considered as a clear violation case. The proposal may be placed in the SEIAA with the aforesaid remarks.

Table Agenda No. 126-04:

(File No.6555/2017)

Existing expansion of hospital facility by M/s.Ganga Medical Centre and Hospital Pvt Ltd at S.F.No 11/3/1B (P), Sanganur Village, Coimbatore North Taluk, Coimbatore District – For Terms of Reference under Violation notification dated 8th March 2018 and 13th April 2018.

(SIA/TN/NCP/24656/2018)

The project proponent gave a detailed presentation on the salient features of the project and informed that:

1. The hospital has 6 floors with a total built up area of 26,069.15 sq.m (15541.3 sq.m – Consented + 10,527.85 Sq.m – Non-Consented) in a plot area of 1.424 ha.
2. Out of 6 floors consent was obtained for only basement, Ground, 1st, 2nd, 3rd floor. Additional three floors (4th, 5th, 6th floor + terrace) of construction was completed in 2008 and it came into operation in 2009 without obtaining prior Environmental Clearance under EIA Notification 2006 from SEIAA, Tamil Nadu.
3. The EC has been sought for total built up area of 26,069.15 sq.m
4. The Consent for the existing three floors (Basement, Ground, 1st, 2nd, 3rd floor) was valid upto March 31, 2018 and the Bio Medical Authorization was valid upto December 04, 2014.
5. Green belt area provided is 2944.78 (20.7 % of the total land area)
6. This proposal comprises of 2,550 occupants after expansion.
7. 212 KLD of fresh water is required which is sourced from Coimbatore Corporation/ Private Supply. Out of 212 KLD of fresh water, 187 KLD is used for domestic purposes and 25 KLD for lab usages, floor washings. The treated wastewater of 282.3 KLD is utilized for flushing (89.0 KLD), AC chiller make up

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(164 KD), dust suppression and fire protection (25.0 KLD) and Greenbelt (4.3 KLD)

8. Parking Details:

   i. Car Parking – Existing – 78

      After expansion – 195

   ii. Two wheeler parking – Existing – 96

      After expansion – 230

   iii. Hydraulic lift parking – After expansion – 24

   iv. Ambulance parking – Existing – 07

      After Expansion – 12

   Total – Existing – 181

      After Expansion - 461

9. Power Requirement:

   v. Existing – 600 KVA, TANGEDCO

      Back up - 2x500 KVA, 1x750 KVA

   ii. After Expansion – 700 KVA, TANGEDCO

      Back up -2x500 KVA, 1x750 KVA

10. Rain water harvesting pits - 54 number of percolation pits with 1.20x1.20m and 4.0m depth.

11. Total waste estimated to be generated is 1.08 TPD in which 0.648 TPD is Biodegradable waste, organic solid waste was collected and given to Coimbatore Corporation Solid waste facility, 0.432 TPD is Non Biodegradable waste will be sold to recyclers. And STP sludge of 5.5 TPA disposed to authorised CTSDF.

The SEAC noted the following:

1. The Proponent of M/s. Ganga Medical Centre and Hospital Pvt.Ltd has applied for Terms of Reference to SEIAA on 29.08.2018 for the proposed expansion of hospital

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facility at S.F.No 11/3/1B (P) Sanganur Village, Coimbatore North Taluk, Coimbatore District

2. The project/activity is covered under Category "B" of Item 8(a) "Building & Construction projects of the Schedule to the EIA Notification, 2006.

The proposal was placed in the 123rd SEAC Meeting held on 22.12.2018. The proponent made a presentation about the project proposal. Based on the presentation made by the proponent and the documents furnished, the committee decided to visit the project site by the technical team of SEAC, to assess mainly the land availability & safety aspects of the hospital since it is an expansion activity, the committee decided to consider the file for the further course of action after submitting the inspection report of the technical team.

Further, the committee requested to submit the following details at the time of inspection to the technical team

1. The existing Green belt developed in the hospital premises shall be furnished with the number of trees, name of the species along with a lay out map of the developed green belt and proposed (additional).
2. Performance of the existing STP, ETP, Air pollution control measures, Bio Medical handling and solid waste handling techniques shall be furnished, for a period of atleast last 3 years along with the quality report by the TNPCB.
3. What are the pollutant present in the effluent and characteristics of the effluent shall be furnished
4. Consolidated ROA of stack/AAQ monitoring data of TNPCB.
5. Environmental Cell details shall be provided with Designation and Qualification.
6. The proponent shall furnish the Report of Analysis of AAQ survey, stack survey, treated sewage conducted by TNPCB for the last 3years.
7. CSR compliance shall be furnished for the existing activity.
8. CER proposal shall be furnished.

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9. DTCP approval for the existing building.
10. Consent order under water and Air Act obtained from TNPCB for the existing hospital and the compliance status of the same as on date.

As per the order Lr.No.SEAC-TN/F.No.6555/2018 dated: 02.02.2019 of the Chairman, SEAC, a subcommittee of SEAC was constituted to inspect and study the field conditions for the Proposal Seeking Terms of Reference for the existing expansion of hospital facility By M/S. Ganga Medical Centre and Hospital Pvt. Ltd At S.F.No 11/3/1b (P) Sanganur Village, Coimbatore North Taluk, Coimbatore District, Tamil Nadu.

The subcommittee inspected the site on 09.02.2019. To start with, the subcommittee held discussions with the project proponent regarding the proposal Seeking Terms of Reference for the existing expansion of Hospital Facility By M/S. Ganga Medical Centre And Hospital Pvt. Ltd at S.F.No 11/3/1B (P) Sanganur Village, Coimbatore North Taluk, Coimbatore District, Tamil Nadu.

1. The proponent has submitted the following details as minuted in the 123rd SEAC meeting held on 22.12.2018 to the Inspection committee.
    - Copy of the CTO (Air & Water Act) from TNPCB
    - Greenbelt layout plan of the hospital and breakup details of tree species planted
    - Copy of the Stack and AAQ report, test results of treated sewage from STP conducted by the private laboratories. Further, it was reported that TNPCB has not conducted any survey in the hospital facility since 2015. The RoA dated 15.04.2015 for the STP outlet has been conducted by TNPCB is enclosed. It was found that BOD parameter exceeds the standard as prescribed by the Board.
    - The Consolidated month-wise BMW handling details of the hospital

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- Presently, no separate Environmental cell but proposed to form an environmental cell in future
- Details of CSR activities
- CER proposal was discussed with district Collector Coimbatore and the detailed CER activities along with expenditure
- Copy of the approved DTCP drawing
- Copy of BMW authorization valid till 2014.

The following observations were made by the technical team during the inspection:

1. The hospital has 6 floors with a total built up area of 26,069.15 sq.m. All the 6 floors (Basement to 6^{th} floor including terrace) has been constructed. Out of 6 floor, basement, Ground, 1^{st}, 2^{nd}, 3^{rd} floor construction has been completed in the year 2005 and came to operation during 2006. Remaining 4^{th}, 5^{th}, 6^{th} floor + terrace and construction was completed in 2008 and came into operation during 2009.
2. The Hospital facility consists:
    - Basement occupied by Car parking, CT & MRI scan room
    - Ground Floor occupied by Out patients/ Causality & services
    - First to Third floor occupied by General wards and rooms
    - Fourth to Six floor occupied by General wards, Operation Theaters, ICU, Operation theatre complexes and Conference room.
    - Terrace was occupied by AC Chiller and boilers.
3. The proponent has informed that considering the proposed expansion of the hospital 320 KLD of STP was constructed and came to operation on 09.06.2018. Till then 40 KLD of STP was in operation and decommissioned on 25.06.2018. Hence the committee requested the proponent that all the six floors where came to operation during 2009 and considering the expansion

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320KLD of STP was constructed during 2018 the proponent is requested to clarify the how the sewage was handled during 2009 to 2018.

4. STP consists of following components Screen chamber, Collection sump, MBBR, Clarifier, Clarified water tank, STP water tank and UF treated water tank are placed under the ground and auxiliary components and STP room found to be in ground level. The proponent has informed that along with the quantity of 257.3 KLD Sewage, the effluent like Lab and floor washings of quantity 25 KLD is neutralized and treated with Hypochlorite and sends to STP Collection tank for further treatment. The committee has suggested to treat the effluent separately in the ETP and requested to provide proposal for ETP. The proponent has informed that the already the work has been started for Installation of ETP and shall be completed within three months.
5. Solid Waste Management:

   The Bio-degradable waste of 0.648 TPD was previously collected and disposed to Coimbatore Corporation solid waste facility. During the time of inspection it was noticed that Organic waste converter of capacity 60 kg per Batch was installed. The manure generated is partially used for the greenbelt inside the hospital premises and remaining is used for the farm house owned by the proponent. The inorganic waste of quantity 0.432 TPD generated in the hospital facility is disposed for the recycling through recyclers. The Inspection Committee instructed the proponent as per the Solid waste Management Rules 2016, all the solid waste generated should be managed within the hospital premises.
6. Bio Medical waste Management:

   The separate Bio Medical waste storage room was provided with color coding as per BMW Rules. During inspection the BMW storage room was found to be vacant, the proponent informed that as routine work the BMW stored was disposed to Teckno-Therm Industries. During inspection the labours working

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in the Bio medical waste storage room were not provided with proper PPE like aprone, gloves and boots.

During presentation following additional details were also asked to submit from the proponent to the inspection committee on 15.02.2019.

1. Auditor Certificate for the Gross fixed assets of the Ganga Hospital.

The Auditor certificate for the Gross Fixed Assets has been attached.

2. Justification for increasing in water demand in the expansion activity of the Hospital facility.

The Hospital facility was expanded their bed strength from 140 to 450 beds and subsequently the Outpatient and employees strength was also increased. The Per capita demand of water has been calculated based on the CPHEEO norms of 450 LPCD per bed this added additional water consumption. Also, the water requirement for the AC- Chiller and Fire protection increased drastically due to the Expansion of hospital facility. The freshwater requirement of expansion activity is about 212KLD which is met through the Coimbatore Corporation/ Private supply. The wastewater generated from the expansion activity is treated and being reused for flushing and AC-chiller Makeup.

3. Details of Log book and receipts for handling of Bio-Medical Waste

The Log book has been maintained periodically by the Hospital facility and receipts issued by the Teckno-Therm industries regarding the collection of waste has been attached.

4. Date of Decommissioning of existing 40KLD STP and Initialization of 320KLD combined STP

The Proposed 320KLD STP came to operation on 9th June 2018 and subsequently existing STP of 40KLD was decommissioned on 25th June 2018.

5. Details regarding the Expansion activity (Commissioning date of 4^{th} 5^{th} 6^{th} floor) made by the Ganga Hospital

The expansion of additional floors (4th, 5th, 6th floor) was commissioned on June 2009.

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6. Proposal of STP/ETP of 320KLD

The Proposal of the 320KLD STP and ETP has been attached.

7. Details of Rain water harvesting pits in the hospital premises

At present, three nos of rain water harvesting pits are constructed in order to recharge the ground water collected from the roof top of the building. The details of the RWH pits has been attached.

8. Disposal method of expired drugs by the Hospital Facility

The Expired drugs/Medicines were collected by the Suppliers for scientific disposal. The details of the disposal has been attached.

9. Greenbelt layout of the existing facility with details of tree species

The greenbelt has been maintained in and around the Hospital facility of over 20% of the total area. The tree species were planted based on the suggestions from the Horticulturist. The greenbelt layout has been attached.

10. List of the Modification carried out after the SEAC Meeting

The SEAC has recommended to install the Effluent Treatment plant exclusively to treat the Lab wash and Floor wash. The management has taken immediate action for installing the ETP; the work has been started and will be completed at the earliest. Further, they have also established the Organic composting plant for decomposition and recycling of organic material Such as food waste into a humus rich soil. The details of the Organic waste converter enclosed. Furthermore, the Hospital has planted supplementary trees as the suggestions incorporated by the Committee. The list of planted trees has been attached.

11. Details of STP/ETP components with respect to the positioning (Ground level/ underground/ partially underground)

The details has been Attached.

12. Photography evidence of the proposed activities

The Photographs of the Hospital facility such as Greenbelt, Rainwater Harvesting pits, STP, BMW handling, Organic Composting has been attached.

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13. Precautionary measures taken to avoid dust and noise emission from railway track and Setback distance between boundary of hospital and railway track

A thick greenbelt has been maintained to mitigate the noise and dust suppression. As per the NOC Issued by the Railway Department, distance from the center line of nearest track to the proposed activity is about 35.5m. The NOC has been attached.

In response to the Team's instructions, the proponent was directed to submit a report detailing the proposals to SEAC on 15.02.2019. Accordingly the proponent submitted the report on 15.02.2019

The following detail/ report shall be a part of EIA study

1. Noise monitoring survey for the D G set
2. Report on safety aspect carried out in the hospital
3. Analysis report for the cooling water tower the presence of legenella bacteria
4. Environment Management Cell should be formed and shall be reported along with EIA.
5. Combustion ratio for D.G set for the use of Diesel shall be furnished.
6. Nutrient content in the food waste generated from the hospital shall be analysis and reported shall be furnished.
7. Permission from the Coimbatore Corporation and private water tanks for 212 KLD for the supply of water through piping/truck.
8. The proponent has not provided storage sump for the rain water run off. Hence, it is requested to submit the Layout plan for Rain water harvesting facility considering the soil characteristics by providing roof run off for Rain water storage sump.
9. EMP shall be revised considering the handling of Bio medical waste, STP, ETP, OWC, D.G. set etc.
10. As the proponent reported 20 % shall be maintained for green belt development from the total plot area. Accordingly,

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The proponent has to submit the layout plan for Green belt with GPS co-ordinates shall be furnished.

11. The proponent has to submit the form-IV for the bio-medical waste disposal detail with receipt.
12. Additional Green Belt development.
13. Proper/ separate room facilities for biomedical waste categories.

The Technical Team recommends the proposal of existing expansion of hospital facility by M/S. Ganga Medical Centre And Hospital Pvt.Ltd at S.F.NO 11/3/1B (p) Sanganur Village, Coimbatore North Taluk, Coimbatore District, Tamil Nadu for Terms of reference - under violation notification subject to above said detail/ report be a part of EIA study.

The subject was placed in the 126th SEAC Meeting held on 26.02.2019. The SEAC accept the Subcommittee inspection report and decided to recommend the proposal to SEIAA for considering issue of ToR in 3 parts as annexed –I for conducting the EIA study for the existing expansion of hospital facility by M/S. Ganga Medical Centre And Hospital Pvt.Ltd at S.F.NO 11/3/1B (p) Sanganur Village, Coimbatore North Taluk, Coimbatore District, Tamil Nadu under Category "B" of Item 8(a) "Building and Construction projects " of the Schedule to the EIA Notification, 2006 subject to following Additional Terms of Reference:

1) Noise monitoring survey for the D G set shall be furnished.
2) Detail report on safety aspect carried out in the hospital
3) Analysis report for the cooling water tower and the presence of legenella bacteria
4) Environment Management Cell should be formed and shall be reported along with EIA.
5) Combustion ratio for D.G set for the use of Diesel shall be furnished.
6) Nutrient content in the food waste generated from the hospital shall be analysis and reported shall be furnished.

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7) Permission from the Coimbatore Corporation and private water tanks for 212 KLD for the supply of water through piping/truck.
8) The proponent has not provided storage sump for the rain water runoff. Hence, it is requested to submit the layout plan for Rain water harvesting facility considering the soil characteristics by providing roof run off for Rain water storage sump.
9) EMP shall be revised considering the handling of Bio medical waste, STP, ETP , OWC, D.G. set etc.
10) As the proponent reported 20 % shall be maintained for green belt development from the total plot area.
11) The proponent has to submit the layout plan for Green belt with GPS co-ordinates shall be furnished.
12) The proponent has to submit the form-IV for the bio-medical waste disposal detail with receipt.
13) Proper/ separate room facilities for biomedical waste categories.
14) Design adequacy report for STP from the reputed Govt. Institutions.
15) Record of bio-medical waste disposal & Hazardous waste Disposal for the existing facility.
16) The proponent shall furnish certificate from revenue authority to the effect that there is no encroachment on water bodies.
17) 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.
18) The Proponent shall strictly follow the guidelines issued by MOEF&CC for 8(a) Building and construction projects for the preparation of EIA report.

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Annexure-II

8[b]: 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. Examine details.

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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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Annexure –III

ANNEXURE

TERMS OF REFERENCE (TOR) FOR THE PURPOSE OF PREPARING THE EIA/EMP Existing expansion of hospital facility by M/s.Ganga Medical Centre and Hospital Pvt Ltd at S.F.No 11/3/1B (P), Sanganur Village, Coimbatore North Taluk, Coimbatore District, TAMILNADU, 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

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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. 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.

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

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

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

26) Details of litigation pending against the project, if any, with direction /order passed by

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any Court of Law against the Project should be given.

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

28) 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".

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

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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) 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.

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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).

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.

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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.

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.

Enclosure

CHECKLIST

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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?

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Part - B –Pre construction phase:

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

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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?
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?

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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?
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?

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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 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:

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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?

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.

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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.

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?

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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

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

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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?
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?

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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:

PART III:

DEFICIENCIES TO BE RECTIFIED BEFORE SUBMITTING THE EIA REPORT:

1) Noise monitoring survey for the D G set shall be furnished.
2) Detail report on safety aspect carried out in the hospital
3) Analysis report for the cooling water tower and the presence of legenella bacteria
4) Environment Management Cell should be formed and shall be reported along with EIA.
5) Combustion ratio for D.G set for the use of Diesel shall be furnished.
6) Nutrient content in the food waste generated from the hospital shall be analysis and reported shall be furnished.
7) Permission from the Coimbatore Corporation and private water tanks for 212 KLD for the supply of water through piping/truck.
8) The proponent has not provided storage sump for the rain water runoff. Hence, it is requested to submit the layout plan for Rain water harvesting facility considering the soil characteristics by providing roof run off for Rain water storage sump.
9) EMP shall be revised considering the handling of Bio medical waste, STP, ETP, OWC, D.G. set etc.
10) As the proponent reported 20 % shall be maintained for green belt development from the total plot area.

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11) The proponent has to submit the layout plan for Green belt with GPS co-ordinates shall be furnished.

12) The proponent has to submit the form-IV for the bio-medical waste disposal detail with receipt.

13) Proper/ separate room facilities for biomedical waste categories.

14) Design adequacy report for STP from the reputed Govt. Institutions.

15) Record of bio-medical waste disposal & Hazardous waste Disposal for the existing facility.

16) The proponent shall furnish certificate from revenue authority to the effect that there is no encroachment on water bodies.

17) 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.

18) The Proponent shall strictly follow the guidelines issued by MOEF&CC for 8(a) Building and construction projects for the preparation of EIA report.

19) The proponent shall conduct the EIA study and submit the EIA report for the entire M/S. Ganga Medical Centre And Hospital Pvt.Ltd along with layout and necessary documents "A" register and village map

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