

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)
IN
ORIGINAL APPLICATION NO. 442 OF 2013, OA No.22 of 2017, OA. No.
276 of 2017, OA No. 77 OF 2021 (SZ)**

**ACTION TAKEN REPORT BY THE ADDITIONAL CHIEF SECRETARY,
LOCAL SELF GOVERNMENT**

Index

S.No	Particulars	Page No.
1.	Action Taken Report	1-9

Dated at Chennai on this the 13th day of May, 2022.

M/s. E.K.KUMARESAN

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

Action Taken by Local Self Government in O.A No. 442 of 2013 (SZ), O.A No. 22 of 2017, O.A 276 of 2017 (SZ) and O.A 77 of 2021 (SZ) of Hon'ble National Green Tribunal

The Hon'ble NGT as per order 23.02.2022 has directed the Chief Secretary, State of Kerala to convene a meeting with the Secretaries of the local bodies and review the progress of the implementation of the Solid Waste Management Rules, 2016 within their area and if there is any gap found, the Chief Secretary is directed to give necessary instruction and guidelines as to how this can be rectified in consultation with the respective District Collectors of the area and submit a detailed action taken report in this regard before the next hearing date.

It is submitted that Chief Secretary, State of Kerala had conducted review meetings to monitor progress of implementation of Solid Waste Management Rules and to monitor the compliance of all N.G.T cases on 22.09.2020, 25.09.2020, 11.12.2020, 06.03.2021, 17.06.2021, 23.10.2021, 18.11.2021, 04.01.2022 and most recently on 02.04.22. Additional Chief Secretary to the Government is also conducting continuous review meetings to monitor the compliance of NGT directions and implementation of Solid waste management Rules 2016 in the State. Regular review meetings to follow up on the SWM plans of Local Governments were conducted by the Additional Chief Secretary on 09.06.2021, 15.06.2021, 29.06.2021, 13.07.2021, 04.08.2021, 24.08.2021, 23.10.2021, 09.12.2021, 8.02.2022, 01.04.2022 and direction has been given to Principal Director, LSGD & departmental district heads to review the time frames of various activities and interventions listed in the SWM Action Plans. Wherever the time indicated is seen to be unduly long, the concerned LSG has been directed to revise the time frame appropriately. Additional Chief Secretary is reviewing the functioning of the

Sacady

Brahmapuram Plant on fortnightly basis.

It is submitted that Chief Secretary conducted offline /online meetings on 10.01.2022 and 02.04.2022 respectively to discuss about the waste dumping issues at Brahmapuram . The Kochi Corporation Secretary, the Secretaries of the local bodies dumping waste at Brahmapuram Yard , The Managing Director Zonta Infratech were summoned to the meeting convened by the Chief Secretary. Directions have been given to the Chairman , Kerala State Pollution Control Board to impose penalties to the Secretaries of LSGIs in case of non-compliances identified.

It is submitted that Kochi Municipal corporation includes 74 divisions having a population around 6,77,381.Out of total 1,67,935 households door to door waste collection (both dry and wet waste) is done from 1,50,730 households. The Waste is generated on a daily basis from 5 Municipalities, 3 Grama Panchayaths and Kochi Municipal Corporation. On a daily basis, an average of 326 tonnes of waste is being generated, both biodegradable and non-biodegradable combined. 20 tonnes of waste generated is treated at household level by means of bio composting. Remaining 206 tonnes is wet waste and 100 tonnes is dry waste, which is received at Brahmapuram dumpsite. Now the collection of wet and dry waste is in segregated manner. As per the instruction of Hon'ble NGT the waste collection, treatment and disposal is done in accordance with Solid Waste Management (SWM) Rule 2016. For the implementation of SWM Rule 2016 , following projects are ongoing and proposed at Brahmapuram. The videos and photographs on progress of bio-mining may be seen in google drive -<https://drive.google.com/drive/folders/111P-umQrwFuqyZ--0QLuxvnX11fFTnmu?usp=sharing>

K. S. S. S. S.

Bio mining of Legacy Waste

It is submitted that the major issue at Brahmapuram yard is the legacy waste dumpsite and leachate draining out of it, which pollutes nearby water body Kadambayar. As the joint effort of Government of Kerala, KSIDC, Kochi Municipal Corporation and M/s. Zonta Infra tech Pvt Ltd, a remediation process known as Bio mining, an eco-friendly technology that converts old dump yard materials into reusable resources is adopted.

It is submitted that as per the scope of services of the contractor detailed in the tender document, the Contractor will reclaim the MSW Dumpsite at Brahmapuram in Ernakulam district of Kerala through Bio-mining of legacy waste - processing of un-treated municipal solid waste by excavation of the non-biodegradable waste using suitable mechanical sieving machine or any other suitable equipment/method, segregating, sorting, retrieving recoverable materials, storing, selling, diverting for recycling, dumpsite land reclamation (including cutting & leveling of the land).

It is submitted that as per the drone survey done by NIT, Calicut total quantity of Legacy waste was assessed as 559103 m³, which is spread over an area of approximate 40.25 acre of land. For calculating the volume of legacy waste, this 40.25 acres of land was divided into seven sectors and volume analysis is carried out at each sector separately. By adopting Bio mining, about 80% of land can be recovered/reclaimed.

It is submitted that the work of Bio mining was awarded to M/S.Zonta Infracore Pvt Ltd and Kochi Corporation entered into an agreement on

Jacalaly

06/09/2021. For monitoring Bio mining project, a technical committee has been constituted as per the direction of the Government and the committee approved the work implementation plan submitted by M/s. Zonta Infra Tech Pvt Ltd. The Biomining process started on 20.01.2022 and mobilization advance of Rs 7,15,74,684/- for work was released on 05.02.2022.

Machineries & Equipment mobilized for Biomining

In accordance with the implementation plan the contractor (M/S.Zonta Infratech Pvt Ltd) brought machineries and equipment to the project site and has commenced work at site on 07th January 2022.

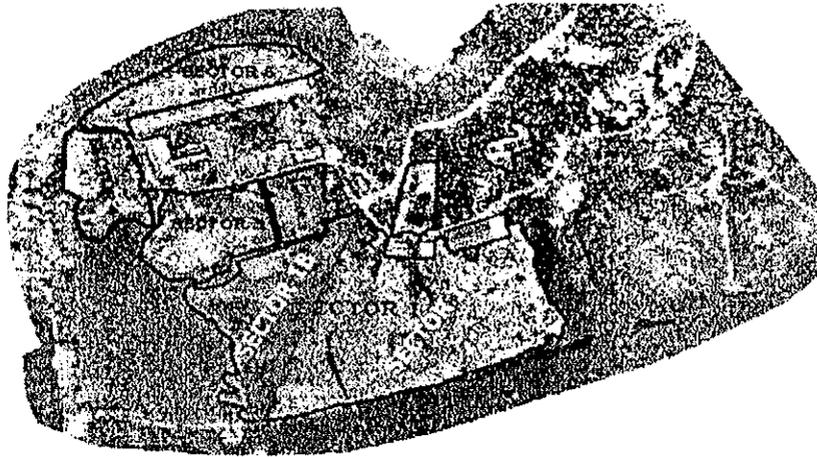
Resources, Equipment, and machinery Deployed:

Description	Details
Total Mobilized Personnel at the Site daily	65 people
Total number of Modern Mobile Automatic Screening Machines operating at the site	02 units
Total number of Vehicles, Backhoe Loaders, Front Hoe Loaders, Dozers, etc.	28 units
Additional High Capacity Automatic Baling Machine	01 unit

(expected to be operational at the site by Mid April 2022)

For the Implementation Purpose, the area is split into seven sectors

Saeed



Sector wise Quantification of Legacy Waste

Sector	Volume in Cu m
Sector 1A	2,47,882
Sector 1B	1,23,941
Sector 2	17,436.40
Sector 3	65,133.30
Sector 4	30,132.70
Sector 5	41,303.60
Sector 6	16,256.70
Sector 7	9,817.70
Total	5,51,903.30

It is submitted that after loosening of the dumped waste,biomining started on 15th January 2022. The work is progressing in full swing. 18 months is the duration mentioned in the technical plan for the completion of work. The legacy waste spread in sector 4, 5, 6 and 7 has been cleared and area recovered is about 10 acres.

It is submitted that 28% of biomining work is completed so far, well within the schedule as per the technical plan. Application for consent to operate has been submitted to PCB and processing fees has been paid and the consent from PCB is expected to be obtained soon.

Old Windrow Compost Plant

[Handwritten signature]

It is submitted that approximately 206 tonnes of Biodegradable wet waste is received daily at Brahmapuram and is being treated by windrow composting and converted to fertilizer. The existing windrow compost Plant is having a capacity for handling 250 TPD. Though the windrow compost plant is in a dilapidated condition, the fresh waste being brought to Brahmapuram is still handled in this plant. Leachate oozing out of windrow compost plant is now collected through drain to a leachate collection tank having a capacity of 130 m³. The Collected leachate is now transported and daily about 20KL of it is treated at septage treatment plant. Kochi Corporation has also taken steps for the maintenance of existing windrow compost plant and estimate is under submission for Council sanction. Corporation is also attempting to get renewal of consent to operate the windrow compost plant.

Septage treatment Plant.

It is submitted that the existing STP is having capacity of 100 m³/day. The operation and maintenance of plant has been awarded to M/s. Aquatech sole through tender and contractor executed agreement with KMC for O & M for 5 years on 01.02.2022. The Rectification work of STP has been completed. The Plant started its operation from 01.02.2022. The Leachate is now treated at Brahmapuram Septage treatment Plant after its preliminary treatment in the ratio:4:1 (Septage:Leachate). It is submitted that Kochi Corporation has applied for consent to operate from KSPCB for treatment of Septage together with Leachate in Septage treatment plant.

Strengthening the Haritha Karma Sena (HKS)

It is submitted that Kochi Corporation is taking earnest efforts to ensure

Sasada

proper segregation, collection and transportation of Waste. IEC action programme has been approved by the council. Digital display of Swachh surveshan (waste segregation, disposal and management, awareness activity among public, included in it has been carried out from 31.01.2022-03.02.2022. Recruitment of more number of HKS persons has commenced. Two health inspectors have been appointed in east and west zones respectively for renovating the existing MCFs and for constructing new MCF.

PROPOSED PROJECTS AT BRAHMAPURAM

1) Waste to energy Plant

About 500 TPD Waste to energy Plant is proposed by KSIDC for 14 clusters of ULB at 20 acres of land at Brahmapuram. The Corporation has transferred 20 acres of land at Brahmapuram to KSIDC by a registered lease deed on 9/11/2021. The Global tender was floated for Waste to energy project by KSIDC and M/s.Zonta Infratech Pvt Ltd was selected as a bidder for the same. M/s.Zonta Infratech Pvt Ltd informed that following procedures should be done before execution.

1. Environment site assessment is under progress.
2. Samples collected and sent to lab for analysis.
3. Waste generation and characterization study will start by 04/04/2022. Based on this result, DPR is to be prepared. Approval of DPR Should be obtained from Government.
4. After that Statutory clearance such as
 - a. PCB NOC.
 - b. Factories and boilers approval.
 - c. Initial fire NOC.
 - d. Layout approval of town planning department.
 - e. Building permit from PuthanemuzVedavukode Panchayath

[Handwritten signature]

...including permission from the Director, KSEB, Kochi...

- 1. Power purchase agreement with KSEB.

It is submitted that Kochi Corporation has also decided to set up a new windrow compost plant at Brahmapuram in 10 acres of land. The DPR prepared by M/s. Esteem Developers has been approved by council and the Soil test, architectural design completed and layout has been approved by Kochi Municipal Corporation.

2. New Leachate Treatment Plant

Once this heap of Legacy waste is cleared, the present issue of leachate seepage will temporarily end. The Corporation has entrusted to prepare DPR for the construction of a leachate treatment plant and it has been proposed to collect and treat the leachate generated in the STP at Brahmapuram.

It is submitted that the Corporation plans to setup new leachate treatment plant during the time of Bio-Mining. DPR preparation has been started.

During the meeting held on 2.04.2022 by the Chief Secretary certain discrepancies in the waste management of the local bodies disposing biodegradable wastes at Brahmapuram were brought to the notice by KSPCB. To have a complete assessment of the field realities, a meeting of LSGD, LSGIs concerned and KSPCB is proposed to be held in near future. A complete assessment of waste management based on updated field reports will be taken up during the meeting. Status of statutory consents, disparities noted in the log entries regarding waste generated, collected and treated by local bodies etc. will also be part of the discussion. Further directions will be issued by the LSGD and KSPCB to the local bodies after the ensuing meeting.

Saeed Ali

9

05.2022

The report is filed on the behalf of Chief Secretary, Government of Kerala on
6th April 2022.

Sarada

Sarada Muraleedharan IAS
Additional Chief Secretary
Local Self Government Department
Government Secretariat
Thiruvananthapuram.