

To  
The Scientist - E  
Zonal Office,  
Central Pollution Control Board,  
I & II Floors, Thimmaiah Main Rd  
7<sup>th</sup> D-Cross, Shivnagar,  
Bengaluru 560 079.

RC. No. 1389/LSE/APCRDA/2015 Dt. 15.07.16.

Sir,

**Sub:** APCRDA – Environmental clearance-1<sup>st</sup> Half yearly Compliance report- 2016 for the EC issued for Greenfield capital city, Amaravati – submission- Regarding.

**Ref:** Environment Clearance Order No. SEIAA/AP/GNT-151/2015 - dated 09-10-2015

Adverting to the reference cited above and as per the General condition No. (vii) of the Environment Clearance I am herewith submitting the 1<sup>st</sup> Half yearly compliance report for the year 2016 for Amaravati Greenfield Capital City.

  
Commissioner  
APCRDA & CA  
Vijayawada  
Andhra Pradesh.

  
SE  
15/7/16

1. Copy to the Joint chief Environmental Engineer, AP Pollution Control Board, Zonal office, Plot No. 41, Gurunanak Road, Opp. SBH, Sri Kanakadurga officer's colony, Vijayawada -520 008.
2. Copy submitted to the chairman, State Level Environmental Impact Assessment Authority, AP Pollution Control Board, Paryavaran Bhavan, A-III, Industrial Estate, Sanath Nagar, Hyderabad-18.
3. Copy submitted to the Addl. Principal Chief Conservator of Forests (C), Ministry of Environment, Forests & Climate Change, Regional office (SEZ), I & II Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungabakkam, Chennai-600 034.

## Greenfield Capital City Amaravati

### I Half yearly Compliance report for 2016

#### SPECIFIC CONDITIONS:

#### WATER ENVIRONMENT

Sl.No	EC Condition	Compliance status
1	The Krishna river be protected from all types of harmful discharges from all developmental activities before, during and after Capital Region Development.	No harmful discharges will be released in to the river Krishna before, during and after the capital region development. Each sub project of the capital city development project will have an environment management plan which will address waste management as per the standard procedures.
2	The proponent shall utilize only surface water from Krishna River and Kondaveetivagu to the tune of 1067 MLD, after obtaining the approvals from the concerned statutory bodies and after proper treatment in the proposed Water Treatment Plants. Proponent shall ensure supply of water round the clock i.e., 24x7, meeting the drinking water quality standards as per IS10500.	The water source for the capital city will be from the Krishna river and Kondaveetivagu and will be supplied 24X7 to the IS 10500 drinking water standards. The necessary approvals will be taken from the competent authority prior to the development activities.
3	The proponent shall construct nine internal detention ponds and two reservoirs within the Capital City in addition to two external detention ponds of adequate capacity to overcome the flood menace posed by the Kondaveetivagu and its tributaries. The proponent shall carry detailed hydrological study of the Kondaveetivagu and its tributaries and plan location of detention ponds and reservoirs to achieve twin objectives – combat of inundation and utilization of water. The proponent shall consider factor of increase in intensity of the flow and volume due to pavement of the City and area inundated for 1 hour or more and having water depth more than 6 inches may be considered as affected by water logging for designing of Storm Water Drainage System. The proponent shall take into account climate change considerations and design storm water drains for 20% more capacity than the calculated discharge. The proponent shall protect and improve the existing natural drains and construct modern storm water drainage system under any circumstances. Proponent shall construct adequate detention ponds and reservoirs at appropriate locations to collect entire storm water. Proponent shall also take measures to strengthen the Krishna River Bund to minimize flood related issues.	It is planned to construct detention ponds and two reservoirs within the capital city with an objective to mitigate inundation and also to utilize the storm water. The storm water system will be designed considering the factors of increased intensity due to paved surface and the climate change and drains will be designed with 20% more capacity than the calculated discharge. It is proposed to strengthen Krishna river bund, protect existing natural drains, river training etc.

4	Detailed studies on the flood management of the Storm water drains, mainly Kondaveetivagu and its branches and a detailed plan to avoid inundation of the areas be developed taking in to account of the impact of the increased built up area in different development zones of the project.	Detailed study on storm water drains in the capital city is done considering the built up area factor contribution in different development zones of the project and the same will be considered in the development of capital city to avoid inundation of the areas.
5	The proponent shall ensure cleaning of storm water drains at least three times a year. (i) First, the process must start by 31 March each year. (ii) The drains should also be thoroughly cleaned after first heavy shower (iii) subsequently, after retreating of rain i.e., in the post monsoon.	It will be complied. During 2016 pre-monsoon all storm water drains were cleaned.
6	Proponent shall ensure construction of rain water harvesting structures and also promote rain water storage and use system by considering heavy rains in the area. Proponent shall make these as mandatory by incorporating in the Bye-laws of APCRDA & CA.	It will be ensured that rain water harvesting structures are constructed and further it will be seen that the rain water is stored/utilised for construction/maintenance of infrastructure etc as per the feasibility. The construction of RWH structure is made mandatory by incorporating it as guideline in Bye law.
7	Water pumping system and sewage conveyance and treatment systems are energy intensive and as such the proponent shall follow Bureau of Energy Efficiency Norms.	It will be ensured that the pumping systems, conveyance systems and treatments systems will be developed as energy efficient systems in conformation with Bureau of Energy Efficiency norms.
8	Proponent shall encourage low flow plumbing efficient fixtures, sensors, auto valves, pressures reducing devices including for toilets, faucet aerators and shower heads to conserve the water. Proponent shall incorporate these guidelines in the Bye-laws.	The usage of water conservation plumbing fixtures will be ensured will be incorporated as a guideline in the bye-laws.
9	The proponent shall ensure 100% collection of sewage by covering entire area of the city with modern underground sewerage network. The proponent shall treat entire ( 100% ) waste water of 877 MLD (year 2050) in the proposed Five Sewage Treatment Plants and one dedicated Industrial Waste Water Treatment Plant to the International Municipal Sewage reuse standards of BOD $\leq$ 10 mg/l, COD $\leq$ 10 mg/l, Total Suspended Solids (TSS) $\leq$ 10 mg/l, Residual Chlorine $\leq$ 1MG/l and Faecal Coli /100 ML – No detectable levels as committed in EIA report. The proponent shall recycle 100% of treated sewage for non potable applications like flushing, gardening, road and vehicle cleaning, HVAC, fire protection, construction activities, industrial applications by lying dedicated pipeline for supply of treated grey water as committed in the EIA report. The	In the capital city project sewage treatment plants for domestic effluents and a dedicated industrial waste water treatment plant with underground sewerage network will be developed. The treatment of the effluents will be done to the international standards and will recycle 100% of treated sewage for the development and maintenance of greenery, road cleaning and other purposes. Storage ponds with adequate capacity will be provided

	proponent shall construct treated sewage storage ponds of adequate capacity with HDPE liner to store treated sewage during rainy season as committed. The proponent shall lay dual piping at street level shall be laid out in service ducts with 24 x7 water supply provision by ensuring pressure in the main water supply network is always maintained at least twice of the pressure in dual pipe carrying treated waste water to avoid contamination of the fresh water	for the storage of treated sewage during monsoons. It will be ensured to avoid contamination of the treated waste water with the fresh water.
10	The proponent shall construct Sewage Treatment Plant of capacity 216 MLD in the 1 <sup>st</sup> phase and reuse 114 MLD for green belt development and Horticulture and 102 MLD for flushing, construction activities, HVAC requirements, road washings, emergency fire fighting, industrial applications etc., as committed. The proponent shall also construct 3500 MLD treated sewage storage pond for storage of treated sewage in the rainy season as committed. The proponent shall undertake construction of Sewage Treatment Plant simultaneously with the construction of the city.	Development of the STP will be started simultaneously with construction of the city and in the phase I the Capacity of the STP will be 216 MLD and the treated 114 MLD will be reused as committed. Additionally a storage pond of 3500 MLD will be constructed to store treated water during monsoons.  STP is part of the design in the proposed Interim Government complex.
11	The proponent shall provide continuous online water quality monitoring facilities for WTPs, STPs and upstream of drinking water source at Krishna River. Results of monitoring shall be linked to SPCB / CPCB website.	Water quality monitoring systems will be provided at the WTPs, STPs and upstream of River Krishna and the same will be linked with SPCB website.  SCADA system is part of the proposal at WTP in the proposed Interim Government Complex.
12	All roads should have rain water drains connected separately (from the sewage network) to the treatment facility of the zone.	A separate storm water network along all the capital city roads will be developed and will be connected to the nearest treatment facility.
13	Appropriate sites be identified and selected for establishing the STPs for different zones, and the proponent shall reserve the area within 200 m from the STPs, as no habitation vegetation zone and may use for establishing waste recycling or processing or handling facilities for the respective zone.	Suitable sites have been identified for the establishment of the STPs and a buffer zone around the STP will be demarcated as no habitation zone for the Auxiliary activities.
14	Water quality of all the surface water bodies, including the storm water drains be monitored during pre-monsoon and post-monsoon seasons, for their management purposes and the report is submitted as compliance.	It will be complied with
15	The proponent shall prepare water footprint and carry auditing every year.	It will be complied with.

## AIR ENVIRONMENT

1	<p>The proponent shall give priority for walking, cycling and integrated public transport system for laying of the roads and usage of cleaner fuels and plying of fuel efficient vehicles on the road.</p>	<p>In the capital city the roads will be constructed with pedestrian, cycling facilities and integrated public transport systems.</p> <p>Priority will be given for the usage of cleaner fuels and fuel efficient vehicles.</p>
2	<p>Proponent shall construct a continuous unobstructed foot path on each side of all streets with ROW wider than 12 mtrs. Minimum width of footpath shall be 2 mtrs. In addition to space for trees/greenery/vending spaces and surface utilities. Width of footpath shall be determined based on pedestrian volume and have to be wider than 2m wherever required. Intermittent buffers, bollards and other physical elements should be used to protect foot paths from encroachment by motor vehicle parking. At least 125 trees per kilometre length of footpath on the streets shall be ensured. Spacing of trees at no place should be greater than 12 m except at intersections. On streets with ROW of 18 m or less, if pedestrian traffic is greater than 8000 per hour in both directions together, the entire ROW should be notified for pedestrianization. Footpath Elevation over the carriage way at all times should be less than 150 mm. All pedestrian facilities should be barrier free for universal access by all persons with reduced mobility including those with hearing and visual impairments. At least 5 safe street-level crossing opportunities per kilometre of street with 250m being maximum spacing between two crossings shall be ensured. Depending on context, these crossings may be signalized and / or traffic calmed (through raising crosswalk over street level by 150 mm) to reduce vehicular speed. Limiting speed on urban arterial roads and sub-arterial streets to 50 kmph and on collector and local streets to 30 kmph shall be ensured. Traffic calming of all streets with ROW of 12m or less through narrowing of driveway and meandering path with use of trees, islands and street furniture should be done and speed should be limited to 20 km/hr by design. Highways within urban areas should be avoided since they disrupt pedestrian activity and disconnect neighbourhoods. Vending spaces should be marked in addition and adjacent to the walking path, especially along high pedestrian volume areas to activate the street and make it safe. Space to be planned for utilities including drinking water kiosks and toilets so that the walking space is enhanced but not compromised.</p>	<ul style="list-style-type: none"> <li>• All roads with ROW more than 12m will be provided with footpath with minimum width of 2m and will be more as per the projected pedestrian population in that zone of development.</li> <li>• The street with ROW 18m or less and pedestrian traffic more than 8000/hr in both directions will be notified as pedestrianization.</li> <li>• Safety aspects on the streets shall be complied with considering the universal design.</li> <li>• All relevant road infrastructures will be provided on the streets and also traffic will be regulated as per the standards with advanced traffic surveillance systems.</li> <li>• Vending spaces will be demarcated on the streets in the areas with high pedestrian movement.</li> <li>• Greenery development in the capital region has been started. The details capital region greenery development is provided in the Annexure I.</li> </ul>
3	<p>Proponent shall</p>	
	<ul style="list-style-type: none"> <li>- Construct dedicated and physically segregated bicycle tracks with width of 2m or more, one in each direction on all streets with total motor vehicle carriageway larger</li> </ul>	<p>It will be complied with.</p>

	than 10 m (not ROW) after providing adequately sized footpaths in each direction based on pedestrian traffic	
	- Develop at least 5 safe street crossings per km for bicycles with spacing between two crossings not more than 250m.	It will be complied with.
	- Provide secure parking for cycles at transit stations, all public places and commercial and institutional buildings.	It will be complied with.
	- Promote and implement public sharing schemes.	It will be complied with.
4	Proponent shall design streets with emphasis on Pedestrian and cyclist safety, comfort and convenience. Proponent shall establish a dedicated unit for planning and auditing of Non-Motorized Transport (NMT) facility. Area of blocks surrounded by public access pedestrian / cyclist streets or pathways shall not exceed 2 Ha. No development shall be permitted until local street grid is put in the place which subdivides land into blocks of no more than 2 Ha.	The designs of the streets are as per the standards. A separate dedicated unit will be established for NMT. Development will be as per the city zoning regulations and Building bye laws.
5	Proponent shall develop high quality and high frequency rapid public transport system with dedicated lines for bus rapid transit system. All public facilities (institutional / educational / cultural etc.) should be accessible by public transport within 400m walking distance.	Bus rapid transit system will be provided with dedicated lines and it will be ensured that public facilities shall be accessible to public transport within 400m walking distance.
6	The proponent shall encourage battery operated vehicles by providing separate lane with a provision for recharging.	The planned public transport systems will be run with battery operated vehicles with a provision for recharge or dedicated lanes will be provided for the operation of such vehicles as per the feasibility.
7	On making available of cleaner fuels like LPG/CNG, the proponent shall ensure plying of only CNG/LPG fuelled public transport vehicles like buses, taxis, autos on the road. Proponent shall also ensure that vehicle beyond 15 years of age shall not ply in the city. Proponent shall also encourage usage of low sulphur diesel and unleaded petrol by vehicles. Proponent shall ensure plying of latest emission compliant vehicles only on road.	As per the market conditions plying of CNG/LPG fuelled Public transport vehicles and Intermediate Public vehicles will be encouraged. Vehicles with age 15 years will not be allowed on the streets. It will be ensured that vehicles use low sulphur diesel and unleaded petrol and only latest emission compliant vehicles run on road.
8	The proponent shall encourage environmental friendly modes of transport like public transport and non motorized transport and discourage usage of personal cars by devising disincentives for private car use, in the form of both spatial (like parking control) and physical (like levies on car, fuels, congesting charges).	The capital city master plan is designed with a concept of walk to work and to achieve that zoning regulation will be done, all infrastructure facilities will be provided to encourage environment friendly modes of transport. The practise of disincentives for discouraging the usage of private

		cars will be brought in place.
9	The proponent shall provide adequate parking facilities by giving priority to public vehicles and non motorized transport vehicles.	Parking facilities will be provided as per the standards and priority will be given to the public buses and NMT.
10	The proponent shall ensure that all utility lines (electricity, telephone, cable, water supply, sewerage, drainage etc.) shall be laid below the ground. Duct shall be provided along and across the roads to lay the utility lines. Major trunk (water/sewerage) lines are to be laid along the utility corridor.	All the utility lines shall be laid below the ground and a duct will be provided for such along and across the roads. Trunk lines for sewage and water supply will be laid along the utility corridor.
11	The proponent shall ensure that DG sets shall comply with noise and emission norms prescribed by MoEF& CC in Environment (Protection) Rules.	It will be complied with.
12	The proponent shall ensure development and meeting of not less than 10% of energy needs from the renewable energy sources like Solar, Wind, WTE, Bio mass etc. To meet the demands of the Capital City, atleast 120 MW of solar power with investment to the tune of RS.500 Crores and wind power with investment of Rs.100 Crores in the 1 <sup>st</sup> phase shall be taken up as committed.	It will be ensured that 10 % of the energy needs will be met from the renewable energy sources.
13	The proponent shall ensure installation of solar panels by all buildings by allocating at least 1/3 of roof top for this purpose. This is in addition to installation of solar heaters. The proponent shall incorporate these guidelines in Bye-laws.	It will be ensured that building with large roof top areas (public and private institutions/government complex/IT buildings etc) will be installed with roof top solar systems in addition to the solar heaters and shall be ensured to be incorporated as guideline in the bye-laws.
14	The proponent shall incorporate energy efficiency guidelines (Energy Conservation Building Code) and Green Building Concepts (GRIHA/IGBC/LEED) in the Bye-laws. Buildings shall utilize natural lighting and ventilation to the maximum extent. All point light sources shall be CFL or LEDs or equivalent. All linear light sources shall be T-5 or atleast 4* BEE rated TFLs or equivalent. The distributed cooling system shall be at least BEE 3* rated products. All the major buildings having connected load of more than 100 KW shall maintain power factor of above 0.95. All multi story residential apartment / complexes shall meet atleast 15% of total external lighting load through renewable energy sources and all commercial, institutional, industrial and mixed use buildings shall meet atleast 5% of the total lighting loads through the renewable energy sources. All residential buildings having plot area of more than 500 Sq.mtrs.,multi story residential apartments / complexes, hotels and banquet halls, hospitals, all government buildings, residential schools, educational institutes, hostels and industries requiring hot water shall install solar water heating systems to meet atleast 20% of hot water requirement. 24	It will be complied with and the energy efficiency guidelines shall be incorporated as guidelines in the bye laws.

	hours use buildings like hospitals, hotels, call centers, shall ensure that thermal performance of external walls and roof shall conform to ECBC 2007 requirements i.e., maximum U-factor (W/m <sup>2</sup> K) of 0.44 and 0.261 respectively and for day time use buildings U-factor of 0.44 and 0.409 respectively. U-factor for windows shall not be more than 3.30. All major buildings land complexes shall meet Energy Performance Index of less than 150kWh/Sq.m per year. All commercial buildings with connected load of 100kW and above shall invariably comply with energy conservation building code. All the Capital complexes, Commercial, institutional and major residential complexes should be constructed following <i>Green Building</i> concepts and ensure – energy efficiency, low carbon foot-print, resources conservation etc. The proponent shall ensure that all the bulk consumers of the energy, shall meet a greater part of their demand through renewable energies and avoid use of fossil fuels; The proponent shall incorporate these in Bye-laws.	
15	The proponent shall establish minimum 3 online continuous Ambient Air Quality Stations in there zones i.e, residential, commercial and business zones and connect the results to CPCB / SPCB website in the 1 <sup>st</sup> phase. Permanent Online Air Monitoring Stations for Air Quality be established, one for every 25 km <sup>2</sup> of area, located strategically considering the wind rose of the area and terrain conditions.	Air monitoring stations – 3 Nos for air quality in residential, commercial and business zones will be established in the 1 <sup>st</sup> phase. Considering wind rose and terrain conditions one monitoring station for every 25 sqkm will be established.
16	The project proponent should develop mechanism for monitoring Carbon sequestration from the plantations made and should achieve a Mean Annual Increment of the Carbon stock of at least 5 tons/Ha/annum. The proponent should monitor the carbon stock of each area, at least once in two years and submit reports.	Large scale greenery development will be developed in the capital city along all roads, in neighbourhoods like community levels parks, neighbourhood parks, town parks, district parks etc in order to achieve carbon sequestration duly planting the species that are slow growing to absorb more carbon stock levels in long run and also a carbon stock of 5tons/ha/annum. The monitoring of carbon stock will be done and reported.
17	The proponent shall prepare carbon footprint for the city and strive for carbon neutrality.	It will be complied with.  Apart from energy efficient measures, renewable energy, large scale plantation will be taken up to achieve carbon neutrality.

## SOLID WASTE MANAGEMENT

1	The proponent shall ensure that occupiers of all premises to keep two receptacles, one for the storage of food / organic /	It will be ensured that the solid waste management rules will be
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	biodegradable waste and another for non biodegradable / recyclable and other types of solid waste generated. Hazardous waste generated by households shall be kept separately in suitable container as and when such a waste is generated.	followed in the project.
2	The project proponent shall ensure that all the <i>newly developed areas</i> shall not have any open waste disposal sites on the road sides and develop efficient waste collection mechanism that ensures segregation at the origin level only.	It will be complied with. The waste management in the construction site will be incorporated as part of contractors' responsibility in the bid documents.
3	Proponent shall arrange for door to door collection and / or community bin collection of domestic waste; trade and institutional waste stored by the waste generators in segregated manner.	It will be complied with.
4	Proponent shall identify and allocate suitable pieces of land in the jurisdiction of the city to facilitate sorting of various components of recyclable material collected by waste collectors and prevent such activities being carried out on the foot paths / road side etc.	Suitable places will be allocated for sorting recyclable wastes collected. No such activity will be allowed on roadside.
5	The proponent shall identify and allocate adequate land for Multiple Transfer Stations with mechanical Material Recovery Facility for secondary segregation and storage of dry waste as committed. Transfer Stations shall be properly covered and hygienically maintained to minimize Environmental and Health Hazards.	Adequate number of transfer stations will be allocated for the mechanical recovery facility for secondary segregation and storage of dry waste. Transfer stations will be maintained as per the rules.
6	The proponent shall ensure daily sweeping of all public streets and periodical cleaning of all public places.	It will be complied with.
7	The proponent shall make arrangements for separate collection of construction and demolition waste and shall be transferred to Construction and Demolition Waste Recycling Facility. Proponent shall allocate adequate and suitable land for establishment of Construction and Demolition Waste Recycling Facilities.	To the maximum extent the construction and demolition waste shall be used for the filling up of low lying areas which are meant for development and they does not include any water bodies and further as per the construction and demolition waste rules required infrastructure arrangements will be made.
8	The proponent shall ensure that a separate adequate space for segregation / storage and decentralized processing of solid waste is demarcated in the plan for group housing or commercial / institutional or any non residential complex exceeding 200 dwellings or having a plot area of more than 10000 Sq.mtrs.	It will be ensured that during approval of the developer proposal separate space for solid waste operations are provided in the layout as per the waste management rules.
9	The proponent shall ensure collection of waste from vegetable, fruit, meat and fish markets on daily basis and promote setting up of de-centralized compost plant or bio methanisation plant	It will be ensured that Bio methanisation or Compost plant will be established at the market

	at suitable location in the market.	locations.
10	The proponent shall ensure establishment of modern abattoirs (slaughter houses) with appropriate waste management facilities. The proponent shall also take measures for establishment of Rendering Plant for disposal of carcass or parts of any dead animal in scientific manner.	It will be complied with.
11	The proponent shall allocate suitable and adequate site for setting up of Common Bio Medical Waste Treatment and Disposal Facility within the city limits.	A common biomedical waste treatment and disposal facility will be established within the city limits
12	Proponent shall make arrangement for setting up of Waste Collection Centers for plastic waste in association with plastic manufacturers. The Proponent shall also ensure safe collection, storage, segregation and transportation, processing and disposal of plastic waste in environmentally sound manner. The proponent shall allocate suitable and adequate site for setting up of plastic recycling, processing and disposal facilities.	Collection centers for plastic waste will be provided in the city. Site for Plastic recycling, processing and disposal Facility will be provided within the Integrated Solid Waste Management Facility.
13	The proponent shall facilitate setting up of E-waste Collection Centers by the producers and channelize e-waste to recyclers or dismantlers. The proponent shall allocate suitable and adequate site for setting up of e-waste recycling / dismantling facilities.	Collection centers for electronic waste will be provided in the city. Site for E- waste recycling and dismantling Facility will be provided within the Integrated Solid Waste Management Facility.
14	The proponent shall identify and allocate suitable site for establishment of common Hazardous Waste Treatment and Disposal Facility.	Site for Hazardous Waste Treatment and Disposal Facility will be provided within the Integrated Solid Waste Management Facility.
15	The proponent shall facilitate establishment of used battery Collection Centers by manufactures / importers / assemblers / reconditioners and canalize the used batteries to register recyclers. Proponent shall allocate suitable site for setting up of used battery recycling facilities.	Site within the integrated waste management facility will be allocated for the used battery collection and recycling.
16	Proponent shall ensure proper collection and scientific disposal of sludge from the water treatment plants, sewage treatment plants, water seal latrines and septic tanks.	The sludge generated from different sources will be collected and disposed scientifically as per standard guidelines.
17	Proponent shall take measures for proper collection and scientific disposal of bulky waste like discarded tables, chairs, cots, cub boards, mattresses, gas cookers, microwave ovens, washing machines etc.	It will be complied with.
18	Proponent shall take measures for establishment of state of art modern Integrated Solid Waste Management Facility for the city as committed consisting of Sorting / Material Recovery Plant, Compost Plant / Anaerobic Digesters, Waste to Energy Plant, Construction and Demolition Waste Recycling Plant, Bio medical Waste Facility, Plastic Waste Processing and Recycling Facility and Engineered Landfill Facility. Proponent shall allocate	As committed an integrated solid waste management facility with facilities to handle construction waste, bio medical waste, plastics, organic wastes, land fill etc will be constructed in 1 <sup>st</sup> phase.

	suitable and adequate space for ISWMF in the city limits and ensure establishment of ISWMF simultaneously with the construction of the city in the first phase itself.	
19	The proponent shall maintain adequate green buffer around Integrated Solid Waste Management Facility and Common Hazardous Waste Treatment and Disposal facility By carrying proper assessment, but not less than 100 mtrs width.	A greenbelt with a minimum width of 100m around integrated solid waste management facility and common hazardous waste treatment and disposal facility will be developed.
20	The proponent shall ensure usage of fly ash for levelling / reclamation of low lying areas, road embankments, for raising platforms in inundated areas, and usage of fly ash based products for construction purpose including fly ash bricks, PPC cement, Concrete etc., in compliance with Fly Ash Notification issued by the MoEF under Environment (Protection) Act. The proponent shall incorporate usage of fly ash by construction agencies in the Bye-laws.	It will be ensured that the utilization of fly ash in different forms will be done in the capital city development works in compliance with fly ash notification issued by MoEF. Usage of flyashbased products will be incorporated as guideline in bye laws.

## ECOLOGY

1	A list of all existing water bodies (including ponds, tanks, drains, irrigating channels) falling in the proposed area, shall be prepared village wise with survey no., extent, use and other details duly certified by a competent authority and a certified map of these water bodies as on project commencement date should be kept as base map with the APCRDA & CA, and should be displayed on its web site;	Noted.
2	All construction activities by the proponent should ensure that the activities do not alter or do not adversely affect the water bodies and their ecology;	It will be ensured that the construction activities do not adversely affect the water bodies and it is regulated by terms and conditions as part of liability from the developer/contractor side.
3	Improvement or rehabilitation of existing natural streams, channels / nallas shall be carried out without disturbing the ecological habitat.	The improvement of the existing natural streams, canals will be done without disturbing the ecological habitat.
4	No untreated or treated wastewater shall be discharged in any of the water bodies including Krishna River under any circumstances.	No untreated or treated waste water shall be discharged in any of the water bodies including Krishna river and all the treated waste water will be used for the construction activities or greenery purpose with additional storage facilities.
5	The proponent shall create primary green spaces of 7200 Ha. Consisting of city parks, lake parks, town parks, neighbourhood parks as committed. The proponent shall create primary green	The green spaces in the capital city will be in the form of active and passive spaces. The allotted area for

	space of 3924.57 Ha in the 1 <sup>st</sup> phase as committed.	greenery will be around 30 % of the capital city Area.
6	The proponent shall create and maintain secondary green space of 1910 Ha. Weave through the townships connecting the various town and neighbourhood parks acting as a passive recreation places, interactive jogging trails and Non Motorized Transport corridors across the city. The proponent shall create secondary green space of 510.04 Ha in the 1 <sup>st</sup> phase as committed.	It will be complied with.
7	The proponent shall protect and conserve the existing water bodies of 4815 Ha. In addition to creating new water bodies integrated with green spaces as committed.	All the existing water bodies of 4815 ha. will be protected and conserved in addition to the new water bodies.
8	A buffer of 30m on either side of canals and streams; 50m around water bodies and 100m along the Krishna River Front shall be reserved as greenbelt without allowing any development. Plantation along the side of the roads and in the open spaces shall be developed to act as sinks of air pollutants.	Buffer will be maintained with greenery on either side of canals and streams upto a distance of 30m ; and a buffer of 50m around water bodies and upto 100 m along Krishna river.
9	The proponent shall encourage urban agriculture to meet the city food requirements and reserve high value agriculture land wherever possible for this purpose as committed.	Urban Agriculture will be encouraged.
10	The proponent shall utilize natural features such as forest and hills to create regional green network as committed.	It will be Complied with.
11	The proponent shall utilize reserve forest land of 251.814 hectares, after obtaining approval for diversion from competent authorities for development of green belt / eco friendly activities only.	Diversion proposals were submitted to the GoI for 251.77 Ha. As per the conditions stipulated by the GoI only the forest lands will be utilised.
12	The proponent shall utilize treated sewage water for irrigation of primary and secondary green areas by laying pipeline network.	The treated sewage water will be utilised for the development and maintenance of the greenery areas by laying a pipeline network.
13	All archaeological, cultural and ecologically-sensitive areas (i.e. estuaries, mangroves, rocky shores, caves etc.) in and around the Amaravati capital city be adequately protected and conserved. The proponent shall take appropriate measures for protection of Undavalli caves. The proponent has to declare no development activity Zone of 100 to 300 mtrs around Undavalli caves as per ASI regulations.	All archaeological, cultural and ecological sensitive areas in and around capital city will be adequately protected and conserved. Further the area around Undavalli caves upto a distance of 100 to 300m will be declared as no development zone.
14	A comprehensive PRIMARY BASELINE DATA on the productivity of the Krishna River in the CRDA area (primary, secondary and tertiary productions), before and after Capital region development, shall essentially be collected and processed in systematic and scientific way.	It will be complied with.
15	Development of the green belts, green corridors, avenue plantations etc., be made only with the native species with	The greenery will be developed selecting the native species with

	multiple uses, and the plantation should not affect the native species diversity and shall help enhance carbon stocks.	multiple uses and it will be ensured that the plantation does not affect the native species diversity and will help enhance carbon stocks.
16	The proponent shall reserve most of the waterfront along the Krishna River for public use as committed.	Water front along the Krishna river will be developed for public use.
17	The proponent shall create 780 Ha recreational landscapes including Theme Parks, Golf Courts, Sports and Recreational Spaces.	It will be complied with.
18	The proponent shall create green and blue network interconnecting all reservoirs, water bodies and green spines as committed.	It will be complied with.
19	The proponent shall create network of water ways as committed to connect various eco tourism attractions on the cluster of islands in the river Krishna. These water ways have to inter connect Islands and mainland within the city.	It will be complied with.
20	A major part of the development of the water bodies and green areas be completed before the end of the construction phase;	The development of water bodies and green areas will be developed simultaneously and will be completed before the construction phase.
21	All construction activities by the proponent should ensure that the activities do not adversely affect the water bodies and their ecology.	It will be ensured that the construction activities in the capital city do not adversely affect water bodies and its ecology.
22	No natural water body shall be lined or no embankment shall be cemented except for protection and safety of the people in the surrounding area. The water bodies shall be kept in natural conditions without disturbing the ecological habitat.	It will be complied with.
23	Improvement or rehabilitation of existing natural streams, channels / nallas shall be carried out without disturbing the ecological habitat.	All the existing natural streams shall be protected and will be trained as per the flood mitigation plans without disturbing the ecological habitat. Further it will be seen that such activities will be taken up considering the flow conditions, surrounding landscape etc to prevent and minimise the impacts.
24	Mitigation measures like providing adequate drainage, embankment consolidation and slope stabilization shall be taken on the built up areas and along the city roads to avoid soil erosion. Top soils (30 cm) of the borrow pit sites shall be conserved and restored after completion of excavation. All the topsoil excavated during construction activities shall be stored for use in horticulture / landscape development within the project site. Proper erosion control and sediment control	Measures to avoid soil erosion will be taken up. The top soils will be conserved and reused to increase the level of the greenery.

	measures shall be adopted.	
25	Recognizing the fact that the Capital City project is being proposed on the <i>Green &amp; Blue Concepts</i> , as such to protect the environment, the 24.29% of the land allocation for greening and open spaces, be achieved at the Development zone wise as far as possible.	The greening of the capital city will be done zone wise covering the entire capital city.
26	Deep rooted large foliage plantation along the side of the roads and in the open spaces shall be developed to act as sinks of air pollutants.	Large scale plantation will be developed in the capital city and specifically along the roads and open spaces with Air pollutant absorption plants.

## RESETTLEMENT AND REHABILITATION

1	The APCRDA & CA shall submit the specific plans for the inclusion of the existing habitations in the capital area development and submit the details of the Project Affected Families and the RR Plans to address the PAFs. As far as possible, Least Dislocation Principle be adopted;	The habitations in the capital city are given first priority in the overall development. The village infrastructure will be developed and many social and economic development schemes are being implemented in the habitations. The village specific development plans are under preparation.
2	The proponent shall develop a peripheral area development plan and provide plans for the compensation of the loss of rural productivity like loss of grazing areas for the livestock dependent communities; vegetable growing farmers and sellers etc.	A peripheral area development plan will be developed.

## DISASTER MANAGEMENT

1	The proponent shall prepare and implement proper flood management plan to overcome threats posed by the KondaveetiVagu and its tributaries, Krishna River, heavy rains (more than 1000 mm) and cyclones.	Noted and it shall be complied with.
2	The proponent shall prepare earth quake response management plan by considering the location of the city in the class III seismic zone. The proponent shall incorporate structural design requirements of buildings for Seismic Zone – III in the Bye-Laws.	Earth quake response management plan will be prepared. The structural design requirements will be incorporated in bye laws.
3	The proponent shall create adequate infrastructure for emergency fire fighting.	It shall be complied with.
4	The proponent shall prepare emergency Health Management Plan.	It is ensured that each development project has Environment Health and safety policy.

## ENVIRONMENT MANAGEMENT DURING CONSTRUCTION PHASE

1	<p>The proponent shall ensure safe and secure accommodation, clean drinking water, hygienic sanitation facilities like mobile toilets, community level gas supply, rest areas for female workers, nutrition development programme for workers at all construction sites for the projected work force of 5000 – 10000 spread in about 40 labour camps as committed in EIA report.</p>	<p>It will be ensured as committed that safe working conditions on site, safe and secure accommodation with all basic facilities required for the social development of the workers and such facilities will be within the reach of workers camp. It will be regulated by provision of terms and conditions as part of contractors' responsibility and shall be accessed by the Authority and evaluated by a third party.</p>
2	<p>The proponent shall ensure following mitigation measures as committed, to minimize pollution problems during construction stage.</p> <ul style="list-style-type: none"> <li>• All the loose material either stacked or transported shall be provided with suitable covering such as tarpaulins etc.</li> <li>• Water sprinkling shall be done at the location where dust generation is anticipated.</li> <li>• Construction equipment be maintained and serviced regularly such that the gaseous emissions from these equipment are maintained within the design specifications.</li> <li>• Provision for insulating caps and aids at the exit of noise source on the machinery.</li> <li>• The use of dampening materials such as thin rubber/ lead sheet for wrapping the work places like compressors, generator, etc.</li> <li>• Inlet and outlet mufflers shall be provided.</li> <li>• Earmuffs shall be provided to workers and enforced to be used by the workers.</li> </ul>	<p>As committed all the pollutant sources associated with project activity will be prevented by taking appropriate measures as per the respective guidelines. Non usage of PPP on site by the workers will penalise the contractor.</p> <p>The conditions for risk mitigation, waste management and workers on site safety are provided in the Bid document as part of the contractors' responsibility.</p>

	<ul style="list-style-type: none"> <li>Noise prone activities shall be restricted to the extent possible during the night time, in order to have minimum environmental impact on the workers as well as on the neighbourhood.</li> </ul>	
3	Groundwater should not be used for any activities during the construction phase also; and a policy for the use of water by different users in the project area be developed for their sustainable use and submitted.	For all the construction activities only surface water from the designated places certified by the competent authority will be used. It will be ensured that a policy on water usage by different users will be brought up.

#### ENVIRONMENT MANAGEMENT MONITORING SYSTEM

1	The responsibility of implementation of environmental safeguards rests fully on the project proponent. Project proponent shall establish an Environmental Management Regulatory Authority to carryout functions relating to environmental management under the supervision of a senior executive, directly reporting to the Project Proponent. It should have separate wings for (a) Greenery and Ecological Management; (b) Sewage Management; (c) Solid Waste Management; (d) Fly Ash Utilisation and (e) Pollution Control, staffed by Scientists / Engineers and supported by established laboratories and adequate supporting staff.	An Environmental Management Regulatory Authority is already established by APCRDA.  The details are provided in Annexure II.
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## GENERAL CONDITIONS

1	Any change(s) in the scope of the project, shall require a fresh appraisal by the SEIAA. As the details of the <i>Inter Linked Projects</i> for the Government Complexes, Housing Complexes, Cultural Centers, Industrial / IT Park, Commercial Complexes, Education Institutions etc. have not been submitted with respect to built-up area, excavation, water consumption, sewage generation, solid wastes generation, power requirement, pollution control arrangements, environmental safeguards, construction material etc. for construction and operation phases, the respective project proponents shall obtain separate Environmental Clearances for all the projects which falls under the schedule of Environment Impact Assessment Notification 2006 from State Level Environment Impact Assessment Authority, as per provisions of Environment Impact Assessment Notification 2006.	It shall be complied with as when required.
2	The proponent shall incorporate penal provision in the bye laws / regulations for any violation of environmental issues. The proponent shall also create proper institutional mechanism to ensure continual environmental awareness among all stakeholders.	It Shall be complied with. The penalties for violating the norms relating to the environment will be incorporated in the bye laws.
3	The proponent shall obtain consent from Andhra Pradesh Pollution Control Board.	Consent and Authorisation from APPCB will be taken as per the Air Act, water Act and Hazardous waste Management rules respectively.  For Interim Government Complex, VelagapudiAPCRDA has obtained the Consent for Establishment. Copy enclosed Annexure III.
4	The project proponent shall submit / upload half yearly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the MoEF& CC, its Regional Office, Chennai, SEIAA, AP, Zonal Office of Central Pollution Control Board, Bangalore and A.P. Pollution Control Board. The Regional Office of MoEF /APPCB / CPCB / SEIAA, AP shall monitor the stipulated conditions. The proponent shall upload the status of compliance of the environmental clearance conditions including results of monitored data on their websites and shall update the same periodically.	The activities in the Amaravati Greenfield Capital City have not commenced and environmental monitoring for the capital city will be started and reported thereon.
5	The proponent shall strictly comply with Municipal solid waste (Management & Handling) Rules, the Plastic manufacturer, sales & usage Rules, the Hazardous Waste (Management, Handling & Transboundary movement) Rules, Bio Medical Waste (Management and Handling) Rules, E-waste (Management & Handling) Rules, the Noise pollution (Regulation and Control)	It shall be complied with.

Rules, the Manufacture, Storage and Import of Hazardous Chemical Rules, Fly ash notification and standards notified by MoEF under Environment (Protection) Act, wherever applicable.	
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Commissioner  
APCRDA  
Vijayawada  
AndhraPradesh

  
14/11/16

## ANNEXURE I

Greenery development along the Gannavaram Road





ANNEXURE II  
**OFFICE NOTE**

Rc.No. APCRDA/DT(LPS)/2016, dt. 19.03.2016

**Submitted:**

**Sub:-** APCRDA- Environmental Clearance, Amaravati - Constitution of Environmental Management Regulatory Authority within APCRDA - Proposal Submitted - Reg.

**Ref: -1.** Environmental Clearance vide Order No. SEIAA/AP/GTN-151/2015, dated 09.10.2015

\* \* \*

Vide ref 1 cited above, it is obligatory on the part of APCRDA to constitute "Environmental Management Regulatory Authority (EMRA)" within CRDA to carry out functions relating to environmental management under the supervision of a senior executive directly reporting to the project proponent, ie. Commissioner, APCRDA. As per the order, it should have separate wings for a. Greenery and Ecological management; b. Sewage Management; c. Solid Waste Management; d. Fly Ash Utilization; e. Pollution Control; staffed by scientists/ engineers and supported by established laboratories and adequate supporting staff.

In light of the above, it is submitted that the following may be approved as the framework of the Environmental Management Regulatory Authority.

1. Chairman : Addl. Commissioner
2. Member, Flood Management: Chief Engineer, Utilities
3. Member, Chief Engineer, Infra
4. Member, Planning: Director, Planning
5. Member Convener: Director, Landscape and urban forestry

**Invitees:**

1. Project Management and Third Party Quality Management Consultants of ongoing projects
2. Design Consultants of Existing and Proposed projects

**Scope of the Authority:** To carryout the functions related environmental management in Amaravati Capital City.

**Co-option of members:** EMRA in its first meeting shall co-opt technical expert members from within CRDA and expert organizations from time to time. EMRA shall obtain expert consultation on a need basis from reputed individual experts as well as organisations.




Laboratory support: EMRA shall enlist reputed accredited laboratory, based on expertise on need basis for conducting environmental studies.

Meeting schedule: EMRA shall conduct its meeting once in a month. However, for attending to priority functions, EMRA can conduct its meeting more often.

Secretariat and support staff: EMRA will be supported adequately by 'Committee's Secretariat' Staff and Coordinated by the office of Director, ~~Strategy~~ <sup>LSF</sup>.

Submitted for approval please.

  
24.3.2016  
Director Estates,  
AP CRDA, Vijayawada.

  
Commissioner,  
AP CRDA & CA, Vijayawada.

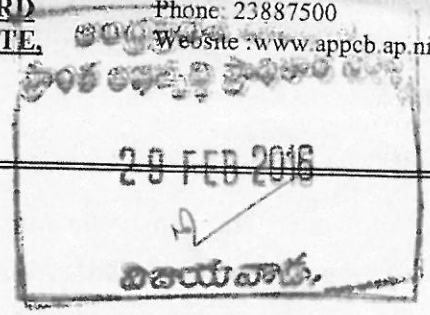


ANNEXURE-III  
**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**PARYAVARAN BHAVAN, A - 3, INDUSTRIAL ESTATE,**  
**SANATHNAGAR, HYDERABAD - 500 018**

Phone: 23887500  
 Website: www.appcb.ap.nic.

RP

(34) 4/3/16



REGD.POST

**CONSENT ORDER FOR ESTABLISHMENT**

**Order No. 373 /APPCB/CFE/RO-GNT/HO/2016**

**Dt. 20.02.2016**

**Sub:** APPCB – CFE – Construction of Interim Government Complex Buildings, Amravati of APCRDA & CA., Sy. No. 196 (Part), 197 (part), 198 (part), 199 (part), 200 (Part), 204 (part), 205 (part), 206 (part), 207 (part), 208 (part), 209 (part), 214 (part) & 216 (part), Velagapudi Village, Thulluru Mandal, Guntur District - Consent for Establishment (CFE) of the Board under Sec.25 of Water (Prevention & Control of Pollution) Act, 1974 and Under Sec.21 of Air (Prevention & Control of Pollution) Act, 1981 - Issued - Reg.

831/2016

GD ✓

LSE

- Ref:**
1. EC order dt. 09.02.2016 issued by SEIAA, AP.
  2. CFE application received on 16.02.2016.
  3. R.O's inspection report dt. 16.02.2016.
  4. CFE Committee meeting held on 20.02.2016.

copy to

CC

USK R-1

Dir Estd

1. In the reference 2<sup>nd</sup> cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for Construction of Interim Government Complex Buildings, Amravati of APCRDA & CA project with a project cost of **Rs. 180.0 Crores.**

Pl- file it

in the concerned

file kha

Received on 02/3/16

S.No.	Description	(in square meters)
<b>I</b>	<b>LAND AREA</b>	
	Total Land Area	1,82,632.21
	Roads Area	44,000.27
	Greenery Area	23,587.75
	Parking Area	40,444.57
<b>II</b>	<b>BUILT AREA</b>	
a.	Secretariat Buildings – 1,2,3,4&5	
	Each Building Area	
	Ground Floor Builtup Area	4,762.83
	First Floor Builtup Area	4,762.83
	Total Builtup Area	9,525.66
	<b>Total Builtup Area for all 5 Buildings (9525.66 Sq. Mts x 5)</b>	<b>47,628.30</b>
b.	Assembly Building (G+2)	
	Ground Floor Area	4,281.46
	First Floor Area	2,399.42
	Second Floor Area	1,755.95
	<b>Total Builtup Area of Assembly building</b>	<b>8,436.83</b>
c	Covered parking for CM	210.00
d	Crash Bay	244.80
e	Transformers & DG set	1,152.00
f	Security / Control Unit	704.00
g	Pump House	180.48
h	Security Post	7.22
i	Health Center	91.80
	<b>Total Built-up Area</b>	<b>58,655.43</b>

2. As per the application, the above project is to be located at Sy. No. 196 (Part), 197 (part), 198 (part), 199 (part), 200 (Part), 204 (part), 205 (part), 206 (part), 207 (part), 208 (part), 209 (part), 214 (part) & 216 (part), Velagapudi Village, Thulluru Mandal, Guntur District and the



3. The above site was inspected by Environmental Engineer & Asst. Environmental Engineer, Regional Office, Guntur, A.P Pollution Control Board on 16.02.2016 and observed that the site is surrounded by:

➤ Co-ordinates:

Northwest - 16° 30' 55.63; 80° 30' 49.769;  
Northeast - 16° 30' 55.621; 80° 31' 7.141;  
Southwest - 16° 30' 42.565; 80° 30' 50.375;  
Southeast - 16° 30' 42.593; 80° 31' 2.704;  
Southwest - 16° 30' 43.117; 80° 30' 49.799;

4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendations of the CFE Committee, hereby issues **CONSENT FOR ESTABLISHMENT** to your project Under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at Para (1) only.**
5. This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.


Encl: Schedule 'A'  
Schedule 'B'

Sd/-  
MEMBER SECRETARY

To

The Commissioner,  
Andhra Pradesh Capital Region Development Authority &  
Capital Area (APCRDA &CA), Lenin Center,  
Governor Pet, Vijayawada -520002.  
Krishna District.

-// T.C.F.B.O //-



Jt. Chief Environmental Engineer (UH-1)

### SCHEDULE - A

1. The proponent shall obtain Consent for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
2. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions by the Board.
3. Rain Water Harvesting (RWH) structure (s) shall be established in the proposed area development project.
4. **This order is valid for period of 7 years from the date of issue.**

### SCHEDULE - B

#### Water:

1. The source of water is Krishna River, Velagapudi Village. The total water requirement is 420 KLD. Out of that, fresh water requirement is 300.0 KLD and treated waste water recycled is 120.0 KLD.
2. The maximum domestic waste water generation is 148 KLD.

#### Treatment & Disposal:

Source of Effluent	Treatment	Mode of final disposal
Domestic	STP	Sewage generation is 148 KLD and shall be treated in a STP of 150 KL capacity. The treated waste water of about 120 KLD is to be reused & recycled for development of greenery, HVAC purposes, flushing toilets etc.,

3. STP shall be constructed and commissioned along with the commissioning of the activity. All the units of the STP shall be impervious to prevent ground water pollution. Separate energy meter shall be provided for Sewage Treatment Plant (STP) to record energy consumed.
4. Dual plumbing system shall be provided for re-use of the treated waste water for flushing and other purposes.
5. During construction stage septic tank followed by soak pit shall be constructed to the temporary toilets / kitchen provided for the construction labour and shall be removed after completion of the project.
6. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for Domestic and flushing purposes.
7. No untreated or treated wastewater shall be discharged in any of the water bodies including Krishna River under any circumstances.



**Air:**

8. Air pollution Control equipment shall be installed along with the commissioning of the activity and shall comply with the following for controlling air pollution

Sl. No.	Details of Stack	Stack 1
1.	Attached to	DG Sets
2.	Capacity	6 x 1000 KVA
3.	Fuel	HSD
4.	Stack height:	17 m.
5.	Control equipment	Acoustic enclosures

9. Diesel generator sets shall be installed in a closed area with silencers and suitable noise absorption systems. The ambient noise level shall not exceed 55 dB(A) during day time and 45 dB(A) during night time.
10. The proponent shall ensure development and meeting of not less than 10% of energy needs from the renewable energy sources like Solar, Wind, WTE, Bio mass etc.
11. The proponent shall ensure installation of solar panels by all buildings by allocating at least 1/3 of roof top for this purpose. This is in addition to installation of solar heaters.

**Solid Waste:**

12. The Solid waste shall be disposed as following:

S. No.	Type of waste	Quantity	Mode of Disposal
1	STP sludge	37.5 Kg / day	to use as manure.
2	Municipal Solid Waste / Garbage	2.25 TPD	to Municipal Solid waste disposal facilities.
3	Waste Oil	Actuals	to authorised recyclers or used as lubricant with in the premises.
4.	Used batteries	Actuals	to authorised recyclers / to dealers on buy back basis.

13. The solid waste generated shall be properly collected and segregated before disposal to the city municipal facility. Waste paper, cartons, thermocol, plastic waste, glass etc., shall be disposed to recycling units. E-waste shall be disposed to authorized recycling units. The in-vessel bio-conversion technique shall be used for composting the organic waste.
14. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
15. Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and shall be disposed taking the necessary precautions for general safety and health aspects of people, and it shall be disposed only in approved sites with the approval of competent authority.
16. The following rules and regulations notified by the MoE&F, GoI shall be implemented.

- a) Municipal Solid Waste (Management and Handling) Rules, 2000.

25. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules, 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

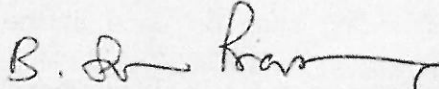
Sd/-  
MEMBER SECRETARY

To

The Commissioner,  
Andhra Pradesh Capital Region Development Authority &  
Capital Area (APCRDA &CA), Lenin Center,  
Governor Pet, Vijayawada  
Krishna District.

Email: [srikant@apcrda.org](mailto:srikant@apcrda.org), [ceo.crda@ap.gov.in](mailto:ceo.crda@ap.gov.in)

-// T.C.F.B.O //-



Jt. Chief Environmental Engineer (UH-1)

c) Batteries (Management & Handling) Amendment Rules, 2010.

d) E-Waste (Management & Handling) Rules, 2011.

17. The proponent shall ensure usage of fly ash for leveling / reclamation of low lying areas, road embankments, for raising platforms in inundated areas, and use fly ash based products for construction purpose including fly ash bricks, PPC cement, Concrete etc., in compliance with Fly Ash Notification issued by the MoEF under Environment (Protection) Act.

**Other Conditions:**

18. The project falls within the "Amaravati- capital city of Andhra Pradesh" which was accorded Consent for Establishment (CFE) vide order dt.19.10.2015. The proponent shall comply with the CFE conditions applicable to this construction project.
19. The Proponent shall ensure following mitigation measures, to minimize pollution problems during construction stage.
- i. All the loose material either stacked or transported shall be provided with suitable covering such as tarpaulins etc.
  - ii. Water sprinkling shall be done at the location where dust generation is anticipated.
  - iii. Construction equipment be maintained and serviced regularly such that the exhaust from these equipments are maintained within the design specifications.
  - iv. Provision for insulating caps and aids at the exit of noise source on the machinery.
  - v. Inlet and outlet mufflers shall be provided.
  - vi. Earmuffs shall be provided to the workers and enforced to be used by the workers.
  - vii. Noise prone activities shall be restricted to the extent possible during the night time, in order to have minimum environmental impact on the workers as well as on the neighbourhood.
20. The proponent shall create corpus fund and maintain separate account with adequate budget to meet operational cost of STP.
21. The proponent shall provide sufficient parking space for visitor vehicles.
22. Application of Solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision of solar water heating.
23. Concealing the factual data or submission of fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
24. The Board reserves its right to modify above conditions or stipulate new / additional conditions and to take action including revocation of this order in the interest of environment