

BEFORE THE NATIONAL GREENS TRIBUNAL
PRINCIPAL BENCH

Original Application No. 705 of 2023

(PB)

IN THE MATTER OF

Tribunal on its own motion Suo Moto
Based on the news item published in
The New Indian Express, dt. 03.11.2023,
Under the caption "Tamil Nadu: Activists Allege
Drinking Water supplied from
Madambakkam Lake in Tambaram contaminated
with Sewage Civic Body."

...Suo Moto

Vs

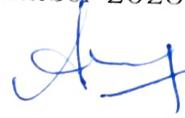
The TWAD Board

... Respondents

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Dated at Chennai this the 28th day of November 2023



Counsel for Respondent - 2



TAMILNADU WATER SUPPLY AND DRAINAGE BOARD



From

Er.G.Selvaraj, B.E.,
Executive Engineer(a/c),
TWAD Board,
RWS Division,
Chengalpattu.

To

The Superintending Engineer,
TWAD Board,
KPM-CPT-TVR Circle ,
Chennai

Lr. No. F. OA.No.705/NGT/WQ/TCMC-Chitlapakkam/DO/RWS/CPT/2023/dt.17.11.2023.

Sir,

Sub:	TWAD Board - RWS Division, Chengalpattu- - Notice of hearing in Suo Motu matter- News item appeared in "The Indian Express" dated 03.11.2023 entitled "TAMIL NADU: ACTIVISTS ALLEGE DRINKING WATER SUPPLIED FROM MADAMBAKKAM LAKE INTAMBARAM CONTAMINATED WITH SEWAGE CIVIC BODY- OA.No.705 of 2023 filed will be hearing before the Hon'ble National Green Tribunal (NGT) New Delhi-110001 on 29.11.2023- Hon'ble Tribunal on its Suo-Motu impleaded TNPCB and TWAD Board to Report – Testing of Water Sample from Madambakkam Eri- Report Submitted–reg
Ref:	<ol style="list-style-type: none"> 1. By Email-Hon'ble National Green Tribunal (NGT) /Principal Bench/ New Delhi/ dt: 10.11.2023 2. CE Vellore/Endt.No.1411/F.General/AE-T2/CE/VLR/2023/dt:14.11.2023 3. State water Testing Lab/TWAD/HO/ Water test reports of, Collection sump and Over Head Tank at Chitlapakkam zone under Tambaram city Municipal Corporation: dt.16.11.2023

With reference to the above 1st and 2nd cited, I submit to state that the Hon'ble National Green Tribunal (NGT) instructed to report the quality of Drinking water is being supplied to the public in Chitlapakkam resident under Tambaram City Municipal Corporation (TCMC) from the open well in Madambakkam lake.

In this connection, the following details are submitted for kind perusal.

- Tambaram Municipality has been upgraded to Tambaram City Municipal Corporation (TCMC) after merging with 5 municipalities and 5 town Panchayats and 15 Village Panchayats with an area of 158.71 sq.km.

- Provide the adequate water supply for Tambaram Corporation, TWAD is supplying water from Palar River, CMWSSB is supplying water from Chembambakkam lake source, Induvial standalone water supply scheme from Madambakkam Lake and other Local Sources to meet out the water requirement.
- To improve the water supply in Chitlapakkam and Madambakkam area, 5 nos of open wells have been created in 2018-2019 in Madambakkam lake by Tambaram Corporation (Then by Chitlapakkam Town Panchayat) and supply 1.50 MLD of drinking water daily.
- Drinking water is being supplied to the public of Chitlapakkam and Sembakkam area from the above 5 Nos open wells to 3 Nos of OHTs and distributed to the following wards
 - Sembakkam (Ward No. 39, 40, 41)
 - Chitlapakkam (Ward No. 43, 44) - Babu street and 2nd main road.
- Tambaram Corporation officials requested for Water quality testing and samples were given by them. It has been tested on 27.10.2023 in the TWAD water quality testing sub district lab at Kattankulathur and it was potable.
- In response to the Hon'ble National Green Tribunal (NGT) instruction and reference 2nd cited above, a detailed field visit was conducted by the TWAD Board Junior Engineer along with TCMC officials and collected the water samples on 14.11.2023 from the following locations and tested at State Level Water Testing Laboratory, Head Office, Chepauk.
 - Collection sump at Madambakkam Head works-1 Sample
 - 2.00LL capacity Over Head Tank at Babu Street at Chitlabakkam-1 sample
 - 5.00LL SR ward 34 Office tank at Chitlapakkam- 1 sample
- The Collected water samples are tested for
 - 3 Parameters in Physical Examination like Turbidity NT units, Electrical conductivity and TDS.
 - Chemical Examination of 19 parameters like pH, Alkalinity, Chloride, Total hardness, Sulphate (either by Turbidity method or Colorimetric method) Nitrate, Fluoride, Iron, Manganese , Residual chlorine and etc.
 - Bacteriological examination as well

- The water samples meet the requirement of IS10500:2012 with respect to the parameters tested. Hence water is potable for drinking purposes. (Report Enclosed)

In this connection, the above detailed report is submitted for kind information and favour of further action.

(s/d.G.Selvaraj, Dt.17.11.2023)
Executive Engineer, TWAD Board,
RWS Division, Chengalpattu.

1. Copy submitted to the Managing Director/TWAD Board/HO/Chennai for favour of kind information please
- 2 Copy submitted to the Chief Engineer, TWAD Board, Vellore for favour of kind information.
- 3 Copy submitted to the Joint Chief Engineer (O&M), TWAD Board, HO, Chennai for favour of kind information.
4. Copy submitted to the LAW Officer/TWAD Board/HO/Chennai for favour of kind information Please.
5. Copy to the Assistant Executive Engineer, TWAD Board, Maint. Sub Dvn, Tambaram for information and necessary follow up action

Handwritten signature
17/11/23
Executive Engineer, TWAD Board,
RWS Division, Chengalpattu



Test Report

Sample Receipt No/Date :	14.11.2023
Invoice Details :	NII
Customer Name and Address :	Executive Engineer, TWAD Board, RWS Division, Chengalpattu
Test Commenced on :	14.11.2023
Test Completed on :	15.11.2023
Test Report Date :	15.11.2023

SAMPLE DETAILS FURNISHED BY CUSTOMER

Source :	Madambakkam Lake
Location :	Collection Sump of 2.00 LL Capacity at Madambakkam Headworks
Sample drawn by/Date :	Customer/14.11.2023
Quantity Received :	2 litres
Sample container :	Plastic
Condition of the sample :	Good Condition
Appearance, Colour, Odour :	Turbid/Slightly Yellowish/Objectionable

The test result of sample received is as follows.

Sl. No.	I. PHYSICAL EXAMINATION	Method of Testing	Sample No.1 Result	IS 10500 : 2012
				Permissible limit in the absence of alternate source
1	Turbidity NT Units	APHA 23 rd Edition 2017 - 2130 B	16.0	5
2	Total dissolved Solids mg/L	APHA 23 rd Edition 2017 - 2540 C	576	2000
3	Electrical Conductivity Micro mho/cm	APHA 23 rd Edition 2017 - 2510 B	823	-
II. CHEMICAL EXAMINATION				
4	pH at 25°C	IS 3025 part 11-1983 - Reaffirmed 2017	7.31	6.5-8.5
5	Ph. Alkalinity as CaCO ₃ mg/L	IS 3025-part 23-1983 - Reaffirmed 2014	0	-
6	Total Alkalinity. as CaCO ₃ mg/L	IS 3025-part 23-1986 - Reaffirmed 2014	220	600
7	Total Hardness as CaCO ₃ mg/L	IS 3025 part 21-2009-Reaffirmed 2014	232	600
8	Calcium as Ca mg/L	APHA 23 rd Edition 2017 - 3500 Ca B	49	200
9	Magnesium as Mg mg/L	APHA 23 rd Edition 2017- 3500 Mg B	27	100
10	Sodium as Na mg/L	APHA 23 rd Edition 2017 - 3500 Na B	82	-
11	Potassium as K mg/L	APHA 23 rd Edition 2017 - 3500 K B	1	-
12	Iron as Fe mg/L	APHA 23 rd Edition 2017- 3500 Fe B	0.10	1.0
13	Manganese as Mn mg/L	APHA 23 rd Edition 2017 - 3500 Mn B	0	0.3
14	Free Ammonia as NH ₃ mg/L	APHA 17 th Edition-1989- 4500 NH ₃ C	0.1	0.5
15	Nitrite as NO ₂ mg/L	APHA 23 rd Edition 2017- 4500 -NO ₂ B	0.00	-
16	Nitrate as NO ₃ mg/L	APHA 23 rd Edition 2017- 4500-NO ₃ B	2	45
17	Chloride as Cl mg/L	IS 3025-part 32-1988- Reaffirmed 2014	110	1000
18	Fluoride as F mg/L	APHA 23 rd Edition 2017 - 4500- F-D	0.20	1.5
19	Sulphate as SO ₄ mg/L	IS 3025-part 24-1986-Reaffirmed 2014	36	400
20	Phosphate as PO ₄ mg/L	APHA 23 rd Edition 2017 - 4500 P- D	0.10	-
21	Tidy's Test 4 hrs.as O ₂ mg/L	APHA 23 rd Edition 2017 - 4500 O - B	2.24	-
22	Residual Chlorine as Cl ₂ mg/L	IS 3025-part 26-1986	0.5	0.2

Reviewed by
 K. Rengaraj - Assistant Water Analyst.
 Note:

Authorised Signatory
 Dr. V. Gopal - Chief Water Analyst.

- The test results relate only to the items tested.
- The test report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.
- Unless informed by customer, the test items will not be retained for more than 15 days from the date of issue of the test report.
- The result applied to the sample as received basis.



Test Report

Sample Receipt No/Date :	14.11.2023
Invoice Details :	Nil
Customer Name and Address	Executive Engineer, TWAD Board, RWS Division, Chengalpattu
Test Commenced on :	14.11.2023
Test Completed on :	15.11.2023
Test Report Date :	15.11.2023

SAMPLE DETAILS FURNISHED BY CUSTOMER

Source :	Madambakkam Lake
Location :	Collection Sump of 2.00 LL Capacity at Madambakkam Headworks
Sample drawn by/Date :	Customer/14.11.2023
Quantity Received :	250 ml
Sample container :	Plastic
Condition of the sample :	Good Condition

The test result of sample received is as follows.

Sl. No.	BACTERIOLOGICAL EXAMINATION	Sample No. 1 Result	BIS 10500 - 2012
			Max limit
1	Standard plate count CFU/1ml	0	500 Organisms/ml
2	Total coliform CFU/100ml	0	Nil/100 ml
3	Fecal coliform CFU/100ml	0	Nil/100 ml
4	Fecal Streptococcus CFU/100ml	0	Nil/100 ml

Report: Sample 1 -The Water Sample meet the requirement of IS10500:2012 with respect to the parameters tested.

Reviewed by
K. Rengaraj - Assistant Water Analyst.
Note:

16/11/23
Authorised Signatory
Dr.V. Gopal - Chief Water Analyst.

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- The result applied to the sample as received basis.

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TAMILNADU WATER SUPPLY AND DRAINAGE BOARD
STATE LEVEL WATER TESTING LABORATORY
31, Kamarajar Salai, Chepauk, Chennai - 600 005
Phone: 044 - 28412098 E-mail: twadboardcwa@gmail.com

Test Report

Sample Receipt No/Date :	14.11.2023
Invoice Details :	Nil
Customer Name and Address :	Executive Engineer, TWAD Board, RWS Division, Chengalpattu
Test Commenced on :	14.11.2023
Test Completed on :	15.11.2023
Test Report Date :	15.11.2023

SAMPLE DETAILS FURNISHED BY CUSTOMER

Source :	Madambakkam Lake
Location :	Babu Street 2.00 LL SR Distribution point No.1 at Chitalapakkam
Sample drawn by/Date :	Customer/14.11.2023
Quantity Received :	2 litres
Sample container :	Plastic
Condition of the sample :	Good Condition
Appearance, Colour, Odour :	Turbid/Slightly Yellowish/Objectionable

The test result of sample received is as follows.

Sl. No.	I. PHYSICAL EXAMINATION	Method of Testing	Sample No.2 Result	IS 10500 : 2012 Permissible limit in the absence of alternate source
1	Turbidity NT Units	APHA 23 rd Edition 2017 - 2130 B	24	5
2	Total dissolved Solids mg/L	APHA 23 rd Edition 2017 - 2540 C	592	2000
3	Electrical Conductivity Micro mho/cm	APHA 23 rd Edition 2017 - 2510 B	845	-
II. CHEMICAL EXAMINATION				
4	pH at 25°C	IS 3025 part 11-1983 - Reaffirmed 2017	7.78	6.5-8.5
5	Ph. Alkalinity as CaCO ₃ mg/L	IS 3025-part 23-1983 - Reaffirmed 2014	0	-
6	Total Alkalinity, as CaCO ₃ mg/L	IS 3025-part 23-1986 - Reaffirmed 2014	220	600
7	Total Hardness as CaCO ₃ mg/L	IS 3025 part 21-2009-Reaffirmed 2014	190	600
8	Calcium as Ca mg/L	APHA 23 rd Edition 2017 - 3500 Ca B	35	200
9	Magnesium as Mg mg/L	APHA 23 rd Edition 2017- 3500 Mg B	25	100
10	Sodium as Na mg/L	APHA 23 rd Edition 2017 - 3500 Na B	106	-
11	Potassium as K mg/L	APHA 23 rd Edition 2017 - 3500 K B	1	-
12	Iron as Fe mg/L	APHA 23 rd Edition 2017- 3500 Fe B	0.1	1.0
13	Manganese as Mn mg/L	APHA 23 rd Edition 2017 - 3500 Mn B	0	0.3
14	Free Ammonia as NH ₃ mg/L	APHA 17 th Edition-1989- 4500 NH ₃ C	0.1	0.5
15	Nitrite as NO ₂ mg/L	APHA 23 rd Edition 2017- 4500 -NO ₂ B	0.1	-
16	Nitrate as NO ₃ mg/L	APHA 23 rd Edition 2017- 4500-NO ₃ B	0	45
17	Chloride as Cl mg/L	IS 3025-part 32-1988- Reaffirmed 2014	115	1000
18	Fluoride as F mg/L	APHA 23 rd Edition 2017 - 4500- F-D	0.2	1.5
19	Sulphate as SO ₄ mg/L	IS 3025-part 24-1986-Reaffirmed 2014	37	400
20	Phosphate as PO ₄ mg/L	APHA 23 rd Edition 2017 - 4500 P- D	0.2	-
21	Tidy's Test 4 hrs.as O ₂ mg/L	APHA 23 rd Edition 2017 - 4500 O - B	2.04	-
22	Residual Chlorine as Cl ₂ mg/L	IS 3025-part 26-1986	0.4	0.2

Reviewed by
K. Rengaraj - Assistant Water Analyst.
Note:

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3. Unless informed by customer, the test items will not be retained for more than 15 days from the date of issue of the test report.
4. The result applied to the sample as received basis.

Authorised Signatory
Dr.V. Gopal - Chief Water Analyst.



Test Report

Sample Receipt No/Date :	14.11.2023
Invoice Details :-	Nil
Customer Name and Address	Executive Engineer, TWAD Board, RWS Division, Chengalpattu
Test Commenced on :	14.11.2023
Test Completed on :	15.11.2023
Test Report Date :	15.11.2023

SAMPLE DETAILS FURNISHED BY CUSTOMER

Source :	Madambakkam Lake
Location :	Babu Street 2.00 LL SR Distribution point No.1 at Chitalapakkam
Sample drawn by/Date :	Customer/14.11.2023
Quantity Received :	250 ml
Sample container :	Plastic
Condition of the sample :	Good Condition

The test result of sample received is as follows.

Sl. No.	BACTERIOLOGICAL EXAMINATION	Sample No. 2 Result	BIS 10500 - 2012
			Max limit
1	Standard plate count CFU/1ml	0	500 Organisms/ml
2	Total coliform CFU/100ml	0	Nil/100 ml
3	Fecal coliform CFU/100ml	0	Nil/100 ml
4	Fecal Streptococcus CFU/100ml	0	Nil/100 ml

Report: Sample 2 -The Water Sample meet the requirement of IS10500:2012 with respect to the parameters tested.

Reviewed by
K. Rengaraj - Assistant Water Analyst.

Note:

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- The result applied to the sample as received basis.

Authorised Signatory
Dr. V. Gopal - Chief Water Analyst.

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Test Report

Sample Receipt No/Date :	14.11.2023			
Invoice Details :	Nil			
Customer Name and Address :	Executive Engineer, TWAD Board, RWS Division, Chengalpattu			
Test Commenced on :	14.11.2023			
Test Completed on :	15.11.2023			
Test Report Date :	15.11.2023			
SAMPLE DETAILS FURNISHED BY CUSTOMER				
Source :	Madambakkam Lake			
Location :	Ward No.34 Office Tank 5.00 LL SR Distribution point No.2 at Chitalapakkam			
Sample drawn by/Date :	Customer/14.11.2023			
Quantity Received :	2 litres			
Sample container :	Plastic			
Condition of the sample :	Good Condition			
Appearance, Colour, Odour :	Turbid/Slightly Yellowish/Objectionable			
The test result of sample received is as follows.				
Sl. No.	I. PHYSICAL EXAMINATION	Method of Testing	Sample No.3 Result	IS 10500 : 2012 Permissible limit in the absence of alternate source
1	Turbidity NT Units	APHA 23 rd Edition 2017 - 2130 B	27.0	5
2	Total dissolved Solids mg/L	APHA 23 rd Edition 2017 - 2540 C	580	2000
3	Electrical Conductivity Micro mho/cm	APHA 23 rd Edition 2017 - 2510 B	829	-
II. CHEMICAL EXAMINATION				
4	pH at 25°C	IS 3025 part 11-1983 - Reaffirmed 2017	7.67	6.5-8.5
5	Ph. Alkalinity as CaCO ₃ mg/L	IS 3025-part 23-1983 - Reaffirmed 2014	0	-
6	Total Alkalinity. as CaCO ₃ mg/L	IS 3025-part 23-1986 - Reaffirmed 2014	220	600
7	Total Hardness as CaCO ₃ mg/L	IS 3025 part 21-2009-Reaffirmed 2014	180	600
8	Calcium as Ca mg/L	APHA 23 rd Edition 2017 - 3500 Ca B	22	200
9	Magnesium as Mg mg/L	APHA 23 rd Edition 2017- 3500 Mg B	30	100
10	Sodium as Na mg/L	APHA 23 rd Edition 2017 - 3500 Na B	107	-
11	Potassium as K mg/L	APHA 23 rd Edition 2017 - 3500 K B	1	-
12	Iron as Fe mg/L	APHA 23 rd Edition 2017- 3500 Fe B	0.00	1.0
13	Manganese as Mn mg/L	APHA 23 rd Edition 2017 - 3500 Mn B	0	0.3
14	Free Ammonia as NH ₃ mg/L	APHA 17 th Edition-1989- 4500 NH ₃ C	0.1	0.5
15	Nitrite as NO ₂ mg/L	APHA 23 rd Edition 2017- 4500 -NO ₂ B	0.10	-
16	Nitrate as NO ₃ mg/L	APHA 23 rd Edition 2017- 4500-NO ₃ B	0	45
17	Chloride as Cl mg/L	IS 3025-part 32-1988- Reaffirmed 2014	110	1000
18	Fluoride as F mg/L	APHA 23 rd Edition 2017 - 4500- F-D	0.20	1.5
19	Sulphate as SO ₄ mg/L	IS 3025-part 24-1986-Reaffirmed 2014	35	400
20	Phosphate as PO ₄ mg/L	APHA 23 rd Edition 2017 - 4500 P- D	0.10	-
21	Tidy's Test 4 hrs.as O ₂ mg/L	APHA 23 rd Edition 2017 - 4500 O - B	2.65	-
22	Residual Chlorine as Cl ₂ mg/L	IS 3025-part 26-1986	0.40	0.2

Reviewed by
 K. Rengaraj - Assistant Water Analyst.

Note:

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- Unless informed by customer, the test items will not be retained for more than 15 days from the date of issue of the test report.
- The result applied to the sample as received basis.

Authorised Signatory
 Dr.V. Gopal - Chief Water Analyst.

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Test Report

Sample Receipt No/Date :	14.11.2023
Invoice Details :	Nil
Customer Name and Address	Executive Engineer, TWAD Board, RWS Division, Chengalpattu
Test Commenced on :	14.11.2023
Test Completed on :	15.11.2023
Test Report Date :	15.11.2023
SAMPLE DETAILS FURNISHED BY CUSTOMER	
Source :	Madambakkam Lake
Location :	Ward No.34 Office Tank 5.00 LL SR Distribution point No.2 at Chitalapakkam
Sample drawn by/Date :	Customer/14.11.2023
Quantity Received :	250 ml
Sample container :	Plastic
Condition of the sample :	Good Condition

The test result of sample received is as follows.

Sl. No.	BACTERIOLOGICAL EXAMINATION	Sample No. 3 Result	BIS 10500 - 2012
			Max limit
1	Standard plate count CFU/1ml	0	500 Organisms/ml
2	Total coliform CFU/100ml	0	Nil/100 ml
3	Fecal coliform CFU/100ml	0	Nil/100 ml
4	Fecal Streptococcus CFU/100ml	0	Nil/100 ml

Report: Sample 3 -The Water Sample meet the requirement of IS10500:2012 with respect to the parameters tested.

G. Rengaraj
16-11-23

Reviewed by
K. Rengaraj - Assistant Water Analyst.
Note:

Dr. V. Gopal

Authorised Signatory
Dr.V. Gopal - Chief Water Analyst.

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2. The test report shall not be reproduced anywhere except in full and in the same format without the permission of the laboratory.
3. Unless informed by customer, the test items will not be retained for more than 15 days from the date of issue of the test report.
4. The result applied to the sample as received basis.

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TAMILNADU WATER SUPPLY AND DRAINAGE BOARD							
KATTANKULATHUR BLOCK LEVEL LABORATORY							
TEST WATER BEFORE TASTE							
THAMBARAM CORPORATION ZONE-3							
Location: Sembakkam, Giralapakkam and Madambakkam Combined Drinking Water Scheme					DATE OF COLLECTION		26.10.2023
Source: OHT Water Tank					DATE OF RECEIPT		27.10.2023
BIS:10500:2012	Acceptable Limit	Permissible Limit in the Absence of Alternative Source	Sample No.1 Bahu Street water tank	Sample No.2 2nd Main Road water tank	Sample No.3 Sembakkam Office Complex	Sample No.4 Masuthi Colony Sembakkam	Sample No.5 Valliammai Street, Giralapakkam
I. PHYSICAL EXAMINATION							
1 Appearance			Clear & Colourless	Clear & Colourless	Clear & Colourless	Clear & Colourless	Clear & Colourless
2 Colour	5	15	2	2	2	2	2
3 Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4 Turbidity NT Units	1	5	0.2	0.2	0.2	0.2	0.2
5 Total Dissolved Solids mg/L	500	2000	925	710	1231	747	915
6 Electrical Conductivity Micro mho/cm	-	-	648	497	862	523	641
II. CHEMICAL EXAMINATION							
7 pH	6.5-8.5	6.5-8.5	7.5	7.2	7.1	7	7.3
8 Total Alkalinity as CaCO ₃ mg/L	200	600	420	400	340	320	380
9 Total Hardness as CaCO ₃ mg/L	200	600	240	370	350	330	340
10 Iron Fe mg/L	0.3	0	0.0	0.0	0.0	0.0	0.0
11 Free Ammonia as NH ₃ mg/L	0.5	0.5	0.2	0.1	0.2	0.1	0.0
12 Nitrite NO ₂ mg/L	-	-	-	-	-	-	-
13 Nitrate NO ₃ mg/L	45	45	12	10	9	10	12
14 Chloride as Cl mg/L	250	1000	150	120	140	160	190
15 Fluoride as F mg/L	1	1.5	1	1	1.1	1.1	1
16 Sulphate as SO ₄ mg/L	200	400	90	80	60	100	90
17 Phosphate as PO ₄ mg/L	-	-	0.0	0.0	0.0	0.0	0.0
Report: Sample 1,2,3,4 & 5 The Given Water Samples are Chemically POTABLE.							
Note: The Samples are collected at source before distribution residual chloride level should be maintained at distribution point							
					E.M./K.A.L.		
					JUNIOR WATER ANALYST		
					KATTANKULATHUR BLOCK LABORATORY		
					CHENGALPATTU DISTRICT.		

Received by
 [Signature]
 27/10/2023.

WATER SAMPLE COLLECTION FROM COLLECTION SUMP AT MADAMBAKKAM , SERVICE RESERVOIRS AT CHITLAPAKKAM

