

**MINUTES OF 76<sup>th</sup> MEETING OF EXPERT APPRAISAL COMMITTEE (INFRASTRUCTURE-2) HELD ON 16<sup>th</sup> NOVEMBER, 2021.**

**VENUE: Through Video Conferencing**

**DATE: 16<sup>th</sup> November, 2021**

**PROCEEDINGS**

**76.1 Opening Remarks of the Chairman:** The Chairman and Members extended warm welcome with each other and other participants of the meeting. Thereafter, the meeting was opened to start proceeding as per the agenda adopted for this meeting.

**76.2 Confirmation of Minutes of 75<sup>th</sup> Meeting of Expert Appraisal Committee (Infrastructure-2) held during 27 & 28<sup>th</sup> October, 2021.**

The Expert Appraisal Committee (Infrastructure-2), hereinafter called the EAC, was informed that no representation has been received regarding projects considered in 75<sup>th</sup> meeting. Minutes of 75<sup>th</sup> meeting of EAC were confirmed. The typo errors, if any noticed during processing of these cases may be corrected in the light of facts and figures provided by the respective Project Proponent.

**76.3 Consideration of Proposals:** The EAC considered proposals as per the agenda adopted for 76<sup>th</sup> meeting. The details of deliberations held and decisions taken in the meeting are as under:

**AGENDA ITEM NO. 76.3.1**

**Proposed Residential Apartment project to be developed with built-up area of 26,849 sqm at Uliyazhathura Village, Thiruvananthapuram Corporation, Taluk & District, Kerala by M/s Favourite Constructions Pvt. Ltd. – Environmental Clearance**

**(IA/KL/MIS/234751/2021; F. No. 21-100/2021-IA-III)**

1. The Project Proponent (M/s. Favourite Constructions Pvt. Ltd.) along with his consultant 'M/s. Environmental Engineers & Consultants Pvt. Ltd.', made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at re-survey Nos. 351/3-1, 351/3-3, 351/3-2, 351/3-4, Ward No. 9, Uliyazhathura Village, Thiruvananthapuram Corporation, Taluk & District, Kerala with coordinates from

08°34'25.00"N to 08°34'28.29"N Latitude and 76°53'44.09"E to 76°53'48.38"E Longitude.

- ii. The project is new.
- iii. The total plot area is 5,844 sqm, FSI area is 18,931.47 sqm and total construction (Built-up) area is 26,849 sqm. The project will comprise of 1 no. of residential apartment block. Total 196 nos. of flats shall be developed (3 BHK - 98 nos., 2 BHK - 94 nos., 1 BHK - 4 nos.). Maximum height of the building is 65.67 m. The details of building are as follows:

Name of Building	Max. no. of floors	Max. Height	Built-up area
Residential Building Block	Basement 1, 2, 3 + Ground Floor +16 upper floors	65.67 meters	26,849 sqm

- iv. During construction phase, total water requirement is expected to be 33 KLD which will be met by recycled water from portable STP/stored rain water tank for construction purposes and Well water/Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be about 10 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- v. During operational phase, total water demand of the project is expected to be 138 KLD and the same will be met by 89 KLD fresh water from stored rain water tank/KWA/well water and 49 KLD recycled water. Wastewater generated (106 KLD) will be treated in STP of total 130 KLD capacity. 95 KLD of treated wastewater will be generated of which 49 KLD will be recycled and re-used (44 KLD for flushing, 5 KLD for gardening etc.). About 46 KLD treated water from STP will be used for nearby construction site/as make-up water for water cooled chillers/horticulture purposes by the local body.
- vi. About 392 kg/day solid waste will be generated in the project. The biodegradable waste will be processed in bio-gas generation unit/OWC unit (200 kg/day) and the non-biodegradable waste generated will be handed over to authorized local vendor. About 65 sqm. area for 10 days storage of non-biodegradable waste would be provided
- vii. The total power requirement during operation phase is 1,200 kW and will be met through Kerala State Electricity Board (KSEB) & DG sets (125 kVA x 2 no.) for standby and total power requirement during construction phase is 100 kW and will be met through KSEB & DG set (standby).
- viii. Rooftop rainwater of buildings will be collected in RWH tank of 71 KL capacity for harvesting after filtration.
- ix. Parking facility for 217 Cars + 164 Two Wheelers is proposed to be provided against the requirement of 155 Cars + 164 Two Wheelers respectively (according to local norms).
- x. Proposed energy saving measures would save about 20% of power. Roof top solar energy installation of 120 kWp shall be done.

- xi. The total excavation/cutting of earth for the foundation of structures and excavation/cutting of earth for construction of lower grounds is 13,947 cum. The top soil (385 cum) which is fertile will be kept at site for landscaping work. The excavated soil will be used for back filling work (648 cum) for site levelling and about 492 cum will be used for internal road construction work. The excess excavated earth (12,422 cum) will be stored at the land owned by the project proponent located at Menamkulam village, about 7 km (SW) from the proposed project site.
- xii. Total area for landscaping proposed is 400sqm (0.04 ha). 16 trees will be cut and it is required to plant about 233 trees.
- xiii. The project is not located in Critically Polluted area.
- xiv. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xv. Forest Clearance is not required.
- xvi. No court case is pending against the project.
- xvii. Expected timeline for completion of the project - About 36 months from the date of start of construction
- xviii. Investment/Cost of the project is ₹45 Crores.
- xix. Employment potential - About 100 persons during construction phase.
- xx. Benefits of the project – Employment opportunities & revenue to the State. The proposed project would provide better residential facilities with supporting infrastructure facilities and amenities to the residents.

**2.** The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it requires appraisal at Central level by sectoral EAC.

**3.** *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 89 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of 130 KLD capacity. At-least 49 KLD of treated water from the STP shall be recycled and re-used for flushing (44 KLD) and for gardening (5 KLD). Excess treated water from STP (46 KLD) shall be used for nearby construction site / as make-up water for water cooled chillers / horticulture purposes by the local body, as proposed. PP shall submit MoU for the disposal of excess treated water (outside

- the site) to the Regional Office of MoEF&CC along with six-monthly compliance report.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
  - iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be at-least 400sqm. As proposed, at least 233 trees shall be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
  - v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
  - vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
  - vii. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, RWH tank of total 71 KL capacity shall be provided by PP for rain water harvesting after filtration.
  - viii. The solid waste shall be duly segregated into biodegradable and non- biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through bio-gas generation unit / bio-bin system to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
  - ix. The PP shall provide electric charging points in parking areas for e-

- vehicles as committed.
- x. As committed, roof top solar energy installation of atleast 120 kWp shall be implemented.
  - xi. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/ Regulations or Statutes as applicable to the project.

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**AGENDA ITEM NO. 76.3.2**

**‘Sabarimala Ropeway Project’ at Sabarimala, Kerala by M/s Eighteenth Step Damodar Cable Car Pvt. Ltd. –Reconsideration for Environmental Clearance(Absent Case).**

**(IA/KL/MIS/63039/2017; F. No. 21-77/2021-IA-III)**

1. The EAC noted that the proposal was deferred in its 75<sup>th</sup> meeting held during 27<sup>th</sup> – 28<sup>th</sup> October, 2021 since the project proponent did not attend the meeting.

2. The Project Proponent (M/s Eighteenth Step Damodar Cable Car Pvt. Ltd.) along with his consultant ‘Perfact Enviro Solutions Pvt. Ltd.’, made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Perunad Village, Ranni Tehsil, Pathanamthitta District, Kerala and is proposed from hill top near KSEB Substation (LTP) to Sannidhanam behind police barrack (UTP). The coordinates of the locations are given as under:

Station	Latitude	Longitude
LTP	9°24'53.52"N	77° 3'54.80"E
UTP	9°33'5.56"N	77° 4'43.49"E

- ii. The project is new.
- iii. The project has obtained Terms of Reference (ToR) from MoEF&CC vide letter no. 10-17/2017-IA-III dated 06.07.2017. Due to change in minor planning, the project was again granted Amendment in Terms of Reference vide letter no. F.No. 10-17/2017-IA-III dated 3.12.2019 for the development of a ropeway of area of 49400 sqm. The extension of validity in Terms of Reference was granted on 15.06.2020.
- iv. The proposed project falls within Periyar Wildlife Sanctuary (UTP is falling inside the Periyar Tiger Reserve & LTP is falling inside the Periyar Tiger Reserve ESZ). Therefore, the project attracts general conditions and falls under “Category A”.NBWL for Periyar Wildlife

Sanctuary will be applied after getting Forest Approval letter from the Forest department which is under progress.

- v. Forest Clearance is required. 4.94 ha. of forest land will be diverted for the development of the project. Stage-I Forest clearance has been applied and is under process with proposal number FP/KL/Others/44535/2020.
- vi. The proposed ropeway will be developed from hill top near KSEB substation at Pamba (LTP) to Sannidhanam Temple (UTP), Kerala. The proposed ropeway project will aid in the transportation of materials and goods to and from the temple and will also help in emergency evacuation of pilgrims if needed. The Project will be 2706.42 m long ropeway, covering an area of 49400 sqm. (including two terminal stations, towers, ropeway corridor, open & covered storage area, godown, machine room, dormitory and kitchen areas) and having hourly capacity of 50 TPH. There will be a continuous ropeway line from Lower Terminal Point (LTP) to Upper Terminal Point (UTP). Terminal will have basic amenities like toilets, waiting areas, Restaurants, first aid rooms etc. The land use details of the project are given as follows:

Land Distribution	Area (in Sqm)	Percentage (%)
Area for LTP (Open and Covered storage area, Godown, Machine room, Dormitory, Kitchen)	10000.0	20.2
Area for UTP (Open and Covered storage area, Godown, Machine room, Dormitory)	5665.6	11.5
Ropeway Corridor	33734.4	68.3
Total Area	49400.0	100

- vii. The project details are given as follows:

S. No.	Particulars	Details
1	Length	2706.42 m
2	Level Difference	250 m
3	Number of Towers	19 nos.
<b>Technical Description</b>		
4	System	Monocable Detachable Ropeway
5	Hourly Capacity	50 TPH
6	Haulage Rope Diameter	34 mm
7	Trip Time	20 min
8	Drive Speed	3.0 m/s
9	Type of Carriers	- Long Tray - Semi enclosed box - Ambulance Car
10	Maximum Single Payload	500 kg
11	Power Supply	415 Volts, 3 Phase
<b>Service Details</b>		
12	Power Requirement	95 KW

13	DG sets (backup power)	1 x 125 KVA (LTP); 1 x 25 KVA(UTP)
14	Pilgrims (emergency evacuation)	800 – 1000 Nos.
15	Staff	50 No.s
16	Total Population	800 – 1000 Nos.
17	Total water requirement	13.3 KLD
18	Total waste water generation	9.2 KLD
19	Total Solid Waste Generation	121 kg/day (18 TPA)

- viii. Total 2 KLD of water shall be required during the construction phase for domestic purposes of 40 no. of labourers and construction activities which shall be sourced through tankers water supplier. Domestic wastewater generated from labourers will be discharged to a septic tank followed by a soak pit. Soak pit will be constructed for the disposal of sewage of the labourers at LTP only and during the operation phase the same pit will be used for the installation of STP. At UTP no provision of a soak pit is there as Common STP of 5 MLD by HPC is already present which is around 100 m from UTP.
- ix. The total water requirement during the operation phase will be 13.3 KLD out of which fresh water requirement will be 5 KLD which will be met through Kerala Water Authority (KWA). Rest 8.3 KLD will be sourced through STP treated water at LTP. The generated sewage of 9.2 KLD will be treated in the Sewage Treatment Plant of capacity 10 KLD (MBBR Technology) proposed at LTP. Treated water generated will be reused in flushing, gardening and miscellaneous purposes. Temporary toilets will be provided at UTP and waste water will be sent to common STP by High-Power Committee (HPC) of 5 MLD already existing around UTP area which is 100 m away from the site.
- x. Total solid waste generated in the project will be 121 kg/day (18 TPA) comprising of 85/day (13 TPA) organic waste and 36kg/day (5TPA) of recyclable waste. 2 no. of Organic Waste Converters will be installed each at LTP (for general waste) and UTP (for temple wastes like flowers, fruits etc.) for the treatment and disposal of biodegradable waste. Recyclable wastes like cardboard, paper etc. will be collected and given to the approved recycler. The proposed project will be a Plastic-free zone. So, there will be no generation of plastic waste. The waste oil generated from D.G sets will be sent to authorized hazardous waste disposal authority.
- xi. The total power requirement of the unit will be 95 KW which will be sourced from Kerala State Electricity Board Limited (KSEBL). DG Sets of 1x 125 kVA at LTP and 1x 25 kVA at UTP shall be installed for power back up only.
- xii. Maximum collection of rainwater will be done and reused wherever possible. Garland drains are proposed around the pillars/towers to ensure the proper drainage of the storm water and to prevent disturbance to the drainage pattern of the area.
- xiii. The Parking Area of 2391 sqm will be utilised for the Parking facility at LTP. Approximately 96 ECS of Parking Provision will be provided.

- xiv. At present, 1650 nos. of trees are present in the UTP, LTP and corridor area. As per present assessment, approximately 250 number of trees will be cut and rest will be either retained or pruning will be done as per the requirement. The number of trees to be cut may increase or decrease after the detailed engineering and soil investigation study. However, trees belonging to endangered species can be protected by rearranging the pillar position. In lieu of trees which will be cut during the construction phase, compensatory afforestation in the ratio of 1:5 will be done in the nearby area to the extent possible after getting due permission from the concerned Authorities. A compensatory afforestation plan will be undertaken as directed by the forest department according to which compensation will be paid to the forest department for plantation. During the operation phase, Green area development will be proposed around the LTP, UTP, under the corridor of the ropeway & in other open spaces, to enhance the terrestrial ecology of the area.
- xv. Baseline monitoring was carried out at six stations for the month of March – May, 2019 and at eight stations for one month revalidated data from 15 Oct-15 Nov, 2020.
- xvi. Public Hearing was held on 28.02.2020 at the Collectorate Conference hall, Pathanamthitta chaired by District Collector, Pathanamthitta.
- xvii. Employment potential – About 40 persons during construction phase and 50 persons during the operation of the ropeway.
- xviii. Investment/Cost of the project is ₹80 Crores. The cost towards implementation of EMP will be – Capital Cost: ₹ 210 Lacs & recurring cost: ₹6.7 Lacs/year.
- xix. No court case is pending against the project.
- xx. The project is not located in Critically Polluted area.
- xxi. Expected timeline for completion of the project - About 3 years after getting all clearances and permissions.
- xxii. Benefits of the project – At present, materials to Sabarimala Temple are transported through the trekking paths on shoulders or through tractors. As the tractor movement is through the forest which creates air & noise pollution due to which the wildlife also gets affected. Since tractors pass through the pilgrim paths, this also is a safety concern. The proposed ropeway project will aid in the transportation of materials and goods to and from the temple and will also help in emergency evacuation of pilgrims during need. The proposal is as per the decision of High Power Committee to implement Sabarimala Ropeway Project which is also a part of the Sabarimala Master Plan approved by the High Court of Kerala.

**3.** The EAC noted that the project/activity is covered under category 'A' of item 7(g) 'Aerial Ropeways' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at Central level by sectoral EAC.

**4.** *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the*

issues noted that the project is yet to obtain Stage – I Forest Clearance which was specified in ToR issued dated 06.07.2017. Also, the EAC was of the opinion that the project activities need to be analysed further to avoid integration of the project related activities with external activities. EAC was also not happy with the presentation of the Consultant, who was not able to answer basic questions during discussion and the chairman was of the opinion to issue a warning letter to the consultant for future presentation.

Accordingly, the EAC decided to defer the project proposal and asked the project proponent to provide the following additional information:

- i. Submit Stage – I Forest Clearance.
- ii. Permission from Forest Department for cutting of trees.
- iii. Copy of application submitted for clearance from NBWL for Periyar Wildlife Sanctuary.
- iv. Details of truck movements to the project site and current pollution load due to tractor movement.
- v. Details of solid waste expected to be generated both at LTP and HTP and sources.
- vi. Revised lighting plan having reduced impact on wildlife considering location within wildlife sanctuary.
- vii. Details of energy conservation measures adopted including solar energy.
- viii. Submit details of existing STP at Upper Terminal Point along with its Environmental Clearance.
- ix. Details of rainwater harvesting.
- x. Detailed waste generation calculation specifying the source and quantity of each type of waste along with its disposal mechanism.

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### **AGENDA ITEM No. 76.3.3**

**Construction of Hospital project “Azeezia Medical College Hospital Alathur” with ancillary facilities to be developed with built-up area of 79,042 sqm at Kavassery-1 Village, Alathur Taluk, Palakkad District, Kerala by M/s Podikunju Musaliar Memorial Charitable and Educational Trust - Environmental Clearance.**

**(IA/KL/MIS/235578/2021; F. No. 21-99/2021-IA-III)**

1. The Project Proponent (M/s Podikunju Musaliar Memorial Charitable and Educational Trust) along with his consultant ‘M/s. Environmental Engineers & Consultants Pvt. Ltd.’, made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at survey nos. 686/85, 686/86, 377/10, 377/9, 379/5, 379/10, 379/9, 379/7, 379/8, 381/2, 382/4, 382/5, 382/3, 380/5, 380/4, 380/2, 381/3, 382/2, 382/1, 381/1, 686/2, 686/11, 686/10, 379/13, Kavassery-1 Village, Alathur Taluk, Palakkad District, Kerala with coordinates from 10°37'46.18"N to 10°38'0.05"N Latitude and 76°30'49.00"E to 76°30'31.57"E Longitude.
- ii. The project is new.
- iii. The total plot area is 1,41,699 sqm. and total construction (Built-up) area is 79,042 sqm. The project will comprise of 5 nos. of building blocks and the proposed hospital will have capacity of 500 beds. Maximum height of the building is 44.85 m. The details of building are as follows:

Building Block Name	No. of Floors	Height of the building (m)	Built-up area (sqm.)
Main Hospital Building-1	L.G. + M.G. + U.G. + 7 floors	38.90	45,486
Hospital Building-2	L.G. + U.G. + 3 floors	15.90	2,201
Nurses Quarters	L.G. + U.G. + 12 floors	44.85	12,141
College Building	L.G. + U.G. + 3 floors	21.60	14,276
Hostel Building	L.G + U.G. + 3 floors	15.80	4,938
<b>TOTAL BUILT-UP AREA</b>			<b>79,042</b>

- iv. During construction phase, total water requirement is expected to be 96 KLD which will be met by recycled water from portable STP/stored rain water (tank/ponds) for construction purposes and ground water/Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 27 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.
- v. During operational phase, total water demand of the project is expected to be 353 KLD and the same will be met by 165 KLD fresh water from stored rain water tanks/pond/KWA/ground water and 188 KLD recycled water. Wastewater generated (209 KLD) will be treated in STP of total 250 KLD capacity. 188 KLD of treated wastewater will be recycled and re-used (117 KLD for flushing, 30 KLD for gardening and about 41 KLD treated water from STP will be used for make-up water requirement for cooling towers attached with the HVAC system).
- vi. About 750 kg/day solid waste will be generated in the project. The biodegradable waste (400 kg/day) will be processed in bio-gas generation plant/bio-bin system and the non-biodegradable waste generated (350 kg/day) will be handed over to authorized local vendor. Approx. 150 sqm. area for about 10 days storage of non-biodegradable waste would be provided
- vii. The total power requirement during operation phase is 2.25 mVA and will be met from Kerala State Electricity Board (KSEB) & DG Sets

(1250 kVA x 3 nos + 500 kVA x 1 no.) as standby arrangement. Total power requirement during construction phase is 100 kW and will be met from KSEB & DG Sets (standby).

- viii. Rooftop rainwater of buildings will be collected in RWH tank of total 1 ML capacity and RWH pond of total 2 ML capacity for harvesting after filtration.
- ix. Parking facility for 748 Cars + 955 Two Wheelers is proposed to be provided against the requirement of 728 Cars + 910 Two Wheelers respectively (according to local norms).
- x. Proposed energy saving measures would save about 20% of power. Roof top solar energy installation of 515 kW shall be done.
- xi. Chunalur Peafowl Sanctuary is located about 8.5 km (NW) radius of the project site. Therefore, NBWL Clearance is required. An application for obtaining Wildlife Clearance has been submitted at MoEF&CC on 23.10.2021 and the proposal no. is FP/KL/DISP/6079/2021. The project site does not fall within the ESZ of the Chunalur Peafowl Sanctuary as per the Draft Notification issued by MoEF&CC dated 07.12.2015.
- xii. The project is not located in Critically Polluted area.
- xiii. Forest Clearance is not required.
- xiv. No court case is pending against the project.
- xv. Total landscape area provided within the site is 94,462 sqm (about 67% of the total plot area) including a medicinal / herbal garden within the premises (an area of about 1.4 ha., 10% of the total land area). 250 trees will be cut and it is proposed to plant about 4400 trees.
- xvi. Expected timeline for completion of the project - About 36 months from the date of start of construction.
- xvii. Investment/Cost of the project is ₹376 Crores.
- xviii. Employment potential - About 200 persons during construction phase and 260 persons during operation phase.
- xix. Benefits of the project – The project would provide better health infrastructure facilities along with education to the medical students & supporting infrastructure facilities and amenities to the people. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

**2.** The EAC noted that the project/activity is covered under category 'B' of item 8(a) Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it requires appraisal at Central level by sectoral EAC.

**3.** *The EAC observed gaps and inconsistencies in the information related to water requirement and waste management details submitted in Form-1, online Form-2 and in the presentation. Accordingly, the EAC (Infra-2), decided*

*to defer the proposal and asked the project proponent to provide the following additional information:*

- i. Clarify the water requirement details specifying the contribution from different sources.
- ii. Clarify the details of waste management specifying bio-degradable waste, recyclable waste, bio-medical waste, C&D waste and hazardous waste.
- iii. Resubmit Form -1 with correct information.

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#### **AGENDA ITEM NO. 76.3.4**

**Expansion of Hotel Building with increase in built up area from 55,550.169 sqm to 82,212.816 sqm at Plot No. 3, Sector 10, Dwarka, Delhi by M/s Tirupati Buildings and Offices Pvt. Ltd. – Reconsideration for Environmental Clearance.**

**(IA/DL/MIS/223780/2021; F. No. 21-54/2021-IA-III)**

1. The EAC noted that the proposal was deferred in its 72<sup>nd</sup> meeting held on 16<sup>th</sup> September, 2021, and the PP was asked to provide the following additional details:

- i. Update/revise details submitted in the online Form 2 and submit corrected Form 1, Form IA and Conceptual Plan.
- ii. Submit copy of amendment letter dated 01.05.2009 for change in the no. of rooms from 140 to 330 rooms.
- iii. Clarify the discrepancy in the no. of floors w.r.t previous EC.
- iv. Clarify the discrepancies related to power requirement and parking area w.r.t previous EC.
- v. Clarify the discrepancies related to DG set capacity, STP capacity and waste calculations.
- vi. Submit Certified Compliance Report from concerned IRO.
- vii. Submit landscape plan for the project with details of tree species.

2. The Project Proponent (M/s Tirupati Buildings and Offices Pvt. Ltd.) along with his consultant 'M/s Perfact Enviro Solutions Pvt. Ltd.', made a presentation and provided the following information:

- i. Revised Form 1, Form IA and Conceptual Plan along with updated revised application, Form 2 have been submitted.
- ii. The project has already been granted Environmental Clearance from MoEF&CC vide F. No. 21-98/2008-IA.III dated 08.07.2008. Due to ignorance the room numbers were not checked in the EC granted. Later an amendment request was submitted in the Environmental Clearance on 01.05.2009 for the change in number of rooms from 140 to 330 rooms to MoEF&CC. However, the amendment letter was not issued. The copy of the letter dated 01.05.2009 has been submitted.

- iii. EC was taken based on concept planning with G+12 floors and built-up area of 55,550.169 sqm. Mistakenly, for EC, only G+10 floors were taken into consideration for built-up area of 55,550.169 sqm. The approval from Airports Authority of India was granted on 30.10.2009 for the permissible height of 58.75 m. However, only 54 m height has been constructed which is well within permissible limits.
- iv. At the time of obtaining EC, the total electrical load was calculated as 6,127.5 KW based on concept planning and considering 100% occupancy. The sanctioned load is 3333 KVA. Later, after adopting many conservation measures, the connected load was reduced by 1,113 KVA and the maximum demand load is 2,220 KVA.
- v. The parking provision at the time of obtaining the EC was 837 ECS. Now, as per the revised norms, the parking required is 612 ECS and provision has been made for 613 ECS. However, enough space is available in the basement for extra car parks if it is required in the future.
- vi. As per the CTO granted by DPCC, 2 nos. of DG sets are installed at the site having capacity of 1500 KVA.
- vii. STP of 200 KLD capacity, extendable upto 210 KLD, is already installed.
- viii. Certified Compliance Report has been issued by Integrated Regional Office, Jaipur vide File No.4522/08 dated 18.10.2021.
- ix. Green area of 2720 sqm. (20 % of total plot area) has been developed all along the periphery of the project site and 78 trees are already planted at the site. Landscape plan with details of tree species has been submitted.

**3.** The EAC noted that the project/activity is covered under category 'B' of item 8(a) Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Delhi at the time of initial consideration of the proposal, it required appraisal at Central level by sectoral EAC.

**4.** *The EAC noted that the PP vide letter dated 01.05.2009 intimated the change in number of rooms from 140 to 330 rooms to MoEF&CC. However, there is no mention of change in number of floors from G+10 to G+12 in the said letter. The EAC also took cognizance of the submission made by the PP that there is no change in built-up area from the EC dated 08.07.2008 as well as the project has not exceeded the height clearance issued by Airports Authority of India. Accordingly, the EAC decided to defer the project proposal and asked the PP to provide the following additional information:*

- i. Submit affidavit clarifying the discrepancy in the number of floors w.r.t to existing EC.
- ii. Submit copy of DDA approval issued to the project specifying number of floors and built-up area.

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**AGENDA ITEM NO. 76.3.5**

**Expansion within existing hotel project with increase in total built-up area from 29,711.63 sqm. to 31,228.33 sqm. at Survey Nos. 84/5, 84/10, Thycaud Village, Thiruvananthapuram Municipal Corporation, Taluk & District, Kerala by M/s Lulu Hospitality Limited - Environmental Clearance.**

**(IA/KL/MIS/237929/2021; F. No. 21-101/2021-IA-III)**

1. The Project Proponent (M/s. Lulu Hospitality Limited) along with his consultant ‘M/s. Environmental Engineers & Consultants Pvt. Ltd.’, made a presentation on the key parameters and salient features of the project to the EAC (Infra-2). The EAC took note of following key parameters and salient features of the project, as presented during the meeting; provided in the brief and application for this project:

- i. The project is located at Survey Nos. 84/5, 84/10, Thycaud Village, Thiruvananthapuram Municipal Corporation, Taluk & District, Kerala with coordinates from 08°29’48.62"N to 08°29’51.65"N Latitude and 76°57’27.78"E to 76°57’32.42"E Longitude.
- ii. The proposal is for Expansion.
- iii. Earlier, the project has obtained Environmental Clearance from SEIAA Kerala vide E.C. Order no. 28/2021 (Proposal No. SIA/KL/MIS/153098/2020 & File No. 1662/EC1/2020/SEIAA) dated 07.06.2021 for the construction of Multi Level Car Parking (MLCP) Building project (built-up area of 10,046.26 sqm.) within the existing hotel premises (built-up area of 19,665.37 sqm.). The construction work is in progress at site based on the Environmental Clearance obtained, however the construction work is yet to begin at site for new facility. It is now decided to construct an additional Dining Hall within the existing hotel building with additional built-up area of 1,516.70 sqm. The cumulative built-up area of the project after the addition of the new facility will thus increase from 29,711.63 sqm. to 31,228.33 sqm.
- iv. The total plot area is 8,925 sqm. and total construction (Built-up) area is 31,228.33 sqm. The project will comprise of 1 no. of hotel block & 1 no. of MLCP block. Maximum height of the building is 28.10 m. The details of building are as follows:

Name of Building	Max. no. of floors	Max. Height (in meters)	Built-up area (sqm.)
Hotel Building	Basement 1, 2 + Gr. floor + Mezzanine floor + 6 floors	28.10 m.	21,182.07
MLCP Building	Basement + Gr. + 5 floors	17 m.	10,046.26
TOTAL			31,228.33

v. The details of the proposed expansion are given as follows:

S. No.	Particulars	Details as per EC accorded by SEIAA, Kerala (A)	Details as per additional facility proposed (B)	Cumulative details after expansion (A+B)	Remarks
1	Survey Nos.	84/5, 84/10	Nil	84/5, 84/10	No change
2	Plot area	0.8925 ha.	Nil	0.8925 ha.	No change
3	Facilities proposed	<ul style="list-style-type: none"> <li>• Hotel (133 rooms)</li> <li>• Restaurant (200 seats)</li> <li>• Conference hall /Banquet hall (350 seats)</li> <li>• MLCP</li> </ul>	Dining Hall (350 Seats)	<ul style="list-style-type: none"> <li>• Hotel (133 rooms)</li> <li>• Restaurant (200 seats)</li> <li>• Conference hall /Banquet hall (350 seats)</li> <li>• MLCP</li> <li>• Dining Hall (350 Seats)</li> </ul>	New facility (Dining hall) added
4	Built-up area	29,711.63 sqm. (existing hotel 19,665.37 sqm. + proposed MLCP 10,046.26 sqm.)	1,516.70 sqm.	31,228.33 sqm.	Addl. built-up area 1,516.70 sqm. (5% increase)
5	Total No. of building block	2 Nos. (existing hotel block & proposed MLCP block)	Nil	2 Nos. (existing hotel block & proposed MLCP block)	No change
6	Max. Height of building	28.10 m (existing hotel) 17.00m (proposed MLCP)	Nil	28.10 m (existing hotel) 17.00 m (proposed MLCP)	No change
7	Max. no. of floors	Basement 1, 2 + Ground floor + Mezzanine floor + 6 floors (existing hotel building)	Nil	Basement 1, 2 + Ground floor + Mezzanine floor + 6 floors (existing hotel building)	No change

		Basement + Gr. +5 floors (proposed MLCP building)		Basement + Gr. + 5 floors (proposed MLCP building)	
8	Connected load	2,170 kW	500 kW	2,670 kW	Addl. connected load 500 kW
9	Capacity of D.G. sets & nos	630 kVA x 2 nos.	500 kVA x 1 no.	630 kVA x 2 nos. + 500 kVA x 1 no.	Additional D.G. Set @ 500kVA
10	Parking facilities	315 cars + 88 two wheelers (MLCP building) 89 cars+ 34 two wheelers (Hotel block)	Nil	315 Cars + 88 two Wheelers (MLCP building) 89 Cars +34 two wheelers (Hotel block)	No change and meeting the KMBR norms
11	Solid waste generation	256 kg/day	87 kg/day	343 kg/day	Increase of 87 kg/day (33% increase)
12	Daily water requirement	179 KL (fresh 90 KL + recycled 89 KL)	19 KL (fresh 6 KL + recycled 13 KL)	198 KL (fresh 96 KL + recycled 102 KL)	Increase of 19 KL (fresh 6 KL + recycled 13 KL)
13	Daily sewage generation	99 KL	14 KL	113 KL	Increase of 14 KL (about 14% increase)
14	Project cost	₹300 Crores	₹10 Crores	₹310 Crores	Increase of ₹10 Crores (about 3% increase)
15	Peak footprint	1018 persons	385 Persons	1403 persons	Increase of 385 persons
16	Capacity of Rain water storage	224 KL	32 KL	256 KL	Additional capacity of 32 KL.

- vi. During construction phase, total water requirement is expected to be 10 KLD which will be met by recycled water from portable STP/stored

rain water (tank) for construction purposes and well water/Kerala Water Authority (KWA) supply for meeting the domestic water requirement expected to be 14 KLD. During the construction phase, portable STP will be provided for disposal of waste water. Temporary sanitary toilets will be provided during peak labor force.

- vii. During operational phase, total water demand of the project is expected to be 198 KLD and the same will be met by 96 KLD fresh water from stored rain water tank/KWA/well water and 102 KLD recycled water. Wastewater generated (113 KLD) will be treated in STP of total 169 KLD capacity. 102 KLD of treated wastewater will be recycled and re-used (45 KLD for flushing, 5 KLD for gardening etc.). About 52 KLD treated water from STP will be used for make-up water requirement for cooling towers attached with the HVAC system.
- viii. About 343 kg/day solid waste will be generated in the project. The biodegradable waste (170 kg/day) will be processed in bio-gas generation unit/OWC system and the non-biodegradable waste generated (173 kg/day) will be handed over to authorized local vendor. Approx. 50 sqm. area for about 10 days storage of non-biodegradable waste would be provided at basement level (MLCP block).
- ix. The total power requirement during operation phase is 2,670 kW and will be met from Kerala State Electricity Board (KSEB) & DG Sets (630 kVA x 2 nos. + 500 kVA x 1 no.) for standby. Total power requirement during construction phase is 100 kW and will be met from KSEB& DG Sets (standby).
- x. Rooftop rainwater of buildings will be collected in RWH tank of total 256 KL capacity for harvesting after filtration.
- xi. Parking facility for 315 Cars + 88 Two Wheelers (MLCP Building) and 89 Cars + 34 two wheelers (Hotel Block) is proposed to be provided against the requirement of 325 Cars + 122 two wheelers (according to local norms).
- xii. Proposed energy saving measures would save about 19% of power. Rooftop solar power plant of 306 kW shall be installed to meet 11.46% of the connected load.
- xiii. The project is not located in Critically Polluted area.
- xiv. The project is not located within 10 km of Eco Sensitive Zone. NBWL Clearance is not required.
- xv. Forest Clearance is not required.
- xvi. No court case is pending against the project.
- xvii. Green area of 0.16 ha (1600 sqm) will be maintained and it is proposed to plant about 150 trees species within the site. There is no tree cutting required for the expansion of additional built-up area.
- xviii. Expected timeline for completion of the project - About 6 months from the date of start of construction
- xix. Investment/Cost of the project is ₹310 Crores.
- xx. Employment potential - About 250 persons.
- xxi. Benefits of the project – The project would provide better hospitality services with supporting infrastructure facilities to the guests. Direct and indirect employment opportunities; The potential for employment and access to new services may draw people to the area around the

project. There will be an increase in economic activity and employment for the local community, local skills development. Employment opportunities generation and revenue to the State.

**2.** The EAC noted that the project/activity is covered under category 'B' of item 8(a) 'Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it requires appraisal at Central level by sectoral EAC.

**3.** The EAC also noted that the PP has earlier obtained EC for proposed MLCP building (built-up area of 10,046.26 sqm) within the existing hotel (built-up area of 19,665.37 sqm) from SEIAA Kerala vide E.C. Order No. 28/2021 (Proposal No. SIA/KL/MIS/153098/2020 & File No. 1662/EC1/2020/SEIAA) dated 07.06.2021, which is less than 6 months old. It was also observed that the proposed expansion accounts to about 5% increase in built-up area.

**4.** *The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Conditions as specified in E.C. Order no. 28/2021 (Proposal No. SIA/KL/MIS/153098/2020 & File No. 1662/EC1/2020/SEIAA) dated 07.06.2021 shall be strictly complied.
- ii. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 96 KLD during operational phase.
- iii. As proposed, wastewater shall be treated in an onsite STP of 169 KLD capacity. At-least 102 KLD of treated water from the STP shall be recycled and re-used for flushing (45 KLD) and for gardening (5 KLD) and to meet make-up water requirement for cooling towers attached with the HVAC system (52 KLD). There shall be no discharge of treated water from the project site as committed.
- iv. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- v. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be atleast 1600 sqm. As proposed, at least 150 trees shall be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm. of land should be planted and maintained. The existing trees

will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.

- vi. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, RWH tank of 256 KL capacity shall be provided by PP for rain water harvesting after filtration.
- vii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through bio-gas generation unit / bio-bin system to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
- viii. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
- ix. As committed, roof top solar energy installation of at-least 306 kW shall be implemented.
- x. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

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#### **AGENDA ITEM NO. 76.3.6**

**Proposed commercial building project along with MLCP building with total built up area of 29,950.21 sqm to be developed at Nattakom Village, Kottayam Municipality, Kottayam Taluk & District, Kerala by M/s Lulu International Shopping Malls Pvt. Ltd. –Reconsideration for Environmental Clearance.**

**(IA/KL/MIS/232464/2021; F. No. 21-96/2021-IA-III)**

1. The EAC noted that the proposal was deferred in its 75<sup>th</sup> meeting held during 27-28<sup>th</sup> October, 2021, and the PP was asked to provide the following additional details:

- i. Clarify the inconsistencies in details of parking provision and installation of solar power.
- ii. Submit the green area details.
- iii. Submit details for waste management area.
- iv. Resubmit Form -1 with correct information.

**2.** The Project Proponent (M/s Lulu International Shopping Malls Pvt. Ltd.) along with his consultant 'M/s Environmental Engineers & Consultants Pvt. Ltd.', made a presentation and provided the following information:

- i. Parking facility for 470 Cars + 514 Two Wheelers is proposed to be provided against the requirement of 403 Cars + 508 Two Wheelers respectively (according to local norms).
- ii. Roof top solar power plant of 541 kWp capacity shall be installed to meet 12.3% of the connected load.
- iii. The total green area available is 4905 sqm. (about 15% of plot area). 15 trees will be cut for the project and it is proposed to plant 600 trees along the boundary.
- iv. The expected municipal solid waste to be generated is 802 kg/day. Bio-degradable waste (about 300 kg/day) would be disposed through the bio-gas generation plant/bio-bins to be installed within the site. An area equivalent to 60 sqm. is earmarked for this purpose. An area equivalent to 150 sqm. for about 10 days storage of non-biodegradable waste of about 500 kg would be provided.
- v. The revised Form-1 with corrected information has been uploaded in Parivesh Portal.

**3.** The EAC noted that the project/activity is covered under category 'B' of item 8(a) Building and Construction projects' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at State level. However, due to non-existence of SEIAA in Kerala, it required appraisal at Central level by sectoral EAC.

**4.** *The EAC found that the response to the queries are satisfactory. The EAC (Infra-2), based on the information submitted and clarifications provided by the Project Proponent and detailed discussions held on all the issues, recommended granting environmental clearance to the project subject to the following specific conditions and other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity while considering for accord of environmental clearance:*

- i. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA). Fresh water requirement shall not exceed 62 KLD during operational phase.
- ii. As proposed, wastewater shall be treated in an onsite STP of 140 KLD capacity. Atleast 105 KLD of treated water from the STP shall be recycled and re-used for flushing (93 KLD), gardening (1 KLD) and as make-up water for cooling towers attached with the HVAC system (11 KLD). There shall be no discharge of treated water outside the premises as committed.
- iii. The project proponents would commission a third-party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using

- recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
- iv. Area for greenery shall be provided as per the details provided in the project document i.e., area under plantation/greenery will be atleast 4905 sqm. As proposed, at least 600 trees shall be maintained during the operation phase of the project. The landscape planning should include plantation of native species. A minimum of 01 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. Plantations to be ensured species (cut) to species (planted). 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.
  - v. No tree can be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
  - vi. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
  - vii. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed, RWH tank of total 200 KL capacity shall be provided by PP for rain water harvesting after filtration.
  - viii. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate area earmarked for segregation of solid waste, as per SWM Rules, 2016. As committed, biodegradable waste shall be utilized through bio-gas generation unit / bio-bin system to be installed within the site. Inert waste shall be disposed off as per norms at authorized site. The recyclable waste shall be sold to authorized vendors/recyclers. Construction & Demolition (C&D) waste shall be segregated and managed as per C&D Waste Management Rules, 2016.
  - ix. The PP shall provide electric charging points in parking areas for e-vehicles as committed.
  - x. As committed, roof top solar energy installation of atleast 541 kWp shall be implemented.
  - xi. The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals/clearances under any other Acts/Regulations or Statutes as applicable to the project.

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**AGENDA ITEM NO. 76.4**

With the due permission of the Chairman, additional agenda item was also discussed. The MoM for the additional agenda shall be circulated separately.

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**LIST OF PARTICIPANTS OF EAC (INFRASTRUCTURE-2) IN 76<sup>th</sup> MEETING OF EAC (INFRA-2) HELD ON 16<sup>th</sup> NOVEMBER, 2021 THROUGH VIDEO CONFERENCING**

S. No.	Name	Designation	Attendance	Sign
			16.11.2021	Through VC
1.	Dr. N. P. Shukla	Chairman	P	-
2.	Dr. H. C. Sharatchandra	Member	P	-
3.	Shri V. Suresh	Member	P	-
4.	Dr. V. S. Naidu	Member	P	-
5.	Shri B. C. Nigam	Member	P	-
6.	Dr. ManoranjanHota	Member	P	-
7.	Dr. DipankarSaha	Member	P	-
8.	Dr. JayeshRuparelia	Member	P	-
9.	Dr. (Mrs.) Mayuri H. Pandya	Member	A	-
10.	Dr. M. V. Ramana Murthy	Member	A	-
11.	Prof. Dr. P.S.N. Rao	Member	A	-
12.	Dr. Dharmendra Kumar Gupta	Scientist "F"& Member Secretary	P	-

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**ANNEXURE-1**

**Standard EC Conditions for Project/Activity 7(a): Airport**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
- iv. 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 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. Clearance from Directorate General of Civil Aviation (DGCA) and Airports Authority of India (AAI) for safety and project facilities shall be obtained.
- vii. 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.
- viii. 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.

**II. Air quality monitoring and preservation:**

- i. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the airport area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- ii. 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. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.
- iv. Soil and other construction materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet
- v. The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.
- vi. Excavated materials shall be handled and transported in a manner that they do not cause any problems of air pollution.
- vii. The soil/construction materials carried by the vehicle should be covered by impervious sheeting to ensure that the dusty materials do not leak from the vehicle.

**III. Water quality monitoring and preservation:**

- i. Run off from chemicals and other contaminants from aircraft maintenance and other areas within the airport shall be suitably contained and treated before disposal. A spillage and contaminant containment plan shall be drawn up and implemented to the satisfaction of the State Pollution Control Board.
- ii. Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.

- iii. The runoff from paved structures like Runways, Taxiways, can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.
  - iv. Storm water drains are to be built for discharging storm water from the air-field to avoid flooding/water logging in project area. Domestic and industrial waste water shall not be allowed to be discharged into storm water drains.
  - v. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rain water harvesting structures shall conform to CGWA designs. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
  - vi. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
  - vii. Sewage Treatment Plant shall be provided to treat the wastewater generated from airport. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression
  - viii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
  - ix. A detailed drainage plan for rain water shall be drawn up and implemented.
- IV. Noise monitoring and prevention:**
- i. 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 as a part of six-monthly compliance report.
  - ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.
  - 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.
  - iv. During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
  - v. Where construction activity is likely to cause noise nuisance to nearby residents, restrict operation hours between 7 am to 6 pm.
- V. Energy Conservation measures:**
- i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.
- VI. Waste management:**
- i. Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal/vertical).
  - ii. The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.
  - iii. Solid inert waste found on construction sites consists of building rubble, demolition material, concrete; bricks, timber, plastic, glass, metals, bitumen etc shall be reused/recycled or disposed off as per Solid Waste Management Rules, 2016 and Construction and Demolition Waste Management Rules, 2016.
  - iv. 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.
  - v. The project proponents shall implement a management plan duly approved by the State Pollution Control Board and obtain its permissions for the safe handling and disposal of:
    - a. Trash collected in flight and disposed at the airport including segregation, collection and disposed.
    - b. Toilet wastes and sewage collected from aircrafts and disposed at the Airport.
    - c. Wastes arising out of maintenance and workshops
    - d. Wastes arising out of eateries and shops situated inside the airport complex.
    - e. Hazardous and other wastes
  - vi. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircrafts, terminals and offices), wood, waste oil and solvents (from maintenance and engineering operations), kitchen wastes and vegetable oils (from caterers) shall be carried out. Solid wastes shall be disposed in accordance to the Solid Waste Management Rules, 2016 as amended.

- vii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- viii. 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.

**VII. Green Belt:**

- i. Green belt shall be developed in area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the Air Port.
- ii. Top soil shall be separately stored and used in the development of green belt.

**VIII. Public hearing and Human health issues:**

- i. Construction site should be adequately barricaded before the construction begins.
- ii. Traffic congestion near the entry and exit points from the roads adjoining the airport shall be avoided. Parking should be fully internalized and no public space should be utilized.
- iii. Provision of Electro-mechanical doors for toilets meant for disabled passengers. Children nursing/feeding room to be located conveniently near arrival and departure gates.
- iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- v. 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.
- vi. Occupational health surveillance of the workers shall be done on a regular basis.

**IX. 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 or State, 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 who in turn has to display the same for 30 days from the date of receipt.
- iii. 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.
- iv. 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.
- v. 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 procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. 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.
- vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- xi. 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, commencing the land development work and start of production operation by the project.
- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. 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.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. 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/NGT and any other Court of Law relating to the subject matter.
- xx. 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.

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**ANNEXURE-2**

**Standard EC Conditions for Project/Activity 7(d): Common hazardous waste treatment, storage and disposal facilities (TSDFs)**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. 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 from the concerned State Pollution Control Board/ Committee.
- v. The Project proponent should ensure that the TSDF fulfils all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016.
- vi. The project proponents shall adhere to all conditions as prescribed in the Protocol for 'Performance Evaluation and Monitoring of the Common Hazardous waste treatment, storage and disposal facilities' published by the CPCB in May, 2010.
- vii. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
- viii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- ix. 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.
- x. 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

**II. Air quality monitoring and preservation:**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- vi. Appropriate Air Pollution Control (As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vii. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory
- viii. Gas generated in the Land fill should be properly collected, monitored and flared

- ix. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

**III. Water quality monitoring and preservation:**

- i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. No discharge in nearby river(s)/pond(s).
- v. The depth of the land fill site shall be decided based on the ground water table at the site.
- vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- viii. The Company shall review the unit operations provided for the treatment of effluents, specially the sequencing of MEE after tertiary treatment, the source of permeate when no R.O. is recommended and the treatment of MEE condensate. The scheme for treatment of effluents shall be as permitted by the Pollution Control Board/Committee under the provisions of consent to establish.
- ix. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.
- x. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- xi. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.
- xii. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- xiii. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.

**IV. Noise monitoring and prevention:**

- i. 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 as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- 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. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

**VI. Waste management:**

- i. The TSDF should only handle the waste generated from the member units.
- ii. Periodical soil monitoring to check the contamination in and around the site shall be carried out.
- iii. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.

- iv. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
- v. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- vi. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- vii. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.

**VII. Green Belt:**

- i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
- ii. Top soil shall be separately stored and used in the development of green belt.

**VIII. Public hearing and Human health issues:**

- i. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
- ii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- iii. 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.
- iv. Occupational health surveillance of the workers shall be done on a regular basis.

**IX. 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 or State, 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 who in turn has to display the same for 30 days from the date of receipt.
- iii. 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.
- iv. 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.
- v. 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 procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. 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.
- vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- xi. 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, commencing the land development work and start of production operation by the project.
- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. 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.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xix. 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/NGT and any other Court of Law relating to the subject matter.
- xx. 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.

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**ANNEXURE-3**

**Standard EC Conditions for Project/Activity 7(da): Bio-Medical Waste Treatment Facilities**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. 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 from the concerned State Pollution Control Board/ Committee.
- v. Transportation and handling of Bio-medical Wastes shall be as per the Bio-Medical Waste Management Rules, 2016 including the section 129 to 137 of Central Motor Vehicle Rules 1989.
- vi. Project shall fulfill all the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 including collection and transportation design etc. and also guidelines for Common Hazardous Waste Incineration - 2005, issued by CPCB Guidelines of CPCB/MPPCB for Bio-medical Waste Common Hazardous Wastes incinerators shall be followed.
- vii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- viii. 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.
- ix. 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

**II. Air quality monitoring and preservation:**

- i. The project proponent shall install emission monitoring system including Dioxin and furans to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Periodical air quality monitoring in and around the site including VOC, HC shall be carried out.
- iii. Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, so as to achieve Total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight of the material.
- iv. Venturi scrubber (alkaline) should be provided with the incinerator with stack of adequate height (Minimum 30 meters) to control particulate emission within 50mg/Nm<sup>3</sup>.
- v. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards. All necessary air pollution control devices (quenching, Venturi scrubber, mist eliminator) should be provided for compliance of emission standards.
- vi. Masking agents should be used for odour control.

**III. Water quality monitoring and preservation:**

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Waste water generated from the facility shall be treated in the ETP and treated waste water shall be reused in the APCD connected to the incinerator. The water quality of treated effluent shall meet the norms prescribed by State Pollution Control Board. Zero discharge should be maintained.
- iii. Process effluent/any waste water should not be allowed to mix with storm water.
- iv. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- v. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.

- vi. A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.
  - vii. The leachate from the facility shall be collected and treated to meet the prescribed standards before disposal.
  - viii. Magnetic flow meters shall be provided at the inlet and outlet of the ETP & all ground water abstraction points and records for the same shall be maintained regularly.
  - ix. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.
- IV. Noise monitoring and prevention:**
- i. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- V. Energy Conservation measures:**
- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
  - ii. Provide LED lights in their offices and residential areas
- VI. Waste management:**
- i. Incinerated ash shall be disposed at approved TSDF and MoU made in this regard shall be submitted to the Ministry prior to the commencement.
  - ii. The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016.
  - iii. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
  - iv. 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
  - v. No landfill site is allowed within the CBWTF site
  - vi. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
- VII. Green Belt:**
- i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- VIII. Public hearing and Human health issues:**
- i. Feeding of materials/Bio-medical waste should be mechanized and automatic no manual feeding is permitted.
  - ii. Proper parking facility should be provided for employees & transport used for collection & disposal of waste materials.
  - iii. Necessary provision shall be made for fire-fighting facilities within the complex.
  - iv. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
  - v. Emergency plan shall be drawn in consultation with SPCB/CPCB and implemented in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or gradual release of hazardous waste or hazardous waste constituents to air, soil or surface water.
  - vi. 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.
  - vii. Occupational health surveillance of the workers shall be done on a regular basis.
- IX. Miscellaneous:**
- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed
  - 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 who in turn has to display the same for 30 days from the date of receipt.
  - iii. 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.
  - iv. 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.

- v. 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 procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and / or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. 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.
- vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels namely; PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xi. 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, commencing the land development work and start of production operation by the project.
- xii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xiv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xv. 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.
- xvi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xviii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
- xix. 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/NGT and any other Court of Law relating to the subject matter.
- xx. 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.

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**ANNEXURE-4**

**Standard EC Conditions for Project/Activity 7(g): Aerial ropeways**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. 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 from the concerned State Pollution Control Board/Committee.
- 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, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

**II. Air quality monitoring and preservation:**

- i. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission) covering upwind and downwind directions.
- ii. Appropriate Air Pollution Control (APC) system (both during the construction and operation) shall be provided for all the dust generating points *inter alia* including loading, unloading, transfer points, fugitive dust from all vulnerable sources, so as to comply prescribed standards.
- iii. 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. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- iv. Adequate parking shall be constructed at upper terminal and lower terminal. PP shall ensure smooth traffic management.

**III. Water quality monitoring and preservation:**

- i. Storm water from the project area shall be passed through settling chamber.
- ii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- iii. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
- iv. Prior permission from competent authority shall be obtained for use of fresh water.
- v. No wastewater shall be discharged in open. Appropriate Water Pollution Control system shall be provided for treatment of waste water.
- vi. A certificate from the competent authority, in case of discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.

**IV. Noise monitoring and prevention:**

- i. 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 as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

**V. Energy Conservation measures:**

- i. Energy conservation measures like installation of LED/CFLs/TFLs for lighting should be integral part of the project design and should be in place before project commissioning.
- ii. Solar energy shall be used in the project i.e., at upper terminal and lower terminal to reduce the carbon footprint.

**VII. Waste management**

- i. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

- ii. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.
  - iii. 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.
- VIII. Public hearing and Human health/safety issues:**
- i. Comply with the safety procedures, norms and guidelines (as applicable) as outlined in IS 5228, IS 5229 and IS 5230, code of practice for construction of aerial ropeways, Bureau of Indian Standards.
  - ii. Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
  - iii. Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
  - iv. The project should conform to the norms prescribed by the Director General Mine safety. Necessary clearances in this regard shall be obtained.
  - v. Adequate infrastructure, including power, shall be provided for emergency situations and disaster management.
  - vi. Adequate first aid facility shall be provided during construction and operation phase of the project.
  - vii. Regular safety inspection shall be carried out of the ropeway project and a copy of safety inspection report should be submitted to the Regional Office.
  - viii. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- IX Miscellaneous:**
- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
  - 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 who in turn has to display the same for 30 days from the date of receipt.
  - iii. 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.
  - iv. 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.
  - v. 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 procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
  - vi. 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.
  - vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
  - viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
  - ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
  - x. 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, commencing the land development work and start of production operation by the project.
  - xi. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
  - xii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

- xiii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xiv. 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.
- xv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xvi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xvii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xviii. 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.
- xix. 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.

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**ANNEXURE-5**

**Standard EC Conditions for Project/Activity 7(h): Common Effluent Treatment plants (CETPs)**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. 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 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. 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.
- vii. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

**II. Air quality monitoring and preservation:**

- i. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Diesel generating sets shall be installed, in the downwind directions.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for fugitive dust from all vulnerable sources, so as to comply prescribed standards.

**III. Water quality monitoring and preservation:**

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- iii. There shall be flow meters at inlet and outlet of CETP to monitor the flow. Suitable meters shall be provided to measure the quantity of effluent received, quantity of effluent recycled/reused and discharged.
- iv. The units and the CETP will maintain daily log book of the quantity and quality of discharge from the units, quantity of inflow into the CETP, details of the treatment at each stage of the CETP including the raw materials used, quantity of the treated water proposed to be recycled, reused within the Industrial park/units, quantity of the treated effluent discharged. All the above information shall be provided on- line of the web site exclusively prepared for the purpose by the CETP owner. The website shall be accessible by the public. The financial and energy details of the CETP will also be provided along with details of the workers of the CETP.
- v. The CETP operator will maintain an annual register of member units which will contain the details of products with installed capacities and quality and quantity of effluents accepted for discharge. This will form a part of the initial and renewal applications for consent to operate to be made before the State Pollution Control Board.
- vi. No changes in installed capacity, quality or quantity of effluents as agreed upon in the initial MOU between the operator and the member units, addition of any new member units shall be carried without prior approval of the ministry
- vii. The Unit shall inform the State Pollution Control Board at least a week prior to undertaking maintenance activities in the recycle system and store/dispose treated effluents under their advice in the matter.
- viii. The unit shall also immediately inform the Pollution Control Board of any breakdown in the recycling system, store the effluents in the interim period and dispose effluents only as advised by the Pollution Control Board.
- ix. The MoU between CETP and member units shall indicate the maximum quantity of effluent to be sent to the CETP along with the quality.
- x. The unit shall maintain a robust system of conveyance for primary treated effluents from the

member units and constantly monitor the influent quality to the CETP. The Management of the CETP and the individual member shall be jointly and severally responsible for conveyance and pre-treatment of effluents. Only those units will be authorized to send their effluents to the CETP which have a valid consent of the Pollution Control Board and which meet the primary treated standards as prescribed. The CETP operator shall with the consent of the State Pollution Control Board retain the powers to delink the defaulter unit from entering the conveyance system.

- xi. The effluent from member units shall be transported through pipeline. In case the effluent is transported thorough road, it shall be transported through CETP tankers only duly maintaining proper manifest system. The vehicles shall be fitted with proper GPS system.
- xii. Before accepting any effluent from member units, the same shall be as permitted by the SPCB in the consent order. No effluent from any unit shall be accepted without consent from SPCB under the Water Act, 1974 as amended.
- xiii. Treated water shall be disposed on land for irrigation. An irrigation management plan shall be drawn up in consultation with and to the satisfaction of the State Pollution Control Board.
- xiv. The Project proponents will build operate and maintain the collection and conveyance system to transport effluents from the industrial units in consultation with and to the satisfaction of the State Pollution Control Board and ensure that the industrial units meet the primary effluent standards prescribed by the State Pollution Control Board.
- xv. The State Pollution Control Board will also evaluate the treatment efficiency of the Effluent Treatment Plant (ETP) and its capability of meeting the prescribed standards. The final scheme of treatment would be such as is approved by the Pollution Control Board in the Consent to Establish.
- xvi. The project proponents will create an institutional arrangement for the involvement of individual members in the management of the CETP.

**IV. Noise monitoring and prevention:**

- i. 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 as a part of six-monthly compliance report.
- ii. Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.
- 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. Waste management:**

- i. ETP sludge generated from CETP facility shall be handled and disposed to nearby authorized TSDF site as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
- ii. Non-Hazardous solid wastes and sludge arising out of the operation of the CETP shall be adequately disposed as per the Consent to be availed from the State Pollution Control Board. Non-Hazardous solid wastes and sludge shall not be mixed with Hazardous wastes.
- iii. The CETP shall have adequate power back up facility, to meet the energy requirement in case of power failure from the grid.
- iv. The site for aerobic composting shall be selected and developed in consultation with and to the satisfaction of the State Pollution Control Board. Odour and insect nuisance shall be adequately controlled.
- v. 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.
- vi. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.

**VI. Energy Conservation measures:**

- i. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- ii. Provide LED lights in their offices and residential areas

**VII. Green Belt:**

- i. Green belt shall be developed in area as provided in project details, with native tree Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

**VIII. Public hearing and Human health issues:**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. Adequate infrastructure, including power, shall be provided for emergency situations and disaster management.

- iii. 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.
- iv. Occupational health surveillance of the workers shall be done on a regular basis.

**IX. Miscellaneous:**

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- 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 who in turn has to display the same for 30 days from the date of receipt.
- iii. 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.
- iv. 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.
- v. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest /wildlife norms /conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms /conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. 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.
- vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- x. The criteria pollutant levels or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xi. 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, commencing the land development work and start of operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- 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 Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- 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.

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**ANNEXURE-6**

**Standard EC Conditions for Project/Activity 7(i): Common Municipal Solid Waste Management Facility (CMSWMF)**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)
- iv. 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 from the concerned State Pollution Control Board/Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. 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.
- vii. 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.

**II. Air quality monitoring and preservation:**

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (for projects involving incineration).
- ii. As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bag filter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator. Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO<sub>2</sub>, NO<sub>x</sub> and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.
- iii. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory.
- iv. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
- v. Gas generated in the Land fill should be properly collected, monitored and flared.
- vi. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

**III. Water quality monitoring and preservation:**

- i. The project proponent shall install continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.
- iii. The depth of the land fill site shall be decided based on the ground water table at the site.
- iv. Rain water runoff from the landfill area and other hazardous waste management area shall be

collected and treated in the effluent treatment plant.

- v. Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- vi. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- vii. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- viii. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.
- ix. Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused within the project.
- x. A certificate from the competent authority for discharging treated effluent/untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point should be obtained.

**IV. Waste management:**

- i. No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, shall be handled in the premises.
- ii. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- iii. 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.
- iv. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.

**V. Transportation:**

- i. Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 to prevent unwanted access.
- ii. Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
- iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

**VI. Green belt:**

- i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
- ii. Top soil shall be separately stored and used in the development of green belt.

**VII. Public hearing and Human health/safety issues:**

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. 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.
- iii. Occupational health surveillance of the workers shall be done on a regular basis.

**IX. 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 or State, 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. (for projects involving incineration)
- ii. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed (For projects involving only Landfill without incineration)

- iii. 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 who in turn has to display the same for 30 days from the date of receipt.
- 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 company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/ conditions and/or shareholder's/stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- vi. 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.
- vii. 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 Ministry/Regional Office along with the Six Monthly Compliance Report.
- viii. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- ix. 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.
- x. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- xi. The criteria pollutant levels namely; PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain (in case of incineration involved).
- xii. 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, commencing the land development work and start of production operation by the project.
- ix. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- x. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xi. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xii. 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.
- xiii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xvi. 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.
- xvii. 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.

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**ANNEXURE-7**

**Standard EC Conditions for Project/Activity 8(a/b): Building and Construction projects/Townships and Area Development projects**

**I. Statutory compliance:**

- i. 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.
- ii. 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.
- iii. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
- iv. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- v. 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 from the concerned State Pollution Control Board/ Committee.
- vi. The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
- vii. 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.
- viii. 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.
- ix. The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
- x. 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 exceedance in ambient air quality at the site.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub>) 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. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- v. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & 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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi. Sand, murrum, 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 Environmental (Protection) prescribed for air and noise emission standards.

- 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) norms.
- xii. For indoor air quality the ventilation provisions 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. Total fresh water use shall not exceed the proposed requirement as provided in the project details.
  - iv. 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, MoEF&CC along with six monthly Monitoring reports.
  - v. 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.
  - vi. 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.
  - vii. 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.
  - viii. 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.
  - ix. 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.
  - x. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
  - xi. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
  - xii. A rain water harvesting plan needs to be designed 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.
  - xiii. All recharge should be limited to shallow aquifer.
  - xiv. No ground water shall be used during construction phase of the project.
  - xv. 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 CGWA for any ground water abstraction or dewatering.
  - xvi. 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, MoEF&CC along with six monthly Monitoring reports.
  - xvii. Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
  - xviii. No sewage or untreated effluent water would be discharged through storm water drains.
  - xix. 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 Ministry 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.

- xx. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
- xxi. 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 residential area/commercial area/industrial area/silence 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 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 apartment 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 M.S.W. 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. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
- iv. Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
- v. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
- vi. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
- vii. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. 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<sup>th</sup> August, 2003 and 25<sup>th</sup> January, 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.

**VII. Green Cover:**

- i. No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
- ii. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The 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.
- iii. Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
- iv. 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.
- iii. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

**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 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. Miscellaneous:**

- i. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.
- 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 who in turn has to display the same for 30 days from the date of receipt.

- iii. 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.
- iv. 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.
- v. 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 procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company 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 MoEF&CC as a part of six-monthly report.
- vi. 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.
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- viii. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- 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, commencing the land development work and start of production operation by the project.
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- xi. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.
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- xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
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- xvii. 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.
- xviii. 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.

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