

**BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI**

**ORIGINAL APPLICATION No. 85 OF 2015 (SZ)**

**IN THE MATTER OF:**

Dr.Lubna Sarwath

....

Applicant

Versus

State of Telangana & Others

....

Respondent(s)

**REPORT DATED 19-08-2021 OF THE CHIEF SECRETARY,  
STATE OF TELANGANA (RESPONDENT No.1)**

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**Place: Hyderabad**

**Date: 21-08-2021.**

①  
**BEFORE THE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE), CHENNAI**

**Original Application No. 85 of 2015, (SZ)**

**REPORT OF THE TELANGANA STATE GOVERNMENT IN COMPLIANCE WITH THE DIRECTIONS OF HON'BLE NGT (SZ), CHENNAI IN ORDER DATED. 08.07.2021.**

It is to submit that the Hon'ble NGT, Chennai in OA No. 85 of 2015 filed by Dr. Lubna Sarwath heard the matter regarding pollution of Hussainsagar Lake on 8.07.2021 and directed the respective departments to file their action taken report on the basis of the recommendations made by the Joint Committee.

In compliance with directions of the Hon'ble NGT, the Action taken by the respective departments on the recommendations of the Joint Committee along with the details on the C&D waste generated due to demolition of old Secretariat building and objections raised by the applicant on lowering of weir and exposing the bed of the lake are submitted:

<b>S. No.</b>	<b>Recommendation of the Joint Committee</b>	<b>Status</b>
i)	The GHMC which is responsible for the sewage management and solid waste in the Hyderabad has not attended any of the meeting conducted by the Joint Committee in spite of informing the meeting schedules.	GHMC submitted the draft FTL map of Hussain Sagar Lake, contour plan and inflows & outflows calculation sheet to the members of the Joint Committee through email on 22.03.2021. The copy of draft FTL & other enclosures are placed as <b>Annexure-I</b> .
ii)	GHMC to quantify the sewage generated in the entire city and submit a time bound action plan for the treatment of the entire sewage generated in the Hyderabad city limits.	<p>It is to submit that, HMWS&amp;SB has quantified the total sewage generation as 1950 MLD within ORR covering GHMC. 25 STPs with capacity 772.3 MLD are existing. Further, HMWS&amp;SB engaged M/s. Shah Technical Consultants, Mumbai for preparation of Comprehensive Sewerage Master Plan to formulate the DPRs for STPs and Sewer Network for the GHMC area. Accordingly, the consultants have proposed 31 STPs in GHMC area with a treatment capacity of 1259.50 MLD in 3 packages.</p> <p>Agency for construction of 17 STPS with a capacity of 376.50 MLD falling under the Hussainsagar catchment is finalised vide G.O.Rt.No. 441, dated:07.06.2021. Work is in</p>

S. No.	Recommendation of the Joint Committee	Status
		<p>progress.</p> <p>The remaining 14 STPs decentralised along river Musi and along water bodies with a capacity of 883MLD in two packages are awaiting administrative sanction.</p>
iii)	<p>To ensure full-fledged operation of Solid waste management system including door to door collection with segregation of wet and dry waste. To ensure that no solid waste/ garbage find its way to water bodies either by dumping/throwing in the vicinity of water bodies.</p>	<p>It is to submit that, 5978 TPD of MSW is collected through 100% door to door collection.</p> <p>No solid waste/garbage is dumped into the water bodies. The GHMC has provided integrated MSW processing facility of 6500TPD including Waste to Energy Plant of capacity of 19.8 MW at Jawaharnagar, Medchal-Malkajgiri District.</p>
iv)	<p>HMDA has once again called a global tender for the Bio-remediation of HussainSagar Lake, without tapping the pollution at the source a fruitful result cannot be borne. The reply may be given for the queries raised by applicant regarding the bio-remediation carried out by M/s Matrix Environmental Inc, Hyderabad and the tender issued for Modern food court" and "Japanese food courts" at the boundary of the Hussain Sagar Lake.</p>	<p>HMDA has entrusted the work of bioremediation of HussainSagar lake to M/s.Matrix environment INC initially for a period of six months for an amount of Rs.1.52 crores by calling global tenders and the agency executed the work for 6 months from March to August 2020. During the intervention period, there was significant and consistent improvement in the water quality of the lake.</p> <p>Since the agreement period was completed in the month of August 2020, a new RFP was prepared for Bio remediation of HussainSagar lake and global tenders were invited. Six firms participated of which four are technically qualified by the expert committee accordingly as per the recommendations of the expert committee the price bids of the four agencies were opened and the committee examined the proposals on 19-03-2021, there was an ambiguity in the quoted price of the bidders.</p> <p>It was decided to recall a shorter notice in</p>

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S. No.	Recommendation of the Joint Committee	Status
		response only two firms participated in the tender altogether and the price with the lowest quote M/s. NACOF has been accepted. An agreement have been concluded with the said agency from 9-4-2021 at an agreement value of Rs.1,04,99,950/- all applicable taxes and are executing the work.
v)	HMDA to ensure the regular operation of STPs maintained by their and to reuse the entire treated sewage than discharging into the Lake/ water bodies.	3 STPs were established by HMDA for HussainSagar lake with capacities of 20MLD at Balkapurnala, 30 MLD at Picket nala and 5 MLD at Rangadhamuni Cheruvu, kukatpally and the treated water is being discharged into the lake. The treated water is discharged into Hussainsagar to maintain hydraulic balance of the lake.  TSPCB is monitoring the performance of these STPs on monthly basis and are meeting the standards. The analysis reports are placed as <b>Annexure-II</b>
vi)	To submit a time bound action plan for the construction & operation of the proposed 17 STPs at the Kukatpally catchment area. To ensure that laying sewer collection network to convey sewage to proposed 17 STPs is completed at par with the proposed STPs, a time bound action plan may also be provided.	The period of implementation of the project is 24 months.  It is to submit that, the construction of 17 STPs, is inclusive of construction of I&D structures to divert the flow from nalas to STPs and O&M for 15 years period is also included in the package.  The designs and drawings are being approved for construction of STPs  The project of sewer collection network is in the process of administrative sanction.  At present 11 I&D structures were constructed to prevent the inflow of sewage from four major nalas into Hussain sagar lake. The entire sewage is being diverted through trunk sewer mains to STP at Amberpet functioning with a capacity of 339 MLD.
vii)	The irrigation department may provide the requested	The information of FTL map of Hussain Sagar Lake, contour plan and inflows & outflows

S. No.	Recommendation of the Joint Committee	Status
	<p>information about the Full Tank Level (FTL) and repair of the surplus weir near the Viceroy Hotel.</p>	<p>calculation sheet are placed at <b>Annexure-I.</b></p> <p>The Hussain Sagar Lake is having two surplus weirs and six number of sluices. The flood water can be directly discharged through surplus weirs whereas the sluices are choked up due to non maintenance and non operation since long time. It is desired to bring all the sluices into operation so the repair works are taken up as flood control measure and regulation of discharges. In order to facilitate repairs to the sluices and weir, additional discharges are released through the weir into the natural surplus course. The applicant herein assumed that, the Government of Telangana is dewatering and desilting Hussain Sagar Lake. There is a marginal increase of flow of water from the above sluices due to the repair of sluices and said flow of water is already curtailed after completion of the repair works</p> <p>Further in reply to the RTI filed by the applicant on the above subject all the Departments have given their replies and that, there is no proposal of dewatering and desilting of Hussain Sagar Lake as alleged by the applicant. The entire process of repairs for upstream and downstream is taken up in a regular course as a part of pre monsoon maintenance</p> <p>The following works were taken up during the period in which inspection was conducted by the committee</p> <ol style="list-style-type: none"> <li>a. Repair works to left side surplus weir.</li> <li>b. Repairs to sluice no 1 and sluice no 2 near to the left side surplus weir.</li> <li>c. Repairs to sluice no 3 called Kukkala Thumu near Dhobighat.</li> <li>d. Repairs to sluice no 4 called Khajana Thumu near Dhobighat.</li> <li>e. Construction of submerged Sluice with pipes at vent no 14 with a discharging</li> </ol>

S. No.	Recommendation of the Joint Committee	Status
		<p>capacity of about <b>550 cusecs.</b></p> <p>It is further submitted that all these works and their related works were completed except some balance repair works to the surplus weir.</p> <p>Regarding repair works to left side surplus weir, it is submitted that the surplus weir with Gated Mechanism is proposed in the existing weir location and the tenders have been floated for the work with last date of bid submission on 25.08.2021. Once the tender is finalised, the work will be taken up and completed within 18 months.</p>
viii)	<p>After discussing with the concerned Department of the State Government, it was learnt that the FTL, Sluice gates in the Lake &amp; Surplus weirs comes under Irrigation Department the maintenance of Lake, STPs around the lake and the I&amp;D structure built at the mouth of the HussainSagar lake come under the HMDA. The drains carrying the sewage to the water bodies comes under the purview of GHMC and the construction of STPs to treat the sewage generated by the city is with the HMWSSB.</p>	<p>No action recommended.</p>
ix)	<p>The concerned Department shall upload the work carried by them to improve the water quality of the Lake in their respective website for the public access.</p>	<p>The respective departments will upload the work carried out in their websites for public access.</p>

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In addition to the above, the applicant has submitted that the C&D waste of the old secretariat building is dumped in the Hussain sagar lake.

It is to submit that, the total C&D waste generated from demolition of old Secretariat building is 147469.02 tons and it was shifted to the processing facility located at Jeedimetla. The month wise processing details of the waste at C&D waste processing plant located at Jeedimetla is as follows:

<b>Month</b>	<b>Quantity of the C&amp;D waste processed which is generated from the Old Secretariat in Tons</b>
Jul-20	710.00
Aug-20	15539.00
Sep-20	11542.75
Oct-20	11382.75
Nov-20	9962.00
Dec-20	10914.60
Jan-21	6219.27
Feb-21	15856.56
Mar-21	27768.07
Apr-21	17537.02
May-21	15768.00
Jun-21	4269.00
<b>Total</b>	<b>147469.02</b>

Further, the applicant raised objections that in the guise of repairing the surplus weir, there was tampering of the FTL of the Hussain Sagar Lake by lowering the weir and the lake bed was exposed and further material was dumped near the Kukatpally nalla side.

The allegations made are baseless and it is reiterated that the Hussain Sagar Lake is having two surplus weirs and six number of sluices. The flood water can be directly discharged through surplus weirs whereas the sluices are choked up due to non maintenance and non operation since long time. It is desired to bring all the sluices into operation so the repair works are taken up as flood control measure and regulation of discharges. In order to facilitate repairs to the sluices and weir, additional discharges are released through the weir into the natural surplus course. The applicant herein assumed that, the Government of Telangana is dewatering and desilting Hussain Sagar Lake. There is a marginal increase of flow of water from the above sluices due to the repair of sluices and said flow of water is already curtailed after completion of the repair works.

Further in reply to the RTI filed by the applicant on the above subject all the Departments have given their replies and that, there is no proposal of dewatering and desilting of Hussain Sagar Lake as alleged by the applicant. The entire process of

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repairs for upstream and downstream is taken up in a regular course as a part of pre monsoon maintenance

**Monitoring of Hussainsagar Lake:**

**I. Hussainsagar Lake water quality:**

TSPCB is carrying out monitoring of water quality of Hussainsagar Lake every month at following 9 locations: -

1. Hussainsagar lake outlet at Boats club
2. Hussainsagar lake outlet at Viceroy Hotel
3. Hussainsagar lake at Necklace road
4. Hussainsagar lake Opposite NTR garden
5. Hussainsagar lake at Lepakshi Handicrafts
6. Hussainsagar lake at Midstream at Budha statue
7. Hussainsagar lake at Sanjeevaiah Park
8. Hussainsagar lake at Sailing club
9. Hussainsagar lake at Bridge-I inlet

The water quality of Hussainsagar lake fluctuates between Class-D and Class-E during the period January to July 2021. The same are placed as **Annexure-III**.

**Monitoring of feeder channels:**

TSPCB is also monitoring 5 feeder channels joining Hussainsagar lake. As per the analysis reports, BOD values are ranging between 12 to 123 mg/L, COD values are ranging between 52 to 500 mg/L. The analysis report is annexed as **Annexure-IV**.

The TSPCB will continue monthly monitoring of Hussainsagar lake and sensitise the stake holder departments on the quality of lake water for taking necessary measures.

PLACE: HYDERABAD  
DATE : 19-08-2021

  
**CHIEF SECRETARY  
GOVT OF TELANGANA**

Chief Secretary  
Govt. of Telangana  
Hyderabad-500 063.

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NOTES:  
1. ALL LEVELS ARE IN METERS  
2. DO NOT SCALE THE DRAWING

**LEGEND**

FULL TANK LEVEL (P.L.)	—
EXISTING P.E.M.	—
PROPOSED	—
LEFT BANK POND	—
RIGHT BANK POND	—
ROAD TOP	—
STREET	—
RAIL TRACK	—
WATER / STREAM	—
CHANNEL / DRAIN / RIVER	—
TANK / CANAL / DRAIN	—
WALL / WEIR / DAM	—
POWER LINE / WIRELINE	—
TRANSFORMER	—
HT TOWER	—
WATER TOWER	—
WELL	—
STAIRCASE	—
OPENING WALL	—
RAIL CROSSING	—
RAIL TRACK	—
RAILWAY SIGNAL	—
RAILWAY CROSSING	—

**LAKE DETAILS**

1. PROPOSED WATER SPREAD AREA	: 108.00 Ha
2. EXISTING WATER SPREAD AREA	: 146.00 Ha
3. WATER LEVEL	: +112.00 m
4. FILL (METERS) (P.L.)	: +11.00 m
5. FILL (METERS) (P.E.M.)	: +11.00 m
6. PROPOSED PERIMETER	: 10.00 km
7. DATE OF SURVEY	: 12-12-2014

NOTE: P.L. ABOVE SEA LEVEL (S.D.M.)

Scale:	1:1000
Drawn by:	[Signature]
Checked by:	[Signature]
Date:	[Date]

Client: **GREATER HYDRABAD MUNICIPAL CORPORATION**

Project: **SURVEY OF LAKES IN MHSA AREA**

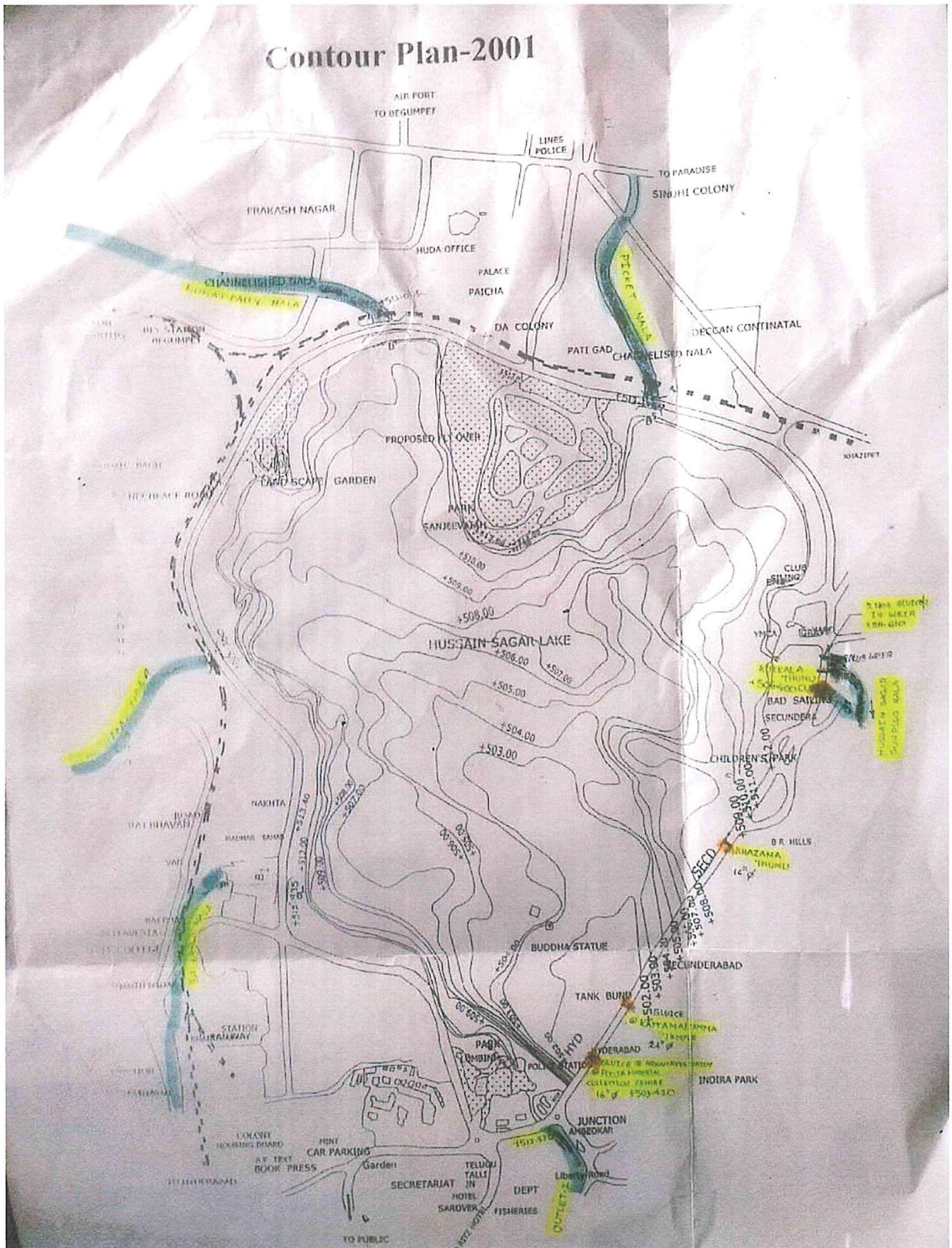
Title: **PLAN OF HUSSAIN SAGAR (ID-4181)**  
**DOKALGUDA VILLAGE, MHARTHASID PONDAL**

Consultant: **ABHYAS ASSOCIATES**

Scale:	1:1000
Drawn by:	[Signature]
Checked by:	[Signature]
Date:	[Date]

Sheet No. 1 of 1

# Contour Plan-2001



Statement showing INFLOWS & OUTFLOWS calculations										
Sl. No	Levels	Outflows (Constant with level)	Increase / decrease for 1cm/1hr	Inflow for 1cm rise/1hr (c+d)	Inflow for 1.5cm rise/1hr (c+1.5xd)	Inflow for 2cm rise/1hr (c+2xd)	Inflow for 1cm fall/1hr (c-d)	Inflow for 1cm fall/2hr (c-d/2)	Inflow for 1cm fall/3hr (c-d/3)	Capacity in TMC
a	b	c	d	e	g	i	f	h	j	k
1	512.900	716	481	1197	1438	1678	235	476	556	0.8200
2	512.950	730	481	1211	1452	1692	249	490	570	0.8330
3	513.000	829	481	1310	1551	1791	348	589	669	0.8460
4	513.050	859	500	1359	1609	1859	359	609	692	0.8591
5	513.100	892	500	1392	1642	1892	392	642	725	0.8726
6	513.150	927	500	1427	1677	1927	427	677	760	0.8861
7	513.200	961	519	1480	1740	1999	442	702	788	0.8996
8	513.250	998	519	1517	1777	2036	479	739	825	0.9133
9	513.300	1037	519	1556	1816	2075	518	778	864	0.9273
10	513.350	1075	519	1594	1854	2113	556	816	902	0.9413
11	513.400	1116	519	1635	1895	2154	597	857	943	0.9547
12	513.450	1204	537	1741	2010	2278	667	936	1025	0.9690
13	513.500	1351	537	1888	2157	2425	814	1083	1172	0.9835
14	513.550	1538	537	2075	2344	2612	1001	1270	1359	0.9980
15	513.600	1751	556	2307	2585	2863	1195	1473	1566	1.0127
16	513.650	1992	556	2548	2826	3104	1436	1714	1807	1.0277
17	513.700	2255	556	2811	3089	3367	1699	1977	2070	1.0427
18	513.750	2537	574	3111	3398	3685	1963	2250	2346	1.0577
19	513.800	2838	574	3412	3699	3986	2264	2551	2647	1.0729
20	513.850	3157	574	3731	4018	4305	2583	2870	2966	1.0884
21	513.900	3494	574	4068	4355	4642	2920	3207	3303	1.1039
22	513.950	3846	593	4439	4736	5032	3253	3550	3648	1.1197
23	514.000	4213	593	4806	5103	5399	3620	3917	4015	1.1357
24	514.050	4593	593	5186	5483	5779	4000	4297	4395	1.1517
25	514.100	4988	593	5581	5878	6174	4395	4692	4790	1.1677
26	514.150	5400	611	6011	6317	6622	4789	5095	5196	1.1840
27	514.200	5820	611	6431	6737	7042	5209	5515	5616	1.2005
28	514.250	6255	611	6866	7172	7477	5644	5950	6051	1.2170
29	514.300	6702	630	7332	7647	7962	6072	6387	6492	1.2337
30	514.350	7161	630	7791	8106	8421	6531	6846	6951	1.2507
31	514.400	7631	630	8261	8576	8891	7001	7316	7421	1.2677
32	514.450	8112	630	8742	9057	9372	7482	7797	7902	1.2847
33	514.500	8605	648	9253	9577	9901	7957	8281	8389	1.3020
34	514.550	9109	648	9757	10081	10405	8461	8785	8893	1.3195
35	514.600	9622	648	10270	10594	10918	8974	9298	9406	1.3370
36	514.650	10146	667	10813	11147	11480	9479	9813	9924	1.3550
37	514.700	10680	667	11347	11681	12014	10013	10347	10458	1.3730
38	514.750	11226	667	11893	12227	12560	10559	10893	11004	1.3910



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/1043 - 1044  
Collected on: 02/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 11/01/2021

Collected by: EE, RO, Medchal  
Received on: 04/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point  
1043 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP  
1044 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results		STP standards
		1043	1044	
pH	-	6.89	7.69	5.5 - 9.0
Electrical conductivity	µS/cm	1890	1620	-
Total Suspended Solids	mg/L	923	32	100
Total Dissolved Solids	mg/L	1094	1066	-
Dissolved oxygen	mg/L	*	*	-
Chemical Oxygen Demand	mg/L	1344	104	250
BOD 3 at 27°C	mg/L	293	26	30
Total coliform	MPN/100ml	*	23	-
Fecal coliform	MPN/100ml	*	<2	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/1255-1258  
Collected on: 19/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 27/01/2021

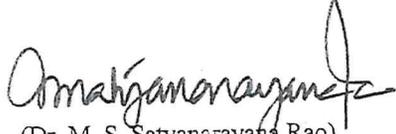
Collected by: AES, RO, HYD  
Received on: 19/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 1255 - Sample collected from Inlet of Amberpet 339 MLD, STP
- 1256 - Sample collected from Outlet of Amberpet 339 MLD, STP
- 1257 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 1258 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results				STP standards
		1255	1256	1257	1258	
pH	-	6.45	7.48	7.27	7.07	5.5 - 9.0
Electrical conductivity	µS/cm	1626	1606	1915	1640	-
Total Suspended Solids	mg/L	236	38	129	28	100
Total Dissolved Solids	mg/L	893	876	1072	908	-
Dissolved oxygen	mg/L	*	5.5	*	3.1	-
Chemical Oxygen Demand	mg/L	341	111	401	75	250
BOD 3 at 27°C	mg/L	77	29	98	19	30
Total coliform	MPN/100ml	*	23	*	>1600	-
Fecal coliform	MPN/100ml	*	<2	*	920	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/1259-1260  
Collected on: 19/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 27/01/2021

Collected by: AES, RO, HYD  
Received on: 19/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 1259 - Sample collected from Inlet of Kharithabad 20 MLD STP  
1260 - Sample collected from Outlet of Kharithabad 20 MLD STP

Parameters	Unit	Results		STP standards
		1259	1260	
pH	-	6.66	7.15	5.5 - 9.0
Electrical conductivity	µS/cm	1293	1164	-
Total Suspended Solids	mg/L	305	18	100
Total Dissolved Solids	mg/L	706	656	-
Dissolved oxygen	mg/L	*	3.6	-
Chemical Oxygen Demand	mg/L	401	63	250
BOD 3 at 27°C	mg/L	92	16	30
Total coliform	MPN/100ml	*	130	-
Fecal coliform	MPN/100ml	*	33	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/1112-1115  
Collected on: 08/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 15/01/2021

Collected by: EE, RO, Medchal  
Received on: 08/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 1112 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 1113 - Sample collected from Outlet of Safilguda lake 0.6 MLD STP
- 1114 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP
- 1115 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP

Parameters	Unit	Results				STP standards
		1112	1113	1114	1115	
pH	-	6.70	6.85	6.81	6.94	5.5 - 9.0
Electrical conductivity	µS/cm	1998	1875	1611	1394	-
Total Suspended Solids	mg/L	159	06	182	08	100
Total Dissolved Solids	mg/L	1090	1039	951	757	-
Dissolved oxygen	mg/L	*	4.6	*	3.6	-
Chemical Oxygen Demand	mg/L	309	33	236	45	250
BOD 3 at 27°C	mg/L	88	15	75	18	30
Total coliform	MPN/100ml	*	23	*	79	-
Fecal coliform	MPN/100ml	*	<2	*	17	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rad)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/2185-2188  
Collected on: 09/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 16/02/2021

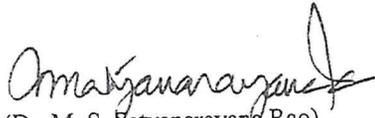
Collected by: AES, RO, HYD  
Received on: 09/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 2185 - Sample collected from Inlet of Amberpet 339 MLD, STP
- 2186 - Sample collected from Outlet of Amberpet 339 MLD, STP
- 2187 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 2188 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results				STP standards
		2185	2186	2187	2188	
pH	-	7.55	7.82	7.54	7.60	5.5 - 9.0
Electrical conductivity	µS/cm	1491	1388	1695	1548	-
Total Suspended Solids	mg/L	48	11	52	14	100
Total Dissolved Solids	mg/L	972	894	1112	988	-
Dissolved oxygen	mg/L	*	1.9	*	4.2	-
Chemical Oxygen Demand	mg/L	299	92	307	76	250
BOD 3 at 27°C	mg/L	67	19	72	17	30
Total coliform	MPN/100ml	-	79	-	<2	-
Fecal coliform	MPN/100ml	-	17	-	<2	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/2189-2190  
Collected on: 09/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 16/02/2021

Collected by: AES, RO, HYD  
Received on: 09/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 2189 - Sample collected from Inlet of Kharithabad 20 MLD STP
- 2190 - Sample collected from Outlet of Kharithabad 20 MLD STP
- 2191 - Sample collected from Inlet of Jalagam Vengal Rao 0.5 MLD STP
- 2192 - Sample collected from Outlet of Jalagam Vengal Rao 0.5 MLD STP

Parameters	Unit	Results				STP standards
		2189	2190	2191	2192	
pH	-	7.60	7.66	7.38	7.52	5.5 - 9.0
Electrical conductivity	µS/cm	1362	1103	1222	1139	-
Total Suspended Solids	mg/L	64	6	74	38	100
Total Dissolved Solids	mg/L	902	708	806	736	-
Dissolved oxygen	mg/L	*	5.2	*	2.3	-
Chemical Oxygen Demand	mg/L	235	36	271	123	250
BOD 3 at 27°C	mg/L	54	8	64	26	30
Total coliform	MPN/100ml	-	<2	-	350	-
Fecal coliform	MPN/100ml	-	<2	-	79	-

Note: Results related to sample as received.  
(\*): Sample not Collected

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/2563-2566  
Collected on: 26/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 04/03/2021

Collected by: AS-I, RO, Medchal  
Received on: 26/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 2563 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 2564 - Sample collected from Outlet of Safilguda lake 0.6 MLD STP
- 2565 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP
- 2566 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP

Parameters	Unit	Results				STP standards
		2563	2564	2565	2566	
pH	-	7.50	7.85	7.43	7.62	5.5 - 9.0
Electrical conductivity	µS/cm	1960	1574	1466	1258	-
Total Suspended Solids	mg/L	85	8	302	10	100
Total Dissolved Solids	mg/L	1102	866	832	724	-
Dissolved oxygen	mg/L	*	4.8	*	5.2	-
Chemical Oxygen Demand	mg/L	264	32	428	28	250
BOD 3 at 27°C	mg/L	90	17	134	13	30
Total coliform	MPN/100ml	-	< 1.8	-	220	-
Fecal coliform	MPN/100ml	-	< 1.8	-	49	-

Note: Results related to sample as received.  
(\*): Sample not Collected

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Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

Analysis Report

No.SR/05/TSPCB/HO/R00/LAB/2021/2567-2568  
Collected on: 26/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 04/03/2021

Collected by: AS-I, RO, Medchal  
Received on: 26/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

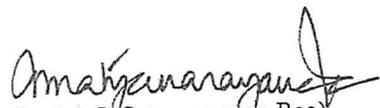
Sample code : Sample details / collection point

2567 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP

2568 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results		STP standards
		2567	2568	
pH	-	7.05	7.72	5.5 - 9.0
Electrical conductivity	µS/cm	1465	1444	-
Total Suspended Solids	mg/L	1128	24	100
Total Dissolved Solids	mg/L	845	775	-
Dissolved oxygen	mg/L	*	2.1	-
Chemical Oxygen Demand	mg/L	1456	84	250
BOD 3 at 27°C	mg/L	461	27	30
Total coliform	MPN/100ml	-	23	-
Fecal coliform	MPN/100ml	-	17	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/3119-3120-(A)  
Collected on: 09/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 16/03/2021

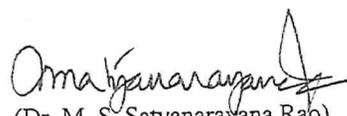
Collected by: AES-I, RO, HYD  
Received on: 09/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 3119 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 3119(A) - Sample collected from Outlet of KIMS (Picket) 30 MLD STP
- 3120 - Sample collected from Inlet of Kharithabad 20 MLD STP
- 3120(A) - Sample collected from Outlet of Kharithabad 20 MLD STP

Parameters	Unit	Results				STP standards
		3119	3119(A)	3120	3120(A)	
pH	-	7.44	7.51	7.32	7.64	5.5 - 9.0
Electrical conductivity	µS/cm	1600	1320	1210	906	-
Total Suspended Solids	mg/L	110	< 5	122	< 5	100
Total Dissolved Solids	mg/L	859	699	679	464	-
Dissolved oxygen	mg/L	*	2.5	*	4.5	-
Chemical Oxygen Demand	mg/L	402	49	163	45	250
BOD 3 at 27°C	mg/L	142	12	49	11	30
Total coliform	MPN/100ml	-	13	-	23	-
Fecal coliform	MPN/100ml	-	< 1.8	-	13	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
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Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3242-3243  
Collected on: 15/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 22/03/2021

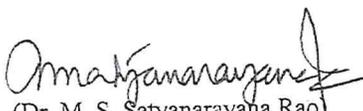
Collected by: AS, RO, Medchal  
Received on: 15/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 3242 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP
- 3243 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP

Parameters	Unit	Results		STP standards
		3242	3243	
pH	-	7.26	7.71	5.5 - 9.0
Electrical conductivity	µS/cm	1335	1123	-
Total Suspended Solids	mg/L	222	10	100
Total Dissolved Solids	mg/L	826	628	-
Dissolved oxygen	mg/L	*	4.8	-
Chemical Oxygen Demand	mg/L	248	53	250
BOD 3 at 27°C	mg/L	61	20	30
Total coliform	MPN/100ml	-	33	-
Fecal coliform	MPN/100ml	-	22	-

Note: Results related to sample as received.  
(\*): Sample not collected

  
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**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/3246-3249

Collected by: TSPCB along with HMWS&SB  
& EPTRI Officials

Collected on: 15/03/2021

Received on: 15/03/2021

Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition

Quantity of the sample: 1 Ltr. sample each

Issue date: 22/03/2021

Page No.: 1 of 1

Sample code : Sample details / collection point

- 3246 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 3247 - Sample collected from Outlet of Safilguda lake 0.6 MLD STP
- 3248 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP
- 3249 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results				STP standards
		3246	3247	3248	3249	
pH	-	7.43	7.63	7.36	7.58	5.5 - 9.0
Electrical conductivity	µS/cm	1889	1515	1846	734	-
Total Suspended Solids	mg/L	357	20	122	<5	100
Total Dissolved Solids	mg/L	1031	869	1075	447	-
Dissolved oxygen	mg/L	*	4.4	*	4.9	-
Chemical Oxygen Demand	mg/L	386	77	224	33	250
BOD 3 at 27°C	mg/L	144	23	58	14	30
Total coliform	MPN/100ml	-	13	-	32	-
Fecal coliform	MPN/100ml	-	4	-	13	-

Note: Results related to sample as received.

(\*) : Sample not Collected

  
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Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/4220-4223

Collected by: TSPCB along with HMWS&SB  
& EPTRI Officials

Collected on: 17/04/2021

Received on: 17/04/2021

Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition

Quantity of the sample: 1 Ltr. sample each

Issue date: 24/04/2021

Page No.: 1 of 1

Sample code : Sample details / collection point

- 4220 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 4221 - Sample collected from Outlet of Safilguda lake 0.6 MLD STP
- 4222 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP
- 4223 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results				STP standards
		4220	4221	4222	4223	
pH	-	7.49	7.42	7.21	7.52	5.5 - 9.0
Electrical conductivity	µS/cm	1689	1593	1444	955	-
Total Suspended Solids	mg/L	96	10	144	15	100
Total Dissolved Solids	mg/L	934	867	900	548	-
Dissolved oxygen	mg/L	*	4.2	*	4.5	-
Chemical Oxygen Demand	mg/L	166	53	255	24	250
BOD 3 at 27°C	mg/L	40	18	66	8	30
Total coliform	MPN/100ml	-	31	-	47	-
Fecal coliform	MPN/100ml	-	11	-	14	-
<b>Heavy Metals</b>						
Copper	mg/L	-	ND	-	ND	3.0
Nickel	mg/L	-	0.164	-	0.205	3.0
Zinc	mg/L	-	< 0.1	-	< 0.1	5.0
Cadmium	mg/L	-	ND	-	< 0.1	2.0
Lead	mg/L	-	ND	-	ND	0.1
Total Chromium	mg/L	-	ND	-	ND	2.0

Note: Results related to sample as received.

ND: Not Detectable

(\*) : Sample not Collected

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**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/4224-4225

Collected by: TSPCB along with HMWS&SB  
& EPTRI Officials

Collected on: 17/04/2021

Received on: 17/04/2021

Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition

Quantity of the sample: 1 Ltr. sample each

Issue date: 24/04/2021

Page No.: 1 of 1

Sample code : Sample details / collection point

- 4224 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP  
4225 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP

Parameters	Unit	Results		STP standards
		4224	4225	
pH	-	7.80	7.66	5.5 - 9.0
Electrical conductivity	µS/cm	1506	1272	-
Total Suspended Solids	mg/L	231	18	100
Total Dissolved Solids	mg/L	855	724	-
Dissolved oxygen	mg/L	*	2.5	-
Chemical Oxygen Demand	mg/L	259	65	250
BOD 3 at 27°C	mg/L	62	21	30
Total coliform	MPN/100ml	-	31	-
Fecal coliform	MPN/100ml	-	8	-
<b>Heavy Metals</b>				
Copper	mg/L	-	ND	3.0
Nickel	mg/L	-	0.205	3.0
Zinc	mg/L	-	< 0.1	5.0
Cadmium	mg/L	-	< 0.1	2.0
Lead	mg/L	-	ND	0.1
Total Chromium	mg/L	-	ND	2.0

Note: Results related to sample as received.

ND: Not Detectable

(\*) : Sample not Collected

  
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**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/4320-4321  
Collected on: 23/04/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 30/04/2021

Collected by: AES, RO, Hyderabad  
Received on: 23/04/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 4320 - Sample collected from Inlet of Kharithabad 20 MLD STP  
4321 - Sample collected from Outlet of Kharithabad 20 MLD STP

Parameters	Unit	Results		STP standards
		4320	4321	
pH	-	7.56	8.01	5.5 - 9.0
Electrical conductivity	µS/cm	1220	1088	-
Total Suspended Solids	mg/L	129	9	100
Total Dissolved Solids	mg/L	764	615	-
Dissolved oxygen	mg/L	*	4.4	-
Chemical Oxygen Demand	mg/L	219	24	250
BOD 3 at 27°C	mg/L	61	8	30
Total coliform	MPN/100ml	-	26	-
Fecal coliform	MPN/100ml	-	10	-
<b>Heavy Metals</b>				
Copper	mg/L	-	ND	3.0
Nickel	mg/L	-	ND	3.0
Zinc	mg/L	-	< 0.1	5.0
Cadmium	mg/L	-	ND	2.0
Lead	mg/L	-	ND	0.1
Total Chromium	mg/L	-	< 0.1	2.0

Note: Results related to sample as received.  
ND: Not Detectable  
(\*): Sample not Collected

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**CENTRAL LABORATORY**

**Analysis Report**

No.SR/05/TSPCB/HO/R00/LAB/2021/4327-4328  
Collected on: 24/04/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 01/04/2021

Collected by: AES, RO, Hyderabad  
Received on: 24/04/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 4327 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP  
4328 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results		STP standards
		4327	4328	
pH	-	7.44	7.83	5.5 - 9.0
Electrical conductivity	µS/cm	1745	1420	-
Total Suspended Solids	mg/L	118	<5	100
Total Dissolved Solids	mg/L	1020	796	-
Dissolved oxygen	mg/L	*	4.6	-
Chemical Oxygen Demand	mg/L	203	24	250
BOD 3 at 27°C	mg/L	54	9	30
Total coliform	MPN/100ml	-	17	-
Fecal coliform	MPN/100ml	-	2	-
<b>Heavy Metals</b>				
Copper	mg/L	-	ND	3.0
Nickel	mg/L	-	ND	3.0
Zinc	mg/L	-	<0.1	5.0
Cadmium	mg/L	-	ND	2.0
Lead	mg/L	-	ND	0.1
Total Chromium	mg/L	-	<0.1	2.0

Note: Results related to sample as received.

ND: Not Detectable

(\*) : Sample not Collected

(Dr. M. S. Satyanarayana Rao)  
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**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5156-5188(A)  
Collected on: 20/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 28/05/2021

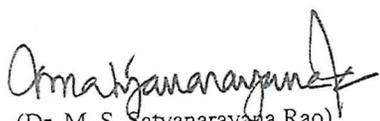
Collected by: AS, RO, Medchal  
Received on: 20/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 5156 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP
- 5156(A) - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP
- 5158 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 5188(A) - Sample collected from Outlet of Safilguda lake 0.6 MLD STP

Parameters	Unit	Results				STP standards
		5156	5156 (A)	5158	5158 (A)	
pH	-	7.90	7.85	8.06	7.95	5.5 - 9.0
Electrical conductivity	µS/cm	1325	1201	1927	1742	-
Total Suspended Solids	mg/L	64	11	291	12	100
Total Dissolved Solids	mg/L	717	684	1074	952	-
Dissolved oxygen	mg/L	*	4.1	*	4.2	-
Chemical Oxygen Demand	mg/L	252	48	384	32	250
BOD 3 at 27°C	mg/L	54	16	73	19	30
Total coliform	MPN/100ml	-	> 1600	-	9	-
Fecal coliform	MPN/100ml	-	350	-	5	-

Note: Results related to sample as received.  
(\*): Sample not collected

  
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**CENTRAL LABORATORY**

**Analysis Report**

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/5159-5159(A)  
Collected on: 20/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 28/05/2021

Collected by: AS, RO, Medchal  
Received on: 20/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

5159 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP

5159(A) - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results		STP standards
		5159	5159 (A)	
pH	-	7.68	8.13	5.5 - 9.0
Electrical conductivity	µS/cm	2075	869	-
Total Suspended Solids	mg/L	330	<5	100
Total Dissolved Solids	mg/L	1274	465	-
Dissolved oxygen	mg/L	*	4.6	-
Chemical Oxygen Demand	mg/L	576	56	250
BOD 3 at 27°C	mg/L	119	17	30
Total coliform	MPN/100ml	-	350	-
Fecal coliform	MPN/100ml	-	79	-

Note: Results related to sample as received.  
(\*): Sample not collected

  
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Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5194-5197  
Collected on: 24/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 02/06/2021

Collected by: AES-II, RO, Hyderabad  
Received on: 24/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 5194 - Sample collected from Inlet of Amberpet 339 MLD, STP
- 5195 - Sample collected from Outlet of Amberpet 339 MLD, STP
- 5196 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 5197 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results				STP standards
		5194	5195	5196	5197	
pH	-	7.84	8.06	7.91	7.99	5.5 - 9.0
Electrical conductivity	µS/cm	1546	1328	1819	1705	-
Total Suspended Solids	mg/L	118	25	162	14	100
Total Dissolved Solids	mg/L	852	742	1068	978	-
Dissolved oxygen	mg/L	*	2.1	*	2.8	-
Chemical Oxygen Demand	mg/L	166	73	207	57	250
BOD 3 at 27°C	mg/L	37	23	46	19	30
Total coliform	MPN/100ml	-	350	-	70	-
Fecal coliform	MPN/100ml	-	22	-	17	-

Note: Results related to sample as received.  
(\*): Sample not Collected

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**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5198-5201  
Collected on: 24/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 02/06/2021

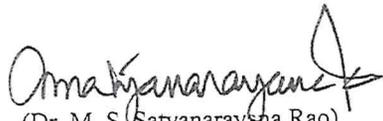
Collected by: AES-II, RO, Hyderabad  
Received on: 24/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 5198 - Sample collected from Inlet of Kharithabad 20 MLD STP
- 5199 - Sample collected from Outlet of Kharithabad 20 MLD STP
- 5200 - Sample collected from Inlet of Jalagam Vengal Rao 0.5 MLD STP
- 5201 - Sample collected from Outlet of Jalagam Vengal Rao 0.5 MLD STP

Parameters	Unit	Results				STP standards
		5198	5199	5200	5201	
pH	-	7.94	8.02	7.61	7.86	5.5 - 9.0
Electrical conductivity	µS/cm	1191	1088	1150	1095	-
Total Suspended Solids	mg/L	164	10	189	10	100
Total Dissolved Solids	mg/L	662	605	635	596	-
Dissolved oxygen	mg/L	*	4.0	*	4.6	-
Chemical Oxygen Demand	mg/L	952	41	288	28	250
BOD 3 at 27°C	mg/L	187	18	64	9	30
Total coliform	MPN/100ml	-	84	-	240	-
Fecal coliform	MPN/100ml	-	11	-	34	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6310-6313  
Collected on: 16/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 23/06/2021

Collected by: AES-II, RO, Hyderabad  
Received on: 17/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 6310 - Sample collected from Inlet of Amberpet 339 MLD, STP
- 6311 - Sample collected from Outlet of Amberpet 339 MLD, STP
- 6312 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 6313 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results				STP standards
		6310	6311	6312	6313	
pH	-	7.79	7.50	7.77	8.25	5.5 - 9.0
Electrical conductivity	µS/cm	1291	1250	1282	1216	-
Total Suspended Solids	mg/L	126	<5	60	<5	100
Total Dissolved Solids	mg/L	797	666	802	675	-
Dissolved oxygen	mg/L	*	4.6	*	4.4	-
Chemical Oxygen Demand	mg/L	162	41	113	32	250
BOD 3 at 27°C	mg/L	53	11	32	12	30
Total coliform	MPN/100ml	-	350	-	210	-
Fecal coliform	MPN/100ml	-	34	-	21	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
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Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6314-6317  
Collected on: 16/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 23/06/2021

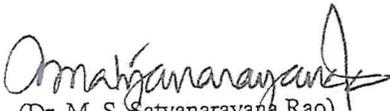
Collected by: AES-II, RO, Hyderabad  
Received on: 17/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 6314 - Sample collected from Inlet of Kharithabad 20 MLD STP
- 6315 - Sample collected from Outlet of Kharithabad 20 MLD STP
- 6316 - Sample collected from Inlet of Jalagam Vengal Rao 0.5 MLD STP
- 6317 - Sample collected from Outlet of Jalagam Vengal Rao 0.5 MLD STP

Parameters	Unit	Results				STP standards
		6314	6315	6316	6317	
pH	-	7.78	8.24	7.63	7.47	5.5 - 9.0
Electrical conductivity	µS/cm	1091	942	1205	926	-
Total Suspended Solids	mg/L	104	< 5	345	19	100
Total Dissolved Solids	mg/L	634	495	703	492	-
Dissolved oxygen	mg/L	*	4.6	*	3.9	-
Chemical Oxygen Demand	mg/L	126	28	462	32	250
BOD 3 at 27°C	mg/L	23	8	117	11	30
Total coliform	MPN/100ml	-	120	-	220	-
Fecal coliform	MPN/100ml	-	13	-	21	-

Note: Results related to sample as received.  
(\*): Sample not Collected

  
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Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6383-6384  
Collected on: 19/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 26/06/2021

Collected by: AS, RO, Medchal  
Received on: 19/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 6383 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP  
6384 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results		STP standards
		6383	6384	
pH	-	7.40	7.12	5.5 - 9.0
Electrical conductivity	µS/cm	1773	1311	-
Total Suspended Solids	mg/L	111	37	100
Total Dissolved Solids	mg/L	1092	806	-
Dissolved oxygen	mg/L	*	3.3	-
Chemical Oxygen Demand	mg/L	243	65	250
BOD 3 at 27°C	mg/L	64	25	30
Total coliform	MPN/100ml	-	33	-
Fecal coliform	MPN/100ml	-	11	-

Note: Results related to sample as received.  
(\*): Sample not collected

  
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**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6379-6382  
Collected on: 19/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 26/06/2021

Collected by: AS, RO, Medchal  
Received on: 19/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 6379 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP
- 6380 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP
- 6381 - Sample collected from Inlet of Safilguda lake 0.6 MLD STP
- 6382 - Sample collected from Outlet of Safilguda lake 0.6 MLD STP

Parameters	Unit	Results				STP standards
		6379	6380	6381	6382	
pH	-	7.48	7.60	7.08	7.96	5.5 - 9.0
Electrical conductivity	µS/cm	1276	1029	1925	1280	-
Total Suspended Solids	mg/L	94	7	867	27	100
Total Dissolved Solids	mg/L	713	610	1132	698	-
Dissolved oxygen	mg/L	*	4.2	*	3.1	-
Chemical Oxygen Demand	mg/L	142	36	988	77	250
BOD 3 at 27°C	mg/L	36	10	211	26	30
Total coliform	MPN/100ml	-	79	-	130	-
Fecal coliform	MPN/100ml	-	11	-	27	-

Note: Results related to sample as received.  
(\*): Sample not collected

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**CENTRAL LABORATORY**

**Analysis Report**

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/2107243-2107246  
Collected on: 13/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 20/07/2021

Collected by: AS, RO, Medchal  
Received on: 14/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

2107243 Sample collected from Inlet of Safilguda lake 0.6 MLD STP

2107244 Sample collected from Outlet of Safilguda lake 0.6 MLD STP

2107245 - Sample collected from Inlet of Khazakunta Lake 12 MLD, STP

2107246 - Sample collected from Outlet of Khazakunta Lake 12 MLD, STP

Parameters	Unit	Results				STP standards
		2107243	2107244	2107245	2107246	
pH	-	7.23	7.28	7.12	6.12	5.5 - 9.0
Electrical conductivity	µS/cm	1210	1113	935	520	-
Total Suspended Solids	mg/L	108	10	138	09	100
Total Dissolved Solids	mg/L	701	667	583	312	-
Dissolved oxygen	mg/L	*	4.9	*	5.3	-
Chemical Oxygen Demand	mg/L	113	24	145	24	250
BOD 3 at 27°C	mg/L	31	8	38	5	30
Total coliform	MPN/100ml	-	70	-	43	-
Fecal coliform	MPN/100ml	-	17	-	13	-
<b>Heavy Metals</b>						
Copper	mg/L	-	BDL	-	BDL	3.0
Nickel	mg/L	-	BDL	-	BDL	3.0
Zinc	mg/L	-	BDL	-	BDL	5.0
Cadmium	mg/L	-	BDL	-	BDL	2.0
Lead	mg/L	-	BDL	-	BDL	0.1
Total Chromium	mg/L	-	BDL	-	BDL	2.0

Note: Results related to sample as received.  
BDL: Below Detectable Limit  
(\*): Sample not collected

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/2107346-2107349  
Collected on: 17/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 27/07/2021

Collected by: AES-I, RO, Hyderabad  
Received on: 17/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

- 2107346 - Sample collected from Inlet of Kharithabad 20 MLD STP
- 2107347 - Sample collected from Outlet of Kharithabad 20 MLD STP
- 2107348 - Sample collected from Inlet of KIMS (Picket) 30 MLD STP
- 2107349 - Sample collected from Outlet of KIMS (Picket) 30 MLD STP

Parameters	Unit	Results				STP standards
		2107346	2107347	2107348	2107349	
pH	-	7.23	7.54	7.14	7.42	5.5 - 9.0
Electrical conductivity	µS/cm	1061	846	1345	966	-
Total Suspended Solids	mg/L	111	14	129	24	100
Total Dissolved Solids	mg/L	606	475	823	563	-
Dissolved oxygen	mg/L	*	5.3	*	5.1	-
Chemical Oxygen Demand	mg/L	159	24	163	52	250
BOD 3 at 27°C	mg/L	35	8	37	14	30
Total coliform	MPN/100ml	-	350	-	220	-
Fecal coliform	MPN/100ml	-	41	-	39	-
<b>Heavy Metals</b>						
Copper	mg/L	-	BDL	-	BDL	3.0
Nickel	mg/L	-	< 0.1	-	BDL	3.0
Zinc	mg/L	-	BDL	-	BDL	5.0
Cadmium	mg/L	-	BDL	-	BDL	2.0
Lead	mg/L	-	BDL	-	BDL	0.1
Total Chromium	mg/L	-	BDL	-	BDL	2.0

Note: Results related to sample as received.

BDL: Below Detectable Limit

(\*) : Sample not Collected

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



**CENTRAL LABORATORY**

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/2107239-2107242  
Collected on: 13/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 20/07/2021

Collected by: AS, RO, Medchal  
Received on: 14/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Sample code : Sample details / collection point

2107239 - Sample collected from Inlet of Rangadhamuni Lake 5 MLD STP

2107240 - Sample collected from Outlet of Rangadhamuni Lake 5 MLD STP

2107241 - Sample collected from Inlet of Pragathi Nagar 2.5 MLD STP

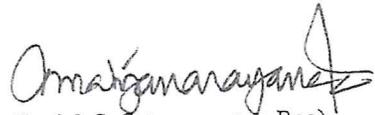
2107242 - Sample collected from Outlet of Pragathi Nagar 2.5 MLD STP

Parameters	Unit	Results				STP standards
		2107239	2107240	2107241	2107242	
pH	-	7.11	7.07	6.99	7.78	5.5 - 9.0
Electrical conductivity	µS/cm	976	888	1339	1008	-
Total Suspended Solids	mg/L	102	18	47	22	100
Total Dissolved Solids	mg/L	608	562	713	638	-
Dissolved oxygen	mg/L	*	4.8	*	5.2	-
Chemical Oxygen Demand	mg/L	113	40	73	32	250
BOD 3 at 27°C	mg/L	32	14	19	15	30
Total coliform	MPN/100ml	-	120	-	540	-
Fecal coliform	MPN/100ml	-	22	-	47	-
<b>Heavy Metals</b>						
Copper	mg/L	-	BDL	-	BDL	3.0
Nickel	mg/L	-	BDL	-	BDL	3.0
Zinc	mg/L	-	BDL	-	BDL	5.0
Cadmium	mg/L	-	BDL	-	BDL	2.0
Lead	mg/L	-	BDL	-	BDL	0.1
Total Chromium	mg/L	-	BDL	-	BDL	2.0

Note: Results related to sample as received.

BDL: Below Detectable Limit

(\*): Sample not collected

  
(Dr. M. S. Satyanarayana Rao)  
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CENTRAL LABORATORY

37

Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/1200-1204  
Collected on: 16/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 25/01/2021

Collected by: Central Lab  
Received on: 18/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 1200 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)
- 1201 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel
- 1202 - Water samples collected from Hussainsagar lake at Necklace Road
- 1203 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens
- 1204 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		1200	1201	1202	1203	1204
pH	-	7.25	7.46	7.50	7.39	7.29
Electrical conductivity	µS/cm	1501	1729	1911	1490	1508
Dissolved oxygen	mg/L	3.9	Nil	2.9	2.9	3.6
Chemical Oxygen Demand	mg/L	129	286	459	89	101
BOD 3 at 27°C	mg/L	24	55	116	29	23
Total Suspended Solids	mg/L	6	180	154	27	10
Total Dissolved Solids	mg/L	811	1060	1013	782	791
Nitrates	mg/L	15	29	35	16	11
Boron	mg/L	0.11	0.18	BDL	BDL	0.02
Free Ammonia	mg/L	0.07	0.41	0.88	0.11	0.09
SAR	-	3.2	3.2	2.7	2.9	2.9
Total coliform	MPN/100ml	>1600	920	>1600	1600	>1600
Fecal coliform	MPN/100ml	540	220	920	350	540
CPCB water quality criteria class		E	E	E	E	E

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



Analysis Report

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/1205-1208  
Collected on: 16/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 25/01/2021

Collected by: Central Lab  
Received on: 18/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 1205 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 1206 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 1207 - Water sample collected from Bridge - I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 1208 - Water sample collected from Budha Statue

Parameters	Unit	Results			
		1205	1206	1207	1208
pH	-	7.23	7.29	7.35	7.28
Electrical conductivity	µS/cm	1512	1516	1520	1484
Dissolved oxygen	mg/L	3.8	3.8	2.6	2.8
Chemical Oxygen Demand	mg/L	125	121	141	97
BOD 3 at 27°C	mg/L	28	31	28	24
Total Suspended Solids	mg/L	16	26	82	19
Total Dissolved Solids	mg/L	809	795	820	802
Nitrates	mg/L	14	13	13	11
Boron	mg/L	BDL	0.08	BDL	BDL
Free Ammonia	mg/L	0.10	0.10	0.12	0.05
SAR	-	2.9	2.9	2.8	2.9
Total coliform	MPN/100ml	1600	>1600	>1600	1600
Fecal coliform	MPN/100ml	430	920	540	280
CPCB water quality criteria class		E	E	E	E

Note : Results related to sample as received.  
BDL: Below Detectable limit

Parameters	CPCB Water Quality Criteria				
	A	B	C	D	E
pH	6.5 - 8.5	6.5 - 8.5	6.0 - 9.0	6.5 - 8.5	6.0 - 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or < 2	3 or < 3	3 or < 3	-	-
Free Ammonia	-	-	-	1.2 or < 1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/2247-2251  
Collected on: 12/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 20/02/2021

Collected by: Central Lab  
Received on: 13/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Water samples collected from Hussainsagar

Sample code : Sample details / collection point

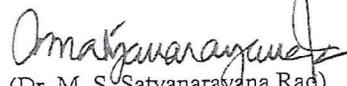
- 2247 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
2248 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
2249 - Water samples collected from Hussainsagar lake at Necklace Road  
2250 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens  
2251 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		2247	2248	2249	2250	2251
pH	-	7.57	7.78	7.73	7.80	7.89
Electrical conductivity	µS/cm	1169	1296	1273	1199	1201
Dissolved oxygen	mg/L	2.9	Nil	0.5	1.2	2.8
Chemical Oxygen Demand	mg/L	92	144	179	76	72
BOD 3 at 27°C	mg/L	20	42	50	19	18
Total Suspended Solids	mg/L	8	12	109	30	<5
Total Dissolved Solids	mg/L	643	726	764	664	691
Nitrates	mg/L	45	40	41	40	39
Boron	mg/L	BDL	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	0.5	0.6	0.5	0.7
SAR	-	3.0	3.1	2.5	2.8	3.0
Total coliform	MPN/100ml	920	>1600	1600	920	1600
Fecal coliform	MPN/100ml	240	430	350	280	430
CPCB water quality criteria class		E	E	E	E	E

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or <50	500 or <500	5000 or <5000	-	-

Below E : Not meeting A, B, C, D, E criteria

  
(Dr. M. S. Satyanarayana Reddy)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/2252-2255  
Collected on: 12/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 20/02/2021

Collected by: Central Lab  
Received on: 13/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

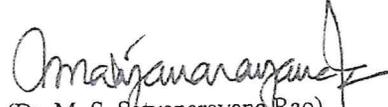
- 2252 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 2253 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 2254 - Water sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 2255 - Water sample collected from Budha Statue

Parameters	Unit	Results			
		2252	2253	2254	2255
pH	-	7.91	7.82	7.67	8.06
Electrical conductivity	µS/cm	1289	1253	1236	1290
Dissolved oxygen	mg/L	4.8	2.6	3.9	2.5
Chemical Oxygen Demand	mg/L	49	118	80	49
BOD 3 at 27°C	mg/L	12	32	20	10
Total Suspended Solids	mg/L	8	30	23	< 5
Total Dissolved Solids	mg/L	752	702	680	766
Nitrates	mg/L	39	38	38	38
Boron	mg/L	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	0.4	0.7	0.4	0.6
SAR	-	2.8	2.8	2.9	2.9
Total coliform	MPN/100ml	>1600	>1600	540	920
Fecal coliform	MPN/100ml	540	430	220	280
CPCB water quality criteria class		D	E	E	E

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

--- End of Report ---



**TELANGANA STATE POLLUTION CONTROL BOARD**  
Paryavaran Bhavan, A-3, Industrial Estate, Sanathnagar, Hyderabad – 500 018  
Ph: 040-23887500

**CENTRAL LABORATORY**

(41)

**Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3181-3185  
Collected on: 10/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/03/2021

Collected by: Central Lab  
Received on: 10/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 3181 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
3182 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
3183 - Water samples collected from Hussainsagar lake at Necklace Road  
3184 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens  
3185 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		3181	3182	3183	3184	3185
pH	-	7.62	7.60	7.77	7.54	7.63
Electrical conductivity	µS/cm	1221	1230	1396	1268	1295
Dissolved oxygen	mg/L	4.9	4.8	Nil	5.1	4.8
Chemical Oxygen Demand	mg/L	40	120	364	48	72
BOD 3 at 27°C	mg/L	10	34	107	18	16
Total Suspended Solids	mg/L	<5	<5	264	64	<5
Total Dissolved Solids	mg/L	739	806	840	764	770
Nitrates	mg/L	31	30	24	16	19
Boron	mg/L	BDL	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	0.02	0.7	0.5	BDL
SAR	-	2.5	2.6	2.7	2.9	3.0
Total coliform	MPN/100ml	920	540	920	>1600	1600
Fecal coliform	MPN/100ml	170	130	130	220	170
<b>Heavy Metals</b>						
Copper	mg/L	ND	ND	ND	ND	ND
Nickel	mg/L	0.094	0.073	0.073	0.1	0.058
Zinc	mg/L	0.348	0.101	0.17	0.511	0.459
Cadmium	mg/L	0.005	0.014	0.022	ND	ND
Lead	mg/L	ND	ND	0.041	0.014	0.041
Total Chromium	mg/L	ND	ND	0.019	0.051	0.534
<b>CPCB water quality criteria class</b>		<b>D</b>	<b>D</b>	<b>E</b>	<b>D</b>	<b>D</b>

Note : Results related to sample as received.

BDL: Below Detectable limit

ND: Not Detectable

Parameters	CPCB Water Quality Criteria				
	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or <50	500 or <500	5000 or <5000	-	-

Below E : Not meeting A, B, C, D, E criteria

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

**TELANGANA STATE POLLUTION CONTROL BOARD**

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**CENTRAL LABORATORY****42****Analysis Report**

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3186-3189  
 Collected on: 10/03/2021  
 Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
 Issue date: 17/03/2021

Collected by: Central Lab  
 Received on: 10/03/2021  
 Quantity of the sample: 1 Ltr. sample each  
 Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 3186 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 3187 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 3188 - Water sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 3189 - Water sample collected near Budha Statue

Parameters	Unit	Results			
		3186	3187	3188	3189
pH	-	7.58	7.80	7.80	7.73
Electrical conductivity	µS/cm	1284	1320	1374	1296
Dissolved oxygen	mg/L	5.5	5.6	2.8	4.7
Chemical Oxygen Demand	mg/L	32	92	104	68
BOD 3 at 27°C	mg/L	8	23	29	16
Total Suspended Solids	mg/L	< 5	7	23	15
Total Dissolved Solids	mg/L	800	792	830	828
Nitrates	mg/L	23	15	15	24
Boron	mg/L	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	BDL	BDL	BDL
SAR	-	2.9	2.9	2.9	2.9
Total coliform	MPN/100ml	540	>1600	1600	920
Fecal coliform	MPN/100ml	170	280	170	130
<b>Heavy Metals</b>					
Copper	mg/L	ND	ND	ND	ND
Nickel	mg/L	0.042	0.068	0.084	0.063
Zinc	mg/L	0.341	0.579	0.87	0.122
Cadmium	mg/L	ND	ND	ND	0.014
Lead	mg/L	0.041	ND	ND	0.041
Total Chromium	mg/L	0.277	0.084	0.116	ND
<b>CPCB water quality criteria class</b>		<b>D</b>	<b>D</b>	<b>E</b>	<b>D</b>

Note : Results related to sample as received.

BDL: Below Detectable limit

ND: Not Detectable

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

*M. S. Satyanarayana Rao*  
 (Dr. M. S. Satyanarayana Rao)

Joint Chief Environmental Scientist (FAC)



# TELANGANA STATE POLLUTION CONTROL BOARD

Paryavaran Bhavan, A-3, Industrial Estate, Sanathnagar, Hyderabad – 500 018

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CENTRAL LABORATORY

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## Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3181A-3185A  
Collected on: 10/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/03/2021

Collected by: Central Lab  
Received on: 10/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Sediment samples collected from Hussainsagar

Sample code : Sample details / collection point

- 3181A - Sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
3182A - Sample collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
3183A - Sample collected from Hussainsagar lake at Necklace Road  
3184A - Sample collected from Hussainsagar lake at Opp. NTR Gardens  
3185A - Sample collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		3181A	3182A	3183A	3184A	3185A
pH	-	7.44	7.87	7.83	7.91	7.29
Electrical conductivity	$\mu\text{S/cm}$	1747	228	284	240	1549
<b>Heavy Metals</b>						
Copper	mg/K	44.4	17.1	3.8	17.5	81.4
Nickel	mg/K	20.4	5.3	ND	4.2	46.8
Zinc	mg/K	287.9	33.8	744.9	129.6	666
Cadmium	mg/K	36.2	ND	ND	ND	111.2
Lead	mg/K	28.7	138	15	64.2	26
Total Chromium	mg/K	ND	0.68	ND	11.9	9.4

Note : Results related to sample as received.

ND: Not Detectable

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3186A-3189A  
Collected on: 10/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/03/2021

Collected by: Central Lab  
Received on: 10/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Sediment samples collected from Hussainsagar

Sample code : Sample details / collection point

- 3186A - Sample collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 3187A - Sample collected from Hussainsagar lake at Sanjeevaiah park
- 3188A - Sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 3189A - Sample collected near Budha Statue

Parameters	Unit	Results			
		3186A	3187A	3188A	3189A
pH	-	7.58	7.35	7.80	7.27
Electrical conductivity	µS/cm	1335	1692	208	1909
Heavy Metals					
Copper	mg/K	223.5	96.1	34.1	48.5
Nickel	mg/K	44.8	25.6	6.3	100.8
Zinc	mg/K	554	374	51.1	2282
Cadmium	mg/K	88.5	67.4	ND	214
Lead	mg/K	118.9	45.1	80.6	72.4
Total Chromium	mg/K	108.6	24.8	9.4	326.6

Note : Results related to sample as received.  
ND: Not Detectable

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



# TELANGANA STATE POLLUTION CONTROL BOARD

Paryavaran Bhavan, A-3, Industrial Estate, Sanathnagar, Hyderabad – 500 018

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## CENTRAL LABORATORY

### Analysis Report

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/4133-4137  
Collected on: 09/04/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 19/04/2021

Collected by: Central Lab  
Received on: 12/04/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Water samples collected from Hussainsagar

Sample code : Sample details / collection point

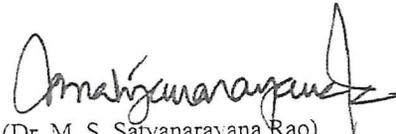
- 4133 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
4134 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
4135 - Water samples collected from Hussainsagar lake at Necklace Road  
4136 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens  
4137 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		4133	4134	4135	4136	4137
pH	-	7.40	7.42	7.28	7.52	7.67
Electrical conductivity	µS/cm	1280	1335	1505	1278	1330
Dissolved oxygen	mg/L	4.6	0.6	3.0	4.8	4.8
Chemical Oxygen Demand	mg/L	68	68	169	120	68
BOD 3 at 27°C	mg/L	16	18	48	34	17
Total Suspended Solids	mg/L	< 5	< 5	84	49	9
Total Dissolved Solids	mg/L	796	818	923	791	810
Nitrates	mg/L	50	50	22	18	51
Boron	mg/L	BDL	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	0.03	0.56	0.45	0.10
SAR	-	4.0	3.5	3.5	3.1	3.1
Total coliform	MPN/100ml	920	920	920	>1600	920
Fecal coliform	MPN/100ml	170	350	110	280	170
CPCB water quality criteria class		D	E	E	D	D

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or < 2	3 or < 3	3 or < 3	-	-
Free Ammonia	-	-	-	1.2 or < 1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



CENTRAL LABORATORY

Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/4138-4141  
Collected on: 09/04/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 19/04/2021

Collected by: Central Lab  
Received on: 12/04/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 4138 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 4139 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 4140 - Water sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 4141 - Water sample collected near Budha Statue

Parameters	Unit	Results			
		4138	4139	4140	4141
pH	-	7.45	7.48	7.43	7.55
Electrical conductivity	µS/cm	1328	1280	1504	1362
Dissolved oxygen	mg/L	5.2	5.2	4.8	4.0
Chemical Oxygen Demand	mg/L	60	84	95	92
BOD 3 at 27°C	mg/L	14	20	20	22
Total Suspended Solids	mg/L	< 5	19	41	15
Total Dissolved Solids	mg/L	804	791	900	799
Nitrates	mg/L	37	19	15	49
Boron	mg/L	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	BDL	0.15	0.4
SAR	-	3.0	3.4	3.0	3.7
Total coliform	MPN/100ml	920	1600	920	540
Fecal coliform	MPN/100ml	220	240	130	110
CPCB water quality criteria class		D	D	D	D

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)

Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5070-5073  
Collected on: 07/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/05/2021

Collected by: Central Lab  
Received on: 07/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 5070 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club
- 5071 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 5072 - Water sample collected from Bridge – 1 (Inlet) / near outlet of Khairthabad STP joining HS lake
- 5073 - Water sample collected near Budha Statue

Parameters	Unit	Results			
		5070	5071	5072	5073
pH	-	8.16	7.96	7.85	7.92
Electrical conductivity	µS/cm	1504	1495	1351	1480
Dissolved oxygen	mg/L	4.9	4.8	3.7	3.9
Chemical Oxygen Demand	mg/L	84	92	136	112
BOD 3 at 27°C	mg/L	19	21	26	24
Total Suspended Solids	mg/L	20	52	56	35
Total Dissolved Solids	mg/L	788	817	716	834
Nitrates	mg/L	13	13	14	24
Boron	mg/L	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	BDL	0.24	0.24	BDL
SAR	-	8.1	8.0	7.4	8.0
Total coliform	MPN/100ml	1600	>1600	1600	>1600
Fecal coliform	MPN/100ml	280	350	210	430
CPCB water quality criteria class		D	D	E	E

Note : Results related to sample as received.  
BDL: Below Detectable limit

Parameters	CPCB Water Quality Criteria				
	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5065-5069  
Collected on: 07/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/05/2021

Collected by: Central Lab  
Received on: 07/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source : Water samples collected from Hussainsagar

Sample code : Sample details / collection point  
5065 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
5066 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
5067 - Water samples collected from Hussainsagar lake at Necklace Road  
5068 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens  
5069 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts

Parameters	Unit	Results				
		5065	5066	5067	5068	5069
pH	-	7.98	7.92	7.38	8.23	8.04
Electrical conductivity	µS/cm	1487	1481	1558	1464	1695
Dissolved oxygen	mg/L	3.8	4.2	3.9	4.2	4.1
Chemical Oxygen Demand	mg/L	116	112	144	100	120
BOD 3 at 27°C	mg/L	27	24	28	28	29
Total Suspended Solids	mg/L	22	13	74	24	32
Total Dissolved Solids	mg/L	867	798	868	812	968
Nitrates	mg/L	21	20	18	20	29
Boron	mg/L	BDL	BDL	0.12	BDL	0.14
Free Ammonia	mg/L	0.33	BDL	0.10	BDL	BDL
SAR	-	7.7	8.2	7.5	7.9	7.2
Total coliform	MPN/100ml	1600	920	920	1600	>1600
Fecal coliform	MPN/100ml	350	280	220	240	430
CPCB water quality criteria class		E	D	E	D	D

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or < 2	3 or < 3	3 or < 3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6147-6151  
Collected on: 08/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 18/06/2021

Collected by: Central Lab  
Received on: 09/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 6147 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)
- 6148 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel
- 6149 - Water sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake
- 6150 - Water samples collected from Hussainsagar lake at Sanjeevaiah park
- 6151 - Water sample collected near Budha Statue

Parameters	Unit	Results				
		6147	6148	6149	6150	6151
pH	-	7.14	7.65	7.86	7.38	7.33
Electrical conductivity	µS/cm	1499	1495	1410	1504	1503
Dissolved oxygen	mg/L	4.0	3.9	4.2	4.1	3.8
Chemical Oxygen Demand	mg/L	72	88	100	88	85
BOD 3 at 27°C	mg/L	16	22	25	22	18
Total Suspended Solids	mg/L	79	82	54	49	84
Total Dissolved Solids	mg/L	828	703	725	722	790
Nitrates	mg/L	12	22	17	24	19
Boron	mg/L	BDL	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	0.10	0.23	0.33	0.13	0.12
SAR	-	6.4	7.2	6.1	7.2	7.0
Total coliform	MPN/100ml	1600	>1600	920	>1600	>1600
Fecal coliform	MPN/100ml	240	280	280	210	240
<b>Heavy Metals</b>						
Copper	mg/L	BDL	BDL	BDL	BDL	BDL
Nickel	mg/L	BDL	BDL	BDL	0.282	BDL
Zinc	mg/L	BDL	BDL	BDL	BDL	BDL
Cadmium	mg/L	BDL	BDL	BDL	BDL	BDL
Lead	mg/L	BDL	BDL	BDL	BDL	BDL
Total Chromium	mg/L	BDL	BDL	BDL	BDL	BDL
<b>CPCB water quality criteria class</b>		<b>D</b>	<b>E</b>	<b>D</b>	<b>D</b>	<b>E</b>

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or <50	500 or <500	5000 or <5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)

Joint Chief Environmental Scientist (FAC)



CENTRAL LABORATORY

Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6152-6155  
Collected on: 08/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 18/06/2021

Collected by: Central Lab  
Received on: 09/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 6152 - Water samples collected from Hussainsagar lake at Necklace Road
- 6153 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens
- 6154 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts
- 6155 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club

Parameters	Unit	Results			
		6152	6153	6154	6155
pH	-	7.33	7.48	7.30	7.40
Electrical conductivity	µS/cm	1507	1503	1502	1513
Dissolved oxygen	mg/L	0.4	4.6	4.5	5.0
Chemical Oxygen Demand	mg/L	115	107	138	123
BOD 3 at 27°C	mg/L	24	22	32	26
Total Suspended Solids	mg/L	< 5	< 5	< 5	26
Total Dissolved Solids	mg/L	921	916	909	929
Nitrates	mg/L	16	25	19	17
Boron	mg/L	0.02	BDL	0.08	BDL
Free Ammonia	mg/L	0.15	0.19	0.13	0.26
SAR	-	6.7	6.6	6.5	7.3
Total coliform	MPN/100ml	>1600	>1600	1600	1600
Fecal coliform	MPN/100ml	220	280	210	220
<b>Heavy Metals</b>					
Copper	mg/L	BDL	BDL	BDL	BDL
Nickel	mg/L	BDL	BDL	BDL	BDL
Zinc	mg/L	BDL	BDL	BDL	BDL
Cadmium	mg/L	BDL	BDL	BDL	BDL
Lead	mg/L	BDL	BDL	BDL	BDL
Total Chromium	mg/L	BDL	BDL	BDL	BDL
<b>CPCB water quality criteria class</b>		<b>E</b>	<b>D</b>	<b>D</b>	<b>D</b>

Note : Results related to sample as received.  
BDL: Below Detectable limit

Parameters	CPCB Water Quality Criteria				
	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or < 2	3 or < 3	3 or < 3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or < 50	500 or < 500	5000 or < 5000	-	-

Below E : Not meeting A. B. C. D. E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



CENTRAL LABORATORY

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Analysis Report

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/217140-217143  
Collected on: 07/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 14/07/2021

Collected by: Central Lab  
Received on: 07/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point

- 217140 - Water samples collected from Hussainsagar lake at Necklace Road
- 217141 - Water samples collected from Hussainsagar lake at Opp. NTR Gardens
- 217142 - Water samples collected from Hussainsagar lake at Lepakshi Handicrafts
- 217143 - Water samples collected from Hussainsagar lake at Sailing Club / Secunderabad Boats Club

Parameters	Unit	Results			
		217140	217141	217142	217143
pH	-	7.09	7.11	7.02	6.71
Electrical conductivity	µS/cm	1711	1866	1947	2056
Dissolved oxygen	mg/L	3.8	5.0	5.1	5.4
Chemical Oxygen Demand	mg/L	98	103	112	109
BOD 3 at 27°C	mg/L	25	26	28	27
Total Suspended Solids	mg/L	60	62	52	45
Total Dissolved Solids	mg/L	1028	1120	1165	1230
Nitrates	mg/L	29	28	27	21
Boron	mg/L	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	0.13	0.12	0.06	0.03
SAR	-	1.99	1.84	2.12	2.14
Total coliform	MPN/100ml	>1600	1600	920	>1600
Fecal coliform	MPN/100ml	350	220	220	430
CPCB water quality criteria class		E	D	D	D

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or <50	500 or <500	5000 or <5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No. SR/05/TSPCB/HO/R00/LAB/2021/217135-217139  
Collected on: 07/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 14/07/2021

Collected by: Central Lab  
Received on: 07/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Water samples collected from Hussainsagar

Sample code : Sample details / collection point  
217135 - Water sample collected from Outlet of Hussain Sagar lake at GHMC office (BPPA Office / Hyd Boats Club)  
217136 - Water samples collected from Hussainsagar lake at Viceroy (Marriott) Hotel  
217137 - Water sample collected from Bridge – I (Inlet) / near outlet of Khairthabad STP joining HS lake  
217138 - Water samples collected from Hussainsagar lake at Sanjeevaiah park/Yatch Club  
217139 - Water sample collected near Budha Statue

Parameters	Unit	Results				
		217135	217136	217137	217138	217139
pH	-	7.32	7.23	7.26	7.24	7.07
Electrical conductivity	µS/cm	1827	1975	1754	1911	1904
Dissolved oxygen	mg/L	4.8	5.2	4.8	5.2	4.6
Chemical Oxygen Demand	mg/L	80	95	108	106	88
BOD 3 at 27°C	mg/L	28	24	24	27	22
Total Suspended Solids	mg/L	85	80	97	85	91
Total Dissolved Solids	mg/L	1097	1189	1053	1147	1143
Nitrates	mg/L	29	13	29	26	29
Boron	mg/L	BDL	BDL	BDL	BDL	BDL
Free Ammonia	mg/L	0.21	0.14	0.14	0.11	0.08
SAR	-	2.04	2.30	1.55	1.92	1.81
Total coliform	MPN/100ml	920	1600	1600	>1600	1600
Fecal coliform	MPN/100ml	170	350	240	540	240
CPCB water quality criteria class		D	D	D	D	D

Note : Results related to sample as received.  
BDL: Below Detectable limit

CPCB Water Quality Criteria					
Parameters	A	B	C	D	E
pH	6.5 – 8.5	6.5 – 8.5	6.0 – 9.0	6.5 – 8.5	6.0 – 8.5
Electrical conductivity	-	-	-	-	Max 2250
Dissolved oxygen	6 or >6	5 or >5	4 or >4	4 or >4	-
BOD 3 at 27°C	2 or <2	3 or <3	3 or <3	-	-
Free Ammonia	-	-	-	1.2 or <1.2	-
SAR	-	-	-	-	Max 26
Boron	-	-	-	-	Max 2
Total coliform	50 or <50	500 or <500	5000 or <5000	-	-

Below E : Not meeting A, B, C, D, E criteria

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



CENTRAL LABORATORY

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Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/1209-1218  
Collected on: 16/01/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 25/01/2021

Collected by: Central Lab  
Received on: 18/01/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code : Sample details / collection point  
1209 - Fathenagar Nallah (CWQMS / KTWQMS)  
1210 - Kukatpally Nallah – joining Hussain sagar lake to the left side  
1211 - Kukatpally Nalla - joining Hussain sagar lake to the right side  
1212 - Kukatpally nalla joining to Hussain sagar lake middle point  
1213 - Kukatpally Nalla joining to Hussain sagar lake  
1214 - Nalla at Bridge – 3, Necklace road  
1215 - Balkampet Nallah  
1216 - Yousufguda Nallah  
1217 - Picket Nallah (KIMS)  
1218 - Banjara Nallah

Parameters	Unit	Results									
		1209	1210	1211	1212	1213	1214	1215	1216	1217	1218
pH	-	7.49	7.50	7.51	7.73	7.50	7.69	7.40	7.54	7.71	7.67
Electrical conductivity	µS/cm	1875	1786	1770	1785	1768	1915	1556	1483	2045	1509
Chemical Oxygen Demand	mg/L	334	318	294	145	314	274	500	230	367	266
BOD 3 at 27°C	mg/L	101	91	76	45	90	61	123	60	95	62
Total Suspended Solids	mg/L	198	263	131	33	135	42	334	66	308	234
Total Dissolved Solids	mg/L	977	987	984	1010	906	1014	855	948	1190	866

Note: Results related to sample as received.

  
(Dr. M. S. Satyanarayana Rao)  
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--- End of Report ---



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/2256-2264  
Collected on: 12/02/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 20/02/2021

Collected by: Central Lab  
Received on: 13/02/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code	Sample details / collection point
2256	- Fathenagar Nallah (CWQMS / KTWQMS)
2257	- Kukatpally Nallah – joining Hussain sagar lake to the left side
2258	- Kukatpally Nalla - joining Hussain sagar lake to the right side
2259	- Kukatpally Nalla joining to Hussain sagar lake
2260	- Nalla at Bridge – 3, Necklace road
2261	- Balkampet Nallah
2262	- Yousufguda Nallah
2263	- Picket Nallah (KIMS)
2264	- Banjara Nallah

Parameters	Unit	Results								
		2256	2257	2258	2259	2260	2261	2262	2263	2264
pH	-	7.58	7.58	7.71	7.70	7.53	7.57	7.62	7.63	7.72
Electrical conductivity	µS/cm	1332	1289	1392	1302	1168	1432	1148	1372	1213
Chemical Oxygen Demand	mg/L	293	228	220	205	372	384	190	338	247
BOD 3 at 27°C	mg/L	93	72	64	70	110	116	58	104	68
Total Suspended Solids	mg/L	142	91	122	112	190	187	44	216	205
Total Dissolved Solids	mg/L	746	748	852	768	689	845	676	700	878

Note: Results related to sample as received.

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3190-3198  
Collected on: 10/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/03/2021

Collected by: Central Lab  
Received on: 10/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code : Sample details / collection point

3190	-	Fathenagar Nallah (CWQMS / KTWQMS)
3191	-	Kukatpally Nallah – joining Hussain sagar lake to the left side
3192	-	Kukatpally Nalla - joining Hussain sagar lake to the right side
3193	-	Kukatpally Nalla joining to Hussain sagar lake middle point
3194	-	Nalla at Bridge – 3, Necklace road
3195	-	Balkampet Nallah
3196	-	Yousufguda Nallah
3197	-	Picket Nallah (KIMS)
3198	-	Banjara Nallah

Parameters	Unit	Results								
		3190	3191	3192	3193	3194	3195	3196	3197	3198
pH	-	7.87	7.78	7.98	8.09	7.95	7.75	7.91	7.83	7.73
Electrical conductivity	µS/cm	1516	1630	1649	1557	1482	1212	1428	1682	1112
Chemical Oxygen Demand	mg/L	260	368	252	158	156	192	148	288	200
BOD 3 at 27°C	mg/L	88	110	76	48	32	59	42	86	58
Total Suspended Solids	mg/L	266	224	214	13	30	37	39	234	160
Total Dissolved Solids	mg/L	924	908	908	922	869	728	905	932	678
<b>Heavy Metals</b>										
Copper	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/L	0.058	0.094	0.058	0.1	0.110	0.105	0.116	0.132	0.126
Zinc	mg/L	0.111	0.486	0.064	0.736	1.629	0.255	0.525	0.115	0.027
Cadmium	mg/L	0.014	0.039	0.039	0.031	0.031	0.039	0.014	0.048	0.048
Lead	mg/L	0.014	0.014	ND	ND	0.014	ND	0.014	0.014	ND
Total Chromium	mg/L	ND	0.148	ND	0.212	0.598	ND	0.019	ND	0.019

Note: Results related to sample as received.

(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/3193A-3196A  
Collected on: 10/03/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/03/2021

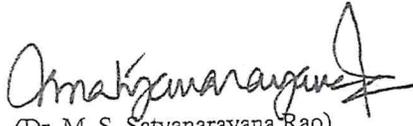
Collected by: Central Lab  
Received on: 10/03/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Sedmient Samples

Sample code : Sample details / collection point  
3193A - Kukatpally Nalla joining to Hussain sagar lake middle point  
3195A - Balkampet Nallah  
3196A - Yousufguda Nallah  
3197A - Picket Nallah (KIMS)

Parameters	Unit	Results			
		3193A	3195A	3196A	3197A
pH	-	7.37	7.32	7.32	7.89
Electrical conductivity	µS/cm	789	812	276	224
Heavy Metals					
Copper	mg/K	201.4	46	24.1	ND
Nickel	mg/K	26.8	4.7	0.2	ND
Zinc	mg/K	346	14.2	5	0.1
Cadmium	mg/K	42.3	ND	ND	ND
Lead	mg/K	61.5	ND	ND	ND
Total Chromium	mg/K	97.4	14.5	11.9	11.9

Note: Results related to sample as received.  
ND: Not Detectable

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/4142-4150  
Collected on: 09/04/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 19/04/2021

Collected by: Central Lab  
Received on: 12/04/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code	Sample details / collection point
4142	- Fathenagar Nallah (CWQMS / KTWQMS)
4143	- Kukatpally Nallah – joining Hussain sagar lake to the left side
4144	- Kukatpally Nalla - joining Hussain sagar lake to the right side
4145	- Kukatpally Nalla joining to Hussain sagar lake middle point
4146	- Nalla at Bridge – 3, Necklace road
4147	- Balkampet Nallah
4148	- Yousufguda Nallah
4149	- Picket Nallah (KIMS)
4150	- Banjara Nallah

Parameters	Unit	Results								
		4142	4143	4144	4145	4146	4147	4148	4149	4150
pH	-	7.42	7.58	7.44	7.58	7.08	7.30	7.40	7.34	7.08
Electrical conductivity	µS/cm	1595	1420	1410	1395	1289	1190	1150	1764	1180
Chemical Oxygen Demand	mg/L	281	221	165	137	76	96	52	181	149
BOD 3 at 27°C	mg/L	82	64	48	40	19	24	12	51	42
Total Suspended Solids	mg/L	127	128	105	21	20	128	< 5	242	90
Total Dissolved Solids	mg/L	1057	990	828	784	836	739	706	1108	690

Note: Results related to sample as received.  
ND: Not Detectable

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/5074-5091  
Collected on: 07/05/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 17/05/2021

Collected by: Central Lab  
Received on: 07/05/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code	Sample details / collection point
5074	- Fathenagar Nallah (CWQMS / KTWQMS)
5075	- Kukatpally Nallah – joining Hussain sagar lake to the left side
5076	- Nalla at Bridge – 3, Necklace road
5077	- Kukatpally Nalla - joining Hussain sagar lake to the right side
5078	- Kukatpally Nalla joining to Hussain sagar lake middle point
5079	- Balkampet Nallah
5080	- Yousufguda Nallah
5090	- Picket Nallah (KIMS)
5091	- Banjara Nallah

Parameters	Unit	Results								
		5074	5075	5076	5077	5078	5079	5080	5090	5091
pH	-	7.58	7.63	8.24	8.51	7.94	7.35	8.34	8.44	8.25
Electrical conductivity	µS/cm	1720	1694	1219	1661	1696	1451	1595	1823	1283
Chemical Oxygen Demand	mg/L	296	232	128	148	212	328	184	108	200
BOD 3 at 27°C	mg/L	64	54	28	35	46	59	43	28	46
Total Suspended Solids	mg/L	206	170	117	65	174	292	126	49	153
Total Dissolved Solids	mg/L	960	1042	707	896	1027	855	986	964	738

Note: Results related to sample as received.

  
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# TELANGANA STATE POLLUTION CONTROL BOARD

Paryavaran Bhavan, A-3, Industrial Estate, Sanathnagar, Hyderabad – 500 018  
Ph: 040-23887500

CENTRAL LABORATORY

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## Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/6156-6163  
Collected on: 08/06/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 18/06/2021

Collected by: Central Lab  
Received on: 09/06/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code	Sample details / collection point
6156	- Fathenagar Nallah (CWQMS / KTWQMS)
6157	- Kukatpally Nallah – joining Hussain sagar lake to the left side
6158	- Kukatpally Nalla - joining Hussain sagar lake to the right side
6159	- Nalla at Bridge – 3, Necklace road
6160	- Balkampet Nallah
6161	- Yousufguda Nallah
6162	- Picket Nallah (KIMS)
6163	- Banjara Nallah

Parameters	Unit	Results							
		6156	6157	6158	6159	6160	6161	6162	6163
pH	-	7.16	6.89	6.82	7.65	6.95	7.13	6.80	7.18
Electrical conductivity	µS/cm	1623	1616	1637	1577	1425	1504	1699	1392
Chemical Oxygen Demand	mg/L	224	152	100	164	248	116	140	120
BOD 3 at 27°C	mg/L	47	41	26	40	59	31	34	32
Total Suspended Solids	mg/L	132	119	81	104	228	62	75	57
Total Dissolved Solids	mg/L	919	858	976	857	876	843	968	757
Total Kjeldhal Nitrogen	mg/L	40	45	43	46	44	38	48	36
Oil & Grease	mg/L	0.2	BDL	BDL	BDL	0.2	BDL	BDL	BDL
Ammonical Nitrogen	mg/L	26	25	25	27	26	22	30	29
<b>Heavy Metals</b>									
Copper	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	< 0.1	BDL
Cadmium	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Chromium	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: Results related to sample as received.

ND: Not Detectable

  
(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)



Analysis Report

Reg. No.SR/05/TSPCB/HO/R00/LAB/2021/217144-217151  
Collected on: 07/07/2021  
Test method: Standard Methods of APHA, 23<sup>rd</sup> Edition  
Issue date: 14/07/2021

Collected by: Central Lab  
Received on: 07/07/2021  
Quantity of the sample: 1 Ltr. sample each  
Page No.: 1 of 1

Source: Nallah Samples

Sample code : Sample details / collection point  
217144 - Fathenagar Nallah (CWQMS / KTWQMS)  
217145 - Kukatpally Nallah – joining Hussain sagar lake to the left side  
217146 - Kukatpally Nalla - joining Hussain sagar lake to the right side  
217147 - Nalla at Bridge – 3, Necklace road  
217148 - Balkampet Nallah  
217149 - Yousufguda Nallah  
217150 - Picket Nallah (KIMS)  
217151 - Banjara Nallah

Parameters	Unit	Results							
		217144	217145	217146	217147	217148	217149	217150	217151
pH	-	6.46	6.99	7.11	6.37	6.26	6.53	7.10	7.05
Electrical conductivity	µS/cm	1958	1588	1644	1907	1646	1567	1927	1423
Chemical Oxygen Demand	mg/L	197	206	220	215	189	199	203	190
BOD 3 at 27°C	mg/L	49	51	55	53	47	50	51	46
Total Suspended Solids	mg/L	112	87	93	120	89	97	89	80
Total Dissolved Solids	mg/L	1168	954	987	1147	985	944	1160	860
Total Kjeldhal Nitrogen	mg/L	64	17	20	24	68	54	21	18
Oil & Grease	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ammonical Nitrogen	mg/L	28	11	10	15	22	15	12	11

Note: Results related to sample as received.  
BDL: Below Detectable limit



(Dr. M. S. Satyanarayana Rao)  
Joint Chief Environmental Scientist (FAC)

**Item No.03:**

BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI

**Original Application No. 85 of 2015 (SZ)&**

**M.A. No. 174 & 232 of 2016**

(Through Vide Conference)

IN THE MATTER OF:

Dr. Lubna Sarwath

... Applicant(s)

Versus

The State of Telangana & Ors.

... Respondent(s)

Date of hearing: 08.07.2021.

CORAM:

**HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL  
MEMBER**

**HON'BLE DR. K. SATYAGOPAL, EXPERT MEMBER**

For Applicant(s):

Ms. Anupradha

For Respondent(s):

Ms. H. Yasmeen Ali for R1

Mr. D. Srinivasan for R2

Ms. Dayana for Mr. T. Sai Krishnan for  
R3&R4

**ORDER**

1. As per order dated 14.09.2020, this Tribunal had considered the report so far filed by the Joint Committee and objections filed by the applicant. Thereafter, directed the Committee to go into the objections filed by the applicant and also the concerned Departments who are expected to carry out remedial measures to file their further statement and also directed the Committee to ascertain as to whether the temporary measures provided by them had resulted in any improvement in curbing the pollution to Hussain Sagar Lake and the Musi River and also directed to give their recommendations, if there is any gap to rectify the same and it was originally posted to 22.12.2020 for that purpose.
2. Thereafter, the matter has been adjourned from time to time by notification. On 28.01.2021, this Tribunal had considered the Joint Committee report dated 22.01.2021 which was extracted in para 4 of the order and expressed our displeasure regarding the progress of the work and passed the following order:

5. It is seen from the report that there was not much progress in the work suggested and still 30-40% of the sewage lines are not connected to any temporary measures and no diversion has been done and untreated sewage is being discharged into the Nallahs which ultimately reaches the Hussai Sagar Lake from where the water is discharged to Musi River.

6. Further, it is also mentioned that most of the recommendations have not been complied with and only partial compliance of the

recommendations were made which are not sufficient to meet the situation as intended by the committee, so as to resolve the problem temporarily till the long term measures are completed.

7. The State of Telangana has not filed any progress report regarding the establishment of STPs and re calibration or up gradation of the existing STPs, so as to maintain the treated water meeting the norms prescribed by the Central Pollution Control Board in this regard before it is being discharged into any water body.

8. It is suggested in the report that a detailed study is required to measure and estimate the sewage/storm water flow into the lake and river Musi and suitable bioremediation of nallah's can be carried out after the barrier structures, to treat the overflow as per the guidelines of Central Pollution Control Board (CPCB). It is also mentioned that the number of jet fountains/aerators can also be increased and operated continuously to improve the Dissolved Oxygen (DO) level which also reduces the contaminates to some extent. The separate sewer system shall be constructed and operated to treat the sewage separately without combining storm water. The treated sewage shall be reused for other purposes and thus avoid the discharge of the same into the lake. These measures will have to be done by the 2nd respondent local body and they have 12 not submitted any report regarding the steps taken by them to remedy the situation as per the Solid Waste Management Rules, 2016 and also under the Water (Prevention and Control of Pollution) Act, 1974 which is their responsibility to see that no untreated sewage is mixed with the storm water or the water body, so as to contaminate the water in the lake.

9. The Lake Protection Committee is also having some responsibility by taking action against those persons, who are discharging untreated sewage into the lake, so as to contaminate the water in the lake. They are also expected to take appropriate protective measures to see that the water quality in the lake does not get contaminated. But there is no such action plan that is forth coming from their side.

10. The learned counsel appearing for the applicant submitted that the committee has not considered all the objections, but they have only considered some of the objections alone which will not meet the situation. So the applicant is directed to submit her further objection to the joint committee report within a week with a copy to the members of the joint committee, so that they can conduct further study on the basis of the objections submitted by her as well.

11. The joint committee is directed to conduct the study which has been mentioned in the recommendation by co-opting any suitable persons whose help is required for the purpose to conduct a detailed study and to submit a report to this Tribunal, so as to mitigate the situation and give proper direction to the persons who are responsible to carry out such recommendations for protecting the water body free from pollution.

12. The applicant who is present submitted that she may also be included in the committee. We direct the committee to give notice to her in advance about the date of inspection so that she can be present and give her suggestions which can also be considered by the committee and

incorporate the same while compiling the report.

13. The 2nd respondent Greater Hyderabad Municipal Corporation (GHMC), the State of Telangana, the Joint committee and the Lake Protection Committee are directed to submit the respective reports as directed along with the progress of the compliance of the recommendations to improve the water quality and to improve the prevention of discharge of untreated sewage into the storm water consequentially letting into the Hussain Sagar lake which ultimately reaches the Musi River on or before 26.03.2021 by e-filing in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF along with necessary hard copies to be produced as per rules.

14. The Registry is directed to communicate this order to the members of the joint committee, Telangana State Pollution Control Board, the Lake Protection Committee as well as the official respondents and Chief Secretary, State of Telangana immediately through e-mail, so as to enable them to comply with the direction.

The case was posted to 26.03.2021 for submission of further reports.

Thereafter the matter has been adjourned from time to time and lastly it was adjourned to today as per notification dated 09.06.2021.

3. When the matter came up for hearing today, Ms. Anupradha represented the applicant. Ms. H. Yasmeen Ali represented 1<sup>st</sup> respondent, Mr. D. Srinivasan represented 2<sup>nd</sup> respondent and Mr. T. Sai Krishnan through Ms. Dayana represented respondents 3 and 4.
4. We have received the Joint Committee report dated 08.06.2021, e-filed on the same date and received on 09.06.2021 which reads as follows:

**BEFORE THE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE), CHENNAI**

**Original Application No. 85 of 2015, (SZ) & M.A. No. 174/2016 & 232/2016 (SZ)**

Report of the Joint Committee in compliance with the Order dated 28/01/2021 of Hon'ble NGT (SZ), Chennai in the O.A. No.85 of 2015(SZ) &M.A. No.174/2016 & 232/2016 (SZ) in the matter of Lubna Sarwath Vs State of Telangana & Ors.

1. Introduction:

In compliance with the Order dated 22/01/2020 of Hon'ble National Green Tribunal (Southern Zone), Chennai in the Original Application No. 85 of

20.15 (SZ), a Joint Committee was constituted and the Committee already submitted its report to the Hon'ble Tribunal based on the meeting and site visit held on 1.6.03.2020 and 17.03.2020. In the said report, the Joint Committee submitted their observations, conclusions and recommendations in accordance with the Terms of Reference (ToR) to the Committee referred therein the Order dated 22/01/2020. Hon'ble NGT after examining the Joint Committee report and the objections filed by the applicant an Order dated 14/9/2020 was passed in the above matter and directed the same committee constituted for further report and also to ascertain the objection raised by the applicant. The joint committee submitted the report on 21/01/2021 to Hon'ble NGT, the Tribunal after examining the joint committee report issued directions to concerned respondents as well as to joint committee to submit further report on or before 26.03.2021. The operative part of the NGT order dated 28/01/2021 is as follows:

11. The joint committee is directed to conduct the study which has been mentioned in the recommendation by co-opting any suitable persons whose help is required for the purpose to conduct a detailed study and to submit a report to this Tribunal, so as to mitigate the situation and give proper direction to the persons who are responsible to carry out such recommendations for protecting the water body free from pollution.

12. The applicant who is present submitted that she may also be included in the committee. We direct the committee to give notice to her in advance about the date of inspection so that she can be present and give her suggestions which can also be considered by the committee and incorporate the same while compiling the report.

Joint Committee meeting with applicant:

In compliance with the Hon'ble NGT order dated 28/01/2021, joint committee had a meeting with the applicant and officials of TSPCB, HMDA, HMWS&SB Irrigation department of March 3, 2021. The officials present for the meeting is attached as Annexure 1. During the meeting, applicant made presentation on the objections filed by her for the joint committee report dated 21/01/2021 and also detailed discussion was held about the actions to be initiated for mitigation of pollution in Hussain Sagar Lake.

**2. Reply of the Joint Committee for the objections raised by the applicant dated February 8, 2021**

It was informed by the applicant that as per the direction of Hon'ble NGT an objection was filed at NGT for the Joint Committee report dated January 21, 2021. However the Joint Committee had no knowledge about the objections and requested the applicant to provide a copy so that the reply can be made.

The point wise reply of the Joint Committee for the objection raised by an applicant is depicted in the table below:

<i>s.</i>	<i>Objection raised by applicant</i>	<i>Reply by Joint Committee</i>
1	While the NGT order cited by the Joint Committee of 21 January 2020 permitting the Committee 'to co-opt any expert member whom	The Hon'ble NGT in its order dated January 21, 2020 constituted joint committee and given liberty to co-opt any

	<p>they feel necessary for the purpose of undertaking this aspect.', and TSPCB as the nodal agency. the Committee report has committed contempt of the Tribunal order as follows: 'The second Committee meeting and site inspection was held on 15.12.2020 and 16.12.2020 respectively, comprising the following Committee members with officials from TSPCB, HMDA &amp; HMWSSB'. Hence, the site visit and report borne out of this visit and meeting is not within ambit of NGT order and appears seriously influenced.</p>	<p>expert member whom they feel necessary for the purpose of undertaking any study. The Joint Committee did not feel necessary for co-opting any expert member as no detailed study was undertaken.</p>
<p>2</p>	<p>In spite of the Applicant raising objections of not being informed of the site visit in march 2020 by the Committee and not being called to take her observations/suggestions, in her reply dated 25 August 2020, yet again the Committee visits on 15 and 16th of December 2020 without calling the Applicant and without taking her objections, while the NGT order directs the Committee to ascertain the objections raised by the applicant, the Committee demonstrated that they are not serious about the objections raised by Applicant not about the NGT order of 14 September 2020.</p>	<p>The Hon'ble NGT in its order dated January 21, 2020 and September 14, 2020 directed the Joint Committee constituted to ascertain the objections raised by the applicant and did not direct to involve in inspections and call for the meeting. Hence the joint committee acted according to the direction to the Hon'ble NGT.</p>
<p>3</p>	<p>The Committee has been appraised about the illegality involved in the contract to M/s Matrix Environment Llc, with substantiations, through the applicant's reply of 25 August 2020 from item number 13(a) to (f), 14, 15, 16, 17 and 30. It is pertinent to note that the Committee in its report of 17 August 2020 stated at item 6(ii) But the Committee did not receive only technical documents about this work. ' While, corruption is writ large in the M/s Matrix Environment INC</p>	<p>The bio-remediation work of Hussain Sagar Lake allocated to M/s Matrix Environment INC, Bahadupura, Hyderabad is an State affair. The Joint Committee has no role in questioning the work of the State Government. The Joint Committee was constituted to consider the objections raised by the parties to the earlier report of 2015 and to submit the consolidated report on the ToR given by</p>

	Bahadupura, Hyderabad' affair as corroborated from the detailed digital and on-ground research Findings stated in the reply of 25 August 2020. It	the Tribunal in the order dated 26 <sup>th</sup> May, 2015.
	is appalling that the Committee did not raise any question on the findings and did not seek any documentary evidence from the respondents.	
4	The Applicant submits that the Committee disregarded the industrious labour put in by the applicant on the crux issue of this petition that is to clean Hussain Sagar and the respondents were gaming around by giving contracts to companies that does not even figure on website of HMDA or on the website of the 'M/s Matrix Environment INC, Baliadurpura, Hyderabad' and does not give any document to the Committee. This Tribunal may proceed against the respondents for the corruption and for the silence/endorsement on the corruption respectively.	Not applicable to Joint Committee, HMDA may reply for this.
5	<p><b>WHAT THE JOINT COMMITTEE FAILED TO ELICIT FROM THE HMDA:</b></p> <p>Current online findings regarding M/s Matrix Environment INC, Bahaduipura, Hyderabad' are as follows:</p> <p>a) An online search (www.matrixenviro.co nand <a href="http://www.matrixenvironmen">http://www.matrixenvironmen</a>) reveals two websites when searched for M/s Matrix Environment INC, Bahadurpura that HMDA claims to have used bio remediation methods to clean Hussain Sagar. Further, the website <a href="http://www.matrixenvironinent.com">http://www.matrixenvironinent.com</a> reveals a page <a href="http://www.matrixenvironment.com/cleaning-up-Hussain-Sagar-Lake">http://www.matrixenvironment.com/cleaning-up-Hussain-Sagar-Lake</a> where it is observed that all previous information furnished by the Applicant is not available on the website now. Only general information of EzOx system is provided.</p> <p>B) Even the youtube link on this Hussain sagar lake.html shows 'Video unavailable'.</p> <p>C) What is mentioned as part of tender notice is</p>	The joint committee inspected the site in order to submit report on the ToR given to the Committee. The Joint Committee no where recommended the work to M/s Matrix Environment INC. Further, the Committee is not having any role to play on examining the tenders floated by the State Authority. The State Authority concerned way submit detailed reply in ttiis regard to the Hon'ble Tribunal, serving a copy to all the concerned.

that the company should have proven expertise and experience with various other conditions. Below extract from tender notice of 28.10.2019 and 7.12.2020:

*'3. The agency shall have demonstrated experience of pollution elimination or abatement projects by remediation techniques with a proven track record of using their patented technology With official demonstration and the site references. In addition to this, the bidders shall submit CV of the principle investigators who has developed the Remediation process and its success at various Projects completed along with sustainability of intervention by the bidder*

D) The Committee has not done the preliminary research even during its second visit in spite of applicant appealing and industriously giving all details of fraud of HMDA Matrix Environment Inc links. Whereas a preliminary investigation, if done sincerely would have revealed that from October 2017 to March 2018, all the waste waters were allowed directly into Hussain Sagar. Further, from April 2018 to June 2019 N ACOF, a Bengaluru based company has used EM spray solution and EM Bokashi balls in Hussain Sagar which as per media reports was not satisfactory. Further, HMDA states 'in continuation', a Canadian company was given bioremediation contract from March 2020 to August 2020. This is surprisingly being mentioned only in the tender notice issued on 07.12.2020, i.e., ten days before the Committee makes its second visit to the site.

E) In the earlier objections to Committee report of 25 August 2020, it was submitted that a page on the website has a tab 'Hussain Sagar' Lake' <http://www.inatrixenvironment.com/Cleaning-up-Hussain-Sagar-Lake.html> with the following claims: 'HMDA had expressed satisfaction with the **implementation of the free pilot project for improvement of quality of the lake water with Canadian innovative technology**', the same page when viewed on 4 February 2021 does not carry the name of Hussain Sagar in its entire website.

F) On 21 August 2020, web page <http://www.matrixenvironment.com/Information.html> carried names of Hassan Ahmed and Naseer

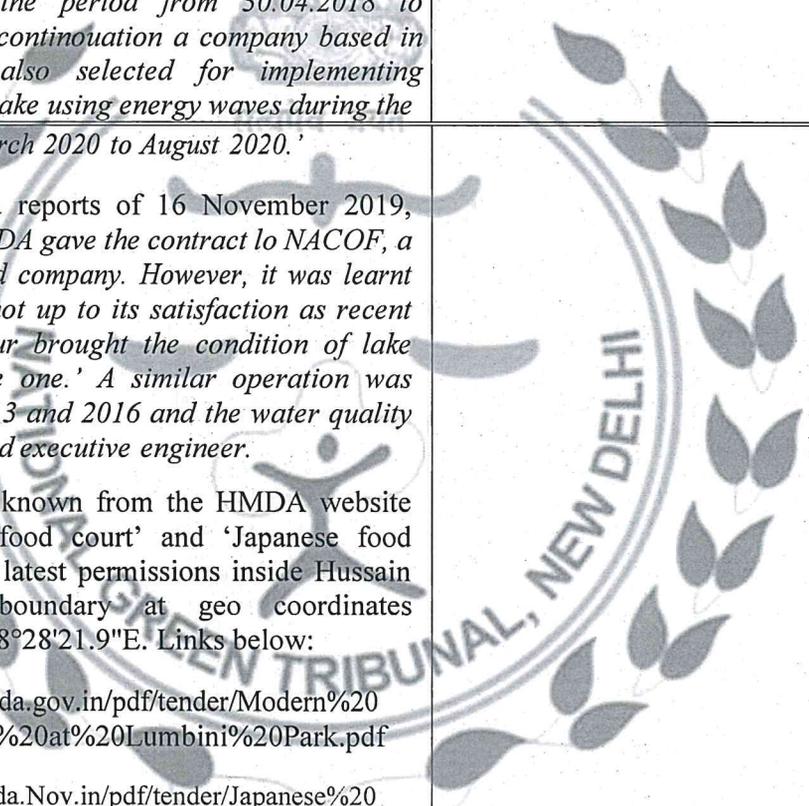
Mehdi Khan among others; the same page when viewed on 4 February 2021 does carry any name except the name as 'CEO, Mr. Robert Boivin. No contact tab on website. No contacts on webpage except that of 'robert@robertbovin.com

G) Such a company is again mentioned by the Committee in the latest report of 22 January 2021 at item no. 3 para 1 of M/s Matrix environment (INC that was stated in first report of the Committee is missing) connected the work in the Month of March 2020 and continued till August 2020. The bio-remediation of Hussain Sagar has been stopped. HMDA has again prepared a new RFP for remediation of lake and global tenders are invited. The Tribunal may direct the Committee to submit what are the documents and field survey done to ascertain the claims above regarding bioremediation of Matrix environment, which the applicant claims as dubious in her reply dated 25 August 2020 itself.

*Hussain Sagar waters a playground for corruption contracts:*

*Upon further finding, it is revealed that HMDA called for global tenders on 28.10.2013 and 07.12.2020 as evidenced in [https://hmda.gov.in/pdf.six\\_tender.pdf](https://hmda.gov.in/pdf.six_tender.pdf) and [https://hmda.gov.in/pdf.tender.tender%20notice%200 dt. 07.12.2020% modified.pdf](https://hmda.gov.in/pdf.tender.tender%20notice%200%20dt.%2007.12.2020%20modified.pdf). As per tender notice of 28.10.2019, it is mentioned that due to operational issues and repairs in the trunk sewers from October, 2017 to March 2018, the sewage was discharged into the lake from Balkapur Nala and Banjara Nala resulting in the reduction of DO and increase of BoD values.*

*Further the tender notice also details that 'on completion of the repairs and rectifications of the pipeline sewage was diverted. HMDA has issued RFP to Design, procure, implement proven technology interventions to arrest odour nuisance, algal blooms and to improve water quality and on receipt of the proposals and on recommendations of the Expert Committee awarded the work to an agency with objective and scope of work mentioned for one year. The agency has carried out the treatment process (Bioremediation intervention using EM Technology products) for the period from 30.04.2018 to 30.06.2019. During the intervention, the agency has sprayed EM solution concentrate of Microbes in the lake and*

<p><i>Bokashi Balls (EM Mud Balls)</i></p> <p><i>I) Further as per the Tender notice dated 07.12.2020, it is understood that EM technology was used from 30.04.2018 to 30.06.2019 and another Canadian based company was selected for remediation of lake using energy waves from March 2020 to August 2020. Earlier HMDA has issued RFP to Design, procure, implement proven technology interventions to arrest odour nuisance, algal blooms and to improve water quality and on receipt of the proposals and on recommendations of the Expert Committee awarded the work to an agency with objective and scope of work mentioned for one year. In this regard, the agency selected carried out the Bioremediation interventions that are based on EM Technology products, for the period from 30.04.2018 to 30.06.2019. In continuation a company based in Canada was also selected for implementing remediation of lake using energy waves during the</i></p>	
<p><i>period from March 2020 to August 2020.'</i></p> <p><i>Through media reports of 16 November 2019, 'Last year, HMDA gave the contract to NACOF, a Bengaluru-based company. However, it was learnt fee work was not up to its satisfaction as recent heavy downpour brought the condition of lake back to square one.' A similar operation was taken up in 2013 and 2016 and the water quality improved, added executive engineer.</i></p> <p><i>I) It is further known from the HMDA website that 'Modern food court' and 'Japanese food courts' are the latest permissions inside Hussain Sagar FTL boundary at geo coordinates 17°24'37.4"N 78°28'21.9"E. Links below:</i></p> <p><i><a href="https://www.hmda.gov.in/pdf/tender/Modern%20Food%20court%20at%20Lumbini%20Park.pdf">https://www.hmda.gov.in/pdf/tender/Modern%20Food%20court%20at%20Lumbini%20Park.pdf</a></i></p> <p><i><a href="https://www.hmda.Nov.in/pdf/tender/Japanese%20Model%20Food%20Court%20at%20Peoples%20Plaza.pdf">https://www.hmda.Nov.in/pdf/tender/Japanese%20Model%20Food%20Court%20at%20Peoples%20Plaza.pdf</a></i></p> <p><i>K) Further, HMDA called for tenders for Hussain Sagar Lake Master Plan and Landscape Re-development'. A master plan of Hussain Sagar is not known to the Committee in spite of two visits so far.</i></p> <p><i><a href="https://www.wmfi8a.gov.in/pdf/tender/Tender%20notice%20for%20HSI..ndf">https://www.wmfi8a.gov.in/pdf/tender/Tender%20notice%20for%20HSI..ndf</a></i></p>	

	<p>HYDERABAD METROPOLITAN DEVELOPMENT AUTHORITY Office of the Chief Engineer block-C, 2ndFloor, HMDA Complex, Tamaka, Secunderabad —500 007 Tender Notice No. HMDA/DEV7CE7 28/2019-20 Date. 02-03-2020 Hyderabad Metropolitan Development Authority invites /invitation for Request For Proposal (RFP) for Providing Consultancy Services for Hussain Sagar Lake Master Plan arid Landscape Re-development from the reputed National agencies in single stage three over .sys/ert (Cover-I—Eligibility Criteria, Cover-II— Technical Proposals, Cover-III—Financial Proposals). The detailed scope of work, eligibility criteria and other details can be seen in RFP on website /http://tender.telangana.gov.in</p> <p>L) The HMDA issues tender notice on 2.11.2020 for Lake Front Night Bazaar across lengthy shoreline of Hussain sagar, a source of pollution, concretization and that which is prohibited for healthy lake environment.</p> <p>HYDERABAD METROPOLITAN DEVELOPMENT AUTHORITY Office of the Chief</p>	
	<p>Engineer 7th floor East Wing, Swarna Jayanti Complex, Aneerpet Hyderabad -500038 Tender Notice No. HMDA/DEV7CE/13/2020-21Date.02-11-2020 Hyderabad Metropolitan Development Authority is issuing the Request or Proposal (RFP) /&gt; “Grant of License for Design, Procurement, Development, Operation and Maintenance of Lake Front Night Bazaar along the.shoreline of Hussein SagarLake between Snjeevaiah park and Buddha Bhavan., Hyderabad, Telengana. The details scope of work, eligibility criteria and other details can be seen in RFP on website (http://tender.telangana.gov.in.)</p>	
<p>6</p>	<p>The Committee ought to have prudently questioned the science and sense of ‘erecting concrete barriers built in nallahs to prevent sewage’. The Applicant has been repeatedly citing</p>	<p>The figure I of the Joint Committee report dated January 21, 2021 is the map showing the proposed project plan by HMDA and HM WS&amp;SB.</p>

	<p>about handling treating sewage/industrial pollutants at source and in the vicinity and not to transport it across terrain through kilometers of pipelines. Unsustainability and unscientific approach of piped transportation of waste waters but the same has not been considered by respondents. The Figure I should be given in full size format for full understanding. The present figure is not at all readable. Purpose of such unreadable submission of an important figure is beyond comprehension. Suggestions can be given only after studying the figure.</p>	<p>The copy of the Figure 1 (Map) was provided by the HMDA.</p>
<p>7</p>	<p>Point 7 and 8 of the Applicant's reply dated 25 August 2020, the applicant had submitted that out of 9 locations mentioned by the Committee, the outflow channel that flows right through the respondent GHMC office was not surveyed/sampled. Even the geo coordinates and geo tagged picture were provided to substantiate the objection.</p>	<p>The Hussainsagar Lake has two outlets, one at Near Viceroy Hotel and another one at GHMC Office. The joint committee decided to collect the sample at the Viceroy Hotel since the flow was moderate and that point is also included in the National Water Quality Monitoring Programme by Telangana State Pollution Control Board.</p>
<p>8</p>	<p>At item 12, the Applicant sought for re-use of the treated waste waters as emphasized by Supreme Court Monitoring Committee. Treating and re-using the waters is the only way to stop piping of waste waters and obtaining clean lakes. The reply of the Applicant dated 25 August 2020 and the reply of the Applicant to the reports filed by the State on 12 September 2020 and 23 September 2020 may be taken on record for suggestions/alternatives.</p>	<p>The Joint Committee in its report dated January 21, 2021 has already recommended that treated sewage shall be reused for other purposes than discharging into lake.</p>
<p>9</p>	<p>The Applicant reproduces below the objection and concern raised at point 23 regarding Secretariat debris. There is not a single proof that the debris</p>	<p>Regarding the demolition of Secretariat building, the matter is being separately dealt by this Hon'ble NGT in the O. A.</p>
	<p>of the Secretariat of more than 10 lac sq ft would need around 30,000 sq mtrs of land when piled up to a height of five to six meters, has been actually transported from demolished site to Jeediinetla plant as being claimed. No picture of the estimated 5000 trucks told to having carried debris is available in the entire media noi' given by government. This should definitely have been done by issuing a contract to shift the debris to the</p>	<p>No. 107 of 2020 in the matter of Antiivtila Revanth Reddy Vs. Union of India&amp; Ors., wherein the Joint Committee already submitted the report and the matter is still pending before the Hon'ble Tribunal.</p>

plant as claimed by government. The issue that was raised by the Applicant is that all the debris has been dumped in the Hussain sagar the waters of which are on the borders of secretariat. Committee did not address the serious issue raised by Applicant. OA 107/2020 pointed out by Committee does not raise this issue at all.

*'MAMMOOTH VOLUME OF DEBRIS DUMPED IN HUSSAIN SAGAR*

*23. It is submitted that there is no plan as to where the debris would be taken. Debris of more than 10 lac. Sq ft would need around 30,000 sq mtrs of land when piled up to a height of five to six meters. It is very pertinent to note there that from July 7 till date there is not a single picture that has been given either by the State Government through press release or did any journalist get any picture of any vehicle carrying the debris of the secretariat outside the demolition site. It is submitted that nobody knows where the debris is dumped as there is no official document release on the demolition and construction of the secretariat. Even the official page of Telangana CMO from where there are communications on daily basis contain any information where the demolition waste has been taken. Whereas, on 27.07.2020, prominent newspaper carried the news that more than 4500 truckloads of debris could be generated and more than 2000 truckloads of debris has been removed from the debris site. With no site mentioned officially and with no picture from any news agency regarding disposal of construction waste, it is apprehended that the debris could have been dumped in the Hussain Sagar lake, which would be an illegal act and highly unethical on part of the Government.*

10	Figure 1 annexed shows the official geo coordinates and kml drawn on google earth satellite imagery depicting the site area of "Secretariat Complex" brazenly cuts through the official FTL boundary given to the applicant and is a preminent source of pollution, and another high rise Structure 'Telengana martyr' tinder construction right inside the FTL barely few	The Joint Committee requested Irrigation department to clarify/ provide information about the FTL of the Lake, however no information has been provided by the irrigation department till now.
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	meters from Secretariats complex' just across the eastern road.	
11	The Committee report states that repair works to surplus weir will be completed by this year-end to bring total weir portion to its original level. The question about the lowered weir has not been answered by the Committee. The very FTL of Hussain Sagar has been tampered by the respondents due to lowering of the weir. The lake bed was exposed and further dumped near the Kukatpally nalla side and thus 10 acres had been plotted right inside the FTL of Hussain sagar.	The Joint Committee requested irrigation department to clarify/ provide information about the FTL of the Lake, however no information has been provided by the irrigation department till now.
12	Once again Matrix Environmental Inc is cited as example to have done bio remediation without any proof. See above all findings from 3, 4(a) to 4(in) and findings in the reply filed by the Applicant on 25 August 2020, from item number 13(a) to (f), 14, 15, 16, 17 and 30. Item numbers from 48 to 57 in the reply of the Applicant dated 25 august 2020 to Committee report dated 17 august 2020 may be referred by the Committee along with item numbers 4 to 39 in the reply of the Applicant dated 12 Sep 2020 to report filed by the State dated 20 August 2020 and item numbers 1 to 14 in the reply filed by the Applicant dated 22 Sep 2020 to report filed by the State dated 12 Sep 2020.	The Joint Committee nowhere recommended the work to M/s Matrix Environment INC. Further, the Committee is not having any role to play on examining the tenders floated by the State Authority.

#### 4. Progress of action taken by HMWSSB to prevent the untreated sewage into Hussain Sagar Lake

Reportedly HM WSSB had engaged M/s Shah Technical Consultants to prepare Comprehensive Sewerage Master Plan in Hyderabad Urban Agglomeration (HUA) up to Outer Ring Road (ORR). The projected sewage generation for the year-2021 is 1960 MLD out of which the existing treatment capacity available is 772.3 MLD. The gap of 1187.7 MLD of sewage flows through 185 drains and joins various water bodies which in turn joins river Musi and Nakkavagu.

The Telengana Government has accorded administrative sanction for construction of 17 STPs (Package I) with a capacity of 376.5 MLD vide GO Rt.No.374, MAUD, dt: 11 .09.2020 under HAM mode of contract with 40% fund by State Government & 60 % by the contractor in the Hussain Sagar Lake - Kukatpally Nala Catchment area. The online e-Tenders were invited vide EP No.06/CGM(E)/PCC-II/ STPs Hussain Sagar lake, Kukatpally Nala Catchment/2020-21, dt: 23.09.2020 with due date on 5.12.2020. Further as per bid conditions, a pre-bid meeting was

convened on 24.11.2020 and was attended by 17 Nos of prospective bidders and various clarifications sought by bidders were clarified. As per the request of the bidders, the last date for submission of bids was extended to 6.12.2020. The online Technical Bid under e-Procurement platform was opened on 6.12.2020 and found that no bids were received for the above tender. The bids were re-called and tender process was successfully completed and HM WSSB has submitted to Telangana Government for issue of work order. It was informed by HM WSSB that 2 years time is required for the construction of STPs.

HMWSSB has proposed laying sewer collection network to convey sewage to proposed 17 STPs in the Kukatpally catchment area i.e. upstream of the Hussain Sagar Lake catchment and proposals submitted to Telangana Government for approval.

The proposed 17 STPs are as follows:

S. No.	Location	Capacity in MLD
1	Ambar Cheruvu (Pragathi Nagar)	37.00
2	Chinna Maisamma	14.50
3	Nalla Cheruvu (Kukatpally)	15.00
4	Khajakunta	22.00
5	Yellammakunta Lake (Maya Nagar)	13.50
6	Fathe Nagar	100.00
7	Vennelagadda	5.00
8	Gayatri Nagar (Chintal)	5.00
9	Fox Sagar Lake	14.00
10	Shivalaya Nagar Cheruvu	14.00
11	Pariki Cheruvu (Kandri Gutta)	28.00
1.2	Dhurgam Cheruvu	7.00
13	Khajaguda	21.00
14	Miyapur Patel Cheruvu	7.00
1.5	Gangaram Cheruvu	20.00
1.6	Mullakathuva Cheruvu	33.50
17	Kamuni Cheruvu	20.00
<b>Total</b>		<b>376.5</b>

### **Progress of action taken by HMDA for the Bio-remediation of Hussain Sagar Lake**

HMDA had invited Global Invitation for Request for Proposal (RFP) to "Design, Procure, Implement Proven Technological interventions for odour nuisance, algal blooms and to improve the water quality of Hussain Sagar Lake". The Expert Committee was constituted as per the orders of the Prl. Secy. To Govt., MA & UD Dept. comprising of Environmental Scientist from TSPCB, Professor IITH, Professor & Head Micro Biological JNTU, Special Advisor Projects, Chief Scientist EPTRI and CGM HGC L. It was informed that the committee was constituted for the purpose of short listing, and to evaluate for calling bidders to present their technology by way of presentation before the Committee so as to select the bidders based on the technology suitable for Hussain Sagar Lake. Following six (6) agencies submitted the proposals and made presentation on their technological interventions before the Committee and the finalization of tender is under progress. HMDA provided the copy of RFP to the Joint committee members and is enclosed as Annexure 2.

- i. M/s Vasathi Housing Ltd.
- ii. M/s Randhawa Brosons Enterprises
- iii. M/s NACOF
- iv. M/s K.N Bio-Science (India) Pvt. Ltd.
- v. M/s Cleantec Infra Pvt. Ltd.
- vi. M/s Aria Palley Infrastructure

#### **5. Conclusions of Joint Committee**

Following conclusions are based on the discussion held and documents provided by concerned departments:

- i. HM WSSB has completed tender process for the construction of 17 STPs in the Hussain Sagar Lake - Krikatpally Nala Catchment area.
- ii. HM WSSB has proposed laying sewer collection network to convey sewage to proposed 17 STPs in the Kukatpally catchment area and waiting for the approval from the State Government.
- iii. HMDA had invited Global tender for Request for Proposals (RFP) to improve the water quality of Hussain Sagar Lake through Bio-remediation. The finalization of tender is under progress.

#### **6. Recommendations of the Joint Committee**

After discussion & reviewing of the progress of action taken by the concerned departments viz. HMDA, HMWSSB and irrigation department, the Joint Committee requested the Hon'ble NGT to issue suitable directions to concerned departments for submitting the time

bound action plan to comply with the following directions to improve the water quality of the Hussain Sagar Lake.

- i. The GHMC which is responsible for the sewage management and solid waste in the Hyderabad has not attended any of the meeting conducted by the Joint Committee in spite of informing the meeting schedules.
- ii. GHMC to quantify the sewage generated in the entire city and submit a time bound action plan for the treatment of the entire sewage generated in the Hyderabad city limits.
- iii. To ensure full-fledged operation of Solid waste management system including door to door collection with segregation of wet and dry waste. To ensure that no solid waste/ garbage find its way to water bodies either by dumping/throwing in the vicinity of water bodies.
- iv. HMDA has once again called a global tender for the Bio-remediation of Hussain Sagar Lake, without tapping the pollution at the source a fruitful result cannot be borne. The reply may be given for the queries raised by applicant regarding the bio-remediation carried out by M/s Matrix Environmental Inc, Hyderabad and the tender issued for 'Modern food court' and 'Japanese food courts' at the boundary of the Hussain Sagar Lake.
- v. HMDA to ensure the regular operation of STPs maintained by their and to reuse the entire treated sewage than discharging into the Lake/ water bodies.
- vi. To submit a time bound action plan for the construction & operation of the proposed 17 STPs at the Kukatpally catchment area. To ensure that laying sewer collection network to convey sewage to proposed 17 STPs is completed at par with the proposed STPs, a time bound action plan may also be provided.
- vii. The irrigation department may provide the requested information about the Full Tank Level (FTL) and repair of the surplus weir near the Viceroy Hotel.
- viii. After discussing with the concerned Department of the State Government, it was learnt that the FTL, Sluice gates in the Lake & Surplus weirs comes under Irrigation Department the maintenance of Lake, STPs around the lake and the I&D structure built at the mouth of the Hussain Sagar lake come under the HMDA. The drains carrying the sewage to the water bodies comes under the purview of G HMC and the construction of STPs to treat the sewage generated by the city is with the HM WSS B.
- ix. The concerned Department shall upload the work carried by them to improve the water quality of the Lake in their respective website for the public access.

### 7.Submission of Joint Committee

The Joint Committee (JC) constituted by the Hon'ble NGT humbly prays that this JC has regularly filed their report in regular intervals and assisting this Hon'ble Tribunal for giving directions to the concerned Party/ Authority in the proceedings. Further this Hon'ble Tribunal may give directions to respective departments for improving the water quality as suggested by this JC. Hence it is prayed that this Hon'ble Tribunal may discharge the Joint Committee by considering their report.

5. Learned Counsel appearing for the applicant submitted that they have not answered the objections raised by the applicant to the earlier report and that nothing was mentioned about the dumping of construction debris which was generated due to demolition of old Secretariat building and their case was that though the contracts were given to several persons for transporting the construction and demolition waste that was generated due to demolition of old Secretariat building. In fact the debris was not transported to the actual land-fill or disposal facility provided for such debris and that has been deposited by them in the Hussain Sagar Lake itself and the case mentioned as O.A. No. 107/2020 does not relate to this aspect but the Committee had said that they have filed a detailed report in O.A. No. 107/2020 and they have not mentioned anything about the same in this report in spite of the fact that specific objection has been raised.
6. Further, the applicant raised objections that in the guise of repairing the surplus weir, there was tampering of the FTL of the Hussain Sagar Lake by lowering the weir and the lake bed was exposed and further material was dumped near the Kukatpally nalla side and thus 10 acres had been

plotted right inside the FTL of Hussain Sagar Lake. But the Joint Committee in their answer mentioned that the Joint Committee requested Irrigation department to clarify/provide information about the FTL of the Lake, however, no information has been provided by the irrigation department till now. Further in the recommendation portion, it was mentioned that the Greater Hyderabad Municipal Corporation who is responsible for sewage management and solid waste management in Hyderabad has not attended any of the meeting conducted by the Joint Committee in spite of informing the meeting schedules. These two pitfalls pointed out by the Joint Committee in the report show the lack of responsibility on the part of the concerned department to answer the query raised by the Joint Committee for the purpose of filing a detailed report which was directed by this Tribunal, which deals with pollution caused to Hussain Sagar Lake, one of the famous and ancient lake in Hyderabad. When this was pointed out Mr. Ramchandra Rao, Learned Additional Advocate General, who was present for appearing in another matter and Ms. H. Yasmeen Ali, Learned Counsel for the State of Telengana submitted that they will look into those allegations and cooperate with the Committee in answering the queries made by them. Learned Counsel appearing for the State of Telengana also submitted that they want to file a detailed report regarding interim measures taken by them on the basis of the recommendations given.

7. Let the independent Departments may file their progress report regarding the implementation of the directions and recommendations made by the Joint Committee and submit their detailed reports to this Tribunal. But at the same time they are also directed to furnish the details required by the Joint Committee and attend the Joint Committee meetings and appraise the progress of the work done by them so that the Joint Committee can also conduct further inspection and conduct further analysis of the water quality and then submit a further report to the Tribunal regarding the improvement caused to Hussain Sagar Lake on account of the temporary measures that has been said to have been taken by the respective Departments till long term measures are completed and also answer the specific objection raised and referred to by us in the earlier paragraphs.
8. The Joint Committee is also directed to answer the objections raised by the applicant regarding the dumping of construction and demolition of debris generated due to the demolition of old Secretariat building in the report, even if they have filed a detailed report in O.A. No. 107/2020, they ought to have mentioned about the nature of report regarding this aspect and its impact on Hussain Sagar Lake in this case also as it is a specific case relating to the remedial measures to save Hussain Sagar Lake from pollution and encroachments. If the concerned departments, namely, Irrigation and Greater Hyderabad Municipal Corporation did not attend and furnish the details and cooperated with the Joint Committee in

carrying out the inspection and submission of report, then their impertinent attitude of not attending the meetings or furnishing the details which they are expected to avoid as being the regulator, they have got the responsibility to protect environment and it is a onerous duty cast on them under the Constitution of India as well will be seriously viewed by this Tribunal and appropriate punitive measures against such erring officers will be taken/initiated.

9. The Joint Committee is directed to collect the details and file further progress report and also status of compliance of the recommendation made by the Joint Committee by the respective Departments and also suggest improvement that has been made on account of the temporary measures taken by them and if there is any gap, they are directed to furnish further recommendations for improving the situation.
10. The respective Departments are also directed to file their action taken report on the basis of the recommendations made by the Joint Committee and the Joint Committee is also directed to file further report on or before 23.08.2021 by e-filing in the form of searchable PDF/OCR supportable PDF and not in the form of image PDF along with necessary hardcopies to be produced as per Rules.
11. The Registry is directed to communicate this order to the members of the Committee, official respondents and also to Chief Secretary, State of Telengana and Principal Secretary for Environment, Local Administration,

Irrigation and Public Works Department for information and also instruct their officials to comply with the direction of this Tribunal and submit progress report to this Tribunal as directed without fail making all necessary details which will be helpful for this Tribunal to dispose of the case effectively.

**M.A. No. 174 of 2016**

12. The Joint Committee is also directed to consider the prayer mentioned in M.A. No. 174/2016, namely, the flood control system constructed by the respondents including sluices and other necessary structures as suggested by the members of the Supreme Court appointed Committee, namely, Prof R.C. Reddy and Mr. Sagar Dhara and submit about the allegations made in the application as well when they are filing the Joint Committee report.
13. With the above observation, we are disposing M.A. No. 174 of 2016. M.A. No. 174 of 2016 is dispose of accordingly. The Registry is directed to furnish the copy of the affidavit and the prayer in the M.A. No. 174 of 2016 to the members of the Committee so that they can go into the issue as well while submitting the report as well.

**M.A. No. 232 of 2016**

14. This application was filed by the applicant to initiate contempt proceedings against the respondents in terms of the Sections 26 and 28 of National Green Tribunal Act, 2010 for wilful disobedience of the orders of the Hon'ble Tribunal dated 01.05.2020 in O.A. No. 85/2015. It is alleged

in application that in violation of the interim order passed by this Tribunal dated 01.05.2015, the official respondents are acting. It may be mentioned here that after passing this order by the Tribunal, this Tribunal had appointed a joint Committee to go into the question and file report regarding the same and this Tribunal is considering those reports periodically. The question as to whether they have deliberately violated the interim order passed by this Tribunal and whether that is justified for reasons taking into account as part of disaster management which is likely to arise, then those aspects will have to be considered by this Tribunal while deciding the matter finally. If this Tribunal finds that there was any wilful violation or disobedience of the order passed by this Tribunal, then that issue will also be considered by this Tribunal while deciding the case finally depending upon the nature of evidences available and facts to be considered by this Tribunal as it is a matter relating to penal action against the officials if they have wilfully violated the directions issued by this Tribunal. However, we direct the official respondents, against whom such allegations have been made, are directed to file their independent counter statement regarding the allegations made which can also be considered by this Tribunal while disposing the case finally.

15. With the above observations, M.A. No. 232 of 2016 is also disposed of.

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16. For consideration of further report, post on 23.08.2021.

.....J.M.  
(Justice K. Ramakrishnan)

.....E.M.  
(Shri. Dr. K. Satyagopal)

O.A. No.85/2015 (SZ)&  
M.A.No. 174/2016 & 232/2016  
8<sup>th</sup> July, 2021. (AM)

