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**Validity expires on 02.04.2026**

**PROCEEDINGS OF THE ADMINISTRATOR, STATE  
ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,  
THIRUVANANTHAPURAM  
(Present. MINIMOL V.G)**

**Sub: SEIAA- Environmental Clearance for the proposed Pain and Palliative Care Unit within Ernakulam Medical College in Sy No. 321 Part 1 at Thrikkakara North Village, Kanayannur Taluk, Ernakulam District, Kerala by Dr.V.Sreekala, Principal, Government Medical College -Granted-Orders issued**

**State Environment Impact Assessment Authority, Kerala**

**No. 1187/A1/2018/SEIAA**

**dated, Thiruvananthapuram 03.04.2019**

- Ref: 1. Application received on 27.11.2018 from Dr. S.Sreekala, Principal, Government Medical College, HMT Colony P.O. Kalamassery, Kochi- 683503  
2. Proceedings No. 1144/EC/SEIAA/KL/2017 dated 15.03.2018  
3. Minutes of the 90<sup>th</sup> meeting of SEAC held on 04<sup>th</sup> January 2019  
4. Affidavit dated 08.02.2019 from Dr.V.K.Sreekala, Principal, Govt. Medical College, Ernakulam  
5. Minutes of 88<sup>th</sup> SEIAA meeting held on 25<sup>th</sup> January, 2019.  
6. Minutes of 93<sup>rd</sup> SEAC Meeting held on 21<sup>st</sup> February, 2019  
7. Minutes of the 94<sup>th</sup> meeting of SEAC held on 12<sup>th</sup> & 13<sup>th</sup> March 2019  
8. Minutes of the 90<sup>th</sup> meeting of SEIAA held on 29<sup>th</sup> March 2019

**ENVIRONMENTAL CLEARANCE NO.03/2019**

Dr.V.Sreekala, Principal, Government Medical College, HMT Colony P.O, Kalamassery, Kochi- 683503, has sought Environmental Clearance under EIA Notification, 2006 for the proposed Pain and Palliative Care Unit within Ernakulam Medical College in Sy No. 321 Part 1 at Thrikkakara North Village, Kanayannur Taluk, Ernakulam District, Kerala. The project comes under the Category B, of Schedule 8(a) of EIA Notification 2006.

2. The proposed project is the expansion of existing Hospital & Common Amenity Centre with built-up area of 1, 28, 337.65 sq.m, in which Environmental Clearance has been accorded for built up area 82,397.89 sq.m by State Environment Impact Assessment Authority, Kerala as per the proceedings read as 2<sup>nd</sup> paper above. The present proposal is for the development of Pain & Palliative Care Unit within Ernakulam Medical College with a built up area of 5368 sq.m. During the operational phase the water demand forecasted is 89 KLD. The current water supply source is KWA and the same will supply the water to satisfy the additional water demand after the upgradation. The power requirement is 220 kVA.

3. The proposal was placed in the 90<sup>th</sup> meeting of SEAC held on 04<sup>th</sup> January 2019. The Committee noticed the following defects in the proposals:

1. *Lack of a master plan*
2. *Breathing space for the building is very poor*
3. *Waste management plan of the proposed construction is incomplete.*
4. *Rain water harvesting must be detailed in the proposal.*

The Committee instructed to switch over to solar power system and Horticulture Therapy may be adopted for the palliative care patients. The Committee also directed to produce an affidavit to the effect that the above defects will be rectified in the proposed construction and recommended the proposal subject to the above conditions.

4. The proposal was placed in the 88<sup>th</sup> SEIAA meeting held on 25<sup>th</sup> January, 2019. Authority decided to send back the proposal to SEAC after getting rectified the defects noted. The proposal was placed again in the 93<sup>rd</sup> SEAC Meeting held on 21<sup>st</sup> February, 2019. The Committee deferred the item for next meeting, due to constrain of time.

5. The proposal was again placed in the 94<sup>th</sup> meeting of SEAC held on 12<sup>th</sup> & 13<sup>th</sup> March 2019. The Committee examined the proposal once again and made the following observations.

1. The present proposal for the construction of the Pain and Palliative Care Unit is as per the plan of Directorate of Medical Education, Govt. of Kerala. As the number of buildings within the compound are increasing, the Committee suggested to have a master plan prepared for future expansion, if any, incorporating the existing infrastructure and proposed constructions. The proponent in their affidavit stated that they will prepare the master plan.

2. The comment "breathing space for the building is very poor" is a general comment aired in the committee considering the number of buildings within the compound which got into the minutes inadvertently. The proposed building is located such that it has adequate open space.
3. The waste management plan of the proposed construction is incomplete as it is stated that the organic waste- food waste generated will be the responsibility of the contractor during the construction phase and treated in a biogas plant during the operation phase. It is stated in the Environmental Management Plan that a well managed waste disposal scheme will be adopted as per Annexure will be provided. However, no such Annexure is found in the proposal.
4. Rainwater harvesting is also not detailed in the proposal.

Considering the proposal in totality, the Committee decided to get an affidavit so that the shortcomings in the environmental management plan will get incorporated into the total project and the proponent has submitted an affidavit as per the paper read as 3<sup>rd</sup> above. Having examined the proposal once again, the Committee **recommended to issue EC** for the construction of Pain and Palliative Care building subject to the following conditions:

1. *Any future constructions after the proposed construction of Pain and Palliative Care Unit should be done only based on a master plan incorporating the provisions in Kerala Municipal Building Rules, 1999 and its amendments from time to time.*
2. *The rainwater falling on the roof of the proposed building should be collected, conveyed, stored and used in accordance with prevailing rules. A storage facility for atleast 90KL of rain water should be established.*
3. *Garland drainage facility should be laid around the building to collect the storm water. Two percolation tanks of capacity 7200 KL should be established. The Garland drain should be provided with silt traps to minimize siltation of the percolation tanks. In case the actual overland flow is higher, considering the area within the garland drain, the capacity of percolation tank or number of percolation tank with capacity specified above should be increased appropriately.*
4. *Since the building is coming up as part of the Medical College Complex, the proponent is a bulk generator of waste as per the Solid Waste Management Rules, 2016. Therefore, the proponent should establish, operate and maintain a composting facility either using aerobic or anaerobic system within the compound for treating the biodegradable waste including food waste. The proponent should also establish a Material Collection Facility with ventilated building of size 20 m<sup>2</sup> for segregated*

*storage of non-biodegradable waste and timely forwarding of reusable and recyclable materials through appropriate vendors.*

- 5. Roof-top solar generation system should be established as part of the project so as to generate maximum possible electricity. The electricity generated should be used for meeting full or partial requirement of the energy demand of the building*
  - 6. Horticulture garden should be established and maintained in the vacant spaces adjacent to the building as a measure of Horticulture Therapy which will provide a peaceful setting for the patients and bystanders besides enriching the environment with flowers, fruits and ornamental trees and medicinal plants.*
- 6 The matter was finally placed in the 90<sup>th</sup> meeting of SEIAA held on 29<sup>th</sup> March 2019. Authority decided to issue EC subject to the general conditions and the following specific conditions.
- 1. Any future constructions after the proposed construction of Pain and Palliative Care Unit should be done only based on a master plan incorporating the provisions in Kerala Municipal Building Rules, 1999 and its amendments from time to time.*
  - 2. The rainwater falling on the roof of the proposed building should be collected, conveyed, stored and used in accordance with prevailing rules. A storage facility for atleast 90KL of rain water should be established.*
  - 3. Garland drainage facility of sufficient capacity should be laid as per norms around the building to collect the storm water. Two percolation tanks of capacity 7200 KL should be established.*
  - 4. Since the building is coming up as part of the Medical College Complex, the proponent is a bulk generator of waste as per the Solid Waste Management Rules, 2016. Therefore, the proponent should establish, operate and maintain a composting facility either using aerobic or anaerobic system within the compound for treating the biodegradable waste including food waste. The proponent should also establish a Material Collection Facility with ventilated building of size 20 m<sup>2</sup> for segregated storage of non-biodegradable waste and timely forwarding of reusable and recyclable materials through appropriate vendors.*
  - 5. Roof-top solar generation system should be established as part of the project so as to generate maximum possible electricity. The electricity generated should be used for meeting full or partial requirement of the energy demand of the building*

6. *Horticulture garden should be established and maintained in the vacant spaces adjacent to the building as a measure of Horticulture Therapy which will provide a peaceful setting for the patients and bystanders besides enriching the environment with flowers, fruits and ornamental trees and medicinal plants.*
7. *The specific conditions stipulated in the EC No.1144/EC/SEIAA/KL/2017 dated 15.03.2018 are to be implemented.*
8. *Provisions shall be made for the housing of construction labour within the site with all necessary infrastructures and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.*

7. In this circumstance, this Authority is pleased to issue Environmental Clearance as per the EIA Notification 2006 for the proposed Pain and Palliative Care Unit within Ernakulam Medical College in Sy No. 321 Part 1, at Thrikkakara North village, Kanayannur Taluk, Ernakulam District, Kerala by Dr.V.Sreekala, Principal, Government Medical College, HMT Colony P.O, Kalamassery, Kochi- 683503, subject to the conditions in para 6 above 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.*

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, Ernakulam to take legal action under the Environment (Protection) Act 1986.
- iii. The given address for correspondence with the authorized signatory of the project is, Dr.V.Sreekala, Principal, Government Medical College, HMT Colony P.O, Kalamassery, Kochi- 683503.



  
**MINIMOL.V.G**  
**Administrator, SEIAA**

To,

Dr. V.Sreekala,  
Principal, Government Medical College,  
HMT Colony P.O, Kalamassery  
Kochi- 683503

Copy to:

1. MoEF Regional Office, Southern Zone, KendriyaSadan, 4<sup>th</sup> Floor, E&F Wing, II Block, Koramangala, Bangalore-560034
2. The Principal Secretary to Government, Environment Department
3. The District Collector, Ernakulam
4. The District Town Planner, Ernakulam
5. The Tahsildhar, Kanayannur Taluk
6. The Member Secretary, Kerala State Pollution Control Board
7. The Secretary, Kalamassery Municipality, Changampuzha Nagar P.O, Kalamassery, Ernakulam
8. Chairman, SEIAA, Kerala
9. Website
10. Stock file
11. 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 road 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 enforces 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.



- (xviii) 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.
- (xix) 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.
- (xx) 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.seiaakerala.org](http://www.seiaakerala.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.
- (xxi) A copy of the clearance letter shall be sent by the proponent to concerned GramaPanchayat/ 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.
- (xxii) 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.
- (xxiii) 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.
- (xxiv) 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 spoils, 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 27<sup>th</sup> 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 upto 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass 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 lightening 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 been started without obtaining environmental clearance.

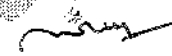
## **II. Operation Phase**

- 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 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 odour problem from STP.
- ii. The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert 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 conforming 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

