

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)
IN
ORIGINAL APPLICATION NO. 24 OF 2021 (SZ)**

**JOINT COMMITTEE REPORT FILED BY THE EXECUTIVE ENGINEER,
KERALA WATER AUTHORITY / 4TH RESPONDENT**

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Dated at Chennai on this the 11th day of September 2021.

M/s. E.K.KUMARESAN

Standing Counsel for State Government of Kerala - NGT(SZ) Chennai Bench

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

Original Application No. 24 of 2021 (SZ)

IN THE MATTER OF

O.A. Ninan

... Applicant(s)

Versus

The State of Kerala and Ors.

...Respondents

**JOINT COMMITTEE REPORT FILED BY THE EXECUTIVE ENGINEER,
KERALA WATER AUTHORITY / 4TH RESPONDENT**

1. It is submitted that this Hon'ble Tribunal vide its order dated 04.02.2021 in OA No.24/2021 has appointed a Joint Committee to ascertain the genuineness of the allegations made in the above application.

2. It is submitted that a joint committee constituted as per the directions of this Hon'ble Tribunal and the proposed site for the Water Treatment Plant was visited on 14th August, 2021. All the members of the joint committee except Sri Vivek K, Senior Scientist, Representing Central Pollution Control Board, Bangalore were present during the field inspection. It is submitted that Sri Vivek K, Senior Scientist attended through ZOOM meet, considering the prevailing restrictions for interstate travel due to COVID 19.

Therefore it is most humbly prayed that this Hon'ble Tribunal may be pleased to take the said joint committee Report filed by the Executive Engineer, Kerala Water Authority on Record and thus render justice.

Dated at Chennai on this the 11th day of September, 2021



(E.K.Kumaresan)

Counsel for R4
Standing Counsel for State
Government of Kerala
NGT(SZ), Chennai Bench

**BEFORE THE HON'BLE NATIONAL
GREEN TRIBUNAL
(SOUTHERN ZONE BENCH,
CHENNAI)
OA No. 24 of 2021**

BETWEEN

O.A. Ninan

...Applicant(s)

AND

The State of Kerala and Ors.

...Respondents

**JOINT COMMITTEE REPORT FILED
BY THE EXECUTIVE ENGINEER,
KERALA WATER AUTHORITY / 4TH
RESPONDENT**

M/s. E.K.KUMARESAN

Standing counsel for Kerala (SZ)
Counsel for R1, R4 and R5

**Report of Joint Committee in the matter of OA 24 of 2021, O A
Ninan Kerala Vs the State of Kerala Thiruvananthapuram and
Others submitted before the Hon'ble National Green Tribunal,
Southern Zone, Chennai as per order dated 04/02/2021**

1.0 PREAMBLE

In the Original Application No. 24 of 2021 (O.A Ninan, Kerala. Vs The State of Kerala, Thiruvananthapuram & ors) before the Hon'ble National Green Tribunal, Southern Zone Chennai, the Hon'ble Tribunal had issued order on 04.02.2021 with the following directions:

“On going through the allegations in the application and applying the precautionary principle, we feel that the matter can be admitted and the apprehension of the applicant can be considered and allowing the project to go in an environmental friendly manner. In order to ascertain the allegations made in the application and the feasibility of the project at the present site and also regarding the scientific and environmental effect of utilising the water without having any proper treatment system of the reject water and sludge that is to be generated, we feel it appropriate to appoint a joint committee comprising of (1) the District Collector, Pathanamthitta District, State of Kerala (2) a Senior Officer from Kerala State Pollution Control Board (KSPCB) as designated by its Chairman, (3) a Senior Scientist from Central Pollution Control Board (CPCB) Regional Office, Bangalore (4) a Senior Scientist, an Officer or an Engineer of State Public Health Engineering Department from State of Kerala and (5) a Senior Officer as deputed by the Principal Secretary of Urban Development Department (UDD) of Government of Kerala to inspect the area in question

and examine the project on the basis of the allegations made by the applicant in the application and the reports relied on by the applicant and submit their report regarding the feasibility, regarding the location, any modification if any required for the purpose of dealing with the reject water and disposal of sludge that is likely to be generated and other relevant aspects which they feel necessary to make the project environment friendly.”

The State Public Health Engineering Department, (presently Kerala Water Authority), State of Kerala was identified as the nodal agency for co-ordination and for providing all necessary logistics for the committee.

2.0 INSPECTION OF THE JOINT COMMITTEE

After receiving all the required nominations, the proposed site for the Water Treatment Plant was visited on 14.08.2021 by the Joint Committee. The following members were present during the visit:

1. Dr Divya S Iyer IAS, District Collector , Pathanamthitta
2. Smt Suchitra V, Environmental Engineer representing the Kerala State Pollution Control Board, Pathanamthitta district
3. Sri Sunil. S Executive Engineer, Project Division Adoor, representing State Public Health Engineering Department
4. Sri K E Vinod Kumar, Assistant Development Commissioner and District Coordinator, Shuchitwa Mission representing the Principal Secretary of Urban Development.
5. Sri Vivek K, Senior Scientist, representing Central Pollution Control Board, Bangalore attended through ZOOM meet, considering the prevailing restrictions for interstate travel due to COVID 19 and the short notice and all the Committee members had detailed discussions and deliberations on the proposed project and the directions given by the Honble Tribunal.

Kerala Water Authority proposed to implement a water treatment plant of 40 MLD capacity with Pampa River as the source for the scheme for the general improvement of public health and social living status of people in Seven Grama Panchayaths viz. Puramattom, Kallupara, Ezhumattoor, Kunnamthanam, Eraviperoor, Koipuram and Thottappuzhassery. These are seven adjacent Grama panchayats situated in the hilly villages of Pathanamthitta District and the benefitted population of the scheme is 135928 as per the 2011 census. As per the information made available, as done in the case of every new proposal of Water Supply Schemes by Kerala Water Authority, detailed survey and investigation have been carried out for planning a viable proposal of new WSS covering the entire area of the above Panchayaths.

After conducting detailed survey, a comprehensive scheme is designed for implementation, integrating modern techniques including waste water treatment for reuse sludge handling & disposal facilities is proposed implement a Water Supply Scheme. Design of the scheme has been prepared and approved by a team of engineers who are experts in the field. The WTP is proposed in survey No 53/1 (350 cents) & 52/12 (8 cents) near Muttaman junction in Koipuram village. After fixing the suitable location/position for the WTP according to the topography, locations of other components viz Intake well, storage/service reservoirs in the seven Panchayaths were fixed. The land, bearing survey No. 53/1 (350 cents) & 52/12 (8 cents) is identified as the most suitable site for the construction of WTP as the land is having a topography to construct the components of WTP, soil is hard so as to avoid expensive piling works for foundation, site is above the maximum flood level of 2018, and treated water can be distributed within a short distance to all the Grama Panchayats.

3.0 DELIBERATIONS OF THE COMMITTEE:

It was noted during the visit that WTP is in proposal stage only and site acquisition and civil works etc. are yet to commence at the proposed site. The Joint Committee had

detailed deliberations on the major contentions raised by the petitioner regarding the feasibility, siting criteria, environmental impacts related to reject management etc. and the findings are summarized below;

a. Feasibility of the project and selection of location;

As per the information and records provided by Kerala Water Authority, the feasibility studies as per the standard procedures have been done for the project implementation and identification of the site.

As per the information and records available, the site selection was done by the KWA after conducting detailed field study by the Project Planning and Design wing (PPD) of KWA and considering all the factors such as technical and hydraulic feasibility, economic viability etc. The Committee had also referred to some of the available reference manual and as per the siting criteria provided in CPHEEO manual, clause 2.2.2, all the factors for optimal and economical utilisations such as topography, soil conditions, physical hazards including flooding has to be considered for selecting the site. The proximity of the plant to the source is not a mandatory requirement for the setting up of the plant as per the above cited guidelines and is only one of the factors to be considered.

The environmental impacts from the operation of Water Treatment Plants (WTPs) are relatively less or minimal compared to industrial activities or even residential complexes etc. and is not a scheduled activity as per the provisions of EIA notification, 2006 as amended thereof. As per the details made available to the Committee, the proposed site does not come under or adjoining with any critical environmental setting such as area under coastal regulation zone/forest/national park/wild life sanctuaries/wetlands/declared environmental or eco sensitive zones as per the prevailing rules. Hence, the proposed WTP does not attract requirement of prior Environmental Clearance as per EIA notification. It has been further submitted by KWA that an environmental consultant had also examined the site to study on the environmental sensitivity and had observed that the site is suitable.

b. Management of reject from WTP;

The principle objectives of setting up a WTP are to remove turbidity from the raw water and to disinfect it before supplying to public. The raw water quality determines the operations required in a water treatment scheme, which mainly consists of aeration, coagulation, flocculation, sedimentation, filtration and disinfection. The proposed WTP plant design by are also in similar lines and the expected sources of waste/rejects from the plant shall be the backwash water and sludge generated. Disinfection of the water is proposed to be done by injecting Chlorine gas, which is not expected to generate any waste.

Management of filter back wash water: As per the proposed WTP design by KWA, the rejects shall be generated from two locations, i.e from the sedimentation basin (clari-floculator) and from the filter bed during its cleaning, known as back washing of filter beds. As per the information compiled by CPCB on WTPs, most of the WTPs in the country are discharging the back wash water to nearby drains or back to the River, away from the intake point. However in most of the recent WTPs, the recycle of the back wash water in the plant itself by installing necessary recycle system is envisaged as an environment friendly option. The proposal by KWA for the WTP also envisages wash water recycling system as a component of the treatment plant along with various other components of the plant, which will eliminate any discharge of back wash water outside the WTP premises.

Management of sludge: As per the WTP design, Clarifiers or clari-floculators are used to remove fine particles or turbidity of the raw water. Compounds like Alum (Aluminum-Sulphate) and Lime will be added to raw water in small quantities to enhance the settling of colloidal and fine particles, reducing the settling time lime shall be added to adjust the pH to potable standard. The quantity of Alum and Lime to be added depends on the level of turbidity and if turbidity levels are very less, such as in summer, the use of Alum and Lime will be minimal. The clarified water is further subjected to filtration through a filter bed (layer of sand or any other type of inert material) to remove very fine particles and tiny flocs that are not removed by settling. The sludge generated by sedimentation shall be less in

quantity and shall be stable due to the absence of organic matter. The sludge is allowed to remain in the sedimentation basin for some time and is proposed to be removed on monthly or bimonthly basis depending upon the quantity of sludge accumulated. As informed by KWA, proper sludge management system for disposal of sludge is planned as part of the proposed WTP, for the safe disposal/reuse of sludge generated from the treatment plant as per clause. 7.7.1 of CPHEEO manual. The system will include sludge thickening and sludge dewatering either by using drying bed, sludge lagoon, filter press, vacuum filtration or centrifuge. The dried sludge is proposed to be used for land fill, brick and tile manufacturing etc.

It is also brought to the notice of the Committee that Kerala Water Authority is operating a 33 mld Water Treatment Plant in the heart of Thiruvalla town, nearly 10 km from this proposed site, which started operations in 1977. There has been no environmental issues regarding the operation of the Water Treatment Plant till now. Complaints regarding the sludge rejects or other wastes have not been reported.

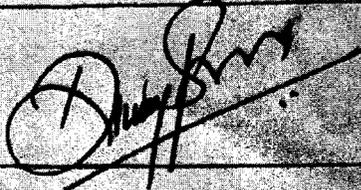
4.0 CONCLUSION AND RECOMMENDATIONS:

As per the discussions and deliberations after the site visit and assessment of available documents and reports, the Joint Committee has come into the following conclusions and recommendations;

1. The proposed Water Treatment Plant (WTP) by KWA at the identified location is not expected make much adverse impact on the environment, if the plant design and operations are conducted as per the proposal detailed by KWA before the Joint Committee.
2. The back wash and sludge management, shall be carried out in the following manner, as already proposed by the KWA;
 - a. Filter back wash management - The Wash water recycling system as envisaged by KWA as part of the proposal shall be materialised as a component of the treatment plant along with various other components of

the plant and discharge of back wash water outside the WTP premises shall be eliminated.

- b. Sludge management system – A proper sludge management system, including sludge thickening and sludge dewatering either by using drying bed, sludge lagoon, filter press, vacuum filtration or centrifuge shall be provided for disposal of sludge as part of the proposed WTP. The dried sludge shall be reused/disposed in an environment friendly manner for land fill, brick and tile manufacturing etc.
3. It is observed that the standard practises have been followed for the feasibility studies and identification of location of the proposed WTP and deviation from existing guidelines/manuals by relevant authorities such as CPHEEO etc. were not observed by the Committee and it is felt that modifications may not be required
4. The Senior Officer of the State Pollution Control Board has observed that Water Treatment plants come under Green category as per categorization of the Board based on pollution potential.
5. The Committee is also of the opinion that it is the constitutional right of every citizen to have access to safe drinking water and that public interest and the welfare of common man are the paramount concern of every Government and its instrumentalities. Ensuring and providing pure drinking water is the sine quo non condition for the very existence of human race on earth. As such this has become an inalienable right of every human being on earth. The Universal Declaration of Human Rights also provides it as a basic human right of an individual. This has accepted globally as a fundamental right of every citizen in the constitutional context also.
6. The Government of India has also announced Jal Jeevan Mission with the aim to provide safe drinking water to all villages by year 2024. The activities of this mission in the seven villages can be completed only after setting up this Water Treatment Plant.

Name and Designation of Committee Members	Signature
Dr Divya S Iyer District Collector, Pathanamthitta	
Sri Vivek K, Scientist D (Senior Env Engineer), representing Central Pollution Control Board, Regional Directorate, Bangalore	
Smt Suchitra V, Environmental Engineer representing the Kerala State Pollution Control Board, Pathanamthitta District	
Sri Sunil. S Executive Engineer, Project Division Adoor, representing State Public Health Engineering Department	
Sri K E Vinod Kumar , Assistant Development Commissioner and District Coordinator, Shuchitwa Mission representing the Principal Secretary of Urban Development	