Sewage

REMARKS: The Sample meets the requirement with respect to the parameters tested.

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory
N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory
A. RAJKUMAR
Technical Manager
(CHEMICAL)

The Report shall not be used to malign, defame and for any malicious purpose.
The Report is meant only for sole use of the addressee to promote his/her own business.

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CHENNAI
Testing redefined
TESTING LABORATORY PRIVATE LIMITED
CIN : U74999TN2008PTC067568

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TEST REPORT

Report Number and date	**CTL/CH/N-13895/2020-21 & 09.04.2021**		
Sample Number	**N-13895/20-21**		
Customer Name & Address	**M/s.Ramky Infrastructure Ltd,**		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	**Raw Sewage Water (Dubrayapet)**		
Sampling Date	29.03.2021	**Sampled By**	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	**Sampling Method**	CTL/QSP/09
Date of Receipt	29.03.2021	**Sample Condition**	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	**Analysis Completion Date**	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S.NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	4500-H^+-B APHA 23rd Edn.2017	–	7.0
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	400
3	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	5210-B APHA 23rd Edn.2017	mg/l	106
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	329
5	Oil & Grease	5520-O&G-B APHA 23rd Edn.2017 (Partition Gravimetric Method)	mg/l	< 2
6	Ammonical Nitrogen as N	4500-NH_3-B,C-APHA 23rd Ed.2017	mg/l	40.3
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	52.7
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Edn.2017	mg/l	8.9
9	Dissolved Oxygen	4500-O-C-APHA 23rd Edn.2017	mg/l	2.9
10	Free Ammonia as NH_3	4500-NH_3 -B,C,-APHA 23rd Edn.2017	mg/l	1.4
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	1.9
Microbiology:				
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	30
13	Total Coliform		MPN/100ml	170

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

A. RAJKUMAR
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TEST REPORT

Report Number and date	**CTL/CH/N-13896/2020-21 & 09.04.2021**		
Sample Number	**N-13896/20-21**		
Customer Name & Address	**M/s.Ramky Infrastructure Ltd,**		
	17 MLD Sewage Treatment Plant, Kanaganeri, Kathirkamam, Puducherry- 605 009.		
SAMPLE DETAILS			
Sample Description By Customer	**Treated Sewage Water (Dubrayapet)**		
Sampling Date	29.03.2021	**Sampled By**	Chennai Testing Laboratory Pvt. Ltd.,
Quantity Received	2 Litres	**Sampling Method**	CTL/QSP/09
Date of Receipt	29.03.2021	**Sample Condition**	Good & Received in Plastic Container
Analysis Starting Date	29.03.2021	**Analysis Completion Date**	08.04.2021

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	4500-H+-B APHA 23rd Edn.2017	-	7.5	6.5 to 9.0
2	Total Suspended Solids (TSS)	2540-D- APHA 23rd Edn.2017	mg/l	7	NMT 100
3	Biochemical Oxygen Demand (BOD) 3 days at 27°C	5210-B APHA 23rd Edn.2017	mg/l	9	NMT 30
4	Chemical Oxygen Demand (COD)	5220-B- APHA 23rd Edn.2017	mg/l	34	-
5	Oil & Grease	5520-B APHA 23rd Ed.2017 (Partition Gravimetric Method)	mg/l	< 2	
6	Ammonical Nitrogen as NH_4-N	4500-NH_3-B,C-APHA 23rd Edn.2017	mg/l	2.4	-
7	Total Kjeldahl Nitrogen as N	4500-N-B,C-APHA 23rd Edn.2017	mg/l	5.7	-
8	Total Phosphorous as P	4500-P-B,D-APHA 23rd Ed.2017	mg/l	0.81	-
9	Dissolved Oxygen	4500-O-C-APHA 23rd Ed.2017	mg/l	6.1	-
10	Free Ammonia as NH_3	4500-NH_3 -B,C,-APHA 23rd Edn.2017	mg/l	BDL(DL:0.1)	-
11	Nitrate Nitrogen	4500-NO_3-B-APHA 23rd Edn.2017	mg/l	0.47	-
Microbiology:					
12	Faecal Coliform	IS 1622:1981 (R.2019)	MPN/100ml	< 2	< 1000
13	Total Coliform		MPN/100ml	23	-

BDL - Below Detection Limit; DL - Detection Limit,NMT - Not More Than.

*Limits as Per MoEF & CC Notification, October 2017 for Treated Sewage

REMARKS: The Sample meets the requirement with respect to the parameters tested.

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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N. RAJENDRAKUMAR
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ANNEXURE–III

ADOPTION OF GOODIRRIGATIONPRACTICE

1. It is proposed to cover more are a under precision farming.
2. System of Rice Intensification (SRI) is popularized among the farming community as a water saving measure.
3. Sustainable Sugarcane Initiative (SSI) for reducing water consumption in sugarcane crops is also being popularized.
4. Attractive subsidy assistance is being extended of farmers for installation of Drip/Sprinkler irrigation devices.
5. Attractive subsidy assistance is being extended to farmers for laying underground pipelines for conveyance of irrigation water.

ANNEXURE–IV

Ground Water Recharge / Rain Water Harvesting

Government of Puducherry is taking continuous efforts to protect and restore the ground water resources and fulfill the water requirement of present without compromising the needs of future generation. The details of the various actions taken by the Government of Puducherry on Ground Water Recharge and Rain Water Harvesting are stated below:

1. U.T of Puducherry prepared a separate Water Policy in 2016 to develop, conserve and manage the water resources in the region in a sustainable manner guided by the national perspective. The policy encourages to take all efforts to store the surplus rainwater in the canals, ravines and rivers by way of constructing small bed dams or regulators. Traditional water conservation practices of rain water harvesting including roof top rain water harvesting is also promoted through appropriate legislative measures.

2. The Puducherry Building By-laws and Zoning Regulations mandates the building owners to take effective measures for rain water harvesting and necessary conditions are in corporate in the Building Permits. The planning authorities while issuing occupancy certificate ascertain that the conditions stipulated in the building permits regarding rain water harvesting measures have been complied with.

3. The Puducherry Ground Water Authority has been constituted under the Pondicherry Ground Water (Control & Regulation) Act, 2002 to effectively and efficiently control and regulate the extraction of Ground water in the Union Territory. The PuducherryGroundWaterAuthoritydoesnotissuesfreshpermits/renewspermitstoanyindustries/ institutions unless it is installing the Rain Water Harvesting System in their respective buildings. This is put as a precondition and insisted upon while granting clearance to the industries.

4. Rain water harvesting structures have been provided in all Government buildings at Government cost wherever feasible. The Department of Agriculture constructed 30roof top rain water harvesting structures in Government buildings. Public Works Department, Puducherry constructed 165 roof top rain water harvesting structures in

Government schools and Colleges. Further, Rain Water Harvesting Structures have been constructed in 121 industries in Puducherry.

5. To augment ground water recharge in the river basins the Public Works Department has constructed 26 bed dams in Puducherry and Karaikal region another 8 bed dams are proposed to be newly constructed. The construction of bed dam has considerably helped in the raising of ground water level.

6. Recharge structures are constructed in the desilted ponds for recharge of ground wateraquifersince1990onwards.

7. Attractive Subsidy assistance are being extended for renovation of unused dug-cum-bore wells for harvesting rainwater.

8. Recharge shafts are being constructed across the river courses/ channels / river beds near the water holding area for better recharging of ground water.

9. Construction of Farm Ponds is promoted for harvesting Rain Water and reuse it for critical wilting of crops in Karaikal region. The ponds are also used for fish culture by which the farmers are realizing additional income by extending attractive subsidy assistance.

10. Agriculture Department and Department of Science, Technology and Environment conducts awareness programmes to the Publics, Farmers, Students and industrialist create awareness on conservation of water and harvesting rainwater.

11. Tanks and ponds play a vital role in recharging ground water resources. The task of rehabilitation of tanks was taken up by the Government of Puducherry under Tank Rehabilitation Project, Puducherry (TRPP) with the financial assistance of European Union in the year 1998 which lasted for 6 years till 2004. Under this project all the 84numbers of tanks located in Puducherry have been desilted and their water holding capacity has been increased from 46 MCM to 75 MCM which has given a good impact in the ground water regime of Puducherry. Subsequently in 2016, rejuvenation of 25 tanks and 32 village ponds in Puducherry have been taken up with funding from the Ministry of Environment Forests and Climate Change, Govt. of India under the National Adaptation fund for Climate Change and the project is under progress. Also, the U.T. Government has taken up desilting of urban drains, rural canals and village

ponds with the cooperation of the general public and donor institutions under various projects initiated by the U.T. government. The Industries and Institutions are encouraged to take up the restoration works under CSR. Public Participation and Student Participation are encouraged to strengthen the community ownership. To make the restoration initiative sustainable, a team is formed for each pond in a combination of SHG of the own Village, NSS students of the own Villages and Self Interest Groups like Lion Club, Rotary Club, etc., for future maintenance.

ANNEXURE-V

PROTECTION AND MANAGEMENT OF FLOOD PLAIN ZONES (FPZ)

Sl. No.	Key components of proposed action plans for restoration of identified polluted river stretches in States/UTs	Proposed Achievable Target	Proposed Time Targets for Compliance	Present status and or Pendency in terms of %	Remarks
1.	**Flood Plain Zone protection and its management**	Proposal submitted for approval of 50.00 Crore.	2020-2025	The Karaikal Region is receiving water from the Seven Cauvery distributaries from Tamilnadu. The flood/ excess water due to rainfall run off will be released and regulated by Tamilnadu Irrigation Division from the upper reaches through these seven distributaries. The river banks and the inspection tracks are almost strengthened to receive the flood water from upper reaches in Tamilnadu and to dispose safely to the Ocean (Bay of Bengal). However flood protection scheme works has been included under Flood Management and Border Area Program for an amount of Rs.50 Crore in the proposal for the period from 2020-2025 for getting approval from Government. The details are enclosed, in which for protecting the Arasalar River bank an estimate for an amount of Rs.10.00 Crore is earmarked to protect the Left Bank of Arasalar River above tail end regulator at Melaoduthurai.	After getting approval of works under Flood Management and Border Area Programme, DPR will be submitted

1

ANNEXURE-VI

Reuse of Treated Water

Station	Purpose	Quantity
Lawspet STP	Industrial usage	0.8 MLD
	Fodder Grass raising	6 MLD
	Coconut Plantation	
	Silk cotton trees	
	Natural recharging through impounding reservoir	9 MLD
Dubrayapet STP	Watering the road side plantation by PWD and Municipality	0.015 MLD
	Construction activities	
	Supply to Pondy Marina for plantation and gardening purpose	0.03 MLD
	Total	**15.845 MLD**