

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

Original Application No. 76 of 2017 (SZ)

Original Application No. 259 of 2017 (SZ) &

Original Application No. 260 of 2017 (SZ)

REPORT REGARDING THE PROGRESS FILED BY SMT. BINDHU  
RADHAKRISHNAN, CHIEF ENVIRONMENTAL ENGINEER OF  
KERALA STATE POLLUTION CONTROL BOARD IN THE MATTER  
OF O.A NO.259/2017 IN ACCORDANCE WITH THE ORDER  
DATED 14.07.2021 OF THE HON'BLE NGT

I, Bindhu Radhakrishnan, D/o. M.P Krishnan kutty (Late), aged 53 years, am the Chief Environmental Engineer of Kerala State Pollution Control Board and I am duly authorised to file this report and submit the following progress/status report subsequent to the order dated 14.07.2021.

The Hon'ble NGT as per the order dated 14.07.2021 had directed to conduct Source Apportionment Studies in Kochi & Thiruvananthapuram cities and the committee appointed by the Hon. Tribunal was directed to provide necessary guidance for the study and submit periodical reports to the Tribunal regarding the progress of the work. The Environment Department, Government of Kerala was directed to conduct the study and the Chief Secretary, State of Kerala was directed to supervise the implementation of the scheme envisaged by each department. Subsequently the Chief Secretary convened a meeting on 14.09.2021 and directed to invite estimate from NIT, Calicut to conduct the source apportionment studies, being a reputed institute within the State. Copy of the minutes of the meeting conducted by the Chief Secretary is attached as

**Annexure R2(A)**. Accordingly, the Additional Chief Secretary, Environment Department invited a proposal with estimate and directed the Board to examine the proposal and to hold discussion with the Director, NIT Calicut to get it revised to reasonable amount.

As directed, Board had examined the proposal submitted by NIT, Calicut and hold a discussion with NITC on 03.03.2022 . As the proposal submitted by NITC was not comprehensive and not in line with the Conceptual Guidelines and Common Methodology issued by Central Pollution Control Board for conducting Air Quality Monitoring, Emission Inventory and Source Apportionment study the same was communicated to NIT, Calicut during the meeting held on 03.03.2022 and requested to submit revised detailed proposal considering all aspects of the guidelines issued by CPCB and the terms of reference framed by the Joint Committee, appointed by the Hon'ble NGT, in their meeting held on 08.09.2021. Copy of the minutes of the joint committee meeting held on 08.09.2021 is attached as **Annexure R2(B)**.

It is respectfully submitted that the revised proposal was received from the NIT Calicut on 04.04.2022. The committee, appointed by the Hon'ble NGT in O.A. 259/2017, was directed to provide necessary guidance for the study as envisaged by them in the report primarily in Thiruvananthapuram and Kochi cities. Meanwhile one of the members of committee appointed by Hon'ble NGT, Dr. M.T. Karuppiah, member from MoEF &CC was transferred to Raipur and on Boards request, Dr. P. Saranya, Scientist 'D', Ministry of Environment Forest & Climate Change, Regional Office (SEZ), Chennai was deputed in place of Dr.M.T. Karuppiah to the committee vide letter dated 12.04.2022. Copy of the letter is produced herewith and marked as **Annexure R2(C)**. As the committee appointed by Hon'ble NGT in O.A. 259/2017 was directed to provide guidance for the Source Apportionment study, the revised proposal received from NITC was placed before the committee on 06.05.2022 for remarks and requested to offer remarks not later than 13.05.2022. The committee

members had not offered specific remarks and requested for a presentation of the proposal by NITC

As the committee constituted based on the directions of Hon'ble NGT couldn't arrive at final decision, it was felt to strengthen the committee by incorporating more experts in this field from the same organisations suggested earlier by the Hon'ble NGT. Accordingly, the committee was strengthened by incorporating additional members namely Er. J. Chandrababu, Regional Director, CPCB, Regional Directorate, Bangalore, Dr. S.M. Shiva Nagendra, HOD, IIT, Madras and Er. Alexander George, Senior Environmental Engineer, Technical Section, Head Office, Kerala State Pollution Control Board. Copy of the proceedings dated 22.07.2022, reconstituting the committee is attached as **Annexure R2 (D)**. This committee can look into the proposal of NITC and provide necessary guidance and support so as to conduct and complete the study at the earliest. The latest meeting of the joint committee was held on 05.08.2022 and the minutes of the committee meeting is attached as **Annexure R2 (E)**. The committee decided to evaluate the proposal submitted by the NITC in the next meeting proposed to be conducted on 11.08.2022, though the agency to conduct the study was not selected by the committee.

Further, the Hon. NGT also directed that the independent departments who were directed to carry out certain recommendations to file their independent status report regarding the action plan with shorter timeline as to how they are going to implement the recommendations made by the committee to check the air pollution in the State of Kerala.

The action plan comprising of the short term and long term steps already prepared and submitted by the committee before the Honourable NGT is reproduced below:

<b>Short term steps suggested for improving Air Quality</b>		
<b>SL. NO</b>	<b>ACTION</b>	<b>IMPLEMENTING AGENCY</b>
1	Launching extensive awareness drive against polluting vehicles	Motor Vehicle Department
2	Ensuring strict action against visibly polluting vehicles	Motor Vehicle Department
3	Steps to prevent parking of vehicles in non designated areas.	Motor Vehicle Department /State Police- Traffic
4	Introducing wet/Mechanized vacuum sweeping of roads.	Local Self-Government Department
5	Controlling dust pollution at construction sites by providing an appropriate covering system	Local Self-Government Department
6	Ensuring carriage of construction material in closed/covered vessels.	Police Department
<b>Long term steps suggested for improving Air Quality</b>		
<b>SL. NO</b>	<b>ACTION</b>	<b>IMPLEMENTING AGENCY</b>
1	Retrofitting of diesel vehicles with particulate filters	Motor Vehicle Department
2	Installation of the vapour recovery system in fuelling stations	Petroleum and Explosives Safety Organization (PESO) /Pollution Control Board
3	Promoting battery operated vehicles	Motor Vehicle Department
4	Banning of old diesel vehicles in a phased manner	Motor Vehicle Department

<b>5</b>	Undertaking Greening of open areas	Local Self-Government Department/ Public Works Department
<b>6</b>	Creation of green buffers along the traffic corridors.	Local Self-Government Department/ Public Works Department
<b>7</b>	Development of a proper system for ensuring garbage/municipal solid waste/biomass/leaves connection and disposal and to avoid open burning.	Local Self-Government Department
<b>8</b>	Promoting the use of LPG only and to avoid the use of kerosene/firewood in restaurants/dhabas/roadside eateries.	Local Self-Government Department
<b>9</b>	Introduce water fountains at major traffic intersection, wherever feasible	State Highway Authority of Kerala (SHAK)/ National Highways Authority of India/ Public Works Department (PWD)
<b>10</b>	Take steps for lacktopping/pavement of road shoulders to avoid road dust	Public Works Department (PWD)
<b>11</b>	Prepare an action plan for public transport on CNG mode.	Motor Vehicle Department
<b>12</b>	Ensure the proper collection of solid waste ( biomass)	Local Self-Government Department (LSGD)
<b>13</b>	Ensure strict enforcement of the ban on burning of agricultural	Agriculture Department

	waste and crop residues	
<b>14</b>	Ensure strict action against industrial units not complying with standards.	Pollution Control Board
<b>15</b>	Ensure DG sets meeting the standards only be allowed to operate	Department of Electrical Inspectorate/Pollution Control Board (KSPCB)
<b>16</b>	Undertake road widening and improvement of infrastructure for decongestion of road	Public Works Department (PWD)

In the action plan already submitted to the Hon'ble NGT, by the committee the following are the steps to be taken by the Kerala State Pollution Control Board (item 2, 14, and 15 above).

<b>2</b>	Installation of the vapour recovery system in fuelling stations	Petroleum and Explosives Safety Organization (PESO) /Pollution Control Board
<b>14</b>	Ensure strict action against industrial units not complying with standards.	Pollution Control Board
<b>15</b>	Ensure DG sets meeting the standards only be allowed to operate	Department of Electrical Inspectorate/Pollution Control Board (KSPCB)

Regarding item no.2, petrol refuelling stations are a major source of benzene emissions, volatile organic compounds and particulate matter 2.5 concentrations. Therefore installation of vapour recovery system is an important step in improving air quality. This is to be implemented in coordination with Petroleum and Explosives Safety Organization (PESO) shortly. Action in this

regard has already been initiated, and this is now being insisted for new retail outlets with sale potential of 300KL per month and setting up in cities with population more than one lakh. Copy of the circular dated 24.02.2020 issued in this regard is attached as **Annexure R2((F)-10 pages)**.

Regarding item no.14, periodical inspections are being conducted by the Board in industries and the pollution control measures adopted by them are being verified. If any non-compliance is noticed by the Board, adequate actions are also being taken to rectify the same.

Regarding item no.15, In connection with the National Clean Air Programme (NCAP), with an intention to reduce the PM<sub>2.5</sub> and PM<sub>10</sub> concentration from DG sets, retro fitting of emission control devices of generators already in use was suggested or to shift to gas based DG sets. This emission control is required to be provided for DG sets of 500KVA and above only. Circular regarding the above was already issued by Kerala State Pollution Control Board on 09.12.2020 and copy of the same is attached as **AnnexureR2(G)**.

Dated this the 10<sup>th</sup> day of August 2022.

Bindhu Radhakrishnan Digitally signed by Bindhu Radhakrishnan  
Date: 2022.08.08 21:46:17 +05'30'

Bindhu Radhakrishnan

Chief Environmental Engineer

On behalf of the 2<sup>nd</sup> Respondent in OA no. 259/2017

**Minutes of the meeting held by the Chief Secretary on 14.09.2021 in the matter of O.A. Nos. 76/2017, 259/2017 & 260/2017 of the National Green Tribunal, Southern Bench.**

The VC commenced at 10:30 am with the Chief Secretary in chair. The meeting was attended by the Additional Chief Secretaries of Home & Environment Departments, Principal Secretary & APC, Agriculture Department, Secretaries of Public Works and Transport Departments, Transport Commissioner, Chairman & Member Secretary, Kerala State Pollution Control Board and other officers concerned.

As directed by Additional Chief Secretary, Environment Department the Member Secretary, Kerala State Pollution Control Board gave a brief presentation on the various NGT matters with respect to air and noise pollution and briefed on the directions of NGT for which actions are required to be taken by various authorities. As the domain of air pollution encompasses aspects of noise pollution also, the compliance to the Noise (Regulation and Control) Rules, 2000 issued under the Environment (Protection) Act, 1986 is also to be ensured along with actions mandated under the Air (Prevention and Control of Pollution) Act, 1981 and rules thereunder. Since motor vehicles also play a significant role in contributing to air pollution there are actions that are required to be complied under the Motor Vehicles Act, 1988 and Rules thereunder. As quarterly reports need to be filed on the compliance of various authorities of the State before the Hon'ble NGT, all authorities concerned shall make available the action taken report pertaining to them to the Environment Department for enabling filing of a consolidated report.

**After a thorough discussion the following actions were recommended to be enforced:**

1. **Restriction on plying of old vehicles:** It was informed that the

restrictions imposed legally by way of Act / Rules with respect to age of vehicles allowed to ply are enforced in the State by the Motor Vehicle Department. Chief Secretary directed that this may be brought to the notice of the NGT in the report being filed. Transport Department / KSRTC / Transport Commissioner may file the compliance report on the short-term and long-term actions recommended by the committee constituted by the Tribunal and on actions taken by them in compliance to the relevant Act / Rules to the Environment Department.

**(Action: Motor Vehicle Department, Transport Commissionerate, KSRTC, Environment Department)**

2. **Source Apportionment Study for two cities (Thiruvananthapuram & Cochin):** Chairman, KSPCB informed that Source Apportionment study is to be conducted in Trivandrum and Cochin as per the direction of NGT and that the funding shall be in the ratio of 50:30:20 by the State Government, CPCB & SPCB respectively. It is learnt that the cost of the study may go up to 2 crore rupees for one city. NIT, Calicut is the only institute within the State recommended by the committee for conducting the study. Chief Secretary directed to invite estimate from NIT, Calicut for the purpose. ACS, Home Department opined that identifying a pool of best colleges which offers M.Tech in Environmental Engineering may help to build a capable team to conduct related field studies. Chief Secretary suggested strengthening the capacities of existing Government Engineering Colleges for conducting studies relating to environmental issues.

**(Action: Environment Department)**

3. **Noise Regulation:** Chief Secretary highlighted that the noise pollution caused by the illegally altered motor vehicles, especially motorbikes, have to be curbed. Transport Department informed that special drives

like operation RASHI is being implemented to find the vehicles which are illegally altered and to prevent rash and negligent high speed driving. Actions are being taken to suspend licenses of defaulters and to cancel registration of vehicles concerned. It is also informed that raiding of workshops are also done to identify units facilitating illegal alteration of vehicles and action is being taken against violators.

**(Action : Motor Vehicle and Transport Departments)**

4. Chief Secretary emphasized the need to limit the noise level in public places in adherence to the Noise 'Pollution (Regulation and Control) Rules, 2000 in force. The first and foremost initiative shall be to spread awareness on the existing Rules. Awareness campaigns and press releases will go a long way in ensuring this. Social media networks may be utilized for this purpose. Drives may be carried out to publish actual noise levels of various public places. Consistent efforts in this front by all authorities concerned is needed for achieving good results.

**(Action: Transport, Motor Vehicle, Home, LSG & Envnt Departments)**

5. **Quarterly report to NGT:** For enabling Environment Department to furnish quarterly report to the NGT before 14.10.2021, all Line Departments are directed to furnish action taken report as applicable to them, on all the recommendations given by the committee constituted by the Tribunal by 28.09.2021, (short & long term measures and concerned implementing authority, are extracted in the order dated 14.07.2021 of the Tribunal; pages 41, 42 of the order).

**(Action: Transport, Motor Vehicle, Home, Public Works, LSG, Agriculture & Envnt Departments)**

6. **Air Quality Monitoring Committee :** The AQMC constituted by the

State shall meet in the first week of October 2021 to evaluate the action taken in compliance to the various directions of NGT (invariably covering all the agenda points of this meeting) and for enforcing The Noise Pollution (Regulation and Control Rules) 2000 in the State and shall forward its recommendations to the Environment Department to bring the same to the notice of the Chief Secretary. Actions to be complied / taken by various authorities for ensuring compliance to the Noise Rules 2000 may be charted out by the Committee and circulated to all Departments concerned with definite time frame for implementation.

**(Action: Env't Department)**

The meeting came to an end by 11:15 am.

Chief Secretary

**Minutes of the Joint Committee meeting held on 08.09.2021 through VC to discuss the directions issued as per the Order dated 14.07.2021 of the Hon'ble National Green Tribunal in O.A Nos.76 of 2017, 259 of 2017 and 260 of 2017.**

The meeting commenced at 03.00 pm. The list of members attended the meeting is attached as annexure. Shri. Bijumon, RTO, Enforcement, TVM member from the Transport Department informed that he is unable to attend the VC as he is engaged with another official meeting.

Smt.Bindhu Radhakrishnan, the Member Convener, cordially welcomed the members to the meeting and briefly explained about the Order dated 14.07.2021 of Hon'ble NGT in O.A Nos.76 of 2017, 259 of 2017 and 260 of 2017 dealing with air pollution and related matters. The Member Convenor sighted that the principal agenda of the meeting is to form guidelines/terms of reference for selecting the institutions for carrying out the source apportionment study.

Dr R. Sivacoumar, Sr. Principal Scientist, CSIR- NEERI Zonal Centre, Chennai invited the attention of the committee towards the quantum of work involved in carrying out the study. He added that the education institutions usually engage P.G. students or outsource the work granted to them, and expressed dissatisfaction with their method of relying on secondary data instead of field data which would include 60% of the quantum of work. Also pointed out that there will not be sufficient number of field monitoring equipments, as the study involves monitoring at different location simultaneously. All the Committee members agreed to that and decided to exempt educational Institutions and opt for agencies with previous experience in conducting Source Apportionment Studies as per the 'Conceptual Guidelines and Common Methodology for Air Quality Monitoring, Emission Inventory & Source Apportionment Studies for Indian Cities' prepared by CPCB.

The Convenor informed that CSIR - National Institute of Interdisciplinary Science and Technology has shown their interest in carrying out the Source Apportionment Studies. Dr Sivacoumar informed that they shall prove their expertise in this field by providing the reports of the last two Source Apportionment studies carried out by them.

The Committee members then discussed the points to be considered in preparing terms of reference for conducting the Source Apportionment Study and modelling.

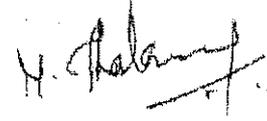
1. The Source Apportionment and Emission Inventory study shall be carried out for the **Thiruvananthapuram Metropolitan Area** (Thiruvananthapuram Corporation and the municipalities of Attingal, Nedumanagadu and Neyyatinkara, 3 'Outgrowths' and twenty-four Census towns)- 310 km<sup>2</sup> and **The Greater Cochin Area** -- 732 km<sup>2</sup>
2. The overall project scope shall include complete characterisation of ambient dust- (PM<sub>10</sub> & PM<sub>2.5</sub>), emission inventory, source profiling, source apportionment using dispersion and chemical mass balance models.
3. Air Quality sampling shall be carried out at locations such as kerbside, residential, industrial and background. A minimum of 20 locations shall be identified in each city.
4. The monitoring shall be carried out covering all seasons in a year, to get representative data on seasonal variations in meteorology as well as activities that affect Air Quality.
5. To address all the expected anthropogenic emission sources in urban areas not limited to the major air pollutants such as Sulphur dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Carbon Monoxide (CO), PM<sub>10</sub>, PM<sub>2.5</sub>, Benzene, Toluene and Xylene. Analyse PM<sub>10</sub>& PM<sub>2.5</sub> mass collected for elemental composition, elemental carbon, organic carbon, Non- Methane Hydrocarbon (NMHC), Total Hydrocarbon (THC), Poly Cyclic Aromatic Hydrocarbon (PAHs) and other Molecular Markers.
6. In addition to the above Black Carbon shall also be measured using Aethalometer as mentioned in OA No. **76 of 2017**
7. The agency should have a minimum of 3 years field experience in the source apportionment studies and shall possess the required number of equipment before submission of the interest and shall furnish the details of the equipment in the interest.
8. They shall also establish at least 2 micro weather stations in each city for the study.

The Convenor requested Shri. Deepesh CPCB, to make available terms of reference prepared in similar studies and he agreed to submit the same and the meeting was concluded by 3.15 pm.

MEMBERS

SIGNATURE

1. Dr. M.T Karuppiah  
Scientist 'E',  
MoEF& CC, Regional Office,  
Chennai.



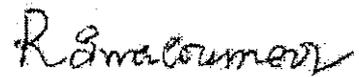
2. Dr. S Prabhu  
Scientist 'C'  
Regional Office (South Zone)  
MoEF& CC Regional Office,  
Bengaluru



3. Dr. Deepesh. V  
Scientist 'C'  
Regional Directorate,  
Central Pollution Control Board,  
Bengaluru



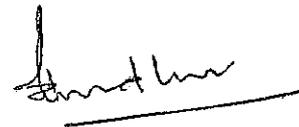
4. Dr. R. Sivacoumar, Sr.  
Principal Scientist  
CSIR- NEERI Zonal Centre CSIR  
Complex, TTTI, Chennai.



5. Sri. Bijumon K  
Regional Transport Officer  
Enforcement Division,  
Thiruvananthapuram

Absent

6. Smt. Bindhu Radhakrishnan Senior  
Environmental Engineer Kerala State  
Pollution Control Board,  
Thiruvananthapuram



EP/12.7/NGT(SZ)/04/2020/KL/418  
Government of India  
Ministry of Environment, Forests and Climate Change  
(Integrated Regional Office (South Eastern Zone))

1st floor, Additional Office Block for GPOA,  
Shastri Bhawan, Haddows Road, Nungambakkam,  
Chennai – 600006,  
E-mail: [roefccc1@gmail.com](mailto:roefccc1@gmail.com)

Tel. 044-222041

Dated: 12<sup>th</sup> April, 2022.

To  
The Chairman  
Kerala State Pollution Control Board,  
Pattam P.O, Thiruvananthapuram-695004.

Subject: Constitution of committee as per the order of Hon'ble NGT (SZ) dated 06.01.2020 in Application No.259 of 2017.

Reference:

- i). Hon'ble NGT(SZ) Order dated 06.01.2020 in Application No.259 of 2017.
- ii). Your letter No. PCB/HO/SEE-1/O.A259/2017 dated.30.03.2022.

Sir,

With reference to above mentioned subject and consequent to the transfer of Dr.M.T Karuppiah, Scientist 'E' to IRO, Raipur, I am hereby inform that the competent authority has deputed Dr.P. Saranya, Scientist 'D' as the representative from the Ministry of Environment, Forests and Climate Change, Regional Office (SEZ), Chennai to the Joint Committee constituted by the Hon'ble NGT (SZ) in Application No.259 of 2017.

Yours faithfully,



(Dr.K.G.Prijilal)  
Research Officer (Environment)

**Copy to:** Dr. Dr.P. Saranya, Scientist 'D', Ministry of Environment, Forests and Climate Change, Integrated Regional Office (SEZ), Chennai. Ph.No. 8178810548



5. Officer from IIT Chennai - Member
6. Officer from NEERI, Chennai - Member

Accordingly the following Officers were nominated from the respective offices except IIT, Chennai.

1. Dr. Deepesh V, Scientist B and Smt. Poornima B. M, Scientist C, CPCB, Bangalore
2. Dr. M.T Karupiah, Scientist D, MoEF, Regional office, Chennai
3. Dr. S Prabhu, Scientist C, MoEF, Regional office, Bangalore
4. Sri. Bijumon, Regional Transport Officer, Trivandrum
5. Dr. R. Sivacoumar, Senior Principal Scientist, CSIR-NEERI, Chennai

Smt. Poornima B. M, Scientist C, CPCB left the committee in view of her transfer to newly incepted Regional Directorate, Chennai, vide ref 3. Also Dr. P. Saranya, Scientist D was nominated instead of Dr. M.T Karupiah, vide ref 8.

The Kerala State Pollution Control Board was specified as the nodal agency for this purpose and Smt. Bindhu Radhakrishnan, Senior Environmental Engineer, Head Office, Kerala State Pollution Control Board, Thiruvananthapuram was nominated as the Nodal Officer for coordination.

The Hon'ble NGT as per the order dated 14.07.2021 in O.A No. 76/2017, 259/2017 and 260/2017 had directed to conduct Source Apportionment Studies in Kochi & Thiruvananthapuram cities vide read 4<sup>th</sup> and the committee appointed by the Hon.Tribunal was directed to provide necessary guidance for the study and submit periodical reports to the Tribunal regarding the progress of the work. The Environment Department, Government of Kerala was directed to conduct the study and the Chief Secretary, State of Kerala was directed to supervise the implementation of the scheme envisaged by each department. Subsequently the Chief Secretary convened a meeting on 14.09.2021 and directed to invite estimate from NIT, Calicut for the purpose, being a reputed institute within the State, as per the minutes cited 5<sup>th</sup>.

Vide ref. cited 6<sup>th</sup>, a proposal dated 03.12.2021 of the NIT, Calicut for conducting Source Apportionment Study was received from the Environment Department .The Chairman of the Board was requested to examine the proposal and to hold a discussion with NIT, Calicut to get it revised to a reasonable amount. Accordingly a meeting with the NITC was held on 03.03.2022. As the proposal was not comprehensive as specified in the Conceptual Guidelines and Common Methodology,

NITC was requested to submit revised proposal, vide ref. 7 based on Source Apportionment Study developed by CPCB. NITC had submitted a revised proposal on 23.03.2022 and the same was placed before the committee on 06.05.2022. But a final decision could not be arrived. So it is felt to strengthen the committee by having more experts in this field from the same organizations suggested by NGT. As requested vide ref. 9, consent letters were received from IIT, Chennai and CPCB, Bangalore. In the mean time another proposal was collected from the NITC, based on the methodology specified in the CPCB letter dated 26.07.2021.

Accordingly, the committee is strengthened by incorporating additional members namely Sri. J. Chandrababu, Zonal Officer, CPCB, Regional Directorate, Bangalore, Dr. S.M. Siva Nagendra, HOD, IIT, Madras and Sri. Alexander George, Senior Environmental Engineer, Technical Section, Head Office, Kerala State Pollution Control Board. This committee can look into the proposals of NITC and provide necessary guidance and support so as to conduct and complete the study at the earliest.

Smt. Bindhu Radhakrishnan , Chief Environmental Engineer, Head Office, Kerala State Pollution control Board, Thiruvananthapuram will continue to be the nodal officer.

The expenditure in this regard will be met from the head of account- Non Plan 'Contingency' from current year's budget.

*Sheet 77*  
**MEMBER SECRETARY**

To

1. Sri. J. Chandrababu,  
Zonal Officer, CPCB Regional Directorate,  
Bangalore
2. Dr. Deepesh V  
Scientist 'B'  
Regional Directorate -South (Bengaluru)  
Central Pollution Control Board
3. Dr. S Prabhu  
Scientist 'C'  
Regional Office (South Zone)  
MoEF& CC Regional Office, Bangalore

4. Dr. P Saranya  
Scientist 'D'  
MoEF& CC, Integrated Regional Office (SEZ)  
1<sup>st</sup> Floor, Additional Office block for GPOA,  
Shastri Bhavan, Haddows Rd., Nungabakkam  
Chennai – 600006
5. Dr. R. Sivacoumar  
Sr. Principal Scientist  
CSIR-NEERI, 72, CSIR Rd  
Anbalagan Nagar, Tharamani  
Chennai - 600113
6. Sri. Bijumon. K  
Regional Transport Officer,  
Enforcement Division,  
Motor Vehicle Department, Thiruvananthapuram
6. Dr. S.M. Siva Nagendra,  
HOD, IIT, Madras
- 8 Sri. Alexander George,  
Senior Environmental Engineer,  
Technical Section, Head Office,  
Kerala State Pollution Control Board

**Minutes of the Joint Committee meeting held on 05.08.2022 through VC in compliance with the order of the Honourable National Green Tribunal, dated 14.07.2021 in O.A Nos.76 of 2017, 259 of 2017 and 260 of 2017.**

Joint Committee meeting was held on 05.08.2022 at 2.30 pm to discuss the course of action to be taken to comply with Honorable NGT directions. Dr. S.M. Siva Nagendra, Member and representative of IIT, Chennai had not attended the meeting. Following members attended the meeting as detailed below:

1. Er. J. Chandrababu,  
Regional Director,  
Central Pollution Control Board,  
Regional Directorate, Bangalore.
2. Dr. Deepesh V  
Scientist 'C'  
Central Pollution Control Board,  
Regional Directorate, Bangalore.
3. Dr. S Prabhu  
Scientist 'D'  
Regional Office (South Zone)  
MoEF & CC Regional Office, Bangalore
4. Dr. P Saranya  
Scientist 'D'  
MoEF & CC, Integrated Regional Office (SEZ)  
1<sup>st</sup> Floor, Additional Office block for GPOA,  
Shastri Bhavan, Haddows Rd., Nungabakkam  
Chennai – 600006
5. Dr. R. Sivacoumar  
Sr. Principal Scientist  
CSIR-NEERI, 72, CSIR RdAnbalagan Nagar, Tharamani  
Chennai - 600113
6. Sri. Bijumon. K  
Regional Transport Officer,  
Enforcement Division,  
Motor Vehicle Department, Thiruvananthapuram
8. Er. Alexander George,  
Senior Environmental Engineer,  
Technical Section, Head Office,  
Kerala State Pollution Control Board

9. Er. Bindhu Radhakrishnan  
Chief Environmental Engineer and member convenor  
Kerala State Pollution Control Board

Smt. Bindhu Radhakrishnan, Chief Environmental Engineer, KSPCB, and Member Convener welcomed all the committee members to the meeting. As it was the first meeting after reconstitution of the committee, Member Convenor made a presentation briefly explaining about history of the case and the present status as per the order dated 14.07.2021 of Hon'ble NGT in O.A Nos.76 of 2017, 259 of 2017 and 260 of 2017.

Members of the Joint Committee raised concern regarding inviting proposal only from NIT Calicut for carrying out source apportionment studies in Kerala in compliance to Hon'ble NGT directions, without adhering to the normal procedures for inviting proposals from shortlisted expert agencies. To this, the member convener clarified that in the meeting held by the Chief Secretary, Government of Kerala (GoK) on 14.09.2021, it was directed to invite estimates from NIT, Calicut for the purpose. This was suggested with a view to strengthen the capacities of Govt Engineering Colleges in Kerala for conducting studies relating to environmental issues. Therefore, Joint Committee members were of the view that the joint committee shall not be made responsible for all the administrative implications/ complications of the decision to go with NIT Calicut. It is also clarified that if the Govt. of Kerala is opting NIT Calicut for the intended work, other benefits shall stand forfeited.

Representative of CPCB clearly indicated that the proposal should be based on the 'Conceptual methodology and framework for carryout source apportionment studies' already prepared and issued by CPCB and same to be followed and the terms of reference prepared for source apportionment with respect to NCAP project should also be in line with the CPCB suggested methodology. The joint committee had agreed only to examine the technical aspects of the NIT Calicut proposal. The committee members also insisted that

NIT Calicut should make a presentation in the next Joint Committee meeting, scheduled on 11.08.2022 via VC. The technical feasibility of the same will be reviewed in the next meeting of the Joint Committee and also to take further course of action in the matter.

The meeting ended with a vote of thanks to all.

**Member Convenor**

## MEMBERS

## SIGNATURE

1. Sri. J. Chandrababu,  
Zonal Officer, CPCB Regional Directorate,  
Bangalore
2. Dr. Deepesh V  
Scientist 'B'  
Regional Directorate -South (Bengaluru)  
Central Pollution Control Board
3. Dr. S Prabhu  
Scientist 'C'  
Regional Office (South Zone)  
MoEF& CC Regional Office, Bangalore
4. Dr. P Saranya  
Scientist 'D'  
MoEF& CC,  
Integrated Regional Office (SEZ)  
Chennai – 600006
5. Dr. R. Sivacoumar  
Sr. Principal Scientist  
CSIR-NEERI, Chennai
6. Sri. Bijumon. K  
Regional Transport Officer,  
Enforcement Division,  
Thiruvananthapuram
7. Dr. S.M. Siva Nagendra,  
HOD, IIT, Madras Absent
8. Sri. Alexander George  
Senior Environmental Engineer,  
Technical Section, Head Office,  
Kerala State Pollution Control Board
9. Smt. Bindhu Radhakrishnan  
Member Convenor  
Chief Environmental Engineer  
Kerala State Pollution Control Board



## KERALA STATE POLLUTION CONTROL BOARD

കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004

പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

No. PCB/HO/HOW/RULES9/7/2019

Date: 24/02/2020

### CIRCULAR

Sub: - Distance criteria for new petrol pumps - reg.

Ref: - CPCB guidelines for setting up of New petrol pumps in compliance of Hon'ble NGT Order dated 18/01/2019 in O.A No 86/2019. (Copy enclosed)

In compliance to the directions issued by Hon'ble NGT in O.A No. 86/2019 dated 18/01/2019, Central Pollution Control Board has laid down the guidelines for setting up of New Petrol Pumps.

The Hon'ble NGT has directed that these guidelines shall be included in the Integrated Consent to Establish (ICE) of new outlets of petrol pumps as a condition that

“CPCB guidelines for setting up of New Petrol Pumps shall be followed”.

The following siting criteria for new retail outlets of petrol pumps shall be followed.

1. For petrol pumps, new retail outlets shall not be located within a radial distance of 50 metres (from fill point/ dispensing units/ vent pipe whichever is nearest) from schools, hospitals (10 beds and above) and residential areas designated as per local laws.
2. In case of constraints in providing 50 metres distance, the retail outlet shall implement additional safety measures as prescribed by Petroleum and Explosives Safety Organization (PESO).
3. In no case the distance between new retail outlet from schools, hospitals (10 beds and above) and residential area designated as per local laws shall be less than 30 metres.
4. No high tension line shall pass over the retail outlet.

These guidelines are supplementary to all existing relevant Rules, Guidelines, Orders etc.

The circular shall come into effect from the date of the circular and shall be applicable to all applications received thereafter.

Sd/-  
**CHAIRMAN**

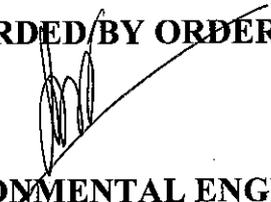
To

1. The Chief Environmental Engineer,  
Regional Office, Trivandrum/Ernakulam/Kozhikode.
2. The Senior Environmental Engineer,  
Regional Office, Ernakulam.
3. The Environmental Engineer, District Office,  
Thiruvananthapuram, Kollam, Pathanamthitta, Alapuzha, Idukki, Kottayam,  
Ernakulam-1, Ernakulam-2, ESC - Eloor, Thrissur, Palakkad, Malappuram,  
Kozhikode, Kannur, Wayanad, Kasargod.

Copy to:-

- 1) All Technical Staff in HO
- 2) IT Cell (for uploading in the website)
- 3) C.A to CHN & MS

**FORWARDED BY ORDER**

  
**CHIEF ENVIRONMENTAL ENGINEER**

272  
16/01/2020

A1  
19/01/20



CENTRAL POLLUTION CONTROL BOARD

DELHI 110 032

B-13011/1/2019-20/AQM 10874

January 07, 2020

OFFICE MEMORANDUM

**Sub: Guidelines for Setting Up of New Petrol Pumps in Compliance of Hon'ble NGT order dated January 18, 2019 in OA No. 86/2019: Gyanprakash@ Pappu Singh vs Gol & Ors regarding.**

Hon'ble National Green Tribunal, vide order dated January 18, 2019 in OA No. 86/2019: Gyanprakash@ Pappu Singh vs Gol & Ors directed Central Pollution Control Board and MoPNG to look into the issue of setting up of large number of petrol pumps in the country and directed that appropriate guidelines be issued by the Central Pollution Control Board in exercise of statutory power.

An Expert Committee comprising of members from IIT Kanpur, NEERI, IIP, TERI, MoPNG and CPCB was constituted to frame Guidelines for setting up of new Petrol Pumps including siting criteria and pollution prevention and control measures.

The guidelines were placed in public domain and comments/suggestions/objections were invited from public and concern stakeholder and these were reviewed and guideline have been finalised.

The final Guidelines prepared by Expert Committee are hereby circulated for implementation by concerned stakeholders. These guidelines are hereby issued with the approval of the Competent Authority.

(V.K. Shukla)

Additional Director, AQM Div.

Encl.: As Above

To.

1. As per List Enclosed

DEE-3

✓  
14/1/2020

List of Stakeholders

1.	The Member Secretary Andhra Pradesh State Pollution Control Board D. No.33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalmvari Street, Kasturibaipet, Vijayavada-520010	2.	The Member Secretary Arunachal Pradesh State Pollution Control Board 'Paryavaran Bhavan', Yupla Road, Pappu Nallah, Naharlagun 791110 Arunachal Pradesh
3.	The Member Secretary Assam State Pollution Control Board Bamunimaidan, Guwahati - 781021 Assam	4.	The Member Secretary Bihar State Pollution Control Board Parivesh Bhawan, Plot No.N-B/2, Patliputra Industrial Area Patna-800023
5.	The Member Secretary Chhattisgarh Environment Conservation Board Paryavas Bhawan, North Block Sector-19 Naya Raipur - 492 099 Chhattisgarh	6.	The Member Secretary Goa State Pollution Control Board Nr. Pilerne Industrial Estate, Opp. Saligao Seminary, Saligao - Bardez Goa - 403511
7.	The Member Secretary Gujarat State Pollution Control Board Sector 10-A, Gandhi Nagar 382043 Gujarat	8.	The Member Secretary Haryana State Pollution Control Board C-11, Sector 6, Panchkula, Haryana 134109 Haryana
9.	The Member Secretary Himachal Pradesh State Pollution Control Board Paryavaran Bhavan, Phase III, New Shimla - 171009 Himachal Pradesh	10.	The Member Secretary J&K State Pollution Control Board, Parivesh Bhawan, Forest Complex, Gladni, Narwal, transport Nagar, Jammu (J&K)
11.	The Member Secretary Jharkhand State Pollution Control Board T.A Building, HEC Campus, P.O. Dhurwa Ranchi - 834004 Jharkhand	12.	The Member Secretary Karnataka State Pollution Control Board Parisara Bhavan, 4 <sup>th</sup> & 5 <sup>th</sup> floors Church Street, Bangalore - 560 001 Karnataka
13.	The Member Secretary Kerala State Pollution Control Board Plamoodu Junction, Pattam Palace P.O. Thiruvananthapuram 695004 Kerala	14.	The Member Secretary Maharashtra State Pollution Control Board Kalpataru Point, 3 <sup>rd</sup> & 4 <sup>th</sup> floors Sion Matunga Scheme Road No. 6 Opp. Cine Planet, Sion Circle, Sion (E), Mumbai 400 022, Maharashtra
15.	The Member Secretary Madhya Pradesh State Pollution Control Board Paryavaran Parisar, E-5 Aera Colony Bhopal 462016 Madhya Pradesh	16.	The Member Secretary Manipur State Pollution Control Board Lamphelpat, Imphal West D.C. Office Complex - 795004 Manipur
17.	The Member Secretary Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong - 793014 Meghalaya	18.	The Member Secretary Mizoram State Pollution Control Board New Secretariat Complex, Khatla, Thlanmual Peng, Aizawl Mizoram 796001
19.	The Member Secretary Nagaland State Pollution Control Board Signal Point, Dimapur, Nagaland - 797112 Nagaland	20.	The Member Secretary Odisha State Pollution Control Board Paribesh Bhawan A-118, Nilakanta Nagar, Unit VIII, Bhubaneswar 751012 Odisha
21.	The Member Secretary Punjab State Pollution Control Board Nabha Road, ITI Rd, Adarsh Nagar, Prem Nagar, Patiala - 147001 Punjab	22.	The Member Secretary Rajasthan State Pollution Control Board A-4 Institutional Area, Jhalane Dungri Jaipur - 302004 Rajasthan
23.	The Member Secretary Sikkim State Pollution Control Board State land Use & Environment Cell Govt. of Sikkim, Deorali, Gangtok., Sikkim	24.	The Member Secretary Tamil Nadu State Pollution Control Board No. 76, Mount Salai, Guindy, Chennai 600032, Tamil Nadu

25.	The Member Secretary Telangana State Pollution Control Board Paryavaran Bhavan A-3, Industrial Estate, Sanath Nagar, Hyderabad - 500 018 Telangana	26.	The Member Secretary Tripura State Pollution Control Board Parivesh Bhawan Pt. Nehru Complex, Gorkhabasti P.O., Kunjaban, Agartala, West Tripura - 799 006 Tripura
27.	The Member Secretary Uttarakhand Environment Protection & Pollution Control Board 29/20, Nemi Road, Dehradun - 248001 Uttarakhand	28.	The Member Secretary Uttar Pradesh State Pollution Control Board 3 <sup>rd</sup> floor, PICUP Bhavan, Vibhuti Khand, Gomti Nagar, Lucknow 226010 Uttar Pradesh
29.	The Member Secretary West Bengal State Pollution Control Board Paribesh Bhavan Building, No.10-A, Block LA, Sector 3, Salt Lake City, Kolkata 700 091, West Bengal	30.	The Member Secretary Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110006
31.	The Member Secretary Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollygunj Van Sadan, Haddo P.O., Port Blair 744102	32.	The Member Secretary Chandigarh Pollution Control Committee, Paryavaran Bhawan, Ground Floor, Sector 19 B Madhya Marg, Chandigarh
33.	Member Secretary Daman, Diu & Dadra Nagar Haveli Pollution Control Committee, Office of the Deputy Conservator of Forests, Moti Daman, Daman - 396220	34.	Member Secretary Lakshadweep Pollution Control Committee, Department of Science, Technology & Environment, Kavarati-682555
35.	Member Secretary Pondicherry Pollution Control Committee, Housing Board Complex, Anna Nagar, Pondicherry-600 005	36.	Joint Secretary (Marketing) Ministry of Petroleum and Natural Gas, Govt. of India Shastri Bhavan, New Delhi 110001
37.	Chief Controller of Explosives Petroleum and Explosive Safety Organization (PESO) A Block CGO Complex Fifth Floor Seminary Hills Nagpur-(Maharashtra) -440006	38.	Director Legal Metrology Ministry of Consumer Affairs, Food and Public Distribution Deptt. of Consumer Affairs, Room No.461-A, Krishi Bhawan, New Delhi - 110 001
39.	The Chairman, M/s. Bharat Petroleum Corporation Limited Bharat Bhavan, 4 and 6 Currimbhoy Road Ballard Estate, Mumbai 400 001	40.	The Chairman, M/s. Hindustan Petroleum Corporation Limited Petroleum House, 17, Jamshedji Tata Road, Mumbai Maharashtra 400020
41.	The Chairman, M/s. Indian Oil Corporation Limited Indian Oil Bhawan, G9, Ali Yavar Jung Marg Bandra East, Mumbai, Maharashtra 400 051	42.	The Chairman and Managing Director, M/s. Shell India Pvt. Ltd. Plot No. 7, Bangalore Hardware Park, Devanahalli Industrial Park Mahadeva Kodigehalli Bangalore- 562 149, Karnataka.
43.	The Chairman and Managing Director, M/s Reliance Industries Limited, Maker Chambers - IV Nariman Point Mumbai 400 021	44.	Chairman M/s. Nayara Energy Limited (Formerly Essar Oil Limited) 5th Floor, Jet Airways Godrej BKC, Plot No. C-68, G Block Bandra Kurla Complex, Bandra East Mumbai- 450 051
45.	General Manager (International Trade), Mangalore Refinery and Petrochemicals Limited, Core - 8, 7th Floor, Scope Complex, Lodhi Road, New Delhi - 110003		

## GUIDELINES FOR SETTING UP OF NEW PETROL PUMPS

### A. Containment and treatment of spillages from fuel filling operations at petrol pumps:

1. Petrol pumps located in areas with high groundwater table i.e. groundwater levels less than 04 meters shall have secondary containment by way of double walled tanks or concrete protection walls so as to minimize groundwater and soil contamination. It shall be the responsibility of OMC to properly get measured groundwater level at the site of proposed petrol pump and ensure implementation of these adequate protection measures for such sites. Details of measures taken by Oil Marketing Company shall be placed in public domain and in case of contradictory view, view of State/ Central Ground Water Board/ Authority will prevail.
2. All new retail outlets shall have underground tanks/ above ground tank and its ancillary components such as pipes, flexible connectors, pumps, fittings etc. protected from leaks due to corrosion by adopting materials (HDPE/ Mild Steel etc.) with required protective coating, as applicable, duly approved by PESO.
3. Any major leakage/ spillage of Petrol, Diesel, Lube Oil (more than 1 barrel-165 litres) occurs at fueling station, concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence.

Operation of concerned underground storage tank (UST) and its ancillary components shall be stopped immediately and not be resumed till corrective measures to contain and stop leakage/ spillages are implemented to the satisfaction of PESO and concerned SPCB.

OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation. Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 5 years in this field. Various approved methods shall be considered for cleaning underground contaminants.

4. All DUs shall have Auto Cut off Nozzles which shuts dispensation of fuel if its level in customer fuel tank reaches full capacity.
5. Breakaways to be installed for all the hoses of dispensing units to reduce spillage in the event of customer vehicles moves away with nozzle still in the fueling position.

6. Single/ double plane swivel with breakaway coupling shall be installed for all the dispensing units for better positioning of nozzle while refueling so that it does not fall off accidentally.
7. In pressurized dispensation, all dispensing units shall be installed with shear valves to cut the fuel flow from pipe line immediately upon accidental knocking of dispensing units from its position.
8. In pressurized system all Submersible Turbine Pumps (STPs) are to installed with line leak detectors and in the event of pipeline leaks STPs shall stop pumping fuel from underground tanks.
9. Emergency stop button switch shall be provided on the Multi-Product Dispenser (MPD) to stop the dispensation in case of emergency.
10. Automation system shall be installed at all new retail outlets to alert in case of tank leak by way of auto gauging system approved by PESO.
11. All Retail Outlets shall provide overfill alarm through automation.
12. Measures for spill containment in fill point chambers and forecourt area shall be implemented as prescribed by PESO.

**B. Check on leakages (Leakage Detection System) from underground storage tanks so as to prevent groundwater and soil contamination:**

1. All new retail outlets will have automation system installed which will provide reports on volume balance after every day operation and records shall be maintained.
2. Manual gauging shall be done once in a month and compare the same with Automatic Tank Gauging for accuracy.
3. Daily MS and HSD loss shall not exceed MoPNG prescribed limits. In case of leakage beyond such limits, matter shall be got analyzed by OMCs and further action shall be taken for ascertaining the reasons of losses. In case of leakage resulting in soil / groundwater contamination:
  - a. Concerned OMC shall report to State Pollution Control Board, PESO and District Administration under intimation to CPCB within 24 hours of occurrence. Operation of such underground storage tank (UST) and its ancillary components shall be stopped immediately.
  - b. Fuel shall be removed immediately from underground storage tank to prevent further release to environment. Measures to prevent explosion due to vapors released due to leakage as recommended by PESO shall be implemented immediately.

- c. OMCs will be held liable for Environmental Compensation (imposed by SPCBs/PCCs) and assessment of environmental damage (depending on extent of contamination in soil and groundwater) and site remediation. Consultant/ Expert agency appointed by OMCs for damage assessment and site remediation shall have minimum national/ international experience of 05 years in this field. Various approved methods shall be considered for cleaning underground contaminants.
  - d. Operation of Underground tank and its ancillary components shall not be resumed till corrective measures to contain and stop leakages are implemented to the satisfaction of PESO and concerned SPCB.
4. All underground tanks and pipelines shall be subjected to test for leaks every 7 years.

**C. Policy towards Treatment and disposal of sludge removed from underground tanks during cleaning:**

Sludge shall be collected, stored and disposed as per Rule 8 of Hazardous Waste (Management and Transboundary) Rules, 2016 and amendments thereof and records shall be maintained.

**D. Installation, Operation and maintenance of Vapour Recovery System:**

1. All **new retail** outlets set up with sale potential of 300KL MS per month and setting up in cities with population more than 1 lakh will be provided with VRS. VRS should be functional by the time of sale of MS touch 300 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.
2. Any **new retail** outlet set up in cities having population more than 10 lakh and having sale potential of 100 KL MS per month will be provided with VRS. VRS should be installed within a period 03 months from the day of sale of MS touch 100 KL. In case of failure of installation of VRS, Environment Compensation will be levied by SPCBs/ PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.
3. In case of Stage II VRS, nozzle shall be provided with flexible cover flap or other alternative system for proper covering of filling tank and therefore proper recovery of vapors.
4. OMCs are responsible for maintaining installed VRS. They have to maintain periodic inspections for A/L regulator as prescribed by Legal Metrology. Proper record shall be maintained.

5. Working of dispenser shall be interlinked with VRS functioning. Online system shall be developed within 06 months to monitor status of operation of VRS. In case of non-operation of VRS, the same shall be automatically reported to concerned OMC. VRS shall be brought into operation immediately within 24 hrs and in any case within 72 hrs failing which sale of MS shall be stopped from the fueling station. Proper records of operation of VRS shall be maintained.
6. Work zone monitoring for Total VOC and Benzene shall be conducted by OMCs for petrol pumps selling more than 300 KL/ month and more than 10 lakh population (in first phase) by E(P)Act, 1986 approved labs once in a year to check compliance with OSHA norms (Time-Weighted Average) and report shall be submitted to SPCB. In addition, pilot study shall be conducted by OMCs through expert institutions for online monitoring of VOCs.
- E. **Ground water and soil quality monitoring within petrol pump selling more than 300 KL/ month and more than 10 lakh population shall be conducted by OMCs once in two years through E(P)Act, 1986 approved labs for the following parameters from the nearest source and report submitted to SPCB:**

**Permissible Limit**

Sr.No.	Parameter	Permissible Limit
1.	Total petroleum hydrocarbons	600µg/l
2.	BTEX	i. Benzene- 950µg/l ii. Toluene- 300µg/l iii. Xylenes- a. o-xylene- 350µg/l b. m & p- xylene- 200µg/l
3.	Ethanol	1400 µg/l
4.	Methyl Tertiary Butyl Ether	13µg/l
5.	PAH	0.0001µg/l

Enforcement agencies including SPCB can collect samples in and around petrol pump to check contamination.

**F. Measures for protection of Worker's Health**

1. All workers engaged at retail outlets may be covered under ESI. OMC dealers shall implement the personal protective equipment (PPE) as per labor laws.
2. IEC (Information Education Communication) activities should be organized by OMC dealers for workers at regular intervals in order to sensitize them about harmful impacts of VOC emissions.

**G. Audit of all protection measures and monitoring system implemented at petrol pumps:**

PESO shall conduct audit of tanks and fuel equipment including pipes, overfill protection equipment and alarm system on annual basis and maintain records.

**H. Siting criteria of Retail Outlets:**

In case of siting criteria for petrol pumps new Retail Outlets shall not be located within a radial distance of 50 meters (from fill point/ dispensing units/ vent pipe whichever is nearest) from schools, hospitals (10 beds and above) and residential areas designated as per local laws. In case of constraints in providing 50 meters distance, the retail outlet shall implement additional safety measures as prescribed by PESO. In no case the distance between new retail outlet from schools, hospitals (10 beds and above) and residential area designated as per local laws shall be less than 30 meters. No high tension line shall pass over the retail outlet.

*These guidelines are supplementary to all existing relevant Rules, Guidelines, Orders etc.*



☎: 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

## KERALA STATE POLLUTION CONTROL BOARD

കേരളസംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

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

PCB/HO/SEE-3/TECH/82/2019

ORDER

DATE: 09/12/2020

**Subject : Kerala PCB - Retrofitting of Emission Control Devices/Equipment  
in DG sets with Capacity of 500 KVA and above in the State of Kerala**

**Ref : Para 7.5.3 of NCAP (National Clean Air Programme) Report of  
Ministry of Environment Forest & Climate Change dated 31.12.2018.**

Whereas, the Government of Kerala, Environment Department vide notification dated 21/12/1983, had declared the entire area within the State of Kerala as Air Pollution Control Area under the Air (Prevention and Control of Pollution) Act, 1981 as amended.

Whereas, action plan for improving ambient air quality in the Non Attainment cities needs to be prepared as per the directions date: 08-10-2018 of Hon'ble NGT in the case titled as "NCAP with multiple timelines to clean air in 102 cities to be released around August 15" with Dr. Gautam Ghosh applicant(s) V/s of West Bengal & Ors. in O.A.681 of 2018.

Whereas, the emission including Particulate Matter due to operation of D.G sets have also been identified as one of the sources of air pollution.

Whereas, the Government of India, MoEF & CC has launched the National Clean Air Programme (NCAP) for the prevention, control and abatement of air pollution level in the Country at an urban and regional level. The Government of India recognizes major sources of air pollution such as vehicles, DG sets, construction dust etc. As per National Clean Air Programme (NCAP) of Government of India, Diesel Generator sets are a major source of air pollution in Indian cities and states.

Whereas, there is plan for national level target of 30% reduction of PM<sub>2.5</sub> and PM<sub>10</sub> concentration in the ambient air under the National Clean Air Programme (NCAP), wherein the Hon'ble NGT vide order dated 06/08/2019 has observed that the timeline to reduce the air pollution by 30 % needs to be reduced and the target of reduction needs to be increased, having regard to adverse effect on public health and in view of constitutional mandate of fundamental right to breath clean air.

Whereas, it further states, that the air pollution caused by DG sets needs to be a part of the action plans, which may, if necessary, require retrofitting of Emission Control Devices/Equipment of generators already in use" and

Whereas, in para 7.5.3 of the NCAP report, one of the Action Point (point no.7) is to retrofit all operational DG sets with an Emission Control Device / Equipment having a minimum specified Particulate Matter capturing efficiency of at least of 70% or shift to gas based DG sets by employing new gas based generators or retrofitting the existing DG sets for partial gas usage.

Now, therefore, with the above background, and in exercise of powers vested with the Board under Section 17 (1) J read with section 31 (A) of Air (Prevention and Control of Pollution) Act, 1981 and section, 5 of the Environment (Protection) Act 1986, all the industries and the establishments operating DG sets of capacity 500 KVA and above, within the jurisdiction of the State of Kerala, are hereby directed to:

I) Retrofit all operational DG sets of capacity 500 KVA and above with an Emission Control Device / Equipment having a minimum specified Particulate Matter capturing efficiency of at least of 70% in 5 mode D2 cycle. The Emission Control Device / Equipment must be tested over an ISO-8178 5 mode D2 cycle for equivalent KVA rating by any one of the five Central Pollution Control Board, Govt of India, recognized/approved laboratories as given below:

- a) Automotive Research Association of India, Pune (Maharashtra)
- b) International Centre for Automotive Technology, Manesar (Haryana)
- c) Indian Oil Corporation, Research and Development Centre, Faridabad (Haryana)
- d) Indian Institute of Petroleum, Dehradun (Uttarakhand); or
- e) Vehicle Research Development Establishment, Ahmednagar (Maharashtra)

(or)

(II) Shifting to gas based generators by employing new gas based generators or retrofitting the existing DG sets for partial gas usage.

This is to be complied with within a period of 120 days from the date of issuance of this order by all stake holders.

It is therefore, enjoined upon all the industries and the establishments within the jurisdiction of the State of Kerala operating DG sets of 500 KVA and above, to comply with the above said directions in the stipulated time period of 120 days from the date of issuance of this order failing which action as warranted under the provisions of Environment (Protection) Act, 1986 and Air (Prevention and Control of Pollution) Act, 1981 shall be initiated.

09.12.2020

-sd-  
**CHAIRMAN**

To:

All units in Kerala using DG sets of capacity 500KVA or more.

Copy to:

1. The Chief Environmental Engineer, Regional Office  
Trivandrum/Ernakulam/Kozhikode
  2. The Senior Environmental Engineer  
Environmental Surveillance Centre, Eloor
  3. The Environmental Engineer, District Office  
Triyandrum/ Kollam/ Alappuzha/ Pathanamthitta/ Kottayam/ Ernakulam-1/ Ernakulam-2/  
Idukki/ Thrissur/ Palakkad/ Malappuram/ Kozhikode/ Kannur/ Wayanad/ Kasargode
- For necessary action
- For necessary action

Copy To:

1. All Technical Staff
2. IT Cell(for uploading in Boards website)
3. CA to CHN and MS

Forwarded by order

ALEXANDER GEORGE  
Digitally signed by ALEXANDER GEORGE  
Date: 2020.12.09 15:32:37 +05'30'  
Senior Environmental Engineer-3