111- F. 1104/2013	**Construction of Medical College Campus by M/s. Adhiparasakthi Charitable Medical, Educational and Cultural Trust at Old S.F.No. 68/1, New S.F.No. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 of Kesavarayanpettai Village, Cheyyur Taluk, Kancheepuarm District, Tamil Nadu – Activity 8(a) & Category "B2"- Building & Construction Projects – ToR to be issued under violation notification dated: 08.03.2018 of MoEF & CC – Regarding.**
	The Project Proponent **M/s. Adhiparasakthi Charitable Medical, Educational and Cultural Trust** has applied for Environment Clearance for the proposed construction of Medical College Campus with a total built up area of 1,33,097 Sq.m at Old S.F.No. 68/1, New S.F.No. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 of Kesavarayanpettai Village, Cheyyur Taluk, Kancheepuarm District, Tamil Nadu on 24.04.2013. The proposal was placed in the 107th SEAC meeting held on 11.04.2018. The proponent made a presentation about the project proposal. From the perusal of the office records, project proposal and the presentation made by the proponent, the following points are noted: 1. While scrutinizing, it was found from the photographs furnished by the proponent, which shows that the construction activity was started without prior Environmental Clearance. Hence it was considered as violation of EIA Notification, 2006. 2. As per the guidelines issued for dealing with the projects involving violation vide MoEF & CC OM dated: 12.12.2012 & 27.06.2013, the project proponent furnished 'Letter of Commitment and Expression of Apology' vide letter dated 20.01.2014 and also resolved in the form of a formal resolution assuring that such violation will not be

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repeated.

3. The same was sent to the State Government vide SEIAA Letter No. SEIAA-TN/F.1104/2013 dated 27.01.2014 for initiating credible action on the said violation by invoking powers under Section 19 of the Environment (Protection) Act, 1986.
4. The State Government forwarded the same to the Tamil Nadu Pollution Control Board (TNPCB) for initiating legal action on the violation under the EIA Notification, 2006 in the project.
5. TNPCB vide their letter dated: 30.06.2014 has informed SEIAA that a complaint was filed against the proponent for the violation of EIA Notification, 2006 before the Chief Judicial Magistrate Court, Chengalpattu.
6. The Proponent was informed vide SEIAA Letter No. SEIAA-TN/F.1104/2013 dated 25.11.2014 that the project proposal is included in the list of cases involving violations of Environment (P) Act, 1986 and that the project stands delisted in the lists of proposals under process in SEIAA-TN.
7. As per the MoEF & CC Notification dated: 14.03.2017, the cases of violation will be dealt strictly as per the procedures specified in the following manner

   "In case the project or activities requiring prior EC under EIA Notification, 2006 from the concerned regulatory authority are brought for Environmental Clearance after starting the construction work or have undertaken expansion, modernization and change in

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product mix without prior EC, these projects shall be treated as cases of violations and in such cases, even Category B projects which are granted EC by the SEIAA shall be appraised for grant of EC only by the EAC and Environmental Clearance will be granted at Central level only". Accordingly, the proponent was addressed to submit the proposal to MoEF & CC for EC under violation category vide SEIAA letter dated: 19.06.2017.

8. The proponent has filed the application to MoEF & CC under violation on 01.08.2017.
9. Subsequently, MoEF&CC issued another notification S.O.1030 (E) dated 08.03.2018, stating that "the cases of violations projects or activities covered under category A of the Schedule to the EIA Notification, 2006, including expansion and modernization of existing projects or activities and change in product mix, shall be appraised for grant of Environmental Clearance by the EAC in the Ministry and the Environmental Clearance shall be granted at Central level, and for category B projects, the appraisal and approval thereof shall vest with the State or Union territory level Expert Appraisal Committees and State or Union territory Environment Impact Assessment Authorities in different States and Union territories, constituted under sub-section (3) of section 3 of the Environment (Protection) Act, 1986".
10. The application was transferred from MoEF & CC to SEIAA-TN.
11. The proponent resubmitted the hard copy of the proposal to SEIAA-

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TN on 31.03.2018 for the consideration of ToR under violation notification.

The Committee noted that the project proposal is to be appraised under violation category as per MoEF & CC notification S.O. 1030 (E) dated: 08.03.2018. Since the project has been considered under violation category, the Committee felt that it is necessary to make an on the spot assessment of the status of the project execution for deciding the further course of action.

As per the order Lr.No.SEAC-TN/F.No. 1104/2013 dated: 04.05.2018 of the Chairman, SEAC, a technical team comprising of the SEAC Members was constituted to inspect and study the field conditions in the project site for the Medical College Campus by M/s. Adi Parasakthi Charitable, Medical, Educational & Cultural Trust with a total built up area of 1,33,097 Sq.m at Old S.F.No. 68/1, New S.F.No. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 of Kesavarayanpettai Village, Cheyyur Taluk, Kancheepuram District on 10.05.2018 and submitted the report on 15.05.2018.

The inspection report of the Technical team was placed in the 111st SEAC meeting held on 16.05.2018.A summary of the review of the checklist and the actual field inspection is s follows:

1. The Technical Team learnt that the "violation" attributed to the project is that the construction activity was started before getting the Environmental Clearance.
2. The stage of construction is that the construction work is already completed in all aspects for the 14 components of the project. Except Hospital other components have become operational. That means project has come into operational mode. The ETP has been constructed but yet to be operated.
3. The proponent has informed that the sewage generated of 692 KLD from the medical campus will be treated along with the other sewage streams which will come from the other institutions of the Trust through the common STP provided for the capacity of 3MLD and the same was under operation. After treatment,

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	305 KLD will be used for flushing, 303 KLD will be used for Green belt development and 50 KLD will be used for HVAC. 4. The proponent is disposing the bio-degradable Solid Waste by a Vermi-composting technology. The team observed that the existing practice is not adequate and directed the proponent to install the adequate OWC for the bio-degradable Solid Wastes generated from the medical campus. 5. The Technical Team directed the proponent to furnish a certificate from revenue authority to the effect that there is no encroachment on water bodies and the proposed site is not prone to flooding during rains. 6. The proponent has informed that the fresh water supply will be arranged from the Kesavarayanpettai village panchayat and the team directed the proponent to provide the necessary permission for the supply of fresh water from the competent authority. 7. For Green belt, the team observed that the proponent has developed the green belt with coconut, neem and Pungam trees. They have planted 1202 trees of different species. The proponent is directed to plant following trees to ensure the total green belt area is not less than 51952.5 sq.m. i. Legerstromea speciosa ii. Calophyllum inophyllum iii. Mimsops elangi iv. Thespesia populnea v. Azadirachta indica vi. Pongamia pinnata vii. Syzygium cumini viii. Terminalia Arjuna ix. Terminalia Bellerica x. Alstonia Scholaris xi. Ficus glomerata xii. Ficus Religiosa

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As per norms, 4329 trees should have been planted. That means there is a deficit of 3127 trees yet to be planted. Out of 1202 planted already, around 400 trees should be replaced with approved species. That means, totally 3127+ 400= 3527 trees should be planted immediately.

8. The Technical Team asked proponent to ensure that there is smooth movement of vehicles from the project area to surrounding area and vice versa.
9. The Odour and noise from the STP should be properly controlled. Intense green belt development should be ensured around STP as there are residential areas close to the project site.
10. The proponent is directed to treat the effluent generated from the laboratories, operation theatres and laundries separately and provide the dedicated ETP with separate RO system for the same. The ETP treated effluent should be reused back in the hospital for laundry purposes.
11. The proponent was asked to furnish the storm water management plan which includes mode of discharge of excess storm water. For rain water harvesting, 30 recharge pits have been constructed and a open channel has been provided along the boundary for carrying excess storm runoff.

    However, no storage sump has been provided for roof run off. The proponent is directed to provide storage sumps of capacity 525 cu.m.
12. For CER activities the proponent was asked to furnish the details of the CER utilisation fund (Rs. 123.5 lakhs) for the local community in terms of permanent structures for the Government schools and others.
13. The following certificates have been obtained:
    i. Fire NOC
    ii. NOC from traffic department.
14. The proponent was directed to furnish the following:

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i. Evidence for water supply and sanitation for workers
ii. Drinking water provisions
iii. Flood related certificate
i. Land use classification
ii. Site plan showing all utilities
iii. Environmental Management Cell
iv. Structural stability certificate from the reputed institution such as Anna University & IIT.
v. Design adequacy report for common STP
vi. Workers Health records
vii. DTCP approval for the plan layout
viii. Layout earmarking the green belt area
ix. Layout of Rain water harvesting system as per CGWB norms.
x. Record of bio-medical waste disposal & Hazardous waste

The proponent was asked to furnish the particulars as discussed above and as per the check list already provided, to the Technical Team on or before 15.05.2018. Accordingly the proponent has submitted the check list with enclosures on 15.05.2018.

From the perusal of the original proposal of the proponent, initial checklist submitted by the proponent, site inspection of the construction site, revised checklist submitted by the proponent, the technical team makes the following observation:

A. The Technical Team learnt that the "violation" attributed to the project is that the construction activity was started before getting the Environmental Clearance.
B. The Technical Team made certain recommendations to improve the ecological and Environmental compliance and these recommendations have been accepted by the proponent.
C. In view of facts presented in summary of review and the revised check list presented by the proponent , the Technical Team recommends the project proposal for Medical College Campus by

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M/s. Adi Parasakthi Charitable, Medical, Educational & Cultural Trust with a total built up area of 1,33,097 Sq.m at Old S.F.No. 68/1, New S.F.No. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 of Kesavarayanpettai Village, Cheyyur Taluk, Kancheepuram District, Tamil Nadu, to SEAC for consideration for issue of ToR subject to the following conditions:

1) The proponent should furnish the following certificates along with the EIA report:
   i. Structural stability certificate from the reputed institution such as Anna University & IIT Madras.
   ii. Revised layout earmarking the green belt area
   iii. Design adequacy report for common STP
   iv. Layout of Rain water harvesting system as per CPWD norms.
   v. Record of bio-medical waste disposal & Hazardous waste Disposal
2. The proponent shall furnish the proposal for adequate OWC for the bio-degradable Solid Waste generated from the campus and the same shall be installed before getting CTO from the TNPCB.
3. The proponent shall furnish certificate from revenue authority to the effect that there is no encroachment on water bodies and the proposed site is not prone to flooding during rains along with the EIA report.
4. The proponent should treat the effluent generated from the laboratories, operation theatres and laundries separately and provide the dedicated ETP with separate RO system for the same. The ETP treated effluent should be reused back in the hospital for laundry purposes after ensuring no pathogens present in the treated effluent (RO Permeate). RO reject shall be disposed into elevated solar evaporation pan with adequate size.
5. The proponent should furnish the storm water management plan which includes mode of discharge of excess storm water. For rain

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water harvesting, 30 recharge pits have been constructed and a open channel has been provided along the boundary for carrying excess storm runoff.

However, no storage sump has been provided for roof run off. The proponent is directed to provide storage sumps of capacity 525 cu.m.

6. For CER activities the proponent should furnish the details of the CER utilisation fund (Rs. 123.5 lakhs) for the local community in terms of permanent structures for the Government schools and others.
7. The proponent should plant following trees to ensure the total green belt area is not less than 51952.5 sq.m.

i. Legerstromea speciosa
ii. Calophyllum inophyllum
iii. Mimsops elangi
iv. Thespesia populnea
v. Azadirachta indica
vi. Pongamia pinnata
vii. Syzygium cumini
viii. Terminalia Arjuna
ix. Terminalia Bellerica
x. Alstonia Scholaris
xi. Ficus glomerata
xii. Ficus Religiosa

As per norms, 4329 trees should have been planted. That means there is a deficit of 3127 trees yet to be planted. Out of 1202 planted already, around 400 trees should be replaced with approved species. That means, totally 3127+ 400= 3527 trees should be planted immediately.

The SEAC accepted the recommendations of the technical team and decided to recommend the proposal to SEIAA for considering issue of ToR in 3 parts as annexed for conducting the EIA study for the project of Construction of

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	Medical College Campus by M/s. Adhiparasakthi Charitable Medical, Educational and Cultural Trust at Old S.F.No. 68/1, New S.F.No. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 of Kesavarayanpettai Village, Cheyyur Taluk, Kancheepuarm District, Tamil Nadu.

S.No	Name	Designation	Signature
1	Dr. K. Thanasekaran	Member	
2	Dr.K.Valivittan	Member	
3	Dr.Indumathi M. Nambi	Member	
4	Dr. G. S. Vijayalakshmi	Member	
5	Dr. M. Jayaprakash	Member	
6	Shri V. Sivasubramanian	Member	
7	Shri V. Shanmugasundaram	Member	
8	Shri B. Sugirtharaj Koilpillai	Member	
9	Shri. P. Balamadeswaran	Co-opt Member	
10	Shri. M.S. Jayaram	Co-opt Member	

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ANNEXURE

TERMS OF REFERENCE (TOR) FOR THE PURPOSE OF PREPARING THE EIA/EMP FOR THE CONSTRUCTION PROJECT OF MEDICAL COLLEGE CAMPUS BY M/S. ADI PARASAKTHI CHARITABLE MEDICAL, EDUCATIONAL & CULTURAL TRUST AT OLD S.F.NO. 68/1, NEW S.F.NO. 68/1, 68/3, 68/4, 68/5, 68/6, 68/7, 68/8, 68/9, 68/10 & 68/11 OF KESAVARAYANPETTAI VILLAGE, CHEYYUR TALUK, KANCHEEPUARM DISTRICT, TAMIL NADU NADU UNDER THE CATEGORY OF VIOLATION AS PER THE MOEF & CC NOTIFICATION.

Part-I

STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR CONSTRUCTION PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

1) Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
2) Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
3) Examine baseline environmental quality along with projected incremental load due to the project.
4) Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
5) Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project
6) Submit the details of the trees to be felled for the project.
7) Submit the present land use and permission required for any conversion such as forest, agriculture etc.
8) Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
9) Ground water classification as per the Central Ground Water Authority.
10) Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
11) Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water.

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Examine details.

12) Examine soil characteristics and depth of ground water table for rainwater harvesting.

13) Examine details of solid waste generation treatment and its disposal.

14) Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.

15) DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.

16) Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.

17) A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.

17) Examine the details of transport of materials for construction which should include source and availability.

18) Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.

19) Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.

20) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

21) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

22) Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website "http://moef.nic.in/Manual/Townships".

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PART-II

Additional TOR specified by the SEAC to deal with the violation aspects of the construction projects

SECTION A

As per the MoEF & CC Notification S.O. 1030 (E) dated: 08.03.2018,

1. "The cases of violations will be appraised by the Expert Appraisal Committee at the Central level or State or Union territory level Expert Appraisal Committee constituted under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 with a view to assess that the project has been constructed at a site which under prevailing laws is permissible and expansion has been done which can run sustainably under compliance of environmental norms with adequate environmental safeguards, and in case, where the findings of Expert Appraisal Committee for projects under category A or State or Union territory level Expert Appraisal Committee for projects under category B is negative, closure of the project will be recommended along with other actions under the law.
2. In case, where the findings of the Expert Appraisal Committee or State or Union territory level Expert Appraisal Committee on point at sub-paragraph (4) above are affirmative, the projects will be granted the appropriate Terms of Reference for undertaking Environment Impact Assessment and preparation of Environment Management Plan and the Expert Appraisal Committee or State or Union territory level Expert Appraisal Committee, will prescribe specific Terms of Reference for the project on assessment of ecological damage, remediation plan and natural and community resource augmentation plan and it shall be prepared as an independent chapter in the environment impact assessment report by the accredited consultants, and the collection and analysis of data for assessment of ecological damage, preparation of remediation plan and natural and community resource augmentation plan shall be done by an environmental laboratory duly notified under the Environment (Protection)

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Act, 1986, or a environmental laboratory accredited by the National Accreditation Board for Testing and Calibration Laboratories, or a laboratory of the Council of Scientific and Industrial Research institution working in the field of environment."

After the appraisal of the project, the SEAC decided that the Para No.2 stated above is applicable to the project. Hence, the proponent is directed to prepare appropriate reports as contained in the Para 2.

While complying with the specific aspects of the MoEF & CC directions as stated in the Para 2 above, the following steps should be followed:

Step 1: Enumerate the aspects of Violation:

a) The proponent should enumerate the violations as applicable to the project.
b) Furnish a description of each violation with quantitative and qualitative data.
c) Violation categories are to be decided taking into consideration the stage at which the project execution stands.

Step 2: Ecological Damage Assessment:

a) For each aspect of violation enumerated in step (1), identify the resultant environmental damage that may have been caused.
b) Furnish a description of the environmental damages with quantitative and qualitative data.

Step 3: Remediation Plan:

a) For the Environmental damage(s) identified in the step (2) above, prepare the remediation plan for the each or combination of damages.
b) The remediation plan should essentially consists of problem statement, target to be achieved (quantity), standards, technology/procedure for remediation, equipment and machinery to be used, time schedule and remediation cost(direct and indirect cost, capital as well as O&M costs).

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SECTION B

1. Natural resource Augmentation:

   a) The resources that should be considered for augmentation should essentially consist of land, biota, air, water and other resources as applicable.

   b) Proponent may choose one or more of the resource augmentation as applicable and provide a description of the augmentation proposal in detail for each resource.

   c) The proponent should also furnish the cost for each augmentation scheme.

2. Community resource Augmentation:

   a) The proponent should prepare a plan of action for addressing the needs of the community in terms of resources in the sectors of education, health and sports primarily and other such resources as applicable to the community in the vicinity of the project.

   b) The community resource augmentation plan should consist of rehabilitation of houses and people, budget allocation and time schedule for completing the activity.

SECTION C

The proponent should prepare content for the ecological damage assessment, remediation plan, natural resource augmentation and community resource augmentation separately in a chapter and include in the EIA / EMP report.

SECTION D

a) After the appraisal of the EIA / EMP report submitted by the proponent, the SEAC will make a judgement of the quality of the content in the EIA / EMP report specifically with reference to the chapter covering the ecological damage assessment, remediation plan, natural resource augmentation and community resource augmentation.

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b) In the judgement of SEAC, if the quality of the content in the chapter is not satisfactory, the SEAC may direct the proponent to further revise the chapter and resubmit the EIA/EMP report.

c) If SEAC concludes that the technical part is satisfactory and the costing aspect is not satisfactory then the SEAC may revert to legal provisions, MoEF & CC guidelines and similar expert committee recommendations for finalizing the cost aspects or the SEAC may use its own expertise and experience in finalizing the cost.

SECTION E

The proponent is directed to furnish data as per the CHECKLIST (Enclosure). It will help the SEAC in arriving at the nature of violations, the ecological damage and the associated cost.

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Enclosure

CHECKLIST

To be filled in by the project proponent with supporting documents. Furnish reply to each question listed below.

Name of the project:

Project location:

Stage at which the project execution stands:

Part - A – Applicable for Pre-construction:

1. Have the constructions of STP, Solid Waste Management facility, E-waste management facility, DG sets, etc., been made in the earmarked area only?
2. Have statutory clearances and approvals been obtained?
    a) Chief Controller of Explosives,
    b) Fire and Rescue Services Department,
    c) Civil Aviation Department,
    d) Forest Conservation Act, 1980 and Wild Life (Protection) Act, 1972,
    e) State / Central Ground Water Authority,
    f) Coastal Regulatory Zone Authority, Bio-Diversity Act, 2002, Wetland Authority Act & Rules, other statutory and other authorities as applicable to the project been obtained by project proponent from the concerned competent authorities?
3. Have trees been cut? If yes, has the compensation plantation been done, in the ratio of 1: 10?
4. Have the Plastic wastes been segregated and disposed as per the provisions of Plastic Waste (Management & Handling) Rules 2016?
5. Has a separate environmental management cell formed with suitable qualified personnel?

Part - B –Pre construction phase:

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6. Has the approval of the competent authority been obtained for structural safety of the buildings during earthquake, adequacy of fire fighting equipments, etc as per National Building Code including protection measures from lightning etc before commencement of the work?
7. Have all required sanitary and hygienic measures for the workers were in place before starting construction activities and the same have been maintained throughout the construction phase?
8. Are the designs of buildings in conformity with the Seismic Zone Classifications?
9. Has the construction of the structures been undertaken as per the plans approved by the concerned local authorities/local administration?
10. Has any construction activity of any kind been taken up in the OSR area?
11. Has the Consent of the local body concerned been obtained for using the treated sewage in the OSR area for gardening purpose?
12. Are the height and coverage of the constructions in accordance with the existing FSI/FAR norms as per Coastal Regulation Zone Notification, 2011?
13. Is the basement of the building above the maximum flood level documented by the Water Resource Department, PWD, Government of Tamil Nadu in consultation with the CMDA?
14. Are the pipelines marked with different colors with the following details?
    i. Location of STP, compost system, underground sewer line.
    ii. Pipe Line conveying the treated effluent for green belt development.
    iii. Pipe Line conveying the treated effluent for toilet flushing
    iv. Water supply pipeline
    v. Gas supply pipe line, if proposed
    vi. Telephone cable
    vii. Power cable
    viii. Strom water drains, and
    ix. Rain water harvesting system.,
15. Has a First Aid Room been provided in the project site during the entire construction and operation phases of the project?

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16. Has the structural design of the proposed building been vetted by premier academic institutions like Anna University, IIT Madras, etc?
17. Is there any threat to the biodiversity due to the proposed development?
18. Has the present land use surrounding the project site got disturbed at any point of time?
19. Has the existing land use been altered due to the project and is it in consistent with the surroundings?
20. Has the green belt area been planted with indigenous native trees, in adequate numbers and areas?
21. Have the natural vegetation listed particularly the tress, been removed during the construction phase? Was there disturbance to the aquatic eco-system within and outside the area?
22. Did the construction activities of the site adhere to all environmental and ecological standards and safeguards?
23. Have the rain water harvesting system (storage + recharge pits) been designed as per the Rain water harvesting and conservation manual of CPWD?
24. Has the land earmarked for OSR been identified, earmarked in coordination with CMDA adjacent to the entry or exit and it has been fenced?
25. Does storm water generated within the premises find access to any water bodies directly/indirectly?
26. Are proper Fire fighting plan and disaster management plan in place?
27. Does the building spoil the green views and aesthetics of surroundings and does it provide enough clean air space?
28. Are the DG Sets and STP located away from the boundary of the project site to ensure minimal disturbance to the neighbours?

Part - C – Construction phase:

29. Have all the labourers engaged for construction been screened for health and adequately treated before and during their employment on the work at the site?

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30. Were Personnel working in dusty areas given protective respiratory devices and provided with adequate training and information on safety and health aspects? Have Occupational health surveillance program of the workers been undertaken periodically to observe any contradictions due to exposure to dust?
31. Have Periodical medical examination of the workers engaged in the project been carried out and records maintained?
32. Water Supply:
    i) If water requirement during construction phase was met from ground water source, then approval of the PWD Department of water resources is necessary. Was it obtained?
    ii) Was provision made for the housing 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?
    iii) Was adequate drinking water and sanitary facilities provided for construction workers at the site? Was the treatment and disposal of waste water through dispersion trench after treatment through septic tank? The MSW generated disposed through Local Body?
    iv) Was water demand during construction reduced by use of pre-mixed concrete, curing agents and other best practices prevalent?
    v) Are the fixtures for showers, toilet flushing and drinking water of low flow type by adopting the use of aerators / pressure reducing devises / sensor based control?
33. Solid Waste Management:
    i) Was the solid waste in the form of excavated earth excluding the top soil generated from the project activity scientifically utilized for construction of approach roads and peripheral roads?
34. Top Soil Management:
    i) Was the top soil excavated during construction activities stored for use in horticulture/ landscape development within the project site?
35. Did disposal of construction debris during construction phase affect the neighboring communities and was it disposed off only in approved sites, with the approval of Competent Authority with necessary precautions for general

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safety and health aspects of the people? Was the construction and demolition waste managed as per Construction & Demolition Waste Management Rules, 2016?

36. Did Construction spoils, including bituminous materials and other hazardous materials, watercourses? Was the dump sites for such materials secured so that they should not leach into the adjacent land/ lake/ stream etc?

37. Diesel Generator sets:

i) For the diesel generator used during construction phase, was the air and noise emission in conformity to the standards prescribed in the Rules under the Environment (Protection) Act, 1986, and the Rules framed thereon?

ii) Was the diesel required for operating stand by DG sets stored in underground tanks fulfilling the safety norms? Was clearance from Chief Controller of Explosives was taken?

iii) Are the acoustic enclosures installed at all noise generating equipments such as DG sets, air conditioning systems, cooling water tower, etc?

38. Air & Noise Pollution Control:

i) Were vehicles hired for bringing construction materials to the site in good condition and conformed to air and noise emission standards, prescribed by TNPCB/CPCB? Were the vehicles operated only during non-peak hours?

ii) Ambient air and noise levels should conform to residential standards prescribed by the TNPCB, both during day and night. Was the Incremental pollution loads on the ambient air and noise quality closely monitored during the construction phase? Was any pollution abatement measures implemented?

iii) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site shall be avoided. Is parking fully internalized and no public space utilized? Is Parking plan as per CMDA norms?

iv) Do the buildings have adequate distance between them to allow free movement of fresh air and passage of natural light, air and ventilation?

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39. Building material:

i) Were Fly-ash blocks used as building material in the construction as per the provision of Fly ash Notification of September, 1999 and amended as on 27th August, 2003 and Notification No. S.O. 2807 (E) dated: 03.11.2009?

ii) Was Ready-mix concrete used in building construction and necessary cube-tests conducted to ascertain their quality?

iii) Is the use of glass reduced up to 40% to reduce the electricity consumption and load on air conditioning?

40. Storm Water Drainage:

Is Storm water management around the site and on site established by following the guidelines laid down by the storm water manual?

41. Are the following Energy Conservation Measures been implemented?

i) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material, to fulfill the requirement.

ii) Opaque wall should meet prescribed requirement as per Energy Conservation Building Code which is mandatory for all air conditioned spaces by use of appropriate thermal insulation material to fulfill the requirement.

iii) All norms of Energy Conservation Building Code (ECBC) and National Building Code, 2005 as energy conservation have to be adopted Solar lights shall be provided for illumination of common areas.

iv) Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting. A hybrids system or fully solar system for a portion of the apartments shall be provided.

v) A report on the energy conservation measures conforming to energy conservation norms prescribed by the Bureau of Energy Efficiency shall be prepared incorporating details about building materials & technology; R & U factors etc and submitted to the SEIAA in three month's time.

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vi) Energy conservation measures like installation of CFLs/TFLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

42. Fire Safety:

i) Are adequate fire protection equipments and rescue arrangements in place as per the prescribed standards?

ii) Is proper and free approach road for fire-fighting vehicles upto the buildings and for rescue operations in the event of emergency in place?

43. Green Belt Development:

i) Has the Project Proponent planted tree species with large potential for carbon capture in the proposed green belt area based on the recommendation of the Forest department well before the project is completed?

44. Sewage Treatment Plant:

i) Is the Sewage Treatment Plant (STP) installed certified by an independent expert/ reputed Academic institutions for its adequacy?

45. Rain Water Harvesting:

i) Is roof rain water collected from the covered roof of the buildings, etc harvested so as to ensure the maximum beneficiation of rain water harvesting by constructing adequate sumps so that 100% of the harvested water is reused?

ii) Is Rain water harvesting for surface run-off implemented as per plan? Before recharging the surface run off, is pre-treatment planned with screens, settlers etc done to remove suspended matter, oil and grease, etc? Are adequate number of bore wells / percolation pits/ as provided?

iii) Is the roof rain water collected and stored in the sumps proposed to be treated before water is put to any beneficial use?

46. Building Safety:

i) Is lightning arrester properly designed and installed at top of the building and where ever is necessary?

Part – D Operation Phase

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1. Has the "Consent to Operate" been obtained from the Tamil Nadu pollution Control Board before the start of the operation of the project?
2. Is the Proponent responsible for the maintenance of common facilities including greening, rain water harvesting, sewage treatment and disposal, solid waste disposal and environmental monitoring including terrace gardening for a period of 3 years?
3. Is the ground water level and its quality monitored and recorded regularly in consultation with Ground Water Authority?
4. Is treated effluent emanating from STP recycled / reused to the maximum extent possible? Does the treated sewage conform to the norms and standards for bathing quality laid down by CPCB irrespective of any use? Are necessary measures in place to mitigate the odour and mosquito problem from STP?
5. Is the STP continuously operated by providing stand by DG set in case of power failure?
6. Is the treated sewage used for green belt development/ avenue plantation without causing pollution?
7. Are adequate measures being taken to prevent odour emanating from solid waste processing plant and STP?
8. Is regular monitoring done regarding operation and maintenance of STP, reuse and disposal of untreated sewage and effluent, swimming pool, Solid waste Management?
9. Have any CSR / CER activities been carried out?
10. Is organic waste convertor proposed for managing the municipal solid waste (Organic components) in place? If yes, is care taken to operate and maintain the OWC such a way that there is no problem to the nearby residents?
11. Is the Municipal solid waste generated collected, segregated and disposed as per Solid Waste Management Rules, 2016?
12. Is the e - waste generated collected and disposed to a nearby authorized e-waste centre as per E- waste (Management& Handling), Rules 2016?
13. Is the height of stack of DG sets equal to the height needed as per CPCB norms?

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14. Is the noise level maintained as per MoEF/CPCB/TNPCB guidelines/norms both during day and night time?
15. Is spent oil from D.G sets stored in HDPE drums in an isolated covered facility and disposed as per the Hazardous& other Wastes (Management & Transboundary Movement) Rules 2016?
16. Is the storm water drain provided at the project site maintained without choking or without causing stagnation? Is the storm water properly disposed off in the natural drainage / channels without disrupting the adjacent public?
17. Are the used CFLs and TFLs properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination?

Signature:

Name of the proponent:

Date:

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PART III:

DEFICIENCIES TO BE RECTIFIED BEFORE SUBMITTING THE EIA REPORT:

1. The proponent should furnish the following certificates along with the EIA report:
    i. Structural stability certificate from the reputed institution such as Anna University & IIT Madras.
    ii. Revised layout earmarking the green belt area
    iii. Design adequacy report for common STP
    iv. Layout of Rain water harvesting system as per CPWD norms.
    v. Record of bio-medical waste disposal & Hazardous waste Disposal
2. The proponent shall furnish the proposal for adequate OWC for the bio-degradable Solid Waste generated from the campus and the same shall be installed and intimated along with the EIA report.
3. The proponent shall furnish certificate from revenue authority to the effect that there is no encroachment on water bodies and the proposed site is not prone to flooding during rains along with the EIA report.
4. The proponent should treat the effluent generated from the laboratories, operation theatres and laundries separately and provide the dedicated ETP with separate RO system for the same. The ETP treated effluent should be reused back in the hospital for laundry purposes after ensuring no pathogens present in the treated effluent (RO Permeate). RO reject shall be disposed into elevated solar evaporation pan with adequate size.
5. The proponent should furnish the storm water management plan which includes mode of discharge of excess storm water. For rain water harvesting, 30 recharge pits have been constructed and a open channel has been provided along the boundary for carrying excess storm runoff.

    However, no storage sump has been provided for roof run off. The proponent is directed to provide storage sumps of total capacity 525 cu.m.

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6. For CSR activities the proponent should furnish the details of the CSR utilisation fund (Rs. 123.5 lakhs) for the local community in terms of permanent structures for the Government schools and others.
7. The proponent should plant following trees to ensure the total green belt area is not less than 51952.5 sq.m.

    (i) Legerstromea speciosa
    (ii) Calophyllum inophyllum
    (iii) Mimsops elangi
    (iv) Thespesia populnea
    (v) Azadirachta indica
    (vi) Pongamia pinnata
    (vii) Syzygium cumini
    (viii) Terminalia arjuna
    (ix) Terminalia bellerica
    (x) Alstonia scholaris
    (xi) Ficus glomerata
    (xii) Ficus religiosa

As per norms, 4329 trees should have been planted. That means there is a deficit of 3127 trees yet to be planted. Out of 1202 planted already, around 400 trees should be replaced with approved species. That means, totally 3127+ 400= 3527 trees should be planted immediately and report should be submitted along with the EIA report.

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