SIX-MONTHLY ENVIRONMENTAL COMPLIANCE REPORT OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE (APRIL 2021 TO SEPTEMBER 2021)

For:

Proposed Construction of New Institutional Buildings Within the Existing Institutional Complex of M/s Matha Amrithanandamayi Math

Submission to:

Ministry of Environment, Forests & Climate Change (MoEFCC)

Submitted by:
M/s Mata Amritanandmayi Math

December, 2021
Date: 22-December-2021

To,

Chief Conservator of Forests,
Ministry of Environment, Forest and Climate Change,
Regional Office (SZ), Kendriya Sadan,
4th Floor, E&F Wings, 17th Main Road,
Koramangala II Block, Bangalore – 560034

Sub: Submission of six-monthly compliance report of stipulated conditions of Environmental Clearance for the proposed buildings construction within the existing institutional complex at Clappana and K S Puram Village and Panchayat, Taluk Karimagappally, District Kollam, for the period of April 2021 to September 2021.

Sir,

In accordance to the condition of Environmental Clearance received from State Environmental Impact Assessment Authority for the above project vide letter no. 1295/EC1/2019/SEIAA, dated 19th November, 2020; we are submitting herewith six monthly Compliance report of stipulated condition of Environmental Clearance (soft copy) for the period of April 2021 to September 2021.

Thanking you,
Yours Sincerely,

Swami Turiyamritananda Puri
Trustee,
Mata Amritanandamayi Math

Copy to: The Member Secretary, State Environmental Impact Assessment Authority (SEIAA),
Thiruvananthapuram, Kerala.
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Chapter 1

INTRODUCTION AND PROJECT DESCRIPTION

1.1 Introduction

The proposed construction of new institutional buildings within the existing institutional complex in K.S Puram and Clappana Villages, Karunagapally Taluk, Kollam District is being developed by M/s Matha Amrithanandamayi Math. The project is being spread over an area of 11.019 ha. It is proposes to construct new buildings like research centre, addition of existing biotech building, hostel buildings, services buildings along with additional supporting infrastructure facilities.

This project has been granted environmental clearance vide letter no. 1295/EC1/2019/SEIAA at dated 19th November, 2020 (Attached as Annexure I) by the State Environment Impact Assessment Authority, Kerala.

1.2 Project Description

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name of the project</td>
<td>Proposed building construction within the existing institutional complex</td>
</tr>
<tr>
<td>2</td>
<td>Total plot area</td>
<td>11.019 ha.</td>
</tr>
<tr>
<td>3</td>
<td>Proposed built-up area</td>
<td>82,772.98 sq.m.</td>
</tr>
<tr>
<td>4</td>
<td>Expected project cost</td>
<td>Rs. 82.34 Crores</td>
</tr>
<tr>
<td>5</td>
<td>Maximum no. of floors</td>
<td>Ground + 13 floors (Proposed Hostel Block)</td>
</tr>
<tr>
<td>6</td>
<td>Maximum height of building</td>
<td>42.45m (Proposed Hostel Block)</td>
</tr>
<tr>
<td>7</td>
<td>Total water requirement</td>
<td>430 KL/day (Fresh 204KLD + Recycled 226 KLD)</td>
</tr>
<tr>
<td>8</td>
<td>Domestic water requirement</td>
<td>314 KL/day (Flushing + Non flushing)</td>
</tr>
<tr>
<td>9</td>
<td>Sewage generation</td>
<td>251 KL/day</td>
</tr>
<tr>
<td>10</td>
<td>Sewage disposal Facility</td>
<td>Sewage Treatment Plant &amp; Recycling</td>
</tr>
</tbody>
</table>
### 1.3 Present Status

Site approval and permission is granted for the erection of Amrita Research Centre-Educational Building in Survey/ Re survey No 1/4-2, 1/5-1, 1/5-1-2, 1/11, 1/12, 1/13-1-2, 1/13-1, 5/1, 6/4, 6/4-2-2, 6/4-2-4, 6/4-2-3, 6/5, 6/6-2, 6/6-3, 6/8-2, 6/9-2, 6/10, 6/11,6/12 Kulasekharapuram Village Karunagappally Taluk, Kollam District for Educational purpose. The building permit is attached as Annexure III.

### 1.4 Purpose of the Project

This six-monthly report is being submitted as per the condition stipulated in the Environmental Clearance letter. Further, the study will envisage the environmental impacts that have generated in the local environment due to the project.
Chapter 2

POINT WISE COMPLIANCE REPORT AS PER EC CONDITIONS

Name of Project : Construction of new institutional buildings within the existing institutional complex of M/s Matha Amrithanandamayi Math in K.S Puram and Clappana Villages, Karunagapally Taluk, Kollam District.

Clearance No. : SEIAA/HR/2016/376 dated 20th May, 2016

Period of compliance Report : April 2021 to September 2021

Part A – SPECIFIC CONDITIONS

1. Construction Phase

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Conditions Imposed</th>
<th>Compliance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>“Consent for Establishment” shall be obtained from Kerala State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.</td>
<td>“Consent for Establishment has been obtained before the construction of the project. Copy of ‘Consent For Establishment’ (CFE) from KSPCB is enclosed as Annexure-IV.</td>
</tr>
<tr>
<td>2</td>
<td>All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.</td>
<td>Adequate Toilet/Sanitary facilities will be provided for labors during the construction phase.</td>
</tr>
<tr>
<td>3</td>
<td>A First Aid Room will be provided in the project both during construction and operation of the project.</td>
<td>A First Aid Room with all necessary medical aids will be provided at site.</td>
</tr>
<tr>
<td>4</td>
<td>Adequate drinking water and sanitary facilities should be provided for construction workers at the site, Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.</td>
<td>Drinking (purified) water for construction workers will be arranged at the site. Provision for mobile toilets will be arranged, also safe disposal of wastewater and solid waste generated at site will be ensured.</td>
</tr>
<tr>
<td>5</td>
<td>All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the tire project site.</td>
<td>Noted and will be followed.</td>
</tr>
<tr>
<td>6</td>
<td>Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed of by taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.</td>
<td>Site debris will be stored within the site and will be reused in site for backfilling.</td>
</tr>
<tr>
<td>7</td>
<td>Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.</td>
<td>The project is only construction of commercial development and there is no involvement of toxic metal and heavy metal. However, proper care shall be taken during construction so that there is no contamination to groundwater.</td>
</tr>
<tr>
<td>8</td>
<td>Construction spoils, including bituminous materials and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the groundwater.</td>
<td>There is no hazardous waste envisaged in the construction stage of the project. However, we will comply with Hazardous Waste (Management and Handling) Rule, 2003 if any such material is encountered in the process.</td>
</tr>
<tr>
<td>9</td>
<td>Any hazardous waste generated during the construction phase, should be disposed of as per applicable rules and norms with necessary approval of the Kerala State Pollution Control Board.</td>
<td>Rules and norms of the KSPCB will be followed.</td>
</tr>
<tr>
<td>10</td>
<td>The diesel generator set to be during the construction phase should be low Sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.</td>
<td>Only low sulphur diesel (LSD) will be used during the construction phase.</td>
</tr>
<tr>
<td>11</td>
<td>The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.</td>
<td>Yes all the necessary precautions will be taken to ensure compliance of all the safety norms.</td>
</tr>
<tr>
<td></td>
<td>vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to the applicable air and noise emission standards and should be operated only during non-peak hours.</td>
<td>The operation of vehicles will be undertaken only during non-peak hours. For ferrying construction material only good condition vehicles will used.</td>
</tr>
<tr>
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<tr>
<td>13</td>
<td>Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during the construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/KSPCB.</td>
<td>Ambient noise level during day and night are well within the standards. Ambient air and noise quality is being monitored closely. The monitoring report of ambient air, noise and water quality is attached as Annexure-V. Also, measures will be taken up during construction phase to reduce noise pollution by installing barricade sheets, proper leveling of roads etc.</td>
</tr>
<tr>
<td>14</td>
<td>Fly ash should be used as building material in construction as per the provisions of Fly Ash Notification September 1999 and amended as on 27th August 2003. (The above condition is applicable Power Stations)</td>
<td>Will comply as per provisions of Fly Ash Notification of September 1999</td>
</tr>
<tr>
<td>15</td>
<td>Ready mixed concrete must be used in building construction.</td>
<td>Yes, only ready mixed concrete will be used in construction</td>
</tr>
<tr>
<td>16</td>
<td>Storm water control and its re-use per CGWB and BIS standards for various applications.</td>
<td>It will be undertaken as proposed in the EIA report.</td>
</tr>
<tr>
<td>17</td>
<td>Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.</td>
<td>It will be followed as per G.O. No. FEE 188 ENV 2003 dated 14.08.2004</td>
</tr>
<tr>
<td>18</td>
<td>Permission to draw ground water shall be obtained from the Central Authority prior to construction/ operation of the project.</td>
<td>Noted</td>
</tr>
<tr>
<td>19</td>
<td>Separation of grey and black water should be done by the use of a dual plumbing line for separation of grey and black water.</td>
<td>Will be followed. It is proposed for dual plumbing for separation of grey and black water.</td>
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<tr>
<td>20</td>
<td>Fixtures for showers, toilet flushing, and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor-based control.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>21</td>
<td>Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>22</td>
<td>Roofs should meet perspective requirements as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>23</td>
<td>Opaque wall should meet perspective requirements as per energy Conservation Building Code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non-air conditioned spaces by use of appropriate thermal insulation material to fulfil requirements.</td>
<td>Will be followed</td>
</tr>
<tr>
<td>24</td>
<td>The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of firefighting equipment, etc. as per National, Building Code including protection measures from lightning etc.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>25</td>
<td>Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.</td>
<td>Will be followed</td>
</tr>
<tr>
<td>26</td>
<td>Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the protected proponent if it was found that construction of the project has been started without obtaining environmental clearance.</td>
<td>Construction of the Project has been undertaken after obtaining the EC.</td>
</tr>
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II. Operation Phase:

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<th>Sl No.</th>
<th>Conditions Imposed</th>
<th>Compliance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be made to mitigate the odor problem from STP.</td>
<td>The norms and standards of the KSPCB will be followed.</td>
</tr>
<tr>
<td>2</td>
<td>The solid waste generated should be properly collected and segregated. Wet garbage should be composted, and dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>3</td>
<td>Diesel power generating proposed as backup power for elevators and common area illumination during the operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of the stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low Sulphur diesel. The location of the DG sets may be decided in consultation with Kerala State pollution Control Board.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>4</td>
<td>Noise should be controlled to ensure that it does not exceed the prescribed standards.</td>
<td>Noise level monitoring will be carried out periodically to keep a check on the noise pollution load from the project.</td>
</tr>
<tr>
<td>5</td>
<td>During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.</td>
<td>Necessary steps will be incorporated while designing the green belt.</td>
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<tr>
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</tr>
<tr>
<td>6</td>
<td>The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.</td>
<td>Necessary steps will be incorporated while designing the green belt.</td>
</tr>
<tr>
<td>7</td>
<td>Weep holes in the Compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.</td>
<td>Noted and will be followed</td>
</tr>
<tr>
<td>8</td>
<td>Rainwater harvesting for roof run-off and surface run-off, as planned, should be implemented. Before recharging the surface run-off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts above the highest groundwater table.</td>
<td>Rainwater harvesting will be implemented as per the submitted plans. Pre-treatment will be carried out before recharging the surface run-off.</td>
</tr>
<tr>
<td>9</td>
<td>The ground water level and its quality should be monitored regularly in consultation with the Central Ground Water Authority.</td>
<td>Noted</td>
</tr>
<tr>
<td>10</td>
<td>Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized, and no public space should be utilized.</td>
<td>Noted and will be followed.</td>
</tr>
<tr>
<td>11</td>
<td>A Report on the energy conservation measures confirmed to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials &amp; technology, R &amp; U Factors etc and submitted to the Ministry in three months time.</td>
<td>Noted</td>
</tr>
<tr>
<td>12</td>
<td>Energy conservation measures like installation of CFLs/TFLS for the lighting the</td>
<td>Noted and will be followed.</td>
</tr>
</tbody>
</table>
areas outside the building should be an integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed of/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

12 Adequate measures should be taken to prevent odor problems from solid waste processing plants and STPs.

13 The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

III. Post Operational Phase:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Conditions Imposed</th>
<th>Compliance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental Monitoring Committee with defined functions and responsibility should foresee post operational environmental problems e.g., development of slums near the site, increase in traffic congestion, power failure, increase in noise level, natural calamities, and increase in suspended particulate matter etc. solve the problem immediately with mitigation measures.</td>
<td>Noted</td>
</tr>
</tbody>
</table>

PART B – GENERAL CONDITIONS:

<table>
<thead>
<tr>
<th>Conditions Imposed</th>
<th>Compliance Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rainwater Harvesting capacity should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified elsewhere.</td>
<td>Noted and will be followed.</td>
</tr>
<tr>
<td>2 The Environment Monitoring Cell as agreed</td>
<td>Complied.</td>
</tr>
<tr>
<td></td>
<td>under the affidavit filed by the proponent should be formed and made functional.</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td></td>
<td>Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach roads and internal roads.</td>
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<tr>
<td></td>
<td>The project shall incorporate devices for solar energy generation and utilization to the maximum possible extent with the possibility of contributing the same to the national grid in future.</td>
</tr>
<tr>
<td></td>
<td>Safety measures should be implemented as per the Fire and Safety Regulations.</td>
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<tr>
<td></td>
<td>STP should be installed and made functional as per KSPCB guidelines including that for solid waste management.</td>
</tr>
<tr>
<td></td>
<td>The conditions specified in the Companies Act, 2013 should be observed for Corporate Social Responsibility.</td>
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<tr>
<td></td>
<td>The proponent should plant trees at least 5 times of the loss that has occurred while clearing the land for the project.</td>
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<tr>
<td></td>
<td>Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity.</td>
</tr>
<tr>
<td></td>
<td>All other statutory clearances should be obtained, if applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.</td>
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<tr>
<td></td>
<td>In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.</td>
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<tr>
<td></td>
<td>The Authority reserves the right to add additional Safeguard measures subsequently, if found necessary, and to take action including revoking the environment clearance under the</td>
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provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

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<tbody>
<tr>
<td>14</td>
<td>The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.</td>
</tr>
<tr>
<td>15</td>
<td>Provision should be made for supply of kerosene or cooking gas and pressure cooker to the laborers during the construction phase.</td>
</tr>
<tr>
<td>16</td>
<td>Officials from the Regional of MOEF, Bangalore who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional Office of MOEF, Bangalore.</td>
</tr>
<tr>
<td>17</td>
<td>These stipulations would be enforce among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control Pollution) at 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.</td>
</tr>
<tr>
<td>18</td>
<td>Environmental Clearance is subject to final order of the Hon’ble Supreme Court of India in the matter of Goa Foundation Vs. Union of</td>
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<tr>
<td><strong>India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>19</strong></td>
<td>Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.</td>
</tr>
<tr>
<td><strong>20</strong></td>
<td>The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Department of Environment and Climate Change, Govt. of Kerala and may also be seen on the website of the Authority at <a href="http://www.seiaakerala.org">www.seiaakerala.org</a>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.</td>
</tr>
<tr>
<td><strong>21</strong></td>
<td>A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ District Panchayat/ Municipality/ Corporation/ Urban Local Body and also to the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.</td>
</tr>
<tr>
<td><strong>22</strong></td>
<td>The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by email) and upload the status of</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the Directorate of Environment and Climate Change, Govt. Of Kerala.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x .3 ft with green, background and yellow letters of Times New Roman font of size of not less than .40.</td>
</tr>
<tr>
<td>24</td>
<td>The proponent should provide a notarized affidavit (indicating the number and date of Environmental Clearance Proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.</td>
</tr>
</tbody>
</table>
Chapter 3

DETAILS OF ENVIRONMENTAL MONITORING

3.1 Ambient Air Quality Monitoring

3.1.1 Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out at one location, being near the proposed Amrita Research Centre-Educational Building to assess the ambient air quality of Project Site. This will enable to have an analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing.

The location of the ambient air quality monitoring station is given in Table 1.

Table 1: Details of Ambient Air Quality Monitoring Stations

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Sample Code</th>
<th>Location Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EN21090121</td>
<td>Project Site</td>
</tr>
</tbody>
</table>

3.1.2 Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters and methodology:

Table 2: Ambient Air Quality Monitoring Methodology

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Description of Test</th>
<th>Test Parameter</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ambient Air Quality</td>
<td>Particulate Matter (PM$_{10}$)</td>
<td>IS 5182 Part 23: 2006 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Particulate Matter (PM$_{2.5}$)</td>
<td>EPA 40 CFR Part 50 Appendix – L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sulphur Dioxide (SO$_2$)</td>
<td>IS 5182 Part 2: 2001 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oxides of Nitrogen (NO$_2$)</td>
<td>IS 5182 Part 6: 2006 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carbon monoxide (CO)</td>
<td>IS 5182 Part 10: 1999 RA 2014</td>
</tr>
</tbody>
</table>
3.1.3 Ambient Air Quality Monitoring Results

All parameters were observed within the corresponding stipulated limits at monitoring location. The detailed on-site monitoring results are attached as Annexure V.

3.2 Groundwater Quality Monitoring

3.2.1 Groundwater Quality Monitoring Locations

Keeping in view the importance of groundwater as an important source of drinking water, sample of ground water was collected from the bore well at project site for the assessment of impacts of the project on the groundwater quality. Water sample was collected from one location near the project site. The sample was analyzed for various parameters to compare with the standards for drinking water as per IS: 10500 for ground water sources. The details of water sampling locations are given in Table 3.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Sample Code</th>
<th>Location Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WT21090061</td>
<td>Project Site</td>
</tr>
</tbody>
</table>

3.2.2 Methodology of Groundwater Quality Monitoring

Samples were collected as grab sample and the samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB. The analytical techniques and the test methods adopted for testing of ground water are given in Table 4.
Table 4: Ground Water Quality Monitoring Methodology

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Description of Test</th>
<th>Test Parameter</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Water Quality</td>
<td>Colour</td>
<td>IS 3025 Part 4:1983 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Odour</td>
<td>IS 3025 Part 5:2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turbidity</td>
<td>IS 3025 Part 10:1984 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pH</td>
<td>IS 3025 Part 11:1983 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conductivity</td>
<td>IS 3025 Part 14:1984 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Dissolved Solids</td>
<td>IS 3025 Part 16:1984 RA 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Hardness (asCaCO₃)</td>
<td>IS 3025 Part 21:2009 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcium (as Ca)</td>
<td>IS 3025 Part 40:1991 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Magnesium (as Mg)</td>
<td>IS 3025 Part 46:1994 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chloride (as Cl)</td>
<td>IS 3025 Part 32:1988 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Alkalinity (asCaCO₃)</td>
<td>IS 3025 Part 23:1986 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Iron (as Fe)</td>
<td>IS 3025 Part 53:2003 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sulphate (SO₄)</td>
<td>IS 3025 Part 24:1986 RA 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coliform Bacteria</td>
<td>IS 15185 : 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E coli</td>
<td>IS 15185 : 2016</td>
</tr>
</tbody>
</table>

3.2.3 Ground Water Quality Monitoring Results

All parameters were observed within the corresponding stipulated limits at monitoring location. The detailed on-site monitoring results are attached as Annexure V.

3.3 Ambient Noise Monitoring

3.3.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels at the project site. Ambient noise monitoring was conducted at 1 location at the front side of the project, site as given in Table 5.

Table 5: The Details of Noise Monitoring Locations

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Location Code</th>
<th>Location Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EN21090122</td>
<td>Project Site</td>
</tr>
</tbody>
</table>
3.3.2 Methodology of Noise Monitoring

Noise levels were measured using digital sound level meter. The noise levels were monitored on working days only. The test methods adopted for testing of ambient noise are given in Table 6.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Description of Test Items</th>
<th>Test Parameter</th>
<th>Test Method</th>
</tr>
</thead>
</table>

3.3.3 Ambient Noise Monitoring Results

The locations wise ambient noise monitoring result are summarized in Annexure V.

3.4 Soil Monitoring

3.4.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify the impacts of ongoing project activities on soil quality and also predict impacts. The physico-chemical characteristics of soils were examined by obtaining soil samples from selected points and analysis of the same. One sample of soil was collected from the project site for studying soil characteristics, the location of which is listed in Table 7.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Location Code</th>
<th>Location Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EN21090123</td>
<td>Project Site</td>
</tr>
</tbody>
</table>

3.4.2 Methodology of Soil Monitoring

The homogenized samples were analyzed for physical and chemical characteristics (physical, chemical and heavy metal concentrations). The samples have been analyzed as per the established scientific methods for physico-chemical parameters. The analytical techniques and the test methods adopted for testing of soil sample are given in Table 8.
### Table 8: Soil Quality Monitoring Methodology

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of Test Items</th>
<th>Test Parameter</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Soil Quality</td>
<td>pH</td>
<td>IS 10158: 1982 RA 2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conductivity</td>
<td>IS 14767: 2000 RA 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water Holding Capacity</td>
<td>SEAL/EN/SLS/SOP/01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Particle Size Distribution</td>
<td>SEAL/EN/SLS/SOP/14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organic Matter</td>
<td>IS 2720 Part 22:1992</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sodium as Na</td>
<td>USEPA 7000B:2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chlorides</td>
<td>SEAL/EN/SLS/SOP/08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sulphate</td>
<td>IS 2720 Part 27: 1977</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Kjeldahl Nitrogen (as N)</td>
<td>IS 14684 :1999 RA 2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Available Potassium</td>
<td>SEAL/EN/SLS/SOP/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Phosphorous (as P)</td>
<td>IS 10158: 1982 RA 2014</td>
</tr>
</tbody>
</table>

#### 3.4.3 Soil Monitoring Results

The physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample are summarized in **Annexure V**.
ANNEXURE I

(Environmental Clearance Letter from SEIAA)
PROCEEDINGS OF THE ADMINISTRATOR, STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, THIRUVANANTHAPURAM
(Present: ANIL P ANTONY)

Sub: SEIAA- Application for Environmental Clearance for Proposed construction of new institutional buildings within the existing institutional complex of M/s Mata Amritanandamayi Math in KS Puram and clappana Villages, Karunagapally Taluk, Kollam District– Granted - Orders issued

State Environment Impact Assessment Authority, Kerala

No. 1295/ECI/2019/SEIAA dated 19.11.2020

Ref : 1. Application received dated 25.03.2019 from the Swami Turunamritanandapuri (Trustee & Authorized Signatory), M/s Mata Amritanandamayi Math, Amrita Vishwa Vidyapeetham, Amritapuri Campus, Clappana P.O, Kollam, Kerala 690525, seeking EC for proposed buildings construction within the existing institutional complex of M/s Mata Amritanandamayi Math in survey No. in KS Puram village: 1/4/2, 1/5/1, 1/5/1/2, 1/8/2, 1/9, 1/9/3, 1/9/1, 1/11, 1/12, 1/13/1, 1/14, 5/1, 6/4, 6/4/2/2, 6/4/2/4, 6/4/2/6, 6/5, 6/6/2, 6/6/3, 6/6/2, 6/9/2, 6/10, 6/11, 6/12 and survey No. in Clappana village: 371/3, 372/4, 372/5, 372/5/2, 372/6/1, 372/7, 372/9, 372/9/1, 372/9/2, 373/2, 373/5/2, 373/7/2, 373/8, 373/9, 373/11, 373/13, 373/14, 373/15, 373/16, 374/1, 374/2, 374/3, 374/4, 374/5/2, 374/6/2, 374/6/3, 374/7, 374/8/1/2, 374/9, 374/10, 374/11, 374/14, 374/15, 374/16,

ENVIRONMENTAL CLEARANCE NO.92/2020

1. SEIAA received application dated 25.03.2019 from the Swami Turunamritanandapuri (Trustee & Authorized Signatory), M/s Mata Amritanandamayi Math, Amrita Vishwa Vidyapeetham, Amritapuri Campus, Clappana P.O, Kollam, Kerala 690525, seeking EC for proposed buildings construction within the existing institutional complex of M/s Mata Amritanandamayi Math in survey No. in KS Puram village: 1/4/2, 1/5/1, 1/5/1/2, 1/8/2, 1/9, 1/9/3, 1/9/1, 1/11, 1/12, 1/13/1, 1/14, 5/1, 6/4, 6/4/2/2, 6/4/2/4, 6/4/2/6, 6/5, 6/6/2, 6/6/3, 6/6/2, 6/9/2, 6/10, 6/11, 6/12 and survey No. in Clappana village: 371/3, 372/4, 372/5, 372/5/2, 372/6/1, 372/7, 372/9, 372/9/1, 372/9/2, 373/2, 373/5/2, 373/7/2, 373/8, 373/9, 373/11, 373/13, 373/14, 373/15, 373/16, 374/1, 374/2, 374/3, 374/4, 374/5/2, 374/6/2, 374/6/3, 374/7, 374/8/1/2, 374/9, 374/10, 374/11, 374/14, 374/15, 374/16,
2. Total build up area of the proposed project is 82,772.98 sq.m. The proposed building site resides in Karunagappally taluk in Kollam district.

3. The proposal was placed in the 97th SEAC meeting held on 21st & 22nd May, 2019. The Committee decided to invite the proponent for presentation.

4. The proposal was placed in the 99th SEAC meeting held on 26th & 27th June, 2019. The proponent was made a presentation. The Committee entrusted Dr. R. Ajayakumar Varma & Smt. Beena Govindan Kumar for field inspection. Later on due to the inconvenience of Dr. Ajayakumar Varma, Shri. K. Krishna Panickal was deputed to the subcommittee and the subcommittee visited the project site on 6th July 2019.

5. The proposals was placed in the 113th SEAC meeting held on 15th, 16th & 17th September, 2020. The Committee discussed and accepted the additional details / clarifications submitted by the proponent. The Committee decided to recommend the issuance of EC subject to the following specific conditions in addition to the general conditions:

I) The proponent has to plant one tree for every 80 m². This comes around 1034 trees. While planting trees, local species to be selected.

II) The proponent has to clean and protect all crisscrossing canals and ponds within the campus for excess storm water flow and ground water recharge. Adequate silt traps need to be provided to prevent soil runoff.

III) Though building sites keep mandatory distance from the houses located there, the proponent has to take special care that the drilling for pile foundation excavation is not causing any damage to those houses.

IV) The proponent has to develop an environmental management plan in consultation with Harithakeralam Mission and Local Self Government Institutions to clean and protect the canals outside the campus and should be implemented with community participation.

V) Proponent must ensure that Levelling, back filling and construction process would not result in any kind of water logging or flooding that affects the community living nearby.

VI) Climate responsive design as per Green Building Guidelines in practice should be adopted.

VII) Vegetation should be adopted appropriately on the ground as well as over built structure such as roofs, basements, podiums etc.
VIII) Exposed roof area and covered parking should be covered with material having high solar reflective index
IX) Building design should cater to the differently-abled citizens
X) Provide safe and healthy basic facilities for construction workers as per the Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996
XI) Water efficient plumbing features should be adopted
XII) Design of the building should be in compliance to Energy Building Code as applicable
XIII) Energy conservation measures including harnessing of solar energy should be adopted

6. The proposal was placed in the 105th SEIAC meeting held on 22nd & 23rd October 2020.

Authority noted that SEAC had appraised the proposal based on the details given in application Form, additional details/documents obtained from the proponent as the part of the appraisal, field inspection report and SEAC had recommended to issue EC.

The Authority accepted the recommendation of SEAC and decided to issue EC for 7 years subject to the following specific condition in addition to the general conditions.

i) Authority noticed that in the field inspection report of SEAC dated 6th July 2020, there was a mention about Clarence & clarification from KCZMA. As this project is implemented in a coastal zone and National water way (T.S. Canal) is close by and there are criss crossing canals and streams in the project region, Project proponent shall obtain clearance of KCZMA under Coastal Zone Regulation 2011.

ii) The proponent has to clean and protect all crisscrossing canals and water bodies within the campus and in the vicinity for excess storm water flow and ground water recharge. Adequate silt traps need to be provided to prevent soil erosion.

iii) Though building sites keep mandatory distance from the houses located there, the proponent has to take special care to see that the drilling for pile foundation excavation is not causing any damage to those houses.

iv) Proponent must ensure that Levelling, back filling and construction process would not result in any kind of water logging or flooding that affects the community living nearby.

v) Climate responsive design as per Green Building Guidelines in practice should be adopted

VI) Exposed roof area and covered parking should be covered with material having high solar reflective index

VII) Building design should cater to the differently-abled citizens

VIII) Water efficient plumbing features should be adopted
XI) Design of the building should be in compliance to Energy Building Code as applicable.
X) Energy conservation measures including harnessing of solar energy should be adopted.
XI) Project proponent shall not disturb the wetland of ecological importance in the project area.
XII) Corporate Environment Responsibility (CER): As per OM no F. No.22-65/2017-IA.III dated 30th September 2020, the project proponent shall prepare an Environment Management Plan (EMP) as directed by SEAC during appraisal, covering the issues to address the environmental problems in the project region, indicating both physical and financial targets year wise. The EMP shall be implemented in consultation with District Collector. The indicated cost for CER shall be not less than 1-2% of the project cost depending upon the nature of the Project. For all the cost of the follow up action on implementation of CER shall be included in the half yearly report which will be subjected to field inspection at regular intervals.
XIII) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project (Circular No: 11013/41/2006-IA.III of GoI, MoEF dt. 22.09.2008).

7. In this circumstance, Environmental Clearance is granted to Swami Turiyamritanandapuris Trustee & Authorised Signatory Mrs. Mata Amritanandanyi Math, Amrita Vishwa Vidyapeetham, Amritapuri Campus, Clappana P.O. Kollam, Kerala subject to the condition in para 6 of this order and the usual general conditions for projects other than mining appended hereto. Also the following green conditions should be strictly adhered to.

Green Conditions.

1. Adequate rain water harvesting facilities shall be arranged for.
2. Technology and capacity of the STP to be indicated with discharge point (if any) of the treated effluent.
3. Effluent water not conforming to specifications shall not be let out to water bodies.
4. Maximum reuse of grey water for toilet flushing and gardening and construction work shall be ensured.
5. Dual plumbing for flushing shall be done.
6. Provisions for disposal of e-wastes, solid wastes, non-biodegradables and separate parking facility for the buildings shall be provided.
7. Generation of solar energy to be mandatory for own use and/or to be provided to the grid.

Page 4 of 6
8. There shall be no compromise on safety conditions and facilities to be provided by the project proponent, which shall be ensured for occupation, regularisation or consent to operate.

8. The Clearance will also be subject to full and effective implementation of all the undertakings given in the application form, all the environmental impact mitigation and management measures undertaken by the project proponent in the documents submitted to SEIAA, and the mitigation measures and waste management proposal as assured in the Form-1 and Form-1A, Environment Management Plan as submitted. The assurances and clarifications given by the proponent in the application and related documents will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

9. Validity of the Environmental Clearance will be for seven years from the date of issuance of E.C, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of any of the conditions stipulated herein or genuine complaints from residents within the scrutiny area of the project.

10. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its agencies and also by the Regional Office of the Ministry of Environment and Forests, Govt. of India, Bangalore.

i. Necessary assistance for entry and inspection by the concerned officials and staff should be provided by the project proponents.

ii. Instances of violation if any shall be reported to the District Collector, Kollam to take legal action under the Environment (Protection) Act 1986.

iii. The Half Yearly Compliance Report (HYCRs) with its contents of a covering letter, compliance report and environmental monitoring data has to be in PDF format merged into a single document. The email should clearly mention the name of the project, EC No and date, period of submission and to be sent to the Regional Office of MoEF & CC by email only at email ID tosz.bag-meftco@gov.in. Hardcopy of HYCRs shall not be acceptable.

Vii. The given address for correspondence with the authorized signatory of the project is, Swami Purvyamritumandapuri (Trustee & Authorized Signatory), M/s Mata
To,

Swami Turiyanandamandapuri (Trustee & Authorized Signatory)
M/s Mata Amritanandamayi Math
Amrita Vishwa Vidyapeetham
Amritapuri Campus
Clappana P.O
Kollam - 690525

Copy to:

1. MoEF Regional Office, Southern Zone, KendriyaSadan, 4th Floor, E&F Wing, II Block, Koyamangal, Bangalore-560034 (through e-mail: rosz.bng-meftco@pov.in)
2. The Principal Secretary to Government, Environment Department
3. The Director, Directorate of Environment & Climate Change, 4th Floor, KSRTC Bus Terminal, Thampacoor, Thiruvananthapuram, Kerala 695001
4. The District Collector, Kollam
5. The District Town Planner, Kollam
6. The Tahsildhar, Kollam Taluk, Kollam District,
7. The Member Secretary, Kerala State Pollution Control Board
8. The Secretary, Kollam East Village, Kollam District
9. Chairman, SEIAA, Kerala
10. Website
11. Stock file
12. O/c
GENERAL CONDITIONS (for projects other than mining)

(i) Rain Water Harvesting capacity should be installed as per the prevailing provisions of KMBR/KPBR, unless otherwise specified elsewhere.

(ii) Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.

(iii) Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach roads and internal roads.

(iv) The project shall incorporate devices for solar energy generation and utilization to the maximum possible extent with the possibility of contributing the same to the national grid in future.

(v) Safety measures should be implemented as per the Fire and Safety Regulations.

(vi) STP should be installed and made functional as per KSPCB guidelines including that for solid waste management.

(vii) The conditions specified in the Companies Act, 2013 should be observed for Corporate Social Responsibility.

(viii) The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.

(ix) Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity.

(x) All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.

(xi) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.

(xii) The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

(xiii) The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

(xiv) The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.

(xv) Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.

(xvi) Officials from the Regional of MOEF, Bangalore who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional Office of MOEF, Bangalore.

(xvii) These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control Pollution) at 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.

The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Department of Environment and Climate Change, Govt. of Kerala and may also be seen on the website of the Authority at www.sciankerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.

A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ District Panchayat/ Municipality/ Corporation/ Urban Local Body and also to the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.

The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the Directorate of Environment and Climate Change, Govt. of Kerala.

The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40.

The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.

**SPECIFIC CONDITIONS**

**I. Construction Phase**

i. "Consent for Establishment" shall be obtained from Kerala State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.

ii. All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

iii. A First Aid Room will be provided in the project both during construction and operation of the project.

iv. Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

v. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
vi. Disposal of muck during construction phase should not create any adverse effect on
the neighbouring communities and be disposed taking the necessary precautions for
general safety and health aspects of people, only in approved sites with the approval
of competent authority.

vii. Soil and ground water samples will be tested to ascertain that there is no threat to
ground water quality by leaching of heavy metals and other toxic contaminants.

viii. Construction spots, including bituminous material and other hazardous materials,
must not be allowed to contaminate watercourses and the dump sites for such material
must be secured so that they should not leach into the ground water.

ix. Any hazardous waste generated during construction phase, should be disposed off as
per applicable rules and norms with necessary approval of the Kerala State Pollution
Control Board.

x. The diesel generator sets to be during construction phase should be low sulphur diesel
type and should conform to Environment (Protection) Rules prescribed for air and
noise emission standards.

xi. The diesel required for operating DG sets shall be stored in underground tanks and if
required, clearance from Chief Controller of Explosives shall be taken.

xii. Vehicles hired for bringing construction material to the site should be in good
condition and should have a pollution check certificate and should conform to the
applicable air and noise emission standards and should be operated only during non-
peak hours.

xiii. Ambient noise levels should conform to residential standards both during day and
night. Incremental pollution loads on the ambient air and noise quality should be
closely monitored during construction phase. Adequate measures should be made to
reduce ambient air and noise level during construction phase, so as to conform to the
stipulated standards by CPCB/KSPCB.

xiv. Fly ash should be used as building material in construction as per the provisions of
Fly Ash Notification of September, 1999 and amended as on 27th August 2003. (The
above condition is applicable Power Stations).

xv. Ready mixed concrete must be used in building construction.

xvi. Storm water control and its re-use per CGWB and BIS standards for various
applications.

xvii. Water demand during construction should be reduced by use of pre-mixed concrete,
curing agents and other best practices referred.

xviii. Permission to draw ground shall be obtained from the Computer Authority prior to
construction/operation of the project.

xix. Separation of grey and black water should be done by the use of dual plumbing line
for separation of grey and black water.

xx. Fixtures for showers, toilet flushing and drinking should be of low flow either by use
of aerators or pressure reducing devices or sensor based control.

xxi. Use of glass may be reduced by up to 40% to reduce the electricity consumption and
load on airconditioning. If necessary, use high quality double glaze with special
reflective coating in windows.

xxii. Roof should meet prespective requirement as per Energy Conservation Building Code
by using appropriate thermal insulation material to fulfil requirement.

xxiii. Opaque wall should meet perspective requirement as per energy Conservation
Building Code which is proposed to be mandatory for all airconditioned spaces while
it is aspirational for non-airconditioned spaces by use of appropriate thermal
insulation material to fulfil requirement.
xxiv. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National, Building Code including protection measures from lightning etc.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

xxvi. Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has started without obtaining environmental clearance.

II. Operation Phase

i. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of treated effluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.

ii. The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/dirt solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.

iii. Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Kerala State pollution Control Board.

iv. Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time, the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

v. The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.

vi. Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.

vii. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts. above the highest ground water table.

viii. The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.

ix. Traffic congestion near the entry and exit points from the roads adjoining the purposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

x. A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.
xi. Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

xii. Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.

xiii. The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

III. Post Operational Phase

Environmental Monitoring Committee with defined functions and responsibility should foresee post operational environmental problems e.g. development of slums near the site, increase in traffic congestion, power failure, increase in noise level, natural calamities, and increase in suspended particulate matter etc. solve the problem immediately with mitigation measures.

Administrator, SEIAA
ANNEXURE II

(Notarized Affidavit)
AFFIDAVIT

I, Swami Turiyamritanandapuri, Trustee & Authorized Signatory of M/s Mata Amritanandamayi Math, having its correspondence office at Amrita Vishwa Vidyapeetham, Amritapuri Campus, Clappana P.O., Kollam – 690 525 do hereby affirm and confirm as follows:

Place: Kollam
Date: 29.06.2021

DEPONENT
Swami Turiyamritananda Puri
Trustee, Mata Amritanandamayi Math

P.K. SUDHEER
ADVOCATE & NOTARY
KARUNAGAPPALLY, KOLLAM, KERALA

GOVT. OF INDIA

DISTRICT STAMP
1. That, M/s Mata Amritanandamayi Math proposes the buildings construction within the existing institutional complex in Survey Nos. in K S Puram Village 1/4/2, 1/5/1, 1/5/1/2, 1/8/2, 1/9, 1/9/3, 1/9/1, 1/11, 1/12, 1/13/1/2, 1/13/1, 1/14, 5/1, 6/4, 6/4/2/2, 6/4/2/4, 6/4/2/3, 6/5, 6/6/2, 6/6/3, 6/8/2, 6/8/2, 6/10, 6/11, 6/12 and Survey Nos. in Clappana Village 371/3, 372/4, 372/5, 372/5/2, 372/6/1, 372/7, 372/9, 372/9/1, 372/9/2, 373/1, 373/2, 373/5/2/3, 373/7/2, 373/8, 373/9, 373/11, 373/13, 373/14, 373/15, 373/16, 374/1, 372/2, 374/3, 374/4, 374/5/2, 374/6/2, 374/6/3, 374/7, 374/8/1/2, 374/9, 374/10, 374/11, 374/14, 374/15, 374/16, 374/17, 374/18, 375/6, 375/7, 375/8, 375/9, 375/10, 375/12/1, 375/15, 376/10, 375/4, 372/1, Karunagappally Taluk, Kollam District, Kerala.

Place: Kollam
Date: 29.06.2021

DEPONENT
Swami Turiyamritananda Puri
Trustee, Mata Amritanandamayi Math
2. That, the Environmental Clearance proceedings number and date are No1295/EC1/2019/SEIAA , 19.11.2020.

3. That, all the conditions stipulated in the Environment Clearance would be scrupulously followed.

Place : Kollam
Date : 29.06.2021

DEPONENT
Swami Turiyamritananda Puri
Trustee, Mata Amritanandamayi Math

P.K. SUDHEER
ADVOCATE & NOTARY
KARUNAGAPPALLY KOLLAM, KERALA

NOTARY
GOVT. OF INDIA

Fiftieth Rupees
Rs.50

Keral KERALA

BZ 928635

28-06-2021

DISTRICT STAMP DEPOT
22 JUN 21
Verification:

Verified that my above statements are true to the best of my knowledge and belief and nothing material has been concealed therein.

Place: Kollam
Date: 29.06.2021

Solemnly affixed and signed below me by the deposent herein when I knew personally at my home at Kollam on the 29th day of June 2021.

Solemnly affixed and signed below me by the deposent herein when I knew personally at my home at Kollam on the 29th day of June 2021.

Solemnly affixed and signed below me by the deposent herein when I knew personally at my home at Kollam on the 29th day of June 2021.

P.K. SUDHEER
ADVOCATE & NOTARY
KARUNAGAPALLY, KOLLAM, KERALA

28-06-2021

P.K. SUDHEER
ADVOCATE & NOTARY
KARUNAGAPALLY, KOLLAM, KERALA

22 JUN 2021
ANNEXURE III

(Building Permit- Amrita Research Centre-
Educational Building)
Kulasekharapuram Gramapanchayat
Kollam
Kerala Panchayat Building Rules
APPENDIX B2
[See rule 6(17) & 9(4)]
SITE APPROVAL AND BUILDING PERMIT
Kulasekharapuram Grama Panchayat

No. K3- 7302/17

Date. 05/10/2021

Ref :- Application dated. 07/09/2017 from Secretary, Mata Amritanandamayi Math, Amritapuri Campus, Clappana P.O

Site approval and permission is granted for the erection / re-erection / addition / alteration of building / hut/ digging of well/ Amritha Research Centre - Educational Building (specify the construction) in building No.................. or near the building No.............in Survey / Re survey No 1/4-2, 1/5-1, 1/5-1-2, 1/11, 1/12, 1/13-1-2, 1/13-1, 5/1, 6/4, 6/4-2-2, 6/4-2-4, 6/4-2-3, 6/5, 6/6-2, 6/6-3, 6/8-2, 6/9-2, 6/10, 6/11, 6/12 Kulasekharapuram Village Karunagappally Taluk Kollam District for Educational (specify the occupancy) purpose subject to the conditions stated below:

1. Adequate safety measures shall be ensured for protection against damage to health, life, buildings and property of the workers and inhabitants around, during and after building construction. The owner and the developer shall be solely responsible for any such damages.
2. The Permit provided under these rules,shall be valid for 5 years from the date of issue and may be renewed once each for 5 years.
3. The Application for renewal shall be submitted to the Secretary in white paper, typed or written in ink, fixed with necessary court fee stamp and accompanied by copy of permit and approved Plan.
4. The Permit Issued under the Kerala Building Rules, 2019 and remaining value at the commencement of these rules shall be deemed to have been issued under these rules and may be renewed for like period and on like terms, as a permit issued.
5. Conditions As Per Order No. C/1132/2018/D. Dis, Dated. 04/10/2018 of District Town Planner, District Town Planning Office, Kollam are Strictly Obeyed.
7. Permit is valid upto 5 years from 05/10/2021 to 04/10/2026
### (a) Set backs (m) (minimum & average) K.P.B.R - 2019 Rule. 26

<table>
<thead>
<tr>
<th>Building</th>
<th>Front Yard</th>
<th>Rear Yard</th>
<th>Side 1</th>
<th>Side 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.33 m</td>
<td>7.83 m</td>
<td>7.55 m</td>
<td>12.76 m</td>
</tr>
</tbody>
</table>

### (b) Plot Area (sq m) – 101.46 are

### (c) FSI : 1.62  
Coverage : 34.99 %

### (d) Details of proposed building

<table>
<thead>
<tr>
<th>Floors</th>
<th>Building No.1</th>
<th>Building No.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupancy – Educational</td>
<td>Occupancy</td>
</tr>
<tr>
<td></td>
<td>Height Of the Building – 29.85 m</td>
<td>Height Of the Building.........m</td>
</tr>
<tr>
<td>Use</td>
<td>Built-up area(Sq.m.)</td>
<td>Area Provided for Parking inside the building(Sq.m)</td>
</tr>
<tr>
<td>Basement Floor</td>
<td>Educational</td>
<td>2555.57 m²</td>
</tr>
<tr>
<td>Ground Floor</td>
<td>Educational</td>
<td>2009.06 m²</td>
</tr>
<tr>
<td>First Floor</td>
<td>Educational</td>
<td>1498.87 m²</td>
</tr>
<tr>
<td>Second Floor</td>
<td>Educational</td>
<td>2127.79 m²</td>
</tr>
<tr>
<td>Third Floor</td>
<td>Educational</td>
<td>1683.38 m²</td>
</tr>
<tr>
<td>Fourth Floor</td>
<td>Educational</td>
<td>1683.38 m²</td>
</tr>
<tr>
<td>Fifth Floor</td>
<td>Educational</td>
<td>1683.38 m²</td>
</tr>
<tr>
<td>Sixth Floor</td>
<td>Educational</td>
<td>1683.38 m²</td>
</tr>
<tr>
<td>Seventh Floor</td>
<td>Educational</td>
<td>1683.38 m²</td>
</tr>
<tr>
<td>Terrace Floor</td>
<td>Educational</td>
<td>176.98 m²</td>
</tr>
<tr>
<td>Machine Room</td>
<td>Educational</td>
<td>123.90 m²</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16909.07 m²</td>
</tr>
</tbody>
</table>

Signature and name of Secretary: [Signature]

Kulastharaipuram Grama Panchayat
Adinadu North - 690 542
Phone: 0476 2640217
ANNEXURE IV

(Consent for Establishment (CFE) from KSPCB)
KERALA STATE POLLUTION CONTROL BOARD

CONSENT TO ESTABLISH

ISSUED UNDER

Section 25 of Water (Prevention & Control of Pollution) Act, 1974
Section 21 of the Air (Prevention & Control of Pollution) Act, 1981

and

Environment (Protection) Act, 1986

As per Application No. :7121029
Dated:17-04-2018

TO

M/s AMRITA VISHWA VIDYAPEETHAM, AMRITAPURI CAMPUS
Clappana P.O,
Kollam-690525.

Consent No. :PCB/HO/KLM/ICE-exp/03/2018
Valid Upto :31/03/2023
1. GENERAL

1.1. This integrated consent is granted subject to the power of the Board to withdraw consent, review and make variation in or revoke all or any of the conditions as the Board deems fit.

<table>
<thead>
<tr>
<th>1</th>
<th>VALIDITY</th>
<th>31/03/2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Name and Address of the establishment</td>
<td>AMRITA VISHWA VIDYAPEETHAM, AMRITAPURI CAMPUS CLAPPANA PO 690525</td>
</tr>
<tr>
<td>3</td>
<td>Communication</td>
<td>Telephone :0476-2801280 Fax :- E-mail:<a href="mailto:director@am.amrita.edu">director@am.amrita.edu</a></td>
</tr>
<tr>
<td>4</td>
<td>Occupier Details</td>
<td>Director, Amrita Vishwa Vidyapeetham, Amritapuri Campus, Clappana PO, Kollam District, Kerala Pin: 690525</td>
</tr>
<tr>
<td>5</td>
<td>Local Body</td>
<td>Clappana/Kulashekarapuram</td>
</tr>
<tr>
<td>6</td>
<td>Survey Number</td>
<td>The location and survey no. of the building and STP as per the site plan attached.</td>
</tr>
<tr>
<td>7</td>
<td>Village</td>
<td>Clappana</td>
</tr>
<tr>
<td>8</td>
<td>Taluk</td>
<td>KARUNAGAPALLY</td>
</tr>
<tr>
<td>9</td>
<td>District</td>
<td>Kollam</td>
</tr>
<tr>
<td>10</td>
<td>Capital Investment(Rs in Lakhs)</td>
<td>Rs.8234.49 Lakh</td>
</tr>
<tr>
<td>11</td>
<td>Scale</td>
<td>Large</td>
</tr>
<tr>
<td>12</td>
<td>Category</td>
<td>RED</td>
</tr>
<tr>
<td>13</td>
<td>Annual fee(Rs)</td>
<td>Rs.2,48,510/-</td>
</tr>
<tr>
<td></td>
<td>Total Fee remitted(Rs)</td>
<td>Rs.12,42,550/-</td>
</tr>
<tr>
<td>14</td>
<td>Activity</td>
<td>Expansion of the educational institution including hostel buildings, academic buildings, biotechnology and research buildings; Total built-up area- 94484 sq.m; STP of capacity 1500 KLD.</td>
</tr>
</tbody>
</table>

2. CONDITIONS AS PER

The Water(Prevention and Control of Pollution)Act, 1974

2.1 Sewage Treatment Plant (STP) consisting of treatment units having adequate capacity shall be made functional/arrangement for sewage treatment shall be provided, as per the proposal submitted along with the application, before commissioning of the establishment. Additional facilities required, if any, to achieve the standards laid down by the Board u/s 17(1)(g) of the Water Act shall also be made along with.

2.2 Water Consumption : 800 KLD

2.3 Effluent Generation : 640 KLD

2.4 The characteristics of effluent after treatment shall confirm to the following tolerance limits:
2.5 Mode of disposal of treated effluent: A part of the treated effluent is used for gardening and balance is discharged into backwaters.

3. CONDITIONS AS PER
The Air (Prevention and Control of Pollution) Act, 1981

3.1 Adequate air pollution control measures shall be provided before commissioning of the industry. Additional facilities required, if any, to achieve the standards laid down by the Board shall also be made along with.

<table>
<thead>
<tr>
<th>Stack No.</th>
<th>Sources of Emission</th>
<th>Emission Rate (Nm3/Hr)</th>
<th>Stack Height above Control Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ground Level</td>
</tr>
</tbody>
</table>

3.2 Emission characteristics shall not exceed the following:

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Parameter</th>
<th>Limiting Standards (mg/Nm3)</th>
</tr>
</thead>
</table>

4. CONDITIONS AS PER
The Environment (Protection) Act, 1986.

4.1 The construction activities shall be carried out strictly in compliance with the provisions of the Noise Pollution (Regulation and Control) Rules 2000.

4.2 Used lead acid batteries shall be disposed of as per the Batteries (Management and Handling) Rules, 2001

4.3 e-waste shall be disposed off safely as per E-Waste (Management) Rules, 2016.

5. ADDITIONAL CONDITIONS

5.1 The location of the buildings and Sewage Treatment Plant shall be as per the drawing attached. Sewage treatment plant as per the proposal submitted along with the application shall be constructed and made functional before commissioning.
5.2 The condition no.2.4 as follows,
The characteristics of effluent after treatment shall confirm to the following tolerance limit:

<table>
<thead>
<tr>
<th>SI.NO.</th>
<th>Characteristics</th>
<th>Unit</th>
<th>Irrigation/Soak pit</th>
<th>Flushing/Gardening</th>
<th>Discharge to Public Sewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>-</td>
<td>5.5-9</td>
<td>6.5-8.5</td>
<td>5.5-9</td>
</tr>
<tr>
<td>2</td>
<td>TSS</td>
<td>mg/l</td>
<td>100</td>
<td>20</td>
<td>600</td>
</tr>
<tr>
<td>3</td>
<td>BOD</td>
<td>&quot;</td>
<td>30</td>
<td>3</td>
<td>350</td>
</tr>
<tr>
<td>4</td>
<td>Oil &amp; Grease</td>
<td>&quot;</td>
<td>10</td>
<td>1</td>
<td>20</td>
</tr>
</tbody>
</table>

5.3. This consent is granted subject to the power of the Board to review and make variations in all or any of the conditions as per section 21 of the Air (Prevention and Control of Pollution) Act 1981 and section 25 of the Water (Prevention and Control of pollution) Act 1974.

5.4. This consent unless withdrawn earlier and subject to condition no. 5.2 shall be valid for five years from the date of issue. At the end of validity period if the construction is in progress the same shall be renewed through online. If the construction is yet to be started, the applicant shall apply afresh for consent to establish.

5.5. The date of commissioning shall be intimated, at least one month in advance, to the District Office of the Board.

5.6. Consent to Operate shall be obtained before commissioning the unit under the Water (Prevention and Control of Pollution) Act, the Air (Prevention and Control of Pollution) Act and the relevant Rules under Environment (Protection) Act. For this, application shall be submitted one month in advance.

5.7. The applicant shall comply with the instructions that the Board may issue from time to time regarding prevention and control of air, water, land and sound pollution.

5.8. Energy meter shall be installed exclusively for the effluent treatment and system and shall be maintained properly.

5.9. Arrangements shall be provided for rainwater harvesting before commissioning

5.10. Natural drainage of the area shall be protected.

5.11. During the construction phase, the building materials shall be transported with proper cover or after
wetting to prevent spreading of dust during transportation. Water sprinkling shall also be arranged to suppress spreading of dust outside the premises.

5.12. The construction debris, mud discharge etc. if any from the construction site shall be disposed off as per Construction and Demolition Waste Management Rules, 2016.

5.13. Suitable species of trees and plants shall be maintained within and along the periphery of the premises to form green belt to improve the environment.

To

M/s Amritha Vidyapeetham,
Amritapuri Campus,
Clappana P.O,
Kollam-690525.

1. This digitally signed document is legally valid as per the Information Technology Act 2000

2. For verifying this document please go to krocmms.nic.in and search using date of issue/name of the unit/Application Number in “Consent Granted Applications” link in the home page of the Board’s Online Consent Management and Monitoring System.
If F = 0 

TO PALLIKKADAVU 5 KM FROM CHANGANKULANCAM 

SIP
ENVIRONMENTAL ENGINEER

STP: ELEQIP.ROOM = 75 KVA 2NOS

STP NO. HT. BUILT UP AREA
ILDG. NO. NO. OF FLOORS BLDG.
G+3 12,15 M 14457,13 SQ.FT
G+1 6,45 M 6741,78 SQ.FT
G+13 42,15 M 18399,46 SQ.FT
G+13 42,45 M 130743,79 SQ.FT
G+8 35,95 M 208865,16 SQ.FT
G+4 18,45 M 9372,00 SQ.FT
TOTAL BUILT UP AREA = 9,09,947,55 SQ.FT

K SAJEEVAN
Digitally signed by K SAJEEVAN
Date: 2018.12.06 16:59:38
+05'30'
ANNEXURE V

(Monitoring Report)
CUSTOMER DETAILS

Customer Name & Address
M/s Mata Amritanandamayi Math
Amritapuri Campus
Karunagappally
Kollam District

Customer Reference
Test Request dt: 22-09-2021

SAMPLE DETAILS

Product Category
Atmospheric Pollution
Sample Code
EN21090121

Sample Name
Ambient Air
Sample Received on
23-09-2021

Sample Conditions at Receipt
Fit for Analysis
Test Commenced on
24-09-2021

Sampled by
Lab Authorized Sampler
Test Completed on
27-09-2021

DETAILS OF SAMPLING

Sampling Location
Project Site
Date of Sampling
22-09-2021

Sampling Procedure
SEAAL/ENL/GEN/SOP/02
Humidity
73 %

Latitude
N 09°05.877'
Longitude
E 076°29.420'

SAMPLING SITE DETAILS

Re-Survey No.
383/4-2,384/1,371/3,388/2-2,359/1

Village
Clappana & K S Puram
Taluk
Karunagappally

District
Kollam
State
Kerala

TEST RESULTS– CHEMICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
<th>NAAQ Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter, PM$_{10}$</td>
<td>IS 5182 (Part 23):2006</td>
<td>µg/m$^3$</td>
<td>42.1</td>
<td>Max 100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter, PM$_{2.5}$</td>
<td>EPA 40 CFR (Part 50) Appendix – L</td>
<td>µg/m$^3$</td>
<td>18.5</td>
<td>Max 60</td>
</tr>
<tr>
<td>3</td>
<td>Sulphur Dioxide as SO$_2$</td>
<td>IS 5182 (Part 2): 2001 RA 2017</td>
<td>µg/m$^3$</td>
<td>&lt;2.00</td>
<td>Max 80</td>
</tr>
<tr>
<td>4</td>
<td>Oxides of Nitrogen as NO$_2$</td>
<td>IS 5182 (Part 6): 2006 RA 2017</td>
<td>µg/m$^3$</td>
<td>&lt;2.00</td>
<td>Max 80</td>
</tr>
<tr>
<td>5</td>
<td>Carbon monoxide (CO)</td>
<td>IS 5182 Part 10: 1999 RA 2014</td>
<td>mg/ m$^3$</td>
<td>&lt; 1.15</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Remarks:

***End of Report***

Checked by: 
Authorized Signatory
CUSTOMER DETAILS

Customer Name & Address: M/s Mata Amritanandamayi Math
Amritapuri Campus
Karunagappally
Kollam District

Customer Reference: Test Request dt: 22-09-2021

SAMPLE DETAILS

Product Category: Water
Sample Name: Ground Water
Sample Conditions at Receipt: Fit for Analysis
Sample Quantity & Packing: 2 litre & 500mL Plastic Bottle

Sample Received on: 21-09-2021
Sample Conditions at Receipt: Temperature @ Receipt 4 °C
Test Commenced on: 24-09-2021
Test Completed on: 29-09-2021

INFO BY CUSTOMER:

DETAILS OF SAMPLING

Sample Source/Location: Open Well - Inside Campus
Sampling Procedure: SEAAL/ENL/GEN/SOP/01 & SEAAL/MBL/SOP/06
Sample Temperature: 31 °C

Latitude: N 09°06’01.2”
Longitude: E 76°29’23.9”

SAMPLING SITE DETAILS

Survey No.: 383/4-2,384/1,371/3,388/2-2,359/1
Village: Clappana & K S Puram
Taluk: Karunagappally
District: Kollam: State: Kerala

TEST RESULTS - CHEMICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
<th>Requirement as per Acceptable Limit of IS 10500 : 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colour</td>
<td>IS 3025 (Part 4):1983 RA 2017</td>
<td>Hazen</td>
<td>5</td>
<td>Max 5</td>
</tr>
<tr>
<td>2</td>
<td>Odour</td>
<td>IS 3025 (Part 5):2018</td>
<td>---</td>
<td>Agreeable</td>
<td>Agreeable</td>
</tr>
</tbody>
</table>
## TEST RESULTS– CHEMICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
<th>Requirement as per Acceptable Limit of IS 10500 : 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Turbidity</td>
<td>IS 3025 (Part 10):1984 RA 2017</td>
<td>NTU</td>
<td>34.3</td>
<td>Max 1</td>
</tr>
<tr>
<td>5</td>
<td>Conductivity</td>
<td>IS 3025 (Part 14):1984 RA 2019</td>
<td>µS/cm</td>
<td>520</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (Part 16):1984 RA 2017</td>
<td>mg/L</td>
<td>338</td>
<td>Max 500</td>
</tr>
<tr>
<td>7</td>
<td>Total Hardness as CaCO₃</td>
<td>IS 3025 (Part 21):2009 RA 2019</td>
<td>mg/L</td>
<td>162</td>
<td>Max 200</td>
</tr>
<tr>
<td>8</td>
<td>Calcium as Ca</td>
<td>IS 3025 (Part 40):1991 RA 2019</td>
<td>mg/L</td>
<td>53.3</td>
<td>Max 75</td>
</tr>
<tr>
<td>9</td>
<td>Magnesium as Mg</td>
<td>IS 3025 (Part 46):1994 RA 2019</td>
<td>mg/L</td>
<td>6.89</td>
<td>Max 30</td>
</tr>
<tr>
<td>10</td>
<td>Chloride as Cl</td>
<td>IS 3025 (Part 32):1988 RA 2019</td>
<td>mg/L</td>
<td>59.9</td>
<td>Max 250</td>
</tr>
<tr>
<td>11</td>
<td>Total Alkalinity as CaCO₃</td>
<td>IS 3025 (Part 23):1986 RA 2019</td>
<td>mg/L</td>
<td>125</td>
<td>Max 200</td>
</tr>
<tr>
<td>12</td>
<td>Iron as Fe</td>
<td>IS 3025 (Part 53):2003 RA 2019</td>
<td>mg/L</td>
<td>5.80</td>
<td>Max 1</td>
</tr>
<tr>
<td>13</td>
<td>Sulphate as SO₄</td>
<td>IS 3025 (Part 24):1986 RA 2019</td>
<td>mg/L</td>
<td>4.90</td>
<td>Max 200</td>
</tr>
</tbody>
</table>

## TEST RESULTS – BIOLOGICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
<th>Requirement as per Acceptable Limit of IS 10500 : 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Coliforms</td>
<td>IS 15185 : 2016</td>
<td>----</td>
<td>Present/100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>2</td>
<td>E coli</td>
<td>IS 15185 : 2016</td>
<td>----</td>
<td>Absent/100 ml</td>
<td>Absent/100 ml</td>
</tr>
</tbody>
</table>

Remarks:

***End of Report***
CUSTOMER DETAILS

Customer Name & Address: M/s Mata Amritanandamayi Math
Amritapuri Campus
Karunagappally
Kollam District

Customer Reference: Test Request dt: 22-09-2021

DETAILS OF MONITORING

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Atmospheric Pollution</th>
<th>Sample Code</th>
<th>EN21090122</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Name</td>
<td>Ambient Noise</td>
<td>Monitoring Commenced on</td>
<td>22-09-2021/ 06:00</td>
</tr>
<tr>
<td>Monitoring Location</td>
<td>Project Site</td>
<td>Monitoring Completed on</td>
<td>23-09-2021/ 06:00</td>
</tr>
<tr>
<td>Latitude</td>
<td>N 09°05.868’</td>
<td>Longitude</td>
<td>E 076°29.417’</td>
</tr>
</tbody>
</table>

SAMPLING SITE DETAILS

Survey No.: 383/4-2,384/1,371/3,388/2-2,359/1
Village: Clappana& K S Puram
Taluk: Karunagappally
District: Kollam
State: Kerala

MONITORING RESULTS - Leq

<table>
<thead>
<tr>
<th>TIME</th>
<th>RESULTS dB(A)</th>
<th>TIME</th>
<th>RESULTS dB(A)</th>
<th>TIME</th>
<th>RESULTS dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00</td>
<td>33.8</td>
<td>14:00</td>
<td>45.2</td>
<td>22:00</td>
<td>32.7</td>
</tr>
<tr>
<td>07:00</td>
<td>36.2</td>
<td>15:00</td>
<td>45.6</td>
<td>23:00</td>
<td>34.0</td>
</tr>
<tr>
<td>08:00</td>
<td>40.0</td>
<td>16:00</td>
<td>46.6</td>
<td>24:00</td>
<td>36.4</td>
</tr>
<tr>
<td>09:00</td>
<td>43.2</td>
<td>17:00</td>
<td>47.0</td>
<td>01:00</td>
<td>37.1</td>
</tr>
<tr>
<td>10:00</td>
<td>45.2</td>
<td>18:00</td>
<td>42.1</td>
<td>02:00</td>
<td>36.8</td>
</tr>
<tr>
<td>11:00</td>
<td>48.0</td>
<td>19:00</td>
<td>39.0</td>
<td>03:00</td>
<td>37.5</td>
</tr>
<tr>
<td>12:00</td>
<td>45.6</td>
<td>20:00</td>
<td>35.5</td>
<td>04:00</td>
<td>36.4</td>
</tr>
<tr>
<td>13:00</td>
<td>44.9</td>
<td>21:00</td>
<td>35.1</td>
<td>05:00</td>
<td>38.2</td>
</tr>
</tbody>
</table>

Sl. No. | PARAMETERS                                    | UNIT | RESULT |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ambient Sound Level (Leq) Day Time (06:00 to 22:00)</td>
<td>dB(A)</td>
<td>43.7</td>
</tr>
<tr>
<td>2</td>
<td>Ambient Sound Level (Leq) Night Time (23:00 to 05:00)</td>
<td>dB(A)</td>
<td>36.7</td>
</tr>
</tbody>
</table>

Remarks: ***End of Report***

Checked by: Authorized Signatory
CUSTOMER DETAILS

Customer Name & Address
M/s Mata Amritanandamayi Math
Amritapuri Campus
Karunagappally
Kollam District

Customer Reference
Test Request dt: 22-09-2021

SAMPLE DETAILS

Product Category
Pollution & Environment

Sample Name
Soil

Sample Conditions at Receipt
Fit for Analysis

Sample Quantity & Packing
500g in Plastic Bag

Sampled by
Lab Authorized Sampler

Sample Received on
23-09-2021

Test Commenced on
24-09-2021

Test Completed on
29-09-2021

Sampled by
Lab Authorized Sampler

Information Provided by Customer
---

DETAILS OF SAMPLING

Sample Source
Project Site

Date of Sampling
22-09-2021

Sampling Procedure
SEAAL/ENL/GEN/SOP/08

Sample Temperature
31 °C

Latitude
N 09°05.857´

Longitude
E 076°29.388´

SAMPLING SITE DETAILS

Re-Survey No.
383/4-2,384/1,371/3,388/2-2,359/1

Village
Clappana & K S Puram

Taluk
Karunagappally

District
Kollam

State
Kerala

TEST RESULTS – CHEMICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 10158: 1982 RA 2014</td>
<td>---</td>
<td>6.32</td>
</tr>
<tr>
<td>2</td>
<td>Conductivity</td>
<td>IS 14767: 2000 RA 2016</td>
<td>µS/cm</td>
<td>210</td>
</tr>
<tr>
<td>3</td>
<td>Water Holding Capacity</td>
<td>SEAL/EN/SLS/SOP/01</td>
<td>%</td>
<td>68.0</td>
</tr>
</tbody>
</table>

Checked by: Authorized Signatory
## TEST RESULTS– CHEMICAL PARAMETERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>PARAMETERS</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Particle Size Distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Clay</td>
<td>SEAL/EN/SLS/SOP/14</td>
<td>%</td>
<td>20.8</td>
</tr>
<tr>
<td>6</td>
<td>Sand</td>
<td>SEAL/EN/SLS/SOP/14</td>
<td>%</td>
<td>42.5</td>
</tr>
<tr>
<td>7</td>
<td>Silt</td>
<td>SEAL/EN/SLS/SOP/14</td>
<td>%</td>
<td>36.7</td>
</tr>
<tr>
<td>5</td>
<td>Organic Matter</td>
<td>IS 2720 Part 22:1992</td>
<td>%</td>
<td>0.24</td>
</tr>
<tr>
<td>6</td>
<td>Sodium as Na</td>
<td>USEPA 7000B:2009</td>
<td>%</td>
<td>0.18</td>
</tr>
<tr>
<td>7</td>
<td>Chlorides</td>
<td>SEAL/EN/SLS/SOP/08</td>
<td>mg/Kg</td>
<td>135</td>
</tr>
<tr>
<td>8</td>
<td>Sulphur as SO4</td>
<td>IS 2720 Part 27: 1977</td>
<td>%</td>
<td>0.09</td>
</tr>
<tr>
<td>9</td>
<td>Total Kjeldahl Nitrogen (as N)</td>
<td>IS 14684 :1999 RA 2014</td>
<td>mg/Kg</td>
<td>348</td>
</tr>
<tr>
<td>10</td>
<td>Available Potassium</td>
<td>SEAL/EN/SLS/SOP/03</td>
<td>mg/Kg</td>
<td>6.2</td>
</tr>
<tr>
<td>11</td>
<td>Total Phosphorous (as P)</td>
<td>IS 10158: 1982 RA 2014</td>
<td>mg/Kg</td>
<td>52.8</td>
</tr>
</tbody>
</table>

Remarks: 

***End of Report***
Calibration Certificates
## CALIBRATION CERTIFICATE

**CERTIFICATE No.:** ETPL/N/2107031/19  
**ULR No.:** CC306521000002457F  
**Page:** 01 Of 03

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1.  | Name & Address Of Customer | STANDARD ENVIRONMENTAL & ANALYTICAL LABORATORIES  
K.J Tower,Above SBI-ISC Eloor Branch,Pathalam,  
| 2.  | UUC Fitted in Instrument | Respirable Dust Sampler  
Envirotech  
APM 460/1807-DTF-2013 |
| 3.  | Description of Unit Under Calibration | Orifice Manometer  
0.6-1.5 m³/min  
0.025 (0.6-0.8 & 1.3-1.5) m³/min,0.01(0.8-1.3)m³/min.  
---  
SEALS/ENL/EQ/001  
---  
---/Analogue/--- |
| 4.  | Condition Of the item on receipt | Satisfactory |
| 5.  | Calibration Contract Form No. | ETPL/N/2107031 |
| 6.  | Discipline/Group | Fluid Flow Calibration  
(Group:Flow Measuring Device) |
| 7.  | Date of receipt of the item | 20.07.2021' |
| 8.  | Date & Place of Calibration | 20.07.2021  
At Site |
| 9.  | Next due date of calibration (As suggested by customer) | 19.07.2022 |
| 10. | Certificate Issue Date | 22.07.2021 |
| 11. | Environmental condition | Temperature 27.3°C  
Humidity 59% RH  
Pressure 751 mmHg |
| 12. | Standard Operating Procedure No. | ETPL/SOP/RDS/03B |

**PREPARED BY**  
Mr. Rahul Khalasi  
EONAIR TECHNOLOGIES PVT. LTD.  
Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1,  
Jetalpur, Ahmedabad-382426.  
Ph: +91 74339 77101/02  
Email: cal@eonairtechnologies.com  
www.eonairtechnologies.com

**AUTHORISED SIGNATORY**  
Mr. Sagar Ranpura  
(Technical Manager)
### Details Standards used for calibration & traceability

<table>
<thead>
<tr>
<th>Description of Reference Standards</th>
<th>Calibration Certificate No.</th>
<th>Due Date</th>
<th>Calibrated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top loading Calibrator</td>
<td>CA 2360 2103 694</td>
<td>22.03.2022</td>
<td>FCRI</td>
</tr>
<tr>
<td>ID No.:ETPL/FW/TLO/07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Pressure Calibrator</td>
<td>PICAL/0621/P/036</td>
<td>20.06.2022</td>
<td>PI Calibration</td>
</tr>
<tr>
<td>ID No.:ETPL/P/PRC-200/05</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Calibration Result

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Average Flow Readings in Standard (m³/min)</th>
<th>Average Flow readings in UUC (m³/min)</th>
<th>Corrected readings in standard (m³/min)</th>
<th>Corrected Readings in UUC (m³/min)</th>
<th>Error (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.650</td>
<td>0.650</td>
<td>0.637</td>
<td>0.637</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>0.790</td>
<td>0.800</td>
<td>0.775</td>
<td>0.784</td>
<td>1.266</td>
</tr>
<tr>
<td>3</td>
<td>0.980</td>
<td>0.990</td>
<td>0.961</td>
<td>0.971</td>
<td>1.020</td>
</tr>
<tr>
<td>4</td>
<td>1.000</td>
<td>1.010</td>
<td>0.981</td>
<td>0.990</td>
<td>1.000</td>
</tr>
<tr>
<td>5</td>
<td>1.340</td>
<td>1.350</td>
<td>1.314</td>
<td>1.324</td>
<td>0.746</td>
</tr>
</tbody>
</table>

Expanded Uncertainty at 95% Confidence level and K=1.96 ± 2.20 % of Reg
14. Remarks:

1) The Results are obtained at the time of calibration only related to the item calibrated.
2) The calibration certificate shall not be reproduced without written approval of Eonair Technologies Pvt. Ltd.
3) The Values has been roundoff as per IS-2 1960 wherever applicable.
4) The calibration results reported in this certificate are valid at the time of calibration & Under the stated condition of measurement.
5) Reference used are directly traceable to National /International standard through unbroken chain of calibration.
6) Uncertainty of measurements are given at confidence level 95 % with coverage factor \( k = 1.96 \).
7) Format No:FF-01, Amendment No:04.
8) UUC=Unit Under Calibration.
9) The calibration is done using air as medium and Top Loading balance as reference standard and is kept at downstream and Orifice manometer inlet free to open atmosphere,

PREPARED BY

Mr. Rahul Khafasi

EONAIR TECHNOLOGIES PVT. LTD.

Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1, Jetalpur, Ahmedabad-382426.

Ph: +91 74339 77101 / 02
Email: cal@eonairtechnologies.com

*End Of Certificate*

AUTHORISED SIGNATORY

Mr. Sagar Ranpura
(Technical Manager)
CALIBRATION CERTIFICATE

CERTIFICATE No.: ETPL/N/2107031/20
ULR No.: CC306521000002458F
Page: 01 Of 02

1. Name & Address Of Customer

2. Description of Unit Under Calibration

   Name Of Instrument

   Range
   Resolution
   Make
   Instrument ID. No.
   Sr. No.
   Model No./Type/Size

   Stop Watch (Fitted in Respirable Dust Sampler, Make: Envirotech,
   Model No: APM 460, Sr. No.-1807-DTF-2013)
   Parameter to be calibrated: TIME
   24 Hrs.
   0.01 Sec
   SEAL/ENL/EQ/001A
   T-188

3. Condition Of the item on receipt

   Satisfactory


   ETPL/N/2107031

5. Discipline/Group

   Electro-Technical Calibration
   (Group:-TIME & FREQUENCY)

6. Date of receipt of the item

   20.07.2021

7. Date & Place of Calibration

   20.07.2021
   At Site

8. Next due date of calibration
   (As suggested by customer)

   19.07.2022

9. Certificate Issue Date

   22.07.2021

10. Environmental condition

    Temperature 26.8 °C
    Humidity 57 % RH

11. Standard Operating Procedure No

    ETPL/SOP/TIME/07A

PREPARED BY

Mr. Rahul Khaiasi

EONAIR TECHNOLOGIES PVT. LTD.
Dayal Estate, National Highway No. B, Opp. APMC Market Gate-1,
Jetalpur, Ahmedabad-382426.

AUTHORISED SIGNATORY

Ms. Sangita Zala
(Technical Manager)
12. Details of Standards used for calibration & traceability

<table>
<thead>
<tr>
<th>Description of Reference Standards</th>
<th>Calibration Certificate No.</th>
<th>Valid up to</th>
<th>Calibrated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Timer</td>
<td>2106/0125/01</td>
<td>07.06.2022</td>
<td>Excellent Services</td>
</tr>
</tbody>
</table>

**CALIBRATION RESULTS**

**Time Calibration**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Standard Reading</th>
<th>UUC Reading</th>
<th>Error</th>
<th>Expanded Uncertainty in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hour Minutes Second</td>
<td>Hour Minutes Second</td>
<td>Second</td>
<td>1/100 Second</td>
</tr>
<tr>
<td>1</td>
<td>00 30 0 19</td>
<td>00 30 0 23</td>
<td>—</td>
<td>4</td>
</tr>
</tbody>
</table>

**Time Calibration**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Standard Reading</th>
<th>UUC Reading</th>
<th>Error</th>
<th>Expanded Uncertainty in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hour Minutes Second</td>
<td>Minutes</td>
<td></td>
<td>± (Second)</td>
</tr>
<tr>
<td>1</td>
<td>00 30 0 19</td>
<td>30</td>
<td>0.00018</td>
<td>20.00</td>
</tr>
</tbody>
</table>

**Remarks**

1) The Results obtained at the time of calibration only related to the item calibrated.
2) The calibration certificate shall not be reproduced without written approval of Eonair Technologies Pvt. Ltd.
3) The values has been roundoff as per IS-2 1960 wherever applicable.
4) The calibration results reported in this certificate are valid at the time of calibration & under the stated condition of measurement.
5) Reference used are directly traceable to National / International standard through unbroken chain of calibration.
6) Uncertainty of measurements at 95% confidence level with coverage factor k = 1.96.
7) Formatte No.: FF-01 , Amendment No.:04
8) Unit Under Calibration reading and Standard Reading are average of 3 reading.

PREPARED BY
Mr. Rahul Khalasi

EONAIR TECHNOLOGIES PVT. LTD.
Daday Estate, National Highway No. 8, Opp. APMC Market Gate-1, Jetalpur, Ahmedabad-382426.
CALIBRATION CERTIFICATE

<table>
<thead>
<tr>
<th>CERTIFICATE NO.: ETPL/N/2107031/24</th>
<th>ULR No.: CC306521000002462F</th>
<th>Page: 01 Of 02</th>
</tr>
</thead>
</table>

1. **Name & Address Of Customer**: STANDARD ENVIRONMENTAL & ANALYTICAL LABORATORIES

2. **UUC Fitted in Instrument**
   - **Name Of Machine**: Mini Fine Particulate Sampler
   - **Make**: Envirotech
   - **Model No./Serial No.**: APM 550 n/mi/188-DTK-2013

3. **Description of Unit Under Calibration**
   - **Name Of Instrument**: Rotameter
   - **Range**: 0 to 20 LPM
   - **Resolution**: 0.5 LPM
   - **Make**: Flow Star
   - **Instrument ID. No.**: SEAAAL/ENL/EQ/002
   - **Sr. No.**: AG13O638

4. **Condition Of the item on receipt**: Satisfactory

5. **Calibration Contract Form No.**: ETPL/N/2107031


7. **Date of receipt of the item**: 20.07.2021

8. **Date & Place of Calibration**: 20.07.2021
   - **At Site**: At Site

9. **Next due date of calibration (As suggested by customer)**: 19.07.2022

10. **Certificate Issue Date**: 22.07.2021

11. **Environmental condition**
    - **Temperature**: 26.4°C
    - **Humidity**: 54% RH

12. **Standard Operating Procedure No.**: ETPL/SOP/RM/018

**PREPARED BY**
Mr. Rahul Khalasi

**EONAIR TECHNOLOGIES PVT. LTD.**
Doyal Estate, National Highway No.8, Opp. APMC Market Gate-1, Jetalpur, Ahmedabad-382426.

**AUTHORISED SIGNATORY**
Mr. Sagar Ranpura (Technical Manager)
13. Standards used for calibration & traceability

<table>
<thead>
<tr>
<th>Description of Reference Standards</th>
<th>Calibration Report No.</th>
<th>Valid up to</th>
<th>Calibrated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Laminar gas flow calibrator</td>
<td>PICAL/0321/F/352</td>
<td>14.03.2022</td>
<td>Poltech</td>
</tr>
<tr>
<td>ID No.: ETPL/FW/LGF/02</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Calibration Result

<table>
<thead>
<tr>
<th>SR NO</th>
<th>SET ON UUC LPM</th>
<th>READING ON STANDARD (LPM)</th>
<th>AVERAGE READING (LPM)</th>
<th>DEVIATION (LPM)</th>
<th>EXPANDED UNCERTAINTY at 17 LPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>17.00</td>
<td>17.18</td>
<td>17.18</td>
<td>17.19</td>
<td>17.18</td>
</tr>
</tbody>
</table>

14. Remarks:

1) The Results are obtained at the time of calibration only related to the item calibrated.
2) The calibration certificate shall not be reproduced without written approval of Eonair Technologies Pvt. Ltd.
3) The Values has been roundoff as per IS-21960 wherever applicable.
4) The calibration results reported in this certificate are valid at the time of calibration & Under the stated condition of measurement.
5) Reference used are directly traceable to National /International standard through unbroken chain of calibration.
6) Uncertainty of measurements are given at confidence level 95 % with coverage factor k = 1.96.
7) Format No: FF-01, Amendment No: 04.
8) UUC=Unit Under Calibration.
9) The calibration is done using atmospheric air, unit under calibration and LEF gas flow calibrator connected in series, the mode of flow is vacuum and regulated by air flow control valve.
CALIBRATION CERTIFICATE

1. Name & Address Of Customer :
   STANDARD ENVIRONMENTAL & ANALYTICAL LABORATORIES
   K.J Tower, Above 581-ISC Ello Branch, Pathalam,

2. Description of Unit Under Calibration :
   Name Of Instrument : Stop Watch (Fitted in Make: Envirotech, Model No: APM 550 mini,
   Sr No.: 188-DTK-2013)
   Parameter to be calibrated : TIME
   Range : 24 Hrs.
   Resolution : 0.01 Sec
   Make :
   Instrument ID. No. :
   Sr. No. :
   Model No./Type/Size :
   SEAL/ENL/002A
   T-1807

3. Condition Of the item on receipt :
   Satisfactory

4. Calibration Contract Form No. :
   ETPL/N/2107031

5. Discipline/Group :
   Electro-Technical Calibration
   (Group:-TIME & FREQUENCY)

6. Date of receipt of the item :
   20.07.2021

7. Date & Place of Calibration :
   20.07.2021
   At Site

8. Next due date of calibration (As suggested by customer) :
   19.07.2022

9. Certificate Issue Date :
   22.07.2021

10. Environmental condition :
    Temperature 27.5 °C
    Humidity 57 % RH

11. Standard Operating Procedure No :
    ETPL/SOP/TIME/07A

PREPARED BY
Mr. Rahul Khalasi

EONAIR TECHNOLOGIES PVT. LTD.
Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1,
Jetalpur, Ahmedabad-382426.

AUTHORISED SIGNATORY
Ms. Sangita Zala
(Technical Manager)

EONAIR TECHNOLOGIES PVT. LTD.
Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1,
Jetalpur, Ahmedabad-382426.

www.eonairtechnologies.com
CALIBRATION CERTIFICATE

CERTIFICATE No.: ETPL/N/2107031/25
ULR No.: CC305521000002463F
Page: 01 Of 02

12. Details of Standards used for calibration & traceability

<table>
<thead>
<tr>
<th>Description of Reference Standards</th>
<th>Calibration Certificate No.</th>
<th>Valid up to</th>
<th>Calibrated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Timer</td>
<td>2106/0125/01</td>
<td>07.06.2022</td>
<td>Excellent Services</td>
</tr>
</tbody>
</table>

CALIBRATION RESULTS

Time Calibration

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Standard Reading</th>
<th>UUC Reading</th>
<th>Error</th>
<th>Expanded Uncertainty in ± (Second)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hour Minutes Second 1/100 Second</td>
<td>Hour Minutes Second 1/100 Second</td>
<td>Second 1/100 Second</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>00 30 0 15</td>
<td>00 30 0 23 8</td>
<td>20.00</td>
<td></td>
</tr>
</tbody>
</table>

13. Remarks

1) The Results obtained at the time of calibration only related to the item calibrated.
2) The calibration certificate shall not be reproduced without written approval of Eonair Technologies Pvt. Ltd.
3) The values has been roundoff as per IS-2 1960 wherever applicable.
4) The calibration results reported in this certificate are valid at the time of calibration & under the stated condition of measurement.
5) Reference used are directly traceable to National / International standard through unbroken chain of calibration.
6) Uncertainty of measurements at 95 % confidence level with coverage factor k =1.96.
7) Formate No.: FF-01 , Amendment No.:04
8) Unit Under Calibration reading and Standard Reading are average of 3 reading.

PREPARED BY

Mr. Rahul Khalasi

EONAIR TECHNOLOGIES PVT. LTD.
Doyal Estate, National Highway No. 8, Opp. APMC Market Gate - 1, Jetpur, Ahmedabad-382426.

AUTHORISED SIGNATORY
Ms. Sajita-Zala
(Technical Manager)
CALIBRATION CERTIFICATE

CERTIFICATE No.: ETPL/N/2107031/21  ULR No.: CC306521000002459F  Page: 01 Of 02

1. Name & Address Of Customer:
   STANDARD ENVIRONMENTAL & ANALYTICAL LABORATORIES

2. UUC Fitted in Instrument:
   Name Of Machine: Gaseous Sampling Attachment
   Make: Envirotech
   Model No/Serial No.:

3. Description of Unit Under Calibration:
   Name Of Instrument: APM-411/5213-DTJ-2013
   Range: 0 - 2 LPM
   Resolution: 0.1 LPM
   Make: Flow Star
   Instrument ID. No.
   Serial No.
   Model No./Type /Size
   SEAAVENUEQ/003
   AG15D6419-1443

4. Condition Of the item on receipt:
   Satisfactory

5. Calibration Contract Form No.:
   ETPL/N/2107031

6. Discipline/Group:
   Fluid Flow Calibration
   (Group: Flow Measuring Device)

7. Date of receipt of the item:
   20.07.2021

8. Date & Place of Calibration:
   20.07.2021
   At Site

9. Next due date of calibration (As suggested by customer):
   19.07.2022

10. Certificate Issue Date:
    22.07.2021

11. Environmental condition:
    Temperature 26.5 °C
    Humidity 57 % RH

12. Standard Operating Procedure No.:
    ETPL/SOP/RM/018

PREPARED BY

Mr. Rahul Khalasi

EONAIR TECHNOLOGIES PVT. LTD.
Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1, Jetalpur, Ahmedabad-382426.

AUTHORISED SIGNATORY

Mr. Sagar Ranpura
(Technical Manager)
CALIBRATION CERTIFICATE

CERTIFICATE No.: ETPL/N/2107031/21 ULR No.: CC306521000002459F Page: 02 Of 02

13. Details of Standards used for calibration & traceability

<table>
<thead>
<tr>
<th>Description of Reference Standards</th>
<th>Calibration Certificate No.</th>
<th>Valid up to</th>
<th>Calibrated By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminar gas flow calibrator</td>
<td>PICAL/0321/F/353</td>
<td>14.03.2022</td>
<td>Polltech</td>
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</table>

Calibration Result

<table>
<thead>
<tr>
<th>SR NO</th>
<th>SET ON UUC LPM</th>
<th>READING ON STANDARD (sccm)</th>
<th>AVERAGE READING (sccm)</th>
<th>DEVIATION (sccm)</th>
<th>EXPANDED UNCERTAINTY at 2 LPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<td>1555.9</td>
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<td>2065.3</td>
</tr>
</tbody>
</table>

14. Remarks:

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2) The calibration certificate shall not be reproduced without written approval of Eonair Technologies Pvt. Ltd.
3) The Values has been rounded off as per IS-2 1960 wherever applicable.
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5) Reference used are directly traceable to National /International standard through unbroken chain of calibration.
6) Uncertainty of measurements are given at confidence level 95% with coverage factor k =1.96.
7) Formet No:FF-01, Amendment No:04.
8) UUC=Unit Under Calibration.
9) The calibration is done using atmospheric air, unit under calibration and LEF gas flow calibrator connected in series, the mode of flow is vacuum and regulated by air flow control valve.
10) sccm=standard cubic centimeter per minute.
11) 1 sccm=0.001 LPM.

PREPARED BY

Mr. Rahul Khalasi Ranpura
Manager

EONAIR TECHNOLOGIES PVT. LTD.

Doyal Estate, National Highway No. 8, Opp. APMC Market Gate-1, Jetalpur, Ahmedabad-382426.

*End Of Certificate*
### CALIBRATION CERTIFICATE

**NAME AND ADDRESS OF THE CUSTOMER**
M/S. STANDARDS ENVIRONMENTAL & ANALYTICAL LABORATORIES
KJ TOWER, PATHALAM, UDYOGAMANDAL P.O
ERNAKULAM KERALA Pincode -683501

**Certificate No.** : CRMTL/01/421100642-A1
**Date Of Calibration** : 07/07/2021

---

### 1. DESCRIPTION OF DUC

<table>
<thead>
<tr>
<th>Name of the DUC</th>
<th>Sound Level Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range / Size</td>
<td>30-130 dBA</td>
</tr>
<tr>
<td>L.C</td>
<td>0.1dDa</td>
</tr>
<tr>
<td>Identification</td>
<td>SEAAL/ENL/EQ/040</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>130911982</td>
</tr>
<tr>
<td>Make</td>
<td>HTC Instruments</td>
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<tr>
<td>Model</td>
<td>SL-1352</td>
</tr>
</tbody>
</table>

**Date of Receipt of Item** : 07/07/2021
**Receiving Condition of DUC** : GOOD
**Cal. Procedure Ref.No.** : CRMTL/WI/205

### 2. DETAILS OF MASTER USED

<table>
<thead>
<tr>
<th>Standard Instrument Used</th>
<th>Make</th>
<th>ID NO.</th>
<th>Traceable To/Certificate No.</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound Level Calibrator</td>
<td>Lutron</td>
<td>CRMTL-355</td>
<td>FCRI/EQL/20-21/282</td>
<td>16/09/2021</td>
</tr>
</tbody>
</table>

The masters are traceable to National / International standards as per ISO / IEC 17025.

**Calibration Field** : Mechanical

### 3. CALIBRATION RESULTS

#### 3.1 CALIBRATED AT THE RANGE :

<table>
<thead>
<tr>
<th>STANDARD VALUE</th>
<th>CALIBRATED VALUE</th>
<th>ERROR</th>
<th>EXPANDED UNCERTAINTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>94.0</td>
<td>0.0</td>
<td>0.26</td>
</tr>
<tr>
<td>114</td>
<td>113.8</td>
<td>-0.2</td>
<td>0.27</td>
</tr>
</tbody>
</table>

### 4. REMARKS

4.1. Uncertainty estimated for a confidence level of 95% at the K factor = 2

4.2. The reported results are valid only for the condition of the items received at the time and under the stated conditions of the calibration.

4.3. DUC - Device Under Calibration

**CALIBRATION LABEL / STATUS**
White : Calibrated & The results are stated as indicated.

---

**CALIBRATED BY (CALIBRATION ENGINEER)**

---

**AUTHORIZED BY (QM/ĐT/MT/SrEr)**

---

**This Report refers only to the sample submitted and may not be reproduced in full or in part, without written permission from Roots Metrology & Testing Laboratory, Chennai.**

---

**NEXT CALIBRATION DUE AS PER CUSTOMERS PLAN AND REQUIREMENT**

---

**END**
Waste treatment, sea wall our top priority: Congress

Cops crack missing case of minor girls
ANNEXURE VII

(Copy of Approval of Lab)
STANDARDS ENVIRONMENTAL & ANALYTICAL LABORATORIES

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

K. J. TOWER, PATHALAM, UDYOGRAMANDAL P.O., ERNAKULAM, KERALA, INDIA

in the field of

TESTING

Certificate Number: TC-5402
Issue Date: 21/11/2019  Valid Until: 20/11/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer
Extension in validity

Ashutosh Tatwawadi <ashutosh@nabl.qcin.org>
To: Standards Laboratories <seaalab@gmail.com>

Tue, Nov 23, 2021 at 6:40 PM

Dear Sir,

STANDARDS ENVIRONMENTAL & ANALYTICAL LABORATORIES, Kochi (T-2749) is an accredited lab as per ISO/IEC 17025:2017. The labs accreditation cycle is valid from 21.11.2019 and valid till 20.11.2021. This is to inform you that the existing accreditation validity for your laboratory has been extended for the existing Chemical and Biological scope till the decision on renewal of accreditation is taken up.

During the period under Extension of validity, you are allowed to use NABL symbol/ claim accreditation for the existing scope.

This is for your kind information.

Thanking you,

Ashutosh D. Tatwawadi.
Deputy Director.
Quality Council of India (Board- NABL).
NABL House
Plot- 45, Sector 44,
Gurugram- 122002. Haryana.
(Near HUDA City Centre Metro Station, Behind Fortis Hospital)
Tel. no.: +91-124-4679700 (30 lines); 4679766 (direct).
Fax: +91-124-4679799
www.nabl-india.org
ANNEXURE VIII

(Site Photographs)
(Ambient Air quality Monitoring)

(Ambient Noise Monitoring)
(Water Sampling)

(Soil Sampling)