

BEFORE THE NATIONAL GREEN TRIBUNAL  
(SOUTHERN ZONE) CHENNAI

ORIGINAL APPLICATION No. 208 OF 2025  
[EARLIER ORIGINAL APPLICATION NO. 443 OF 2025(PB)]

IN THE MATTER OF:

Tribunal on its own motion SUO MOTU based on the News Item in titled "Well water could be source of infection for PAM cases: officials appearing in the HINDU dated 22.08.2025"

With

Kerala State Pollution Control Board and Ors.

...RESPONDENT(S)

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Signed and verified on this 27<sup>th</sup> day of January 2026 at Bengaluru

*Revathi*

REVATHI MANIVANNAN  
COUNSEL FOR CPCB

*J. Chandra Babu*  
27/1/2026  
Deponent

J. Chandra Babu  
REGIONAL DIRECTOR  
CENTRAL POLLUTION CONTROL BOARD  
REGIONAL DIRECTORATE - BENGALURU  
(MIN. OF ENV, FOREST & CC, GOVT OF INDIA)  
BENGALURU - 560 079. MOB: 9868278903



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Vs

Kerala State Pollution Control Board  
and Ors.

...RESPONDENT(S)

**REPLY ON BEHALF OF RESPONDENT NO. 2, CENTRAL POLLUTION CONTROL BOARD (CPCB) IN COMPLIANCE TO THE ORDER DATED 09.10.2025 BY HON'BLE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE), CHENNAI**

1. It is submitted that the Original Application is registered as OA No. 443/2025 by Hon'ble National Green Tribunal (NGT), Principal Bench, Delhi, Suo Motu on the basis of the news item titled "Well water could be source of infection for PAM cases: officials" appearing in The Hindu Bureau dated 22.08.2025 and the news item relates to the fact that well water could be a source of Primary Amoebic Meningoencephalitis (PAM) cases in Kozhikode District, Kerala. The said matter was then transferred to Hon'ble NGT SZ, Chennai and re-numbered as O.A. No. 208/2025 (SZ). Central Pollution Control Board has been impleaded as Respondent No. 2 and the Hon'ble Tribunal had directed the respondents to file the replies vide order dated 09.10.2025 and a copy of the order is placed at **Annexure-1.**



  
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2. The 2<sup>nd</sup> Respondent i.e., Central Pollution Control Board (here after referred to as CPCB) is constituted under The Water (Prevention and Control of Pollution) Act, 1974. It performs the functions under The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981, and The Environment (Protection) Act, 1986.
3. That, State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) in every State/Union Territory have been constituted under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 5 of the Air (Prevention and Control of Pollution) Act, 1981 and are responsible for implementation of the provisions of both the Acts and the Environment (Protection) Act, 1986 in the respective State/Union Territory.
4. That, CPCB, Regional Directorate, Bengaluru, in compliance to the Hon'ble National Green Tribunal order dated 09.10.2025 had conducted a virtual meeting on 17.12.2025 with CPCB Officials (RD Bengaluru and CPCB, Delhi) and Kerala SPCB Officials (Regional Office, Kozhikode, Kerala and Regional Office, Ernakulam, Kerala). In the said meeting, it was decided that Regional Office, KSPCB, Kozhikode, needs to share the test results of the affected well waters and other water bodies along with the assessment report already carried out by the KSPCB on the matter. Also, it was requested to Kerala SPCB to collect assessment reports/ factual report concerning the NGT matter from Health Department, Kozhikode and furnish the report to CPCB and also requested to inform Health Department, Kozhikode to carryout testing of more well water samples and other water bodies in and around the affected area for PAM detection and also to assess possible source of contamination and for submission of the assessment report, on priority to enable to take further actions in compliance to the Hon'ble NGT directions. *A copy of the minutes of the meeting held on 17.12.2025 is enclosed as **Annexure-II**.* In addition to the above, CPCB, RD, Bengaluru vide letter dated 23.12.2025 also coordinated with District Collector,



  
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Kozhikode, and District Health Officer, Kozhikode to share the available analysis reports/ test result of the affected well water concerned with the above matter already conducted by the State Health Department, Kerala to CPCB.

5. It is humbly submitted that information on the above matter vide Regional Directorate, CPCB, Bengaluru letter dated 02.01.2026 also sought from National Centre for Disease Control (NCDC), to share assessment report with CPCB, including the causes and sources of spread of Amoebic Meningoencephalitis based on the study carried out by NCDC and the preventive measures suggested/taken to avoid spread and occurrence of such incidence in future.
6. That, as requested in the meeting held on 17.12.2025, Regional Office, KSPCB, Kozhikode has replied that the above case was examined by the Regional Office, Kozhikode of the Kerala State Pollution Control Board and the District Medical Officer (DMO), Kozhikode was contacted to obtain the information regarding the locations of the reported PAM cases and accordingly a communication was made with District Medical Officer (DMO) requesting the details of the affected areas and other relevant information to enable verification and conduct of inspection. KSPCB has informed that DMO has furnished the requested information mentioning that a scientific Research study titled "Amoebic Meningoencephalitis outbreak in Kerala, 2025" is being conducted by the Health Department in collaboration with ICMR-National Institute of Epidemiology across four districts of Kerala, namely Kozhikode, Malappuram, Kollam and Thiruvananthapuram. In addition to it, field level data collection has been completed in Kozhikode District and is continuing in the remaining districts and that comprehensive public health and mitigation measures including house visits water sampling and chlorination drives have been carried out. A copy of the reply given by, Regional Office, Kerala State Pollution Control Board (KSPCB), Kozhikode is enclosed as **Annexure-III**.

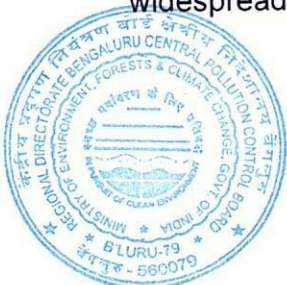


  
23/11/2026

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7. That, the Regional Office, KSPCB, Kozhikode has also informed that well water samples were collected by the Kerala Board from five houses where positive indications relating to amoeba were earlier reported and the general parameters and indicator bacteriological parameters (Total Coliform and Fecal Coliform) were analysed. Testing for amoeba has been carried out by State Public Health Laboratory, Thiruvananthapuram. KSPCB has informed that in 3 out of 5 no. of collected samples, the analysis revealed presence of Total Coliform in the range of 400 to 1900 CFU/100 ml and Fecal coliform in the range of 200 to 1400 CFU/100 ml) in the tested well water, indicating sanitary contamination. Thus, 3 out of 5 no. of samples were not complying to the BIS Drinking Water Specifications i.e., IS 10500:2012 and the contamination is likely to have arisen from nearby septic tank/soak pit or surface runoff and is of the opinion that the water tested is not suitable for drinking without adequate treatment.

8. That, In response to the letter received from CPCB dated 02.01.2026, requesting the Director of National Centre for Disease Control (NCDC) to provide 'factual assessment report' on incidence of PAM in Kerala, the NCDC, Ministry of Health and Family Welfare, Government of India has forwarded a case report of comprehensive research study titled "Primary Amoebic Meningoencephalitis in Kerala – An Emerging Public Health Concern" authored by Regu K, Rajendran R, Sayana Bhaskaran K, Anila Rajendran, and Tamizharasu W, published in the Journal of Communicable Diseases, Volume 56, Issue 1 (2024), pages 25-35, bearing File No. T-18015/062/2026 (Computer No. 8384973). The said NCDC study documents 8 confirmed PAM cases reported from Kerala districts (2 cases from Alappuzha, 2 cases from Thrissur, 3 cases from Malappuram, and 1 case from Kozhikode) during the period from March 2016 to June 2023, with all cases resulting in fatalities. The NCDC study confirms that water samples collected from contaminated canals/Pools/Ponds where patients had exposure showed growth of amoeba resembling *Naegleria fowleri*. The study emphasizes that *N. fowleri* is widespread in freshwater bodies in Kerala and recommends practical measures



  
29/1/2026  
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for prevention and control including education of the public, awareness within the medical community, and regular surveys of water sources for *N. fowleri*. These findings support the need for coordinated action between health and environmental authorities for systematic monitoring and preventive measures. A copy letter and the NCDC case report is enclosed as **Annexure-IV**.

9. That, with regards to water quality management it is informed that, Answering Respondent herein i.e CPCB in association with the SPCBs/ PCCs monitors water quality of aquatic resources in the country at 4,922 locations which includes 2,265 locations on Rivers, 587 on Lakes, 143 on Ponds, 102 on Tanks, 1,271 on Ground Water and 554 on other water bodies under the National Water Quality Monitoring Programme (NWMP). KSPCB monitors ground water quality at 03 locations in Kozhikode district under the NWMP. The ground water quality monitoring data of these 03 locations for the year 2024 is tabulated below:

Monitoring Locations	pH	Nitrate N + Nitrite N (mg/L)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)	Arsenic (mg/L)
BIS 10500: 2012 Drinking Water Specification	6.5-8.5	45			2000 (permissible)	1.5 (permissible)	0.05 (permissible)
WELL AT CHUNGAPALLY, KERALA	5.4 - 6.7	1.9 - 2.43	380 - 1100	460 - 2900	70 - 73	0.2	0.00049 - 0.015
WELL AT MAVOOR, KOZHIKKODE DISTT, KERALA	6.5 - 6.8	1.89 - 2.33	520 - 1100	800 - 2600	60 - 62	0.2	0.00049 - 0.011
WELL AT VELLIPARAMBA, KOZHEKODE	5.3 - 6.5	2.74 - 4.44	480 - 1100	820 - 2100	54 - 81	0.2	0.00049 - 0.01

Total coliform and Fecal coliform were detected in these samples.



  
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10. It is submitted that the analytical capabilities of CPCB is limited to environmental parameters and the regular monitoring is limited to indicator bacteriological parameters (Total coliform, Fecal coliform and Fecal streptococci). The analytical aspects related to the spread of Primary Amoebic Meningoencephalitis, is especially related to the testing for *Naegleria fowleri*. The matter is primarily related to the Health Departments and as already informed by Kerala SPCB, detailed studies in this respect are being conducted by the competent agencies/departments and it will be appropriate to rely upon these study reports for a root cause analysis in the matter.

In View of the above submissions, it is humbly prayed that the report with Annexures may please be taken on record. It is further submitted that CPCB shall abide by any order or directions passed by this Hon'ble Tribunal.

Dated at Bengaluru on this the 27<sup>th</sup> of January 2026



**COUNSEL FOR THE 2<sup>ND</sup> RESPONDENT**

  
27/1/2026  
**DEPONENT**

**J. Chandra Babu**  
REGIONAL DIRECTOR  
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**...RESPONDENT(S)**

**AFFIDAVIT**

I, J Chandra Babu, son of late Shri. J Balaramaiah, aged 57 years, having office at the Regional Directorate (Bengaluru), Central Pollution Control Board (CPCB), 1<sup>st</sup> & 2<sup>nd</sup> Floors, Nisarga Bhavan, A- Block, Thimmaiah Main Road, 7<sup>th</sup> D Cross, Shivanagar, Bengaluru – 560 079, Karnataka, do hereby solemnly affirm, declare on oath and state as under: -

1. That I, the deponent herein is authorized representative to represent the Respondent CPCB in the present case, and as such, I am well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent to verify, sign and swear this affidavit on behalf of the Respondent CPCB.
2. That the accompanying reply in the form a report may be read as part and parcel of the present affidavit.

3. That the accompanying reply has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the record maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.



  
27/1/2026  
DEPONENT

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### VERIFICATION

I, Jathikartha Chandra Babu, working as Scientist 'F' and presently posted as Regional Director (Bengaluru), CPCB, Regional Directorate, Bengaluru, the respondent herein do hereby Verified at Bengaluru on this day of 27<sup>th</sup> January, 2026 that the contents of the above reply are correct and true on the basis of the record of the cases as mentioned in the day to day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.

Dated on this 27<sup>th</sup> day of January, 2026



COUNSEL FOR THE 2<sup>ND</sup> RESPONDENT



  
27/1/2026  
DEPONENT

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**REPLY ON BEHALF OF**  
**RESPONDENT NO. 2, CENTRAL**  
**POLLUTION CONTROL BOARD**  
**(CPCB)**

**ADVOCATE REVATHI MANIVANNAN**  
**COUNSEL FOR CPCB**