

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

IN

ORIGINAL APPLICATION No. O A 77 of 2021(SZ)

IN THE MATTER OF

Suo Motu proceedings initiated

based on letter received

From Justice A.V. Ramakrishna Pillai,

Former Judge, High Court of

Kerala, Chairman,

SLMC, Kerala.

:

Applicant(s)

Verses

The Chief Secretary,

Government of Kerala,

Thiruvananthapuram and Others

:

Respondent(s) And

ORIGINAL APPLICATION No. O A 442/2013(SZ)

Applicant(s) : Jith Kumar, Muthedathu

Versus

Respondent(s) : The State of Kerala & others

And

ORIGINAL APPLICATION No. O A 20 / 2017(SZ)

Abdul Basheer

Versus

Kochi Municipal Corporation & Others

ORIGINAL APPLICATION No. O A 276/2017(SZ)

Lawyers Environmental Awareness Forum

Versus

SEIAA, Thiruvananthapuram

**STATUS REPORT FILED BY THE CHIEF ENVIRONMENTAL ENGINEER,
REGIONAL OFFICE, ERNAKULAM FOR AND ON BEHALF OF THE KERALA
STATE POLLUTION CONTROL BOARD**

Dated this the 6th day of September
2022

Adv. Rema Smrithi,

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT

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Dated this the 6th day of September
2022

Adv. Rema Smrithi,

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT

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

IN

**ORIGINAL APPLICATION No. O A 514 of 2019(PB)
RENUMBERED AS O A 77 of 2021(SZ)**

IN THE MATTER OF

Suo Motu proceedings initiated

based on letter received

From Justice A.V. Ramakrishna Pillai,

Former Judge, High Court of

Kerala, Chairman,

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STATE POLLUTION CONTROL BOARD**

I, Baburajan P K, 52 years, S/o. Late P A Kuttappan, now working as the Chief Environmental Engineer, Regional Office, Kerala State Pollution Control Board, Ernakulam. I am competent to and duly authorized to represent the Board. I know the facts and circumstances of the cases. The factual submissions made hereunder are true and correct to the best of my knowledge, information and belief. In these circumstances, it is just and necessary that this Hon'ble Tribunal may be pleased to accept the accompanying report on file and it is so humbly prayed in the interests of justice in this case.

1. I may humbly submit that the case against Kochi Corporation with regard to Brahmapuram solid waste dumping yard was primarily originated in the year 2012 and the Hon'ble High Court of Kerala had transferred the WP © No.9700/2012 filed by Sri. Jith Kumar to Hon'ble National Green Tribunal where it was numbered as OA 442 of 2013. Based on the reports submitted by various parties, the Hon'ble NGT(SZ) through an order dated 31.05.2016 directed the Kerala State pollution Control Board to prosecute the officers concerned for consistent violations. Against this order, the Corporation had filed a Writ Petition before the Hon'ble High Court of Kerala vide WP(C) No.24380/2016(V) for staying the above order dated 31.05.2016 in M.A No.78/2016 and in M.A No. 79/2016 in Original Application No. 442/2013 of the Hon'ble National Green Tribunal and the Hon'ble High Court stayed the same through an order dated 11.08.2016 stating that "*the direction contained in the order that pollution Control Board shall take steps to prosecute the officers of the petitioner will stand stayed*" which is still under pendency. Kerala State Pollution Control Board has filed a counter affidavit before the Hon'ble Court in this matter. Meanwhile, two other cases were also filed before the Hon'ble NGT in the same matter which were numbered as OA No. 20/2017 filed by Abdul Basheer and OA No. 276/2017 filed by Lawyers Environmental Awareness Forum and from there onwards, the Hon'ble Tribunal considered these applications together and further transferred to the Principal Bench of the Hon'ble NGT as OA Nos.533 of 2018, 534 of 2018 and 535 of 2018 respectively. Thereafter, these




BABURAJAN P.K.
Chief Environmental Engineer

Original Applications were redirected to Southern Bench of the Hon'ble NGT as OA Nos. 442/2013, 20/2017 and OA No. 276/2017. It may be pertinent to note that the Corporation had filed another petition against the order dated 22.10.2018 of the Hon'ble Tribunal in OA 442 of 2013 against imposition of performance guarantee/penalty (WP© No. 36204/2018) and was granted stay order dated 09.11.2018 for 2 months which was further extended "until further orders". It is important to note that counter affidavit in WP© No. 36204/2018 has been filed before the Hon'ble High Court against the stay order. It may also be noted that after the constitution of State Level Monitoring Committee, the Chairman, SLMC had visited the Brahmapuram Plant on 23.02.2019 after a severe fire accident occurred on 22.02.2019 and submitted report before the Principal Bench of the Hon'ble Tribunal dated 23.02.2019 which was taken on its own motion 'Suomotu' and numbered as OA 514 of 2019 which was also as per the order dated 21.01.2021 transferred to Southern Bench of the Hon'ble Tribunal where it was renumbered as OA 77 of 2021 and delivered order dated 03.03.2021.

2. It is respectfully submitted that Kochi Corporation has established a solid waste treatment plant in the year 2008 as per the Municipal Solid Waste (Management and Handling) Rules, 2000 at Brahmapuram in Vadavucode-Puthencruz Grama Panchayath in 110 acres of allotted land, major portion of this area is low lying and closely surrounded by 'Kadambrayar' and a branch of 'Chithrapuzha' streams, identified polluted stretches by CPCB. Dumping of biodegradable and non-biodegradable solid waste started by Kochi Corporation in the year 2008 and is continuing till date. The Solid Waste Treatment facility of Kochi Corporation was issued with a conditional authorization as per relevant provisions of Municipal Solid Waste (Management and Handling) Rules, 2000, which was valid up to 30.04.2010. Even the waste segregation is practiced in the house hold /institution levels, the dumping of mixed waste is practiced in the yard which is the main cause of legacy waste. Though the claim of Corporation is that they are practicing windrow composting for the biodegradable fractions of waste, no satisfactory facilities are seen provided there for windrow composting during inspections conducted on various occasions by the Board officials. It is also to be noted that though Corporation is keeping records for the waste collection in the dumping yard, no records are seen available for the manure production. The windrow composting shed provided in Brahmapuram is in dilapidated condition and drains around the shed for collecting the leachate from the solid waste processing shed is blocked and the leachate is not completely reaching the collection tank. But the Corporation claim that the leachate is disposed through Septage Treatment Plant at Brahmapuram. It is respectfully submitted that from the records it is clear that LSGDs such as Aluva, Angamali, Thrikkakkara,



Thripunithura, Kalamassery Municipalities and Cheranalloor, Kumbalangi and Vadavucode Puthencruz panchayaths also are regularly transferring biodegradable wastes to Brahmapuram Plant. It is important to note that such disposal is unfeasible since the facility provided for fresh biodegradable waste management at Brahmapuram is unscientific and still the Corporation does not have a concrete proposal for such waste management or not submitted any time bound action plans. It is also noticed that there is no facility for the management of non-biodegradable waste including the plastic waste. It is understood from the available log books maintained in Brahmapuram that disposal of plastic waste to the recycling units is also negligible.

3. It is pertinent to note that the Corporation had not done any satisfactory facility for the management of solid waste generated even from their area and allowed other Municipalities and Panchayaths to dispose certain portion of the biodegradable fraction of solid wastes at Brahmapuram dumping yard in an unauthorised and unscientific manner. The Principal Bench of the Hon'ble National Green Tribunal vide its order dated 03.07.2020 had clearly found that Corporation has violated the relevant provisions of Solid Waste Management Rules,2016.Hence a notice was served to the Secretary, Kochi Corporation assessing Rs. 13.95 Crores towards EC on 15.10.2020 which was assessed up to 30.09.2020. Though the Secretary, Corporation had submitted a reply on 02.11.2020, it was not at all satisfactory. Hence, the revised assessment was done for EC up to 31.12.2020 for Rs. 14.92 Crores and a direction under section 5 of the Environment Protection Act 1986 was issued on 13.01.2021 to remit the amount. Copy of the direction dated 13.01.2021 asking to remit EC is produced herewith and marked as **Annexure 1**. Kochi Corporation has filed a writ petition against such imposition of EC before the Hon'ble High Court in WP© 3478 of 2021 on which a stay was granted by the Hon'ble Court on 11.02.2021. Board had filed a counter affidavit in the above writ petition also. However, on observing continuous violation in the improper management of solid waste and repeated fire accidents, a show cause notice was issued on 16.03.2021 as per the direction of the Chairman, SPCB asking explanation for not initiating legal actions including prosecution against the Secretary, Kochi Corporation. Copy of the Show Cause notice is produced herewith and marked as **Annexure 2**. No reply is received from the Corporation till date regarding this. Necessary follow up action is being taken in this matter.

4. It is respectfully submitted that bio mining of the legacy waste has already started in Brahmapuram in the first week of February 2022. It is reported by the Kochi Corporation in the DLMC meeting held on 18.06.2022 and the meeting of




B. B. BURAJAN P.K.
Chief Environmental Engineer

technical committee constituted for the monitoring of bio mining work implementation held on 21.07.2022 that only 24% of the waste was bio mined and the bio mining activities were temporarily stopped due to rain. RDF generated during the biomining is found stored in at the site itself. M/s. Zonta Infratech which is the agency authorized for bio mining informed that they had transferred 2-3 loads of RDF to Dalmia Cement(Bharat) Ltd, Thiruchirappilli, but the cement factory was not ready to accept it due to its poor quality. Also they have requested to allow them to keep the RDF at the site itself for the proposed waste energy plant as fuel. But it was noticed that they have not installed bailing machine for bailing the segregated waste generated during bio mining. Technical Committee directed M/s. Zonta Infratech to inform the proposed date of installation of bailing machine immediately and to submit the revised action plan for the work implementation. It is also to be noted that fresh waste is being transferred from Corporation areas and bio degradable waste from other LSGDs is being still disposed in Brahmapuram where no proper treatment facility provided. It is pertinent to note that the Corporation has not submitted any concrete proposal for the management of fresh waste dumped at Brahmapuram dump yard.

All the facts stated above are true to the best of my knowledge, information and belief.

Dated this the 6th day of September 2022




K. S. RAJAN P.K.
Chief Environmental Engineer
CHIEF ENVIRONMENTAL ENGINEER

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

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Dated this the 06th Day of September 2022

Rema Smrithi, Advocate

ADDITIONAL STANDING COUNSEL FOR THE RESPONDENT

ANNEXURE 1

☎: General: 0471- 2312910, 2318153, 2318154, 2318155 Chairman: 2318150 Member Secretary: 2318151
E-mail: ms.kspcb@gov.in FAX: 0471 - 2318134, 2318152 web: www.keralapcb.nic.in



KERALASTATE POLLUTION CONTROL BOARD

കരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram - 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/SEE2/KOCHI CORPN/2019

Date: 13/01/2021

Regd. with A/D

DIRECTION UNDER SECTION 5 OF THE ENVIRONMENTAL PROTECTION ACT, 1986

Sub: Non-compliance of Solid Waste Management Rules, 2016.

- Ref: 1. Order dated 23/10/2018 of the Hon'ble NGT in O.A. 533-535/2018.
2. Order dated 9/11/2018 of the Hon'ble High Court in WP(c) No. 36204/2018(A)
3. Order dated 16/01/2019 in OA no. 606/2018
4. This office notice No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 12/10/ 2019
5. Letter no. PCB/RO-EKM/GEN-221/19 dated 18/10/2019 from the Chief Environmental Engineer, Regional Office, Ernakulum
6. This office notice No. PCB/HO/SEE2/KOCHI CORPN/2019 dated 11/12/2019
7. Letter No. MOE2/10948/2017 dated 01/ 01/ 2020 and 06/01/2020 of Secretary, Kochi Corporation
8. Order dated 30/01/2020 in OA no. 442/2013 by the Hon'ble NGT.
9. Letter no. PCB/RO/EKM/GEN-258/19 dated 20/02/2020.
10. Minutes of the meeting on 16-3-2020 with the Secretary, Kochi Corporation
11. Order dated 03/07/2020 in OA no.514/2019
12. Letter No PCB/RO-EKM/GEN-258/19 D dated 23.07.2020 from the Chief Environmental Engineer, Regional office, Ernakulum
13. Minutes of the video conference held on 17/08/2020 with Secretary, Kochi Corporation and allied municipalities
14. Letter No. MOE2/10948/2017 dated 11/09/2020 of Secretary, Kochi Corporation.
15. Order dated 22/11/2018 in O.A. No. 353/2016
16. Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014
17. Order dated 16/09/2020 in OA no.514/2018.
18. Show cause notice of even No. dated 15/10/2020.
19. Letter No.MOE2-10948/17 dated 02/11/2020 from Kochi Corporation.

WHEREAS the Central Government notified the Environmental (Protection) Act, 1986 for the protection and improvement of environment and for matters connected therewith;

WHEREAS as per Section 3, 6 and 25 of the Environment (Protection) Act, 1986, the Central Government re-notified the Solid Wastes Management Rules, 2016 (hereinafter referred as SWM Rules) vide notification S.O. 1357(E) dated 8/4/2016;

WHEREAS as per Rule 22 (1) of the SWM Rules, suitable sites for setting up solid waste processing facilities are to be identified;

WHEREAS as per Rule 22(3) of the SWM Rules, suitable sites for setting up solid waste processing facility and sanitary landfill facilities are to be procured;

WHEREAS as per Rule 22 (5) of the SWM Rules, door to door collection of segregated waste and its transportation in covered vehicles to processing or disposing facility shall be ensured by 8-4-2018;

WHEREAS as per Rule 22 (7) of the SWM Rules, solid waste processing facilities for the complete quantity of waste generated from the local body at 0.4 to 0.5 kg/person/day, shall be set up by 8-4-2018;

WHEREAS facilities with the technologies specified in CPHEEO manual and SWM Rules are to be in place for the effective treatment and disposal of the solid waste generated in the local body;

WHEREAS as per Rule 22 (6) of the SWM Rules, separate storage, collection and transportation of construction and demolition waste shall be provided;

WHEREAS as per Rule 22(11) of the SWM Rules, bio-remediation or capping of old and abandoned dump site shall be ensured;

WHEREAS the Hon'ble NGT vide order dated 23/10/2018 read first above, ordered to complete the new integrated solid waste treatment processing plant in six months to commence the treatment of legacy waste, impose a penalty of Rs. 1 crore on Kochi Corporation and to deposit a performance guarantee of Rs. 3 crore with Kerala State Pollution Control Board and the Hon'ble High Court vide the order read 2nd above, ordered to place bank guarantee of Rs. 50 lakh each to Central Pollution Control Board and Kerala State Pollution Control Board and to exempt you from depositing Rs. 3 crore towards bank guarantee and accordingly bank guarantee was placed by the Kochi Corporation;

WHEREAS during the second meeting on 15/3/2019 of the State Level Monitoring Committee constituted by the Hon'ble NGT vide the order under ref.3, the resolutions were made to conduct bio mining of legacy waste part by part; keep ESCROW amount for handling emergency situation; provide adequate cover, leachate collection tank and log book for waste transporting vehicles and allow waste transportation only by those vehicles by Health Supervisor; engage Ex-service armed security at the site in the dump yard; to make the roads, NH Bypass, Sahodaran Ayyappan Road and Banerjee Road as Zero Waste road; to insist door to door collection and prohibit the deposition of waste on roads and other public places and insist for segregation of waste before disposal; ban the plastic carry bags below the prescribed limit and to proceed against violators under the law of penalization; to give adequate protective equipment namely gumboots, gloves, masks etc., proceed against the violators disposing sewage, septage and chicken waste in the water resources; apartments, hospitals, hospitals which are not operating their sewage treatment plants and to evolve methods for the effective disposal of plastics and not to dispose plastic by burning;

WHEREAS Chairman SLMC during their 4th meeting on 08/05/19 directed to submit specific and detailed time bound action plan to the Kerala State Pollution Control Board, to adopt mechanized system for the disposal of legacy waste, to implement heavy fining/insisted surveillance cameras/strict squad to prevent waste dumping on roads, to insist on segregation of wastes at source, to transport vehicles with adequate cover, leachate collection tank and logbook, to provide adequate personal protective equipments to workers and to compel them to wear the same,

to prohibit deposit of wastes on roads and other public places, to deploy Haritha Karma Sena for door to door collection, to report on the action taken to the SLMC;

WHEREAS the fifth meeting of the State Level Monitoring Committee on 14/06/2019, noticed with distress that a good number of directions issued were yet to be complied with and therefore expressed displeasure over the same and it was again directed to issue directions by the Corporation to the bulk generators to take steps to channelize their own wastes as the same is homogenous and clean, channelization can be done easily; to submit the details of wards, in which segregation is complete; segregate plastic waste for shredding to be stored in areas attached to the zonal office of the Corporation; and to submit action plan in each ward for solid waste management, projects to be implemented and to improve the existing waste management facility, existing material collection facility and resource recovery facility; to publish the information on waste management in the website; to take legal action against open burning of non-biodegradable waste and dumping of waste in water bodies; to take steps to establish MCFs in all wards and RRF at least in six wards; issue identity card to all workers engaged in waste management and to prepare action plan for developing a business model for effective treatment of waste;

WHEREAS it is noted that you have not identified the land for managing Construction and Demolition waste and sanitary landfill;

WHEREAS notice dated 12/10/2019 was issued vide reference 4th above for not taking steps to provide biomethanation plant for the food wastes generated within Kochi Corporation;

WHEREAS the Chief Environmental Engineer, Regional Office, Ernakulam vide the letter dated 18/10/2019 cited 5th above, reported about the improper functioning of solid waste plant and non installation of proper leachate treatment plant at the site;

WHEREAS the Board issued notice dated 11/12/2019 read 6th above to the Secretary, Kochi Corporation to show cause why the Environmental compensation of Rs. 1.122 Crore shall not be levied for not providing leachate treatment plant and the replies of the Kochi Corporation under ref. 7th above were received;

WHEREAS the Hon'ble National Green Tribunal vide the order read 8th above on 30-1-2020 directed that, on receipt of the explanation from the Corporation to the notice issued by Board, the Pollution Control Board is to pass appropriate orders and complete the proceedings initiated on the basis of their inspection and dispose of the same in accordance with law and come with compliance report before the Tribunal;

WHEREAS the Chief Environmental Engineer, Regional Office, Ernakulam in the report (ref. 9) dated 20/02/2020 to the Chairman, State Level Monitoring Committee, reported that the Corporation is not taking earnest steps to solve the issue which is a long pending case from the Corporation side and to assess environmental compensation as done on 18/10/2019;

WHEREAS the Chief Environmental Engineer, Regional Office, Ernakulam vide letter No. PCB/RO-EKM/GEN-258/2019 dated 28-2-2020 reported that the Corporation is allowing five municipalities and two grama panchayaths to bring their biodegradable waste in addition to Corporation's biodegradable waste and non biodegradable waste and the total actual quantity of waste estimated as 365.19TPD;

WHEREAS on receiving the reply from the Secretary, Kochi Corporation, hearing was conducted with the Secretary, Kochi Corporation on 16/3/2020 vide ref., 10 reported status to the NGT;

WHEREAS the Hon'ble NGT on 3/7/2020 in OA514/2019 (ref. 11) observed the delay in setting up of waste to energy plant and was doubtful whether leachate can be treated in an ordinary septage treatment plant as it contains heavy metals and the tribunal also observed that the progress appears to be very slow and in disregard to the statutory and constitutional obligation of providing clean environment;

WHEREAS it was reported by the Chief Environmental Engineer, Regional office Ernakulam vide letter No. PCB/RO-EKM/GEN-221/19 dated 23/07/2020 (ref. 12) that during the inspection conducted by the Board on various occasions, it was noticed

- a) The facilities provided for the treatment and disposal of solid waste provided at Brahmapuram are not maintained properly;
- b) The windrow composting shed is in dilapidated condition and the mixed solid waste including plastic waste is dumped in the yard in open condition;
- c) The manure produced seems to be marginal compared to the daily waste collected at the plant;
- d) Manure produced did not meet the fertilizer standard as per the SWM Rule, 2016 and contain heavy metals;
- e) Due to the unscientific treatment of biodegradable solid waste, huge quantity of rejects have been dumped at various places and which in turn got converted to legacy waste;
- f) Fire accident were occurred in the legacy waste dump yard at Brahmapuram 3 or 4 times during the period of 2019 and 2020 which lead to air pollution in and around the dump site
- g) Leachate from the windrow composting shed and the biodegradable solid waste dumping area is not collected and treated properly due to improper drains and there are chances of leachate reaching the Kadambayar river, one of the polluted river stretch identified by CPCB;
- h) The leachate treatment plant provided prior to the visit of Regional Monitoring Committee (RMC) appointed by the Hon'ble NGT is not operational now;
- i) During the inspection conducted on 16.07.2020 it was noticed that no progress in the installation of leachate treatment plant except the construction of a new collection tank having capacity of 100 m³ on which the Hon'ble Court made adverse remarks;
- j) No effective steps were taken for construction activities for the installation of waste to energy plant and for the removal of legacy waste. The Corporation authorities are still not able to assess the quantum of legacy waste settled there;

WHEREAS hearing was conducted by the Chairman on 17/8/2020 with the Kochi Corporation (ref. 13) and accordingly details were submitted by you vide the letter under ref. 14;

WHEREAS from the above observations, it is noted that you have not fully complied with the directions of Hon'ble SLMC, Solid Waste Management Rules and also not obtained authorization under SWM Rules, 2016;

WHEREAS the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the order dated 22/11/2018 in O.A. No. 353/2016 (ref. 15) clarified that apart from prosecution, the statutory authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, must, in exercise of their incidental powers, prescribe scale of compensation to be collected from the polluters on the "Polluter Pay's Principle". Such scale which may be laid down at various levels, having regard to the local condition or as per direction in the hierarchy of the authorities;

WHEREAS in various other application also, the Hon'ble NGT passed similar orders, for instance, in the Order dated 20/11/2018 in O.A No. 117/2014, 499/2014 and 102/2014 (ref. 16) the Hon'ble NGT noted as; "Needless to say that statutory authorities under the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages as "Polluter Pay's Principle" in exercise of incidental powers to protect environment".

WHEREAS as per Hon'ble NGT order dated 23/09/2019 in O.A 585/2018, if the rules are violated, the Pollution Control Board can independently proceed against local bodies who are not complying with the rules including initiation of prosecution of those person who are not complying with the same and assessment of damage caused to the Environment;

WHEREAS the Hon'ble NGT vide order dated 16/9/2020 in OA 514/2018 (ref. 17), observed the failure in taking effective steps on the matter;

WHEREAS based on the recommendation of the Chief Environmental Engineer, Regional Office, Ernakulum made for levying Environmental Compensation against Kochi Corporation Show Cause Notice was issued to the Corporation vide notice No. PCB/HO/SEE2/KOCHI CORPN/2019 dated 15/10/2020 (ref. 18) for furnishing reasons for not levying the Environmental Compensation of Rs. 1395.42 lakhs (Rupees One thousand three hundred and ninety five lakhs and forty two thousand only);

WHEREAS reply was received from Kochi Corporation vide letter No.MOE2-10948/17 dated 02/11/2020 (ref. 19);

ANDWHEREAS the Chief Environmental Engineer, Regional Office, Ernakulum made recommendations for reassessment of levying Environmental Compensation, vide letter No.PCB/RO-EKM/GEN-258/19 dated 10/01/2021 is as follows;

Population(2011)	6,77,381
Class	Class I
Waste generation (TPD)	315.96
Waste disposed as per Rules (TPD)	31.60
Waste Management Capacity Gap(TPD)	284.36
Calculated EC(capital cost component) in Lakhs, Rs.	682.47
Minimum and Maximum values of EC (Capital cost component) recommended by the Committee (Lakhs, Rs.)	Min. 100 Max. 1000
Final EC (capital cost component) in Lakhs, Rs.	682.47
Calculated EC (O&M component) in Lakhs, Rs./day	5.69
Minimum and maximum values of EC (O&M cost component) recommended by the Committee	Min. 0.1 Max. 1.0
Final EC(O&M component) in Lakhs, Rs./day	1.00

Calculated Environmental Externality (Lakhs Rs./day)	0.01
Minimum and maximum values of Environmental Externality recommended by the committee(Lakhs, Rs./day)	Min. 0.05 Max.0.1
Final Environmental Externality (Rs. Per day)	0.05
EC to be collected (Rs. in Lakhs from 22/11/2018 to 31/12/2020 i.e 771 days)	1492.02

NOW THEREFORE, in exercise of the powers vested under Section 5 of the Environment Protection Act 1986, read with Government of India Notification S.O. 327(E) dated 10/04/2001, you are directed to remit an amount of Rs. 1492.02 lakhs (Rupees One thousand four hundred and ninety two lakh and two thousand only) towards the Environmental Compensation for non-compliance of the Solid Waste Management Rules, 2016, for the period from 22/11/2018 to 31/12/2020 within 15 days of receipt of this direction.


CHAIRMAN

To

The Secretary,
Kochi Corporation

Copy to:

1. The Chairman
State Level Monitoring Committee with C/L
2. The Additional Chief Secretary
Local Self Government Department with C/L
3. The Principal Secretary
Environment Department with C/L
4. The District Collector, Ernakulam
5. The Director, Urban Directorate
6. The Chief Environmental Engineer, Regional Office, Ernakulam
7. The Environmental Engineer, District Office 1 and 2, Ernakulam

ANNEXURE 2



KERALA STATE POLLUTION CONTROL BOARD REGIONAL OFFICE, GANDHI NAGAR, ERNAKULAM – 682 020

www.keralapcb.nic.in

PCB/RO-EKM/GEN-258/19

Date: 16.03.2021

SHOW CAUSE NOTICE

Sub:- Solid Waste dumping facility by Kochi Corporation – Brahmapuram - Reg.

Ref:- 1. Direction No.PCB/HO/SEE2/KOCHI CORPN/2019 (Vol-II) given by the Chairman, KSPCB dated 09.03.2021.

2. This office notice No.PCB/RO-EKM/GEN-97/12 dated 14.01.2019.

3. Authorization given by the Chairman, SPCB No. PCB/HO/SEE2/KOCHI CORPN/2019 dated 31.07.2020 to initiate prosecution against Kochi Corporation.

4. Notice No. PCB/HO/RULES/SWM-ERNAKULAM/2018 dated 12.10.2019 from the Chairman of the Board.

5. Notice No. PCB/HO/SEE2/KOCHI CORPN/2019 dated 11.12.2019 from the Chairman of the Board.

6. Joint inspection conducted at solid waste plant and septage treatment plant, Brahmapuram on 03.03.2021 by the Chief Environmental Engineer, Regional Office, Ernakulam along with Chairman, SLMC.

7. Fire Accident Occurred at solid waste dumping area on 05.03.2021 and study report by NIIST prepared in April 2019 during fire accident occurred on 22.02.2019 & 23.02.2019.

8. Notice No. PCB/HO/SEE 2/KOCHI CORPN/2019 dated 15.10.2020 assessing Environmental Compensation.

9. Direction No. PCB/HO/SEE 2/KOCHI CORPN/2019 dated 13.01.2021 imposing Environmental Compensation.

10. Your Letter No. MOE2/10948/17/II dated 28.10.2020.

Sir,

In continuation to the notices & direction vide references cited (4),(5), (8), & (9) above, as per the surprise inspection conducted on 03.03.2021 at solid waste disposal yard / Septage treatment plant at Brahmapuram along with the Chairman, SLMC and based on the findings during the fire accident mentioned/based on the report vide reference (7) I am to inform you as follows,

It may be noted that still there are no progress in the satisfactory management of solid waste at the Solid Waste Management facility provided by the Kochi Corporation at Brahmapuram. During inspection mentioned vide reference (6), certain observations were made. These observations in addition to the earlier findings are illustrated as follows.

Though the Corporation is still collecting solid wastes from other Municipalities also, it was once again noticed that fresh biodegradable waste received in the plant are not in properly segregated form and disposed as such over the legacy waste deposit in the dilapidated windrow sheds. Though several directions were already given directly by the Board and during different meetings by SLMC, you are not able to practice spot treatment of such fresh waste at the plant even after a lag of about 10 years, the date from which the corporation is operating the Brahmapuram yard without a valid authorization as per the MSW Rules 2000 and SWM Rules 2016.

The damaged windrow composting sheds are the root cause for the malfunctioning of solid waste management facility as no effective facilities are seen there to process fresh bio degradable wastes collected from Corporation area as well as from other Local Bodies. It is a sad state of affair that you are still allowing bio degradable fraction of the solid wastes from other local bodies also whereas you have not practicing any scientific facilities for solid waste management at Brahmapuram plant. It is also noticed that the rain water if any will definitely come in contact with the deposited legacy waste and will be directed to "Kadambrayar", one of the rivers surrounding the dumping yard. There are visible discharge routes intentionally constructed for this untreated leachate which find its way to marshy area beyond this sheds then to river flowing nearby. The other one, a branch of chithrapuzha also facing the same menace due to this dumping yard. It is important to note that these two stretches are already identified as polluted river stretch and action plans are being proposed to revitalize these streams as per different orders of the Hon'ble National Green Tribunal in OA 673/2018 in the matter of "News item published in 'The Hindu' authorized by Sri. Jacob Koshy titled "More river Stretches are now Critically Polluted: CPCB". Samples were collected from drains which were seen spread over the entire area and sent to Central Laboratory, KSPCB for reports. It may also be noted that the thickly growing weeds in the Kadambrayar and Chithrapuzha prevent the Board officials to carry out water sampling.

No actions are taken to install proper Leachate Treatment facilities at the site. The temporary plant provided was seen totally non functional. Your claim that this leachate oozed out from windrow sheds is being properly treated in the nearby common septage treatment facility is seems to be absolutely a false statement. During the surprise visit vide reference (6), septage treatment facility provided very near to this dumping yard also was inspected to ascertain whether the plant is functioning or not. It is unfortunate to note that the plant was not functioning properly and it is suspected that you are discharging untreated or partially treated sewage/effluent to nearby marshy area which is approximately 50 m away from septage plant where sewage in septic condition was seen spread over the entire area. It is distressing to note that almost all components of the septage treatment plant were seen kept idle and there were clear evidence for untreated sewage discharge using flexible hose directly through outlet portion which end in such marshy area. This marshy area is extended to Chithrapuzha river, flow if any will be leading to Chithrpuzha, one of the river identified as polluted river stretch out of 21 in the state and 3 in the District. During inspection vehicle (Reg No. KL 40 N 5051) was seen emptying the leachate though no components of the plant was found to be operational and the flow meter provided was seen faulty. It may also be noted that there was an adverse remark from Principal bench of Hon'ble NGT on the feasibility of leachate transfer to a septage plant for treatment. However, sample collected from the discharge area also and was forwarded to Central Laboratory. It may be noted that statutory samples were also collected from this outlet portion and drain leading to temporary leachate collection tank provided at the solid waste dumping yard as a prelude step on initiating prosecution against you for the committed offences as per the relevant provisions of the Water (Prevention and Control of Pollution) Act 1974, the Environment Protection Act 1986 and the Solid Waste Management Rules, 2016 and as authorized by the Chairman, SPCB vide reference (3).

As usual, plastic wastes were found to be dumped openly along the southeast portion and no facilities were seen there to process it except a shed which is not at all capable of accommodating the entire plastic wastes brought to this yard. The shredding machine installed was seen kept idle. It may be noted that the responsible officials available at the site reported that a small portion of the waste is being transferred to some outside agencies for further

processing but the quantity or the agency details are not obtained from them and they were not at all aware of such details.

It is also noticed that a fire accident was occurred at this plant on 05.03.2021 where plastic waste heaped along the southeast direction mentioned above. On hearing about this incident surveillance team of the Board rushed to this area where fire and heavy smoke were observed. The CCTV Footage proved it clear that the flames started at 1.00 PM and multiplied after that. It was noticed that the fire and rescue team was able to control the fire in the night but heavy smoke from burning of plastic continued. It is regretted to observe that during 2019 and 2020 also there were fire accidents and a study was conducted by the NIIST in 2019 on which a report was submitted on the status of emission of dioxins and dioxin – like PCBs. The major findings of the study may be noted,

Major findings of the study.

- ❖ *Dioxins were detected and quantified in ambient air, residual ash and sediment samples collected from the premises of waste dump yard during fire break out.*
- ❖ *The average dioxin levels observed in ambient air was found to be 10.3 pg TEQ/m³. The observed levels are 50 and 10 times higher than reference and field blank data.*
- ❖ *The average dioxin concentration observed in residual ash samples collected from different locations in the fire covered area is 158.5 ng TEQ/kg of ash.*
- ❖ *The observed dioxin levels in sediment samples collected from nearby marsh fields is 6.8 ng TEQ/kg.*
- ❖ *The dioxin generated by the fire is given by Emission Factor x Activity Rate.*
 - *The Activity Rate = total quantity of MSW burned = Area burned (from satellite photo of 23/2/2019) x burn depth (20 cm as given by Dr.Ajit Haridas), and bulk density (350 kg/m³) = 1800 tonnes (appr.)*
 - *The Emission Factor for dioxins as determined in “Burn-hut” at CSIR-NIIST is 39.81 µg PCDD-F TEQWHO/ ton of waste burned.*
 - *Hence, estimated dioxin emitted = 72 milligram Toxicity equivalence (TEQ).*
 - *The WHO /FAO maximum tolerable monthly intake of dioxins for humans is 70 picogram TEQ/kg body weight (tolerable annual intake for a 65 kg person is 54.6 nanogram TEQ). While only a very small fraction of the dioxins generated reaches humans via the food chain, the total dioxin generated is sufficient to exceed tolerable annual intake of $72 \times 10^{-3} / 54.6 \times 10^{-9} = 1.3$ million persons*

Recommendations

- *It is essential to establish modern solid waste treatment plants and clear the dump yards of wastes by ‘bio-mining’ to separate combustible and inert*

material. The contaminated ash separated during bio-mining should be removed to sanitary landfill.

- *Given the widespread burning of waste and dump yard fires, analysis of dioxins in animal origin food samples such as milk, egg, meat and in human milk is recommended.*

It may also be noted that during several occasions specific instructions were given by the SLMC to then Secretaries not to repeat mismanagement of solid wastes/these types of accidents via due negligence shown by the responsible officials of the Corporation at a dumping yard where huge heaps of plastic wastes / legacy wastes are a regular scene. You are also reminded that the repeated fire accidents and experienced toxic gas emissions are violations as per the relevant provisions of the Air (Prevention and Control of Pollution) Act 1981. Also, no reply has been submitted to this office letter of even number dated 16.02.2021 asking details of certain registers and list of officials held the post of Secretary of the Corporation after 28.10.2020, the date on which a list of officials held the post of Secretary from 18.04.2010 onwards (the date on which the validity of the authorization ended) was made available as per the letter vide reference (11).

Please find attached different photographs taken during the visit/fire accident to make you aware on the grave situation existing are placed here.



Photo 1 – Uncontrolled Leachate Flow to Kadambrayar



Photo 2 –Kadambrayar with full of weeds surrounding the solid waste management plant



Photo 3 –The Brahmapuram solid waste dumping yard is just 1-2 m away from Kadambrayar



Photo 4 – Damaged windrow composting sheds of Brahmapuram solid waste plant



Photo 5 – Open Legacy waste heap always a menace to Kadambrayar river



Photo 6 – Uncontrolled Leachate Flow from dilapidated windrow sheds



Photo 7– Fresh Biodegradable wastes are brought from other Municipality (Aluva) but dumped over legacy wastes



Photo 8 –Biodegradable wastes transfer from other Municipality (Thrikkakkara)



Photo 9 – Blocked Drains prevent Leachate Flow.



Photo 10- Uncontrolled Leachate Flow



Photo 11 - Open Drains make leachate treatment unviable.



Photo 12 – Untreated sewage discharge from Septage treatment plant



Photo 13 – A channel through where untreated sewage is routed.



Photo 14 – A part of legacy waste accumulation



Photo 15 – Nonfunctional Sludge Drying Bed of Septage Treatment Plant



Photo 16 – Suspected untreated flow Outlet portion of Septage Treatment Plant



Photo 17 – Nonfunctional Filter feed tank of Septage Treatment Plant



Photo 18 – Faulty flow meter installed at Septage Treatment Plant



Photo 19 – Vehicle seen at the plant emptying leachate from Solid waste plant



Photo 20 – Suveillance team is visiting the Fire accident occurred at Brahmapuram plant on 05.03.3021



Photo 21–CCTV Footage of Fire accident occurred at Brahmapuram plant on 05.03.3021 at 07.27 PM

The following observations also may be read to identify the negligence shown towards improper management of solid waste at Brahmapuram plant owned and operated by the Kochi Corporation.

1. Still you are continuing collection of bio degradable wastes from other Local bodies whereas they are also duty bound to manage their wastes and continuing violation for several years as per the MSW Rules 2000 / for the last five years as per the SWM Rules 2016 [Rules 22(1), (3), (5), (6) & (11)]. It is important to note that there are committed offences by the Kochi Corporation and these local bodies as per the order dated 12.10.2018 & 16.01.2019 in OA 606 of 2018 also.

2. Each fire accident causes damages to environment in equal/similar proportions as happened in 2019 on which specific study was conducted by the Board. Hence the Board will be forced to proceed with Environmental Damage assessment/imposing fine etc.

3. It look leachate flow will be more severe during coming monsoon also which will be there within a couple of months as happened in the previous years and the nonfunctioning septage treatment plant is not at all capable of accommodating the leachate generated from the Solid waste dumping facility at Brahmapuram which is also under your control.

4. It is important to note that the Hon'ble Chief Secretary in the meeting held on 06.03.2021 to review the actions taken for ensuring effective implementation of solid waste management Rules, 2016 by the Kochi and Kollam Corporations in the light of the orders issued by the Hon'ble NGT in OA 514 of 2019 , OA 439 of 2013 and OA 456 of 2013 remarked as follows,

“it is very unfortunate that the inaction on the part of the Municipal Corporations is being reflected as poor governance. It was noted that even after the intervention of the Hon'ble National Green Tribunal and State Level Monitoring Committee, no remarkable progress was achieved in the solid waste management scenario, including remediation of legacy waste dumps. The Chief Secretary made it very clear that such non-compliances will not be allowed to continue and strict legal action including penalty options will be undertaken against the non-implementation of statutory responsibility”.

The Hon'ble Chief Secretary also warned,

“for taking action on erring officials/persons in the event of default. Both the Municipal Secretary and Council will be held responsible for non-implementation of solid waste management rules if timely compliance is not adhered to. The

option of resorting personal fines will have to be thought of, if non compliance continues”.

In these circumstances, you are hereby directed to show cause if any within 15 days why legal actions shall not be initiated against you including prosecution as per the authorization given by the Chairman vide reference (3) and as per the relevant provisions of the mentioned acts for the above explained violations already committed by you.

M A BAIJU

Digitally signed by M A BAIJU
Date: 2021.03.16 20:24:40 +05'30'

Chief Environmental Engineer

To

The Secretary,
Kochi Corporation

- Copy to:
1. *The Chairman, KSPCB, Thiruvananthapuram*
 2. *The Member Secretary, SLMC, Thiruvananthapuram.*
 3. *The District Collector, Ernakulam.*
 4. *Adv. Rema Smrithi, Advocate Standing Counsel (NGT)*