

BEFORE THE HONOURABLE NATIONAL GREEN
TRIBUNAL

Original Application no. 74/2023 (SZ)

State of Kerala & Others : Respondent(s)

Report filed by the Chief Environmental Engineer,
Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram
on behalf of the Kerala State Pollution Control Board,
in Original Application No. 74/2023 (SZ)



Adv. Remasmrithi V.K

ADDITIONAL STANDING COUNSEL

RESPONDENT No. 3

**BEFORE THE HONOURABLE NATIONAL GREEN
TRIBUNAL**

Original Application no. 74/2023 (SZ)

Padma Kumar, Kerala

Vs.

The Chief Secretary to Government of Kerala,
Department of Environment,
Thiruvananthapuram
and Ors

...Respondents

VOLUME 1

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Dated this the 11th day of September 2023

Remasmrithi. V.K., Advocate
Additional Standing Counsel

Respondent No.3

BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL

SOUTH ZONE, CHENNAI

Original Application No.74 of 2023 (SZ)

Respondents : State of Kerala & Others

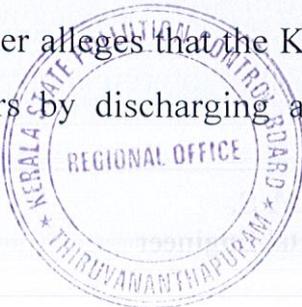
Report filed by Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram on behalf of The Kerala State Pollution Control Board, in Original Application No.74/2023.

Report filed by Smt. Sreekala S., Aged 52 years, W/o Sri. A. Viswambharan, Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram.

I, the Chief Environmental Engineer, Kerala State Pollution Control Board, (hereinafter referred to as Board), Regional Office, Thiruvananthapuram is authorized to represent the Board (3rd respondent) in the above O.A. Copy of the authorization is produced as **Annexure -I**. This Report is filed on behalf of the Kerala State Pollution Control Board, as directed by this Hon'ble NGT in its Order dated 07/08/2023. The Hon'ble NGT Principal Bench, New Delhi vide order dated 31/05/2023 had transferred the O.A. No.502 of 2022 to Southern Bench and renumbered as O.A. No.74 of 2023.

Background and status of OA. 502 /2022 :-

The Hon'ble NGT Principal Bench, New Delhi had registered a Suo Motu case in O.A No. 502/2022 based on a letter petition received from Sri. Padmakumar regarding pollution caused by M/s. Kerala Minerals and Metals Limited (KMML), situated in Chavara in Kollam district. In the above O.A., the petitioner alleges that the KMML is polluting the land and water bodies for about 30 years by discharging acid water and the area surrounding the factory has




SREEKALA S.

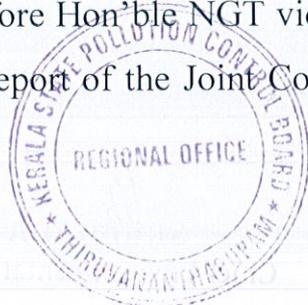
Chief Environmental Engineer

become unfit for any purpose and the villagers were forced to close the drinking water wells which were filled with acid. The petitioner further alleges that the industry is pumping acid waste directly to sea and connected lake through canals and also the Vattakkayal in Porookkara is filled with the acid clay waste polluting the environment and endangering life of the villagers.

The Hon'ble NGT vide order dated 29/08/2022 had constituted a Joint Committee comprising of Principal Secretary (Industries & NORKA), Central Pollution Control Board, State Pollution Control Board, State Wetland Authority and District Collector, Kollam and directed the joint committee to file a report after verifying the factual position. The State Pollution Control Board is the nodal agency for co- ordination and compliance. The Chief Environmental Engineer, KSPCB, Regional Office, Thiruvananthapuram is nominated as the member of the State Pollution Control Board to the above Committee vide proceedings No. PCB/HO/SEE- 1/NGT/O.A.NO.502/2022 dated 15/09/2022.

In compliance with the Hon'ble NGT order dated 29/08/2022 passed in O.A. No. 502/2022, the joint committee conducted a preliminary meeting through video conference on 11/10/2022 in the chamber of Chief Environmental Engineer, Regional Office, Thiruvananthapuram. The Joint committee conducted a site visit on 17/10/2022 to M/s KMML and its premises and collected samples from the affected areas of Ponmana, Chittoor, near the storm water discharge point of M/s. KMML, nearby canal leading to Ashtamudi Estuary, Porookkara and the Vattakkayal. The stagnant water samples and well water samples from the nearby premises of the unit, were also collected during the visit. The committee also inspected the ETP and iron oxide sludge ponds of the unit and sample from the effluent discharge point of the unit to the sea and sludge samples and tube well water samples inside the industry were collected for further analysis.

In compliance to the order, the Joint committee had submitted an interim status report before Hon'ble NGT vide email dated 29/11/2022 seeking additional time for filing report of the Joint Committee. Copy of the interim status report is




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produced herewith as **Annexure -II.**

Kerala State Pollution Control Board organised meeting of the joint committee on 01/12/2022 to discuss the analysis results of the samples collected during the visit to affected areas on 17/10/2022. The analysis results of the samples reveal that stagnant water samples collected from the nearby area of the company show acidic pH and presence of heavy metals. It is understood that the nearby area is polluted and the well water is not fit for drinking purpose. The samples collected from the ETP pond (supernatant) and treated effluent discharge outlet point of M/s. KMML shows neutral pH whereas the parameters such as Total Suspended Solids, Total Chromium, Iron, Manganese, Vanadium, and Titanium were exceeding the limits prescribed under the Integrated Consent to Operate issued to M/s. KMML, which clearly indicates that the existing effluent treatment plant is not adequate to comply to effluent discharge norms. One of the well water sample shows an acidic pH of 3.1 and the parameters such as Iron and Manganese are exceeding the limits of BIS Drinking Water Specifications i.e., IS 10500:2012. The other two well water samples shows neutral pH and the value of Iron exceeds BIS Drinking Water Specification. The tube well water samples collected from M/s. KMML shows a neutral pH of nearly 7 and also shows iron content. The tube wells are considerably deep and could be the reason for neutral pH of the water. The parameters such as Iron, Manganese, and Vanadium were present in the iron oxide sludge sample. All these parameters were exceeding the limits (as per MoEF guidelines) in the stagnant samples collected from the nearby premises. It may be inferred that there is every possibility of leakage or runoff from iron oxide sludge from the company to the nearby premises. The basic findings of the committee regarding the matter were shared with the company authorities, in compliance to the Hon'ble NGT order dated 29/08/2022.

The Joint Committee meeting was also convened on 09/12/2022 at M/s KMML and the Joint Committee held discussions with the officials of M/s. KMML on the status of remedial measures (both short term and long term

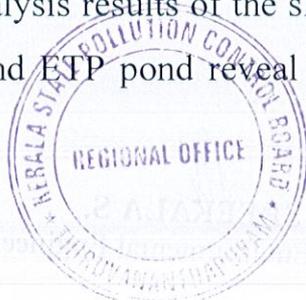



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measures) to curtail the pollution. The company authorities informed that their internal R & D team has developed a new technology of converting acidic iron oxide sludge into neutral metallic iron and the samples are sent to some steel industries and waiting for their response for utilizing as raw material. The R & D wing of M/s. KMML also came up with additional techniques which are under trial run. As a short term measure, trial for remediation of affected land is under progress and the same will be implemented to remediate the land outside outside the company premises, upon successful results. However, the permanent solution for this issue is acquisition of 76 acres of affected land around the company. Earlier 183 acres were identified and out of that 76 acres were the most affected area and the company have active plan to take up that land. The capping of the existing ponds can also be done to avoid contaminated runoff.

Subsequent to the Joint Committee meeting on 9/12/2022, Kerala State Pollution Control Board also collected samples from 14 tube wells, sludge samples from the old iron oxide pond, new iron oxide pond, ETP Pond area located within M/s. KMML. The analysis results of the 14 tube well samples reveal that the pH of the tube well water samples were within a range of 5.7-7.6 and iron content is present in all the samples in the ranges of 0.1 mg/L to 5.5 mg/L and exceeding the prescribed limits of BIS Drinking Water Specification (IS 10500:2012) except at two locations (i.e., KLMKW 13 & KLMKW 14). Manganese is present in two tube well water samples (i.e., KLMKW4 & KLMKW 13) whereas Lead (0.27 mg/L) is present in one of the sample of ground water (ie., KLMKW 11) and exceeding the prescribed limit of BIS Drinking Water Specification (IS 10500:2012). As per M/s. KMML, the depth of ground water in the tube well located within industry premises is around 250- 300 feet below ground level and probably this could be the reason, all the tube well water do not show much contamination.

The analysis results of the sludge samples of old iron oxide pond, new iron oxide pond and ETP pond reveal that pH value of sludge from new iron Oxide



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pond observed as 1 which is highly acidic and falls under the hazardous waste category and requires pre-treatment for disposal into secured landfill in accordance with the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 as amended, whereas the pH value of ETP sludge and sludge from old iron oxide pond observed as 6 and 10 respectively.

Subsequently, the Hon'ble NGT vide order dated 13/12/2022 in the above O.A., had directed the Joint committee to submit a final report by 31/01/2023 and directed all the respondents to file a report within two months by email. As per the direction from the Hon'ble NGT vide order dated 13/12/2022 in the above O.A., the Joint committee had submitted its final report before Hon'ble NGT vide email dated 31/01/2023. Copy of the final report is produced herewith as **Annexure -III**.

Based on the inspections held on 17/10/2022 and 9/12/2022, the Board had noticed that the unit is not complying with some of its consent conditions. Hence the Board had issued directions to the unit vide letter No.PCB/RO/KMML/NGT-O.A. No. 502/2022 dated 04/02/2023 to comply with conditions such as to keep the quality of treated effluent with the consent norms, to provide pH measurement facility at the outlet and maintain the records, to install the water meter to record the consumption of water, to install and maintain CAAQMS and OCEEMS and to furnish action taken report in this regard.

In concurrence to the Order dated 13/12/2022, State Pollution Control Board had submitted a report before Hon'ble NGT dated 07/02/2023. Copy of the report is produced herewith as **Annexure -IV**.

Meanwhile, the Hon'ble NGT , Principal Bench, New Delhi vide order dated 31/05/2023 had renumbered and transferred the above O.A. No.502 of 2022 to Southern Bench as O.A. No.74 of 2023. Copy of the Hon'ble NGT order is produced herewith as **Annexure -V**. The company vide letter dated 24/08/2023 has now submitted a compliance report. Copy of the compliance report of the industry is produced herewith as **Annexure -VI**.




SREEJITH S.
Chief Environmental Engineer

A preliminary inspection was conducted from District Office of the Board on 23/08/2023 to verify the status of short term and long term measures proposed by the industry. The details are as follows:

1) Garland drain was not completed around the old iron oxide pond and ETP Pond and was seen in progress. Garland drain works were not started around existing iron oxide pond.

2) The company Officials reported that patch works/land remediation studies is in progress and land remediation sample test patch area development activities started on a trial basis.

3) The company Officials informed that geotubes method has not received any approval from Government and that process modification of Acid Recovery Plant (ARP) tender approval is in progress and are currently waiting for Government sanction.

A detailed inspection on the compliance report of the industry will be conducted by the Board at the earliest.

All that stated above are true to the best of my knowledge and belief.

Dated this the 11th day of September 2023.



Chief Environmental Engineer

KSPCB
SREEKALA S.
Chief Environmental Engineer

Solemnly affirmed and signed by the deponent who is known to me on this the 11th day of September 2023

BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

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Padma Kumar, Kerala

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VERIFICATION

I, Sreekala S. , Chief Environmental Engineer, Kerala State Pollution Control Board, Regional Office, Thiruvananthapuram, The 3th respondent, do hereby verify on this the 11th day of September 2023, that all what is stated above are true and correct to the best of my knowledge, information and belief.



Sreekala S.

**Chief Environmental Engineer
KSPCB**



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HONOURABLE NATIONAL
GREEN TRIBUNAL (SZ)

OA no. 74/2023 (SZ)

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ADDITIONAL

STANDING

COUNSEL

RESPONDENT

No.3

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