

**MINUTES OF THE 31st MEETING OF
THE STATE EXPERT APPRAISAL COMMITTEE (SEAC)
CONVENED ON 24.04.2024**

The 31st meeting of the State Level Expert Appraisal Committee (SEAC) was convened at the Conference Hall of Dr. Abdul Kalam Science Centre and Planetarium, Lawspet, Puducherry under the Chairmanship of Dr. K Srinivasamoorthy. The list of members attended is enclosed as Annexure – I.

At the outset, the Chairman welcomed the members of the newly formed SEAC. After a brief round of introductions, Shri. K. Kalamegam, Environmental Engineer, DSTE delivered a comprehensive presentation to familiarize the new members with the salient features of EIA Notification, 2006 and procedures involved in granting TOR and Environmental Clearance. Then, the agenda items were taken up for discussion.

Agenda Item No. I: Confirmation of the Minutes of the 30th meeting of SEAC convened on 10.05.2022.

The Committee confirmed the minutes of the 30th meeting of SEAC held on 10.05.2022.

Agenda Item No. II: Examination of project proposals under the provisions of the EIA Notification, 2006 and its subsequent amendments for onward appraisal to SEIAA for further examination to consider issue of Environmental Clearance (EC).

1. Proposal for Environmental Clearance (EC) submitted by M/s. Jawaharlal Institute of Postgraduate Medical Education and Research [JIPMER] for construction of 476 Nos. of regular and 81 Nos. of non-complementary bedded hospital at Karaikal.

The project proponent and the accredited consultant made a detailed presentation on the salient features of the project proposal and informed that they are seeking Prior Environmental Clearance for Construction of 476 Nos. of regular and 81 Nos. of non-complementary bedded hospital in the JIPMER Academic Campus at Karaikal. The following representatives were present on behalf of the project proponent:

- i) Dr. K.C. Premrajan, Project Coordinator, JIPMER, Puducherry.
- ii) Thiru. D. Madhusudhan, Executive Engineer & Senior Manager (Electrical), CPWD, JIPMER, Karaikal.
- iii) Thiru. M. Ramesh Babu. Assistant Engineer (Civil), CPWD, KPD-II, JIPMER, Karaikal.
- iv) Thiru. A. Jayapragash, Assistant Engineer (Electrical), JIPMER, Karaikal.
- v) Thiru. Ashish Tripathi – Managing Director, AGS Environmental Services Pvt. Ltd., Delhi.
- vi) Thiru. Sanjeev Kumar Verma, Associate Architect, ARCOP, Delhi.

Project details in brief:

Name of the Project	Construction of 476 Nos. of regular & 81 Nos. of non-complementary bedded hospital in JIPMER Campus at Karaikal submitted by M/s. Jawaharlal Institute of Postgraduate Medical Education and Research.
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Project Location	R.S. No. 161pt, T.S. No. 12/3, FCI Link Road, Kovilpathu Village, Karaikal, Puducherry – 609605.
Total plot area	1,39,094.58 m ² (34.37 Acres) including (Hospital Institution and Residential). 27113.94 m ² (6.7 acres) - Net Plot Area for Hospital.
Ground Coverage	32.97% of NPA
Hospital built-up area	38,994.479 m ²
Total built-up Area	38994.479 m ²
Green belt Area	4445 m ²
No of Beds	557
Estimated population	5504
Power requirement	3549 KW
Power backup	3 x 1500 KVA DG Sets
Total Water requirement	408 KLD
Fresh water requirement	262 KLD
Recycled water	146 KLD
Fresh Water source	Ground water & Municipal Supply
Wastewater generation	316 KLD (41 KLD effluent from IPD, laundry and clinical sources and 275 KLD from Hospital OPD and Beds)
Wastewater treatment	The waste water from Hospital OPD and Beds will be treated through in-house sewage treatment plant of capacity 330 KLD based on MBR technology and effluent from IPD, Laundry, Clinical water will be pre-treated in ETP of 50 KLD and send to the MBR plant for further treatment and disposal. About 146 KLD of treated wastewater is proposed to be recycled and reused within premises – Toilet flushing (123 KLD), landscape development (13 KLD) and Filter Backwash (10 KLD).
Solid waste generation	Total solid waste generation – 1627 kgs/day out of which biodegradable waste will be 316 kgs/day. Bio-degradable waste will be subjected to compost, resultant will be used as manure. Local vendors will be hired to provide separate-colored bins for dry recyclables and Bio-Degradable waste.
Biomedical waste generation	836 kgs/day will be collected and stored in separate colour coded bins and disposed to authorized CBMWDF.
Total project cost	451.05 Cr.



The said project/activity is covered under category B2 (Building and Construction projects) of item 8 (a) of Schedule to the EIA Notification, 2006 and its subsequent amendments.

The SEAC deliberated the proposal and made due diligence in the process as notified under the provisions of the EIA Notification 2006, as amended from time to time and accordingly decided to recommend the proposal for Environmental Clearance subject to specific conditions given below and standard conditions prescribed by MoEFCC for building and construction projects vide OM dated 04.01.2019 given at Annexure II:

Specific Conditions:

- i. This clearance is issued under the provisions of the EIA Notification, 2016. All other statutory clearances as applicable to the project shall be obtained by the project proponent from the concerned competent authority including the Consent to Establish and Operate from the Puducherry Pollution Control Committee (PPCC).
- ii. The pollution and control measures with regard to waste water treatment and disposal, air and noise pollution control measures, biomedical waste, hazardous waste, solid waste management and all risk mitigation measures shall be strictly implemented as per the Environmental Management Plan submitted by the project proponent and in consonance with existing rules and regulations.
- iii. The total water requirement shall not exceed 316 KLD out of which 262 KLD fresh water shall be met from borewells and municipal supply and 146 KLD shall be met from treated waste water. Necessary approval shall be obtained from the Puducherry State Ground Water Authority for drawal of ground water.
- iv. The domestic waste water generation shall not exceed 316 KLD (41 KLD effluent from IPD, laundry and clinical sources and 275 KLD from Hospital OPD and Beds).
- v. The waste generated from the hospital OPD and Beds shall be treated in the STP with design capacity of 330 KLD. Liquid effluents generated from lab, laundry, mortuary and autopsy and other liquid waste generated from the hospital covered under the Bio Medical Waste Management Rules, 2016 shall be pre-treated in separate effluent treatment plant of 50 KLD capacity before mixing with other waste waters in the STP. The treated wastewater shall conform to the standards stipulated under the Environment (Protection) Rules, 1986 and the Bio Medical Waste Management Rules, 2016 as amended from time to time. Treated waste water shall be recycled / reused for toilet flushing, fire water makeup and gardening to the maximum extent.
- vi. The project proponent shall devise a monitoring plan to the satisfaction of the Puducherry Pollution Control Committee so as to continuously monitor the treated waste water being used for flushing in terms of fecal coliforms and other pathogenic bacteria.
- vii. The project proponent shall take all necessary steps to ensure that bio-medical waste (836 Kgs./day) is handled without any adverse effect to human health and the environment and in accordance with the Bio-Medical Waste Management Rules, 2016 and shall be safely handed over to the authorized Common Bio Medical Waste Treatment Facility for final disposal.

- viii. The project proponent shall make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I of the Bio-Medical Wastes Management Rules, 2016 to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I of the said rules.
- ix. A Committee shall be constituted with Medical Superintendent as Head to monitor the effective implementation of Bio-Medical Waste Management Rules and proper training shall be given to all the staff involved and records to be maintained.
- x. The green belt and landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and / or invasive species should not be used for landscaping. At least 33% of the total plot area shall be developed as green area.
- xi. As per the MoEFCC OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, the project proponent shall allocate an amount of Rs. 297 Lakhs towards Environment Management Plan. The proponent shall undertake health camps and services in local villages towards community welfare activities and shall earmark separate funds for this every year.

2. Proposal for Environmental Clearance (EC) submitted by M/s. Sri Balaji Vidyapeeth, Puducherry for proposed additional construction of hospital components in the existing Mahatma Gandhi Medical College Campus.

The project proponent and the accredited consultant made a detailed presentation on the salient features of the project proposal and informed that they are seeking Environmental Clearance for proposed additional construction of hospital buildings (B Block Expansion (G+4) and Oncology block (G+5)) in the existing Mahatma Gandhi Medical College campus. The following representatives were present on behalf of the project proponent:

- i) Mr. M. Prabakaran, Executive (Administration), Mahatma Gandhi Medical College and Research Institute, Puducherry.
- ii) Thiru A. Dhamodharan, EIA Coordinator, Eco Tech India Pvt. Ltd., Chennai.



Project details in brief:

Name of the Project	Additional construction of Hospital components in the existing Mahatma Gandhi Medical College campus by M/s. Sri Balaji Vidyapeeth, Puducherry.		
Project Location	R.S. No. 46/2B, 47/1, 47/3, 48/1, 48/3, 49/2, 49/3A, 49/3B, 55/1A/1A, 55/1A/1B, 55/1A/1C, 55/1A/1D, 55/2A, 55/2B, 55/2C, 55/2D, 56/1A, 56/2B/1, 56/3A, 56/1A, 57/2, 57/3, 57/4, 57/5, 57/6, 58/2, 58/3, 58/4A, 64/1, 64/2, 64/3, 64/5, 65/1, 65/2, 65/5, 65/7, 65/8, 66/6 in Pillayarkuppam Revenue Village and 80/1, 81/1, 81/2, 81/3, 82/2A, 82/2B & 4/2 in Manapet Revenue Village, Bahour Commune Panchayat, Puducherry District, Puducherry.		
Particulars	Existing	Proposed	After Expansion
Total plot area	1,86,479 Sq.m.	Nil	1,86,479 Sq.m.
Ground coverage area	44557.57Sq.m. (23.90%)	2307.43Sq.M	46865 Sq.m. (25.13%)
Hospital built-up area	63,872.65 Sq.m.	13,119.50 Sq.m.	76,992.15Sq.m.
Non hospital built-up area	1,29,406.57 Sq.m.	-	1,29,406.57 Sq.m.
Total built-up Area	1,93,279.22 Sq.m.	13,119.50 Sq.m.	2,06,398.72 Sq.m.
Green belt area	62237 (33.37%)	-	61559 (33.01%)
No of Beds	1240	131	1371
Estimated population	6391Nos.	196 Nos.	6587 Nos.
Power requirement	2490 KVA	-	2490 KVA
Power backup	1 x 625 KVA 1 x 725 KVA 1 x 750 KVA	Addition of 1 No. of 750 KVA, Removal of 625 KVA	1 x 725 KVA 2 x 750 KVA
Total Water requirement	1320 KLD	97 KLD	1417 KLD
Fresh water requirement	689 KLD	51 KLD	740 KLD
Recycled water	631 KLD	46 KLD	677 KLD
Fresh Water source	Ground water	Ground water	Ground water
Hospital effluent generation	45 KLD	10 KLD	55 KLD
Other wastewater generation	619 KLD	45 KLD	664 KLD
Solid waste generation	3093 kg/day	216 kg/day	3309 kg/day

	Food waste & organic waste sent to Biogas plant; Inorganic waste sold to recyclers	Food waste & organic waste sent to Biogas plant; Inorganic waste sold to recyclers	Food waste & organic waste sent to Biogas plant; Inorganic waste sold to recyclers
Bio medical waste generation	304 kg/day	53 kg/day	357 kg/day
Total Project cost	384.77 Crores	34.37 Crores	419.14 Crores

The said project/activity is covered under category B2 (Building and Construction projects) of item 8 (a) of Schedule to the EIA Notification, 2006 and its subsequent amendments.

The SEAC deliberated the proposal and made due diligence in the process as notified under the provisions of the EIA Notification 2006, as amended from time to time and accordingly decided to recommend the proposal for Environmental Clearance subject to specific conditions given below and standard conditions prescribed by MoEFCC for building and construction projects vide OM dated 04.01.2019 given at Annexure II:

Specific Conditions:

- (i) This clearance is issued under the provisions of the EIA Notification, 2016. All other statutory clearances as applicable to the project shall be obtained by the project proponent from the concerned competent authority including the Consent to Establish and Operate for construction of additional building from the Puducherry Pollution Control Committee (PPCC).
- (ii) The pollution and control measures with regard to waste water treatment and disposal, air and noise pollution control measures, biomedical waste, hazardous waste, solid waste management and all risk mitigation measures shall be strictly implemented as per the Environmental Management Plan submitted by the project proponent and in consonance with existing rules and regulations.
- (iii) The total water requirement shall not exceed 1417 KLD out of which 740 KLD fresh water shall be met from borewells and 677 KLD shall be met from treated waste water. Necessary approval shall be obtained from the Puducherry State Ground Water Authority for drawal of ground water.
- (iv) The domestic waste water generation shall not exceed 664 KLD and it shall be treated in the existing two Nos. of STPs with design capacity of 600 KLD and 300 KLD. Liquid effluents (55 KLD) generated from lab, laundry, mortuary and autopsy and other liquid waste generated from the hospital covered under the Bio Medical Waste Management Rules, 2016 shall be pre-treated in separate effluent treatment plant of 60 KLD capacity before mixing with other waste waters in the STP. The treated wastewater shall conform to the standards stipulated under the Environment (Protection) Rules, 1986 and the Bio Medical Waste Management Rules, 2016 as amended from time to time. Treated waste water shall be recycled / reused for toilet flushing, fire water makeup and gardening within premises and no excess treated water shall be let outside the project site.

- (v) The project proponent shall devise a monitoring plan to the satisfaction of the Puducherry Pollution Control Committee so as to continuously monitor the treated waste water being used for flushing in terms of fecal coliforms and other pathogenic bacteria.
- (vi) The project proponent shall take all necessary steps to ensure that bio-medical waste (304 Kgs./day) is handled without any adverse effect to human health and the environment and in accordance with the Bio-Medical Waste Management Rules, 2016 and shall be safely handed over to the authorized Common Bio Medical Waste Treatment Facility for final disposal.
- (vii) The project proponent shall make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I of the Bio-Medical Wastes Management Rules, 2016 to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I of the said rules.
- (viii) A Committee shall be constituted with Medical Superintendent as Head to monitor the effective implementation of Bio-medical Waste Management Rules and proper training shall be given to all the staff involved and records to be maintained.
- (ix) The green belt and landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and / or invasive species should not be used for landscaping. At least 33% of the total plot area shall be developed as green area.
- (x) As per the MoEFCC OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, the project proponent shall allocate an amount of Rs. 34 Lakhs towards environment conservation and community welfare activities, which shall be utilized over a period of four years. The said amount shall be utilized for activities like rejuvenation of irrigation tanks, ponds and channels in the surrounding villages, infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, tree plantation within the project area. The above fund allocated towards environment conservation support activities is to be in addition to the cost envisaged under the CSR budget of the company which will be allocated as per the rules prescribed by the Government of India / Companies Act 2013.

R. Sagaya Alfred

Dr. R. Sagaya Alfred
(Member Secretary)

K. Srinivasamoorthy

Dr. K. Srinivasamoorthy
(Chairman)

Annexure – IMembers Present

Sl. No.	Name and Designation of the Members		
1	Dr. K. Srinivasamoorthy, Professor, Department of Earth Sciences, School of Physical, Chemical and Applied Sciences, Pondicherry University, Puducherry – 605014.	-	Chairman
2	Dr. M. Velan, No. 3/18, Seventh Street, Dharmaraja Nagar, Porur, Chennai – 600116.	-	Member
3	Dr. Nehru Kumar Vaithilingam, Director, Centre for Environment, Health & Safety, Annamalai University, Annamalai Nagar, Chidambaram – 608002.	-	Member
4	Dr. G. Vijayakumar, Professor, Dept. of Civil Engineering, Puducherry Technological University, Puducherry – 605014.	-	Member
5	Dr. K. Sivakumar, Professor, Department of Ecology and Environmental Science, Pondicherry University, Puducherry – 605014.	-	Member
6	Dr. R. Sridar, Professor and Head, Department of Chemical Engineering, Puducherry Technological University, Puducherry – 605014.	-	Member
7	Dr. S. Gajalakshmi, Associate Professor, Centre for Pollution Control and Environmental Engineering, Pondicherry University, Puducherry – 605014.	-	Member
8	Dr. G. Pradeep Kumar, Assistant Professor, Department of Botany, Mahatma Gandhi Govt. Arts College, Mahe, Puducherry – 673310.	-	Member
9	Dr. Kumaresan Vadivelu, Assistant Professor of Botany, Kanchi Mamunivar Govt. Institute of Postgraduate Studies & Research, Puducherry – 605008.	-	Member
10	Dr. R. Sagaya Alfred, Senior Scientific Officer, Department of Science, Technology and Environment, Government of Puducherry, 3 rd Floor, PHB Building, Anna Nagar, Puducherry – 605005.	-	Member Secretary



Annexure - II

Standard Conditions for Building and Construction Projects

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 and Bio Medical Waste Authorization under the Bio Medical Waste Management Rules, 2016 from the PPCC and shall submit copy of the same to SEIAA, Puducherry.
- ii. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
- iii. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc., as per National Building Code including protection measures from lightening etc.
- iv. The project proponent shall obtain necessary permission for drawal of ground water / surface water required for the project from the competent authority.
- v. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- vi. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
- vii. The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
- viii. The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

II. Air quality monitoring and preservation:

- i. Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
- ii. A management plan shall be drawn up and implemented to contain the current expected exceedance in ambient air quality at the site.
- iii. The project proponent shall system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.



- iv. Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel shall be used as fuel. The location of the DG sets may be decided with in consultation with PPCC.
- v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke and other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
- vii. Wet jet shall be provided for grinding and stone cutting.
- viii. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
- ix. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules, 2016.
- x. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to rules made under the Environment (Protection) Act, 1986.
- xi. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) / PPCC norms.
- xii. For indoor air quality the ventilation provisions shall be as per National Building Code of India.

III. Water quality monitoring and preservation:

- i. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
- ii. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.



- iii. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEFCC and PPCC along with six monthly Monitoring reports.
- iv. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
- v. At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc., would be considered as pervious surface.
- vi. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc., shall be done.
- vii. Use of water saving devices/ fixtures (viz., low flow flushing systems; use of low flow faucets tap aerators etc.,) for water conservation shall be incorporated in the building plan.
- viii. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
- ix. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- x. A rain water harvesting plan needs to be designed in consultation with Ground Water Authority where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
- xi. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the Central / Puducherry Ground Water Authority as applicable for any ground water abstraction or dewatering.
- xii. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office of MoEF&CC and PPCC along with six monthly Monitoring reports.
- xiii. No sewage or untreated effluent water shall be discharged through storm water drains.
- xiv. Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent

expert and a report in this regard shall be submitted to the Regional Office of MoEF&CC and PPCC before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.

- xv. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
- xvi. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention:

- i Ambient noise levels shall conform to silent zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
- ii Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry and PPCC as a part of six-monthly compliance report.
- iii Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures:

- i. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
- ii. Outdoor and common area lighting shall be LED.
- iii. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc., shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
- iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.



- v. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- vi. Solar power shall be used for lighting in the buildings to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

VI. Waste Management:

- i. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the MSW generated from project shall be obtained.
- ii. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- iii. Organic waste compost/ Vermiculture pit/ Organic Waste Converter within the premises with a minimum capacity of 0.3 kg./person/day must be installed.
- iv. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
- v. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the PPCC.
- vi. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity.
- vii. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.
- viii. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27.08.2003 and 25.01.2016. Ready mixed concrete must be used in building construction.
- ix. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- x. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

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VII. Green Cover:

- i. Green belt shall be developed in at least 33% of total plot area with indigenous plant species.
- ii. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

VIII. Transport:

- i. A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
 - a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
 - b. Traffic calming measures.
 - c. Proper design of entry and exit points.
 - d. Parking norms as per local regulation.
- ii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

IX. Human health issues:

- i. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
- ii. For indoor air quality the ventilation provisions shall be as per National Building Code of India.
- iii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Occupational health surveillance of the workers shall be done on a regular basis.
- vi. A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Corporate Environment Responsibility:

- i. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating

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procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the Environmental / forest / wildlife norms /conditions. The institution shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the Regional office of the Ministry and PPCC as a part of six-monthly report.

- ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Regional office of the Ministry and PPCC along with the Six Monthly Compliance Report.

XI. Miscellaneous:

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government (Industries Department and PPCC) who in turn has to display the same for 30 days from the date of receipt.
- iii. No further expansion or modifications in the plant shall be carried out without prior Environmental Clearance from SEIAA / MoEFCC, as applicable. In case of any deviation or alterations in the project proposal from those submitted to the SEIAA for clearance, a fresh reference shall be made to the SEIAA / MoEFCC, as applicable, to assess the adequacy of the conditions imposed and to add additional environmental protection measures required, if any.
- iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- v. The project proponent shall monitor the criteria pollutants level viz., PM₁₀, SO₂, NO₂ (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- vi. The project proponent shall submit six-monthly compliance report on the status of the compliance of the stipulated environmental conditions including results of monitored data in hard and soft copies on 1st June and 1st December of each calendar year in respect



of the conditions stipulated in the Environmental Clearance issued to SEIAA, PPCC and Regional Office of CPCB and MoEFCC.

- vii. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.
- viii. The project proponent shall submit the Environmental Statement for each financial year in Form-V to the Puducherry Pollution Control Committee as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the institution.
- ix. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and start of production / operation by the project proponent.
- x. The project authorities must strictly adhere to the stipulations made by the Puducherry Pollution Control Committee and the U.T. Government.
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The SEIAA reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Puducherry Pollution Control Committee and Regional Office of MoEFCC shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the Officer (s) of the PPCC / Regional Office of MoEFCC by furnishing the requisite data / information / monitoring reports whenever requested.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

