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### DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

2 0 SEP 2023

R/No.1970/C/2023 (TNR/1140 to 1147),

Dated: 19.07.2023

To

Tmt. L.Sujatha, M.Sc., M.A., B.Ed., CHIEF WATER ANALYST, Chief Water Analysis Laboratory, King Institute Campus, Guindy, Chennai - 600 032.

The Commissioner, Ambur Municipality, Ambur, Thirupathur District.

Sir,

Subject: Report on examination of Water samples from The Ambur

Municipality, Thirupathur District - Collected on 05.06.2023

and 06.06.2023.

Ambur Municipality in Thirupathur District derives its drinking water supply from Hokenakkal CWSS (Cauvery river) scheme water.

#### **Water Supply:**

The Cauvery composite water supply scheme water from Hokenakkal is received in GLR at Samiyar Madam (32.75 lakhs litres capacity) and then pumped into the following 12 OHTs.

The details are as follows.

S.No.	OHTs	Capacity in litres
1.	Kambikollai OHT	2,50,000
2.	Kareem Nagar OHT	20,00,000
3.	K.M. Nagar OHT	7,00,000
4.	"B" Kaspa OHT	3,00,000
5.	Alagapuri OHT	10,00,000
6.	Reddi Thoppu OHT	2,00,000
7.	Bethlahem OHT	7,50,000
8.	"A" Kaspa OHT	4,00,000
9.	Sanan Kuppam OHT	2,00,000
10.	Pavadithoppu OHT	7.50,000
11.	Rafiq Nagar OHT	5,00,000
12.	New Street OHT	5,00,000

From: The Ambur Municipality, Thirupathur District. Collected by: Thiru.S.A.Syed Altaf, H.I. Gr.I

C	C. II	TNR- 1140	TNR-1141			
Date of	Collection: 5.6.2023 & 6.6.2023  Receipt: :07.06.2023  as per label	CWSS water from GLR at Samiyar Madam	1 <sup>st</sup> tap after Samiyar Madam OHT	Tap in Gangai amman koil street	Tap in Perumal koil street	Tap in O.V. Road
	Total colonies per ml on agar at 37°C	80	1	2		
ologic	MPN of Coliform bacteria per 100 ml.	210	0	0	0	0
Bacteriological Examination	Rapid Test for E.Coli-I	Positive				
	Results of vibrio test					73
- uoi	Colour	Colourless	Colourless	Anna) eign	e Foreirs	
Physical Examination	Turbidity (Units)	5	5			ra i di
Exal	Smell	None	Chlorinous (2 ppm)			
	Total Solids	430	460	all or a second		2
	Carbonate hardness as CaCo₃	156	The Artist Park 18			
	Non- Carbonate hardness as CaCo₃	0				N STAN
	Total hardness as CaCo₃	156		<del></del>	À.	
	Chloride as Chlorine	44	44			10
	Ammoniacal nitrogen	n - 11 t Handson		el desert a com	err A	
	Albuminoid nitrogen	r resulto impel	r vrogničal za	Malanie		hau z
		0.64	0.0		Coss. La 10 sees	
1).	Oxygen absorbed (Tidy's test)  Nitrate-nitrogen	1.0				
/gm ı	Acidity Phenolphthalein	0		* / J		
Chemical Examination (in mg/1).	as CaCO₃	188	duppe moner added to the	i ognos vi		
amina	Fluoride as Fluorine	0.6			MANAGERA MANAGERA	
cal Ex	PH.	7.8	7.8	-		
hemi	Iron as Fe Total	0.1	630	ollo, 2 reas	Arthroid	
O	Ferrous					The second secon
	Manganese as Mn.	HI OSONGOLA				
	Qualitative-	000,00,5	LL Hio	n Toarounay		
	Nitrite nitrogen	Trace	Nil			
	Sulphate	Trace		ional fil	<u> </u>	ā _
	Phosphate	Trace	* 1	Alacapuri	.7.	
	Toxic substances					
	Electrical conductivity (Reciprocal megohms/Cm³ at 25°C)	620	650			
Micros	scopical Examination	Monas& Amorphou				

Monas& Amorphou Amorphous matter matter

From the above OHTs (12 numbers), the water is supplied to the Public through Public fountains and House service connections after chlorination for drinking purpose.

It was stated that, the water supply is being maintained once in 3 days by adopting zonal system.

Twenty nine samples of water for Bacteriological analysis and eight samples of water for chemical and biological analysis were collected on 05.06.2023 and 06.06.2023 in connection with the periodical monitoring of drinking water quality.

The results of analysis are furnished overleaf.

# 1. CWSS water (Source: Cauvery river water) from GLR in Samiyar Madam (TNR/1140):

The sample of water is colourless and clear in physical appearance.

Chemical analysis reveals that, it is satisfactory of chemical quality for drinking purpose.

But, it is of poor bacteriological quality as evidenced by the presence of E-coli-I organisms of faecal origin. Hence, this water need disinfection before distribution to the Public.

It also shows few microscopical organisms.

- 2. Water from 1st tap after Samiyar madam OHT (TNR/1141):
- 3. Water from 1st tap after K.M.Nagar OHT (TNR/1142):
- 4. Water from Ist tap after Kareem Nagar OHT (TNR/1143):
- 5. Water from Ist tap after "B" Kaspa OHT (TNR/1144):
- 6. Water from 1st tap after "A" Kaspa OHT (TNR/1145):
- 7. Water from Ist tap after Alagapurai OHT (TNR/1146):
- 8. Water from 1st tap after Bethlahem OHT (TNR/1147):

The above seven samples of water are colourless and clear in physical appearance with chlorinous odour (RC: between 0.2 ppm and 2.0 ppm).

Judged by the results of analysis, they are satisfactory of chemical, bacteriological and biological quality for drinking purpose on this occasion.

The water samples collected from all the distribution tap points are of satisfactory hygienic quality on this occasion.

The sample of Sodium Hypo Chlorite solution collected from the stock contains 5.4% of available chlorine content. It is <u>Satisfactory</u> quality for water disinfection purpose. However, the stock should be preserved in airtight container and in dark place to prevent depletion of its available chlorine content.

From: The Ambur Municipality, Thirupathur District. Collected by: Thiru. S.A.Syed Altaf, H.I. Gr.I

		TNR- 1142	one tira	Call Thus Lo	o es el	TNR-1143
Date of I	Receipt : 07.06.2023	1 <sup>st</sup> tap after K.M. Nagar	Tap at Ashabee Nagar	Tap at Maruththuvar Nagar	Tap at Anees Manai	1 <sup>st</sup> tap at Kaveem Nagar
Bacteriological Examination	Total colonies per ml on agar at 37°C  MPN of Coliform bacteria per 100 ml.  Rapid Test for E.Coli-l  Results of vibrio test	0	0	0	0	0
	Colour	Colourless		The second special second seco		Colourless
cal ation	Turbidity (Units)			2		
Physical Examination	Smell	5 Chlorinous (2 ppm)				5 Chlorinous (2 ppm)
10.0	Total Solids	460				460
	Carbonate hardness as CaCo <sub>3</sub> Non- Carbonate hardness as CaCo <sub>3</sub>				, A (), 11	- KE-D-179, s
	Total hardness as CaCo₃  Chloride as Chlorine	44			2	44
	Ammoniacal nitrogen	. 11.de	1014		onder vis v	**************************************
	Albuminoid nitrogen Oxygen absorbed (Tidy's test)	0.0				0.0
Chemical Examination (in mg/1).	Nitrate-nitrogen  Acidity Phenolphthalein  as CaCO <sub>3</sub> Methyl Orange			v mir ggi	el mon 12	EVZ.
kamin	Fluoride as Fluorine					15. N . O
ical E	PH.	7.9				7.8
Chem	Iron as Fe Total Ferrous	0.05	10 1 100 B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 19 19 19 19 19 19 19 19 19 19 19 19 1		0.05
	, Manganese as Mn.	mag 0,5 true a	lq		Lu an andi	
	<i>Qualitative</i> - Nitrite nitrogen	Nil				Nil
	Sulphate Sulphate	e sport tracki	idani da	. pjiboog@wil	mi Lugar	ento Lución.
	Phosphate  Toxic substances	nimplication into	Metroph b	emelku zaidme umizuada kudi	noisk ut Augusta	r Maria
	Electrical conductivity (Reciprocal megohms/Cm³ at 25°C)	650		Care contracts of Wild C. Will C. P.		650

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# The following suggestions are offered for immediate implementation to ensure hygienic safety of drinking water supply:

- 1. Unwanted vegetation noticed in the premises of OHTs at K.M. Nagar, 'B' Kaspa, and Kareem Nagar should be removed immediately and their surroundings should be kept clean and tidy as per sanitary specifications.
- 2. All the Sumps and OHTs should be scrubbed and cleaned with strong solution of BIS grade bleaching powder periodically so as to ensure hygienic safety of storage units.
- 3. A separate stock register showing the particulars of procurement of bleaching powder, stock on hand, daily usage for chlorination, date of cleaning of OHT, scouring of pipelines etc., should be maintained for the perusal of inspecting authorities.

CHIEF WATER ANALYST,
Chief Water Analysis Laboratory,
Guindy, Chennai – 32.

12/9/20 200

Copy submitted to: The Director of Public Health and Preventive Medicine,

Anna Salai, Chennai – 6.

The Joint Director of Public Health and Preventive Medicine,

Anna Salai, Chennai – 6. (C.D.)

The Commissioner of Municipal Administration,

No.75, Santhome High Road, MRC Nagar, Chennai – 28.

Copy to: The Deputy Director of Health Services, Ambur District.

The Municipal Engineer, Ambur Municipality,

Thirupathur District.
The Lab and File.

From: The Ambur Municipality, Thirupathur District.
Collected by: Thiru. S.A.Syed Altaf, H.I. Gr.I

		Constitution of the		densila variable	TNR- 1144	
Date of	Collection: 5.6.2023 & 6.6.2023  Receipt: 07.06.2023  as per label	Tap at Banagara 1 <sup>st</sup> street	Tap at Banagara 5 <sup>th</sup> street	Tap in Baby Colony	1 <sup>st</sup> tap after 'B' Kaspa OHT	Tap at Anjenayar koil street
<del>-</del> -	Total colonies per ml on agar at 37°C		I ust when	<mark>od</mark> engon korok	Disposition 3 F	A V
Bacteriological Examination	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
terio amin	Rapid Test for E.Coli-I	permanent b	o manale		to garwoos	
Bac	Results of vibrio test				and the street	
	Colour			a a	Colourless	-
Physical Examination	Turbidity (Units)				5	
Phy	Smell	Will Child			Slightly Chlorinous (0.2 ppm)	
	Total Solids	6.2			460	
	Carbonate hardness as CaCo₃	1999				
	Non- Carbonate hardness as CaCo₃	72				
	Total hardness as CaCo <sub>3</sub>	Francisco I	Tall of Barner	ar Tait	42	
	7	13	1870 - 1413	Jess' i iii t	72 NO 20 TZ COSC	
	Ammoniacal nitrogen	diast ondu	To referre	Jount and		320 16 30 16 7
	Albuminoid nitrogen	11112				
	Oxygen absorbed (Tidy's test)				0.0	
3/1).	Nitrate-nitrogen	1910 - 1919				
al Examination (in mg/1).	Acidity Phenolphthalein	ned releallle		modiani.	cot ygoD	8
ition	as CaCO₃	M maden As nes		mank seith		5 ax
amina	Fluoride as Fluorine	9 2	in District.	ederconis (B	6.	
al Ex	PH.		oli lid	s No Lovin	7.7	
Chemic	Iron as Fe Total				0.05	
Ò					0.02	
	Ferrous					
	Manganese as Mn.					
	Qualitative-	at .			2.711	
	Nitrite nitrogen				Nil	
	Sulphate	*		9		
	Phosphate	Di .				-
	Toxic substances		*			
	Electrical conductivity (Reciprocal megohms/Cm³ at 25°C)		5		650	9

Microscopical Examination

Amorphous matter

From: The Ambur Municipality, Thirupathur District.
Collected by: Thiru. S.A.Syed Altaf, H.I. Gr.I

TNIP\_11/15

				TNR-1145		
Date of Collection: 5.6.2023 & 6.6.2023  Date of Receipt: 07.06.2023  Source as per label		Tap at Mukkiy amman koil street	Tap at Periya koil street	Tap at 'A'  Kaspa	Tap at Chinna Kammara Veethi	Tap at Baswaswa rappa koil street
<u> </u>	Total colonies per ml on agar at 37°C			NST E POR PORT OF THE	very cylinders in the	2
Bacteriological Examination	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
cteric	Rapid Test for E.Coli-I		2 2 2	140	Combatrak	
Ba	Results of vibrio test	8				
	Colour	Cabardes .		Colourless	10 (10 AA) 10 (10 A)	
Physical Examination	Turbidity (Units)			5	Tudhidisy (Ursus)	
Ph <sub>y</sub> Exam	Smell			Slightly Chlorinous (0.2 ppm)		
	Total Solids	(4)4	and the second s	460	81. F10167	
	Carbonate hardness as CaCo₃	1			Carbonate LandoneO	
	Non- Carbonate hardness as CaCo₃	and the second s		0.0000000000000000000000000000000000000	Plan-Cargonats ha	
	Total hardness as CaCo₃				t ag mentmed igset	
	Chloride as Chlorine			42	and the second	
	Ammoniacal nitrogen	9 - 9 - 9 - 1				
	Albuminoid nitrogen	eger -				
	Oxygen absorbed (Tidy's test)	1 0.0		0.0	at .	i e e e
(1)	Nitrate-nitrogen			71297 - VI4	Patrician regand	
n mg/	Acidity Phenolphthalein			e sua con en La sua colonia de la colonia de	sa C papus	
Chemical Examination (in mg/1).	as CaCO₃			i gradi, is i		
amina	Fluoride as Fluorine			3	pristant, as 4.57 abil	
cal Ex	PH.		Services Services	7.8	2 9.40	1
hemi	Iron as Fe Total			0.05	be the second	
0	Ferrous	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				*
	Manganese as Mn.	1				Anthony on the same of the sam
	Qualitative-	1	· I			
	Nitrite nitrogen			Nil	avitetian)	
	Sulphate		3	as 9	atawii	
	Phosphate				gradien englise	
	Toxic substances	A company	×		\$200 mg 1	
	Electrical conductivity (Reciprocal			(E0 138) V		
	megohms/Cm³ at 25°C)	0.50	8	650	i b. <sup>I</sup> Numerio	

Microscopical Examination

Amorphous matter

### RESULTS OF EXAMINATION OF SAMPLES OF WATER From: The Ambur Municipality, Thirupathur District. Collected by: Thiru. S.A.Syed Altaf, H.I. Gr.I

#### TNR-1146

			TNR-1146			
Date of I	Collection: 5.6.2023 & 6.6.2023  Receipt: 07.06.2023  as per label	Tap at Nesavukkara street	1 <sup>st</sup> tap after Alagapuri OHT	Tap at Mariyamman koil street	Tap at Annai Mery street	Tap at Indira street
<u></u>	Total colonies per ml on agar at 37°C			Q A . 15 J95 J9 IN F		0.5
logica ation	MPN of Coliform bacteria per 100 ml.	0	0	0	0	0
Bacteriological Examination	Rapid Test for E.Coli-I			Lalfo.3	Brok test here	
Bac	Results of vibrio test			7. 7	nesures of vibrio	
c	Colour		Colourless		1000	
sical	Turbidity (Units)	r A	5		ī	
Physical Examination	Chlorinous (0.2 ppps)		Slightly Chlorinous (0.2 ppm)		The end	
	Total Solids		460		3.84,41	li con
	Carbonate hardness as CaCo₃	В	2			
	Non- Carbonate hardness as CaCo₃				a a relición	
	Total hardness as CaCo <sub>3</sub>			2	Men am	
	Chloride as Chlorine		42	- 48	a u y ear streath Di	
	× ×			1 6000	tin is ign ommA.	
	Ammoniacal nitrogen				and the second A	
	Albuminoid nitrogen	Course which are a second	0.0		,	
	Oxygen absorbed (Tidy's test)	1 - 6	0.0	×	1 1	
al Examination (in mg/1).	Nitrate-nitrogen			Phonostrus Stantionort	Telline tuettir	
n (in r	Acidity Phenolphthalein			News Clivide M	- 0263 es	
natio	as CaCO₃			1000 APPENDED LINES AND THE		
xami	Fluoride as Fluorine			90	Flugnde as Flugi	l g
ical E	PH.	<u> </u>	7.8			
Chemica	Iron as Fe Total	<u> </u>	0.05	П	Seculosia de destri	2
	Ferrous				1 ~ 4	
	Manganese as Mn.				M as oce agnalió	
	Qualitative-					
	Nitrite nitrogen		Nil	1	er us alla saltatañ	
	Sulphate				sindade	The Control of the Co
	Phosphate				\$1040.00T	1 2 3
	Toxic substances		2 113-0			4.6
1=	Electrical conductivity (Reciprocal	A CONTRACTOR OF STREET		A Charletty miss	Jack Consider	<del>-</del>
	megohms/Cm³ at 25°C) copical Examination	I constitution	650	N 120 100 100 100 100 100 100 100 100 100		1

Microscopical Examination

Amorphous matter

## RESULTS OF EXAMINATION OF SAMPLES OF WATER From: The Ambur Municipality, Thirupathur District. Collected by: Thiru. S.A.Syed Altaf, H.I. Gr.I

	-	TNR- 1147		8		
Date of I	Collection: 5.6.2023 & 6.6.2023 Receipt::07.06.2023 as per label  Total colonies per ml on agar at 37°C  MPN of Coliform bacteria per 100 ml.	1 <sup>st</sup> tap after Bethlahem OHT	Tap at Jalal Garden 1 <sup>st</sup> street	Tap at Asnampet road	Tap at Vadakku Veethi	Maximum permissible limit for drinking water as per BIS 10500/2012 20
Bacter Exam	Rapid Test for E.Coli-I  Results of vibrio test					absent
	Results of Vibrio test		e e e e e e e e e e e e e e e e e e e			
Ľ	Colour	Colourless				Colourless
Physical Examination	Turbidity (Units)	5			9.	5
Ph	Smell	Slightly Chlorinous (0.2 ppm)				None
	Total Solids	460	(2) (a)	-		2000
	Carbonate hardness as CaCo₃					-
	Non- Carbonate hardness as CaCo₃					-
	Total hardness as CaCo₃					600
	Chloride as Chlorine	42				1000
	Ammoniacal nitrogen					Nil
	Albuminoid nitrogen					Nil
	Oxygen absorbed (Tidy's test)	0.0	n	7		1.0
3/1).	Nitrate-nitrogen					10.2
Chemical Examination (in mg/1).	Acidity Phenolphthalein as CaCO <sub>3</sub> Methyl Orange	,			n n	600
amina	Fluoride as Fluorine					1.5
al Ex	PH.	7.8				6.5-8.5
hemic	Iron as Fe Total	0.05				1.0
	Ferrous					Nil
	Manganese as Mn.					0.3
	*					
	Qualitative- Nitrite nitrogen	Nil	,			Trace
	Sulphate		,			Present
	Phosphate					Trace
	Toxic substances					Trace
	Electrical conductivity (Reciprocal megohms/Cm³ at 25°C)	650	2			

Microscopical Examination

Amorphous matter