



**State Level Environment Impact Assessment Authority, Jharkhand**

Nursery Complex, Near Dhurwa Bus Stand, Dhurwa, Ranchi. Jharkhand-834 004

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Letter No.-EC/SEIAA/2013-14/132/2013/ 580

Ranchi, Date: 26.10.19

To: **Sri Nirmal Kumar Lunawat,**  
**Executive Director,**  
**M/s Forum Infrastructure Pvt. Ltd.**  
**4/1, Red Cross Place, Kolkata – 700001.**

Sub.: Environmental Clearance for the project “City Centre Project of M/s Forum Infrastructure Pvt Ltd at Vill: Asangi, Adityapur Dist. - Saraikela Kharsawan, Jharkhand” regarding.

Ref: Your application no. Nil, dated 16.04.2018.

Sir,

It is in reference to the project “City Centre Project of M/s Forum Infrastructure Pvt Ltd at Vill: Asangi, Adityapur Dist. - Saraikela - Kharsawan, Jharkhand submitted by you for seeking prior Environmental Clearances (EC).

Proposed project is development of a City Centre at Adityapur over a vacant land having total land area of 87,849 sq.m (21.7 Acres) in Adityapur Industrial Area (Phase - VII). The land is given by Adityapur Industrial Area Development Authority (AIADA). Proposed City Centre will be developed in phases. At present, out of 21.7 Acres of land area, 9.5 acres, i.e 38,464.83 sq.m will be developed in Phase – I. Rest area will be developed in future. Phase I comprises of two office tower, one hotel tower, one hospital tower, one specialty ward tower and one retail tower & multiplex and services. Total built up area of Phase I development will be 1,12,004.92 sq.m. Project site is abutted by Adityapur – Kandra Road (Tata – Kandra Road), which is a 64.0 M (240 ft) wide road. Height of the proposed buildings is 34.50 M (Max.) from E.G.L.

**Chronology of the project :**

S. No.	Chronology of Events	Date of Submission	Feedback by MoEF / SEIAA	Date of Feedback
1.	Application to EAC, MoEF on 30.03.2012 & subsequently on 03. 07.2012	03.07.2012	Invitation from EAC, MoEF for Technical Presentation	22.06.2012
2.	Deliberation of Technical Presentation by PP	10.07.2012	Observation by EAC, MoEF based on the Technical Presentation	Subsequent MoM by MoEF

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3.	Submission of Reply by PP of MoEF observation	09.10.2012	Further Invitation from EAC, MoEF for Technical Presentation	09.11.2012
4.	Deliberation of Technical Presentation by PP	09.11.2012	Recommendation by EAC, MoEF for Environmental Clearance	Subsequent MoM by MoEF
5.	MoEF Recommendation forwarded to Jharkhand SEIAA	22.08.2013	Invitation from SEAC Jharkhand for Technical Presentation	07.09.2013
6.	Deliberation of Technical Presentation by PP to SEIAA & SEAC, Jharkhand	24.09.2013	Observation by SEIAA & SEAC based on the Technical Presentation	03.10.2013
7.	Submission of Reply by PP against SEIAA observation	10.10.2013	Observation made by SEAC Jharkhand based on submitted replies	19.11.2013
8.	Deliberation of Technical Presentation by PP to SEIAA & SEAC, Jharkhand	27.03.2018	Observations made by SEAC Jharkhand against Technical Presentation	27.03.2018
9.	Deliberation of Technical Presentation again by PP to SEIAA & SEAC, Jharkhand	23.04.2018	Observations made by SEAC Jharkhand against Technical Presentation	Subsequent MoM by SEAC
10.	Deliberation of Technical Presentation by PP to SEIAA & SEAC, Jharkhand	09.01.2019	Observations made by SEAC Jharkhand against Technical Presentation	Subsequent MoM by SEAC
11.	Deliberation of Technical Presentation by PP to SEIAA & SEAC, Jharkhand	13.08.2019	Observations made by SEAC Jharkhand against Technical Presentation	Subsequent MoM by SEAC

**Location of Plot :**

PLOT NO.-A-1,A-2,A-3,A-4,A-5,B-1,B-2,B-3,B4,B-5,C-2(P),C-3,C-4,C-5,C-6,C-7,C-8,C-9,NS1,NS-3(P),NS-9,NS-10,NS-11,NS-12,NS-13,NS14,NS-15(P),NS-61,NS-62(P),NS-63,NS-64 (Vill : Asangi, Adityapur, Dist. - Saraikela Kharsawan)

**Connectivity of project site :**

The proposed City Centre Site is located in Adityapur, Jharkhand State. It is situated about 7Km away from Tatanagar Railway Station on South-eastern Railway. The site could be approached by Tata-Kandra Road from TATA Nagar to Paban Dharam Kanta (Weigh Bridge) crossing past the Bistupur Bus stop. TATA – Kandra road leads to NH-33, 12 km apart from the project site. Nearest railway line TATA – CHANDIL is located at 1.0 km apart from project site.

**Land Area Statement:**

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Area of Land	= 87,849 sq.m (21.7 acres)
Land area under Phase - I	= 38,456 sq.m (9.5 acres)
Width of Abutting Road	= 64.00 m (TATA- KANDRA Road)
Permissible Ground Coverage	= 19,228 Sq.m (50.00% of Plot Area of Phase I)
Permissible F.A.R.	= 2.5
Permissible Built Up Area	= 96140 sq.m + F.A.R. Allowance Area
Proposed Ground Coverage - I)	= 17,729.84 Sq.m (46.00% of Plot Area of Phase
Proposed Total Built Up Area	= 1,12,004.92 Sq.m
Proposed Total F.A.R. Area	= 88,249.81 sq.m
Proposed F.A.R.	= 2.295
Proposed Height of Building	= 38.30m (Max.) from F.G.L.

#### Land use Distribution :

Building Coverage	: 46.00% of Land Area (17,729.84 sq.m)
Open Parking Area	: 6.21% of Land Area (2,333.7 sq.m)
Internal Roads & Pavements	: 27.39% of Land Area (10,533.59 sq.m)
Landscaped Green Area	: 20.40% of Land Area (7,858.87 sq.m)

#### Building Profile

##### Hospital Tower

Proposed Built Up Area	= 16991.81 sq.m
Proposed Ground Coverage	= 3041.39 sq.m
Height of Building	= 32.7m from F.G.L.
No. of Beds	= 276

##### Hospital Tower (Specialty Ward)

Proposed Built Up Area	= 10,768.33 sq.m
Proposed Ground Coverage	= 1,187.85 sq.m
Height of Building	= 33.90m from F.G.L.
No. of Beds	= 106

##### Office Tower – 1

Proposed Built Up Area	= 13,201.63 sq.m
Proposed Ground Coverage	= 1,657.70 sq.m
Height of Building	= 34.50m from F.G.L.

##### Office Tower – 2

Proposed Built Up Area	= 12,869.46 sq.m
Proposed Ground Coverage	= 1,731.05 sq.m
Height of Building	= 34.50m from F.G.L.

##### Hotel Tower

Proposed Built Up Area	= 12,507.05 sq.m
Proposed Ground Coverage	= 1,465.15 sq.m
Height of Building	= 34.50m from F.G.L.
No. of Rooms	= 105

##### Retail Block

Proposed Built Up Area	= 22,457.93 sq.m
Proposed Ground Coverage	= 7,159.47 sq.m
Height of Building	= 34.50m from F.G.L.

##### Multiplex Block

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Proposed Built Up Area = 3,061.10 sq.m  
 Proposed Ground Coverage = 7,159.47 sq.m  
 Height of Building = 34.50m from F.G.L.

**Multilevel Car Parking Area**

Proposed Built Up Area = 20,147.61 sq.m  
 Proposed Ground Coverage = 1,731.05 sq.m  
 Height of Building = 34.50m from F.G.L.

**Occupancy Pattern:**

Occupancy Type	No. of Units	Person/Unit	Persons (Total)
Hospital	276 Beds	1	276
Hospital – Specialty Ward	106 Beds	1	106
Hospital Employee	-	-	764
Hospital Visitors	-	-	1000
Hotel Boarders	105	2	210
Hotel Employee	105	2	210
Restaurant Capacity	100 seat	-	100 (Seat)
Café Shop	70 seat	-	70 (Seat)
Banquet		-	150
Conference Room		-	90
Visitors	105	1	105
Office Employee	-	-	2504
Office Visitors	-	-	250
Retail Area Employee	-	-	5149
Retail Area Visitor	-	-	1287
Multiplex Employee	4 Theatres	10	40
Multiplex Spectator	4 Theatres	250 seat/Theatre	3000
Service Staff	-	-	200

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<b>Total Occupants</b>			<b>15341</b>
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**Power Requirement, Source of Supply and D.G. Back Up Details :**

Daily power requirement for the proposed CITY CENTRE is preliminarily assessed as around 9,300 kW. Breakup of Power Requirement is as follows:

Hospital Block – 1000 kW

Specialty Block – 800 kW

Office Tower – 1&2 – 2600 kW

Hotel Tower, Retail Area & Multiplex- 4000 kW.

Multi Level Car Parking – 500 kW

External Area Illumination – 400 kW

Jharkhand State Electricity Board and JUSCO will be the supply agency. 100% power backup will be provided by installing 6 X 1500 kVA & 2X 1000 kVA D.G. Sets.

**Water Requirement :**

Daily Water Demand = 1008 KLD, within which domestic demand is 631 KLD

Bore well supply, Treated Wastewater from STP and rooftop rainwater

**Parking Requirement :**

Statutory requirement of Car Parking = 331 No.

Car Parking Provided = 1010 Nos. (Covered = 900, Open = 110)

Detailed Car Parking Calculation is enclosed in Annexure 5.3

Earlier the proposal was presented in SEAC on 13-14.08.2019 in which requisite documents /certificate were sought are under –

- i. *The DFO, Saraikela Division vide letter no. 1129 dated 29.05.2019, apprehends that the project may disturb the adjoining forest area.*
- ii. *The Committee suggested the PP to submit an “Undertaking” that a Green Buffer zone of 10 m width be raised towards the notified forest boundary, by planting trees as per Forest Deptt. specification before the commencement of the project activities. Beside, dust suppressing screens be erected all along the forest boundary during construction period. This “undertaking” comprising mitigation plan be to the satisfaction of DFO concerned.*
- iii. *PP was asked to submit certificate regarding distance of National Park / Sanctuary / Bio-Diversity etc from concerned DFO, Wildlife and permission of surface water / ground water from the respective concerned Authority.*

In the present meeting, the PP has presented and responder to the above mentioned quarries. The PP has proposed a Buffer zone of more than 37 m ( comprising AIADA road + drain 18 m, internal road & green belt 19 m towards the boundary of forest) and has demarcated in a map showing the boundary of the forest and the City Centre. The required “Undertaking” has been submitted also which ascertain that this will act as green buffer zone between this building project and the forest area.

DCF and Field Director, Elephant Project, Jamshedpur vide letter no. 924, dt. 05.09.2019 certified the proposed project site is not within 10 km from the National Park / Wildlife Sanctuary / ESZ.

DFO, Saraikela Division vide letter no. 2374, dated 27.11.18 certified that the distance of notified forest is 0 (zero) m from proposed project site.

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Though this project comes under infrastructure category 8 (a), wherein general condition is not required as per the EIA notification 2006, SEAC deliberated that there is a need of Green Buffer zone to be created for better conservation of forest & environment of the area.

The CO, Gamharia vide memo no. 872, dated 16.07.19 has mentioned the plot no. of the project is not recorded as "Jangle Jhari" in the R.S. Khatiyar.

The committee decided to recommend for issuance of EC with the provisions of the following specific conditions :

- i. The PP will commence the construction work subsequent to completion of raising of Green belt of 10 m to the satisfaction of local forest officer.
- ii. The plantation will be raised as per Forest Deptt. specification & guidelines and a certificate of Green belt raised, issued by the forest deptt. be submitted for confirmation.
- iii. The compliance report should mention the status of survival of plants & measures undertaken in this regard.
- iv. The dust suppressing screen be erected all along the forest boundary during construction period to avert deleterious impact on nearby forest & environment.
- v. All conditions mentioned by MoEF, SEIAA & SEAC during various presentations need to be invariably to be complied with subject to due diligence of all prevailing statutory and other rules & regulations in existence.
- vi. Any breach of the EC conditions may lead to cancellation of EC granted.

SEAC, Jharkhand has suggested the EC in its 79<sup>th</sup> meeting dated 26<sup>th</sup> and 27<sup>th</sup> September, 2019 vide Member Secretary letter no. 198 dated 28.09.2019 and SEIAA, Jharkhand has approved the EC in its meeting held on 04<sup>th</sup> October, 2019.

Following the decision of SEIAA, as mentioned above, Environmental Clearance is hereby issued in the light of SO – 804(E) dated 14.03.2017 and SO – 1030(E) dated 08.03.2018 of MoEF & CC to the "City Centre Project of M/s Forum Infrastructure Pvt Ltd at Vill: Asangi, Adityapur Dist. - Saraikela - Kharsawan, Jharkhand alongwith the following conditions as recommended by SEAC.

**I. Specific Conditions :**

- i. This Environmental Clearance is valid subject to the following condition below –  
That this project has-
  - a. Obtained all legal rights to operate at concerned place.
  - b. Complied with all existing concerned laws of the land and
  - c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.
- ii. **No mining/ activity shall be undertake in the forest land or deemed forest without obtaining requisite prior forestry clearance.**
- iii. **This Environmental Clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT, MoEF & CC and any other Court of Law, if any, as may be applicable to this project.**
- iii. **Environmental clearance is subject to obtaining prior clearance from forestry and Wildlife angle including clearance from standing committee of NBWL, as may be applicable to this project (in case any fauna occurs / is found in the Project area or**







- if the area involves forest land or Wildlife habitat i.e. core zone of elephant/tiger reserve etc. and or located within 10 km. of protected area.
- iv. The project proponent may apply simultaneously for forest and NBWL clearance, (if applicable) in order to complete the formalities without undue delay, which till process on their respective merits, no rights will vest in or accrue to them unless all clearance are obtained.

## PART A – GENERAL CONDITIONS

### II. Pre – Construction Phase :

- i. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.
- ii. Provision of drinking water, waste water disposal, solid wastes management and primary health facilities shall be ensured for labour force. Proper sanitation facilities shall be provided at the construction site to prevent health related problems. Domestic as well as sanitary wastes from construction camps shall be cleared regularly.
- iii. Adequate safety measures shall be adopted for the construction workers.
- iv. All the labourers to be engaged for construction works shall be screened for health and adequately treated before issue of work permits. The contractor shall ensure periodic health check-up of construction workers.
- v. Fencing of the project boundary before start of construction activities.
- vi. Use of energy efficient construction materials shall be ensured to achieve the desired thermal comfort.
- vii. Use of fly ash based bricks/blocks/tiles/products shall be explored to the maximum extent possible.
- viii. Lay out of proposed buildings and roads within premises etc. shall be made in such a way that it shall cause minimum disturbance to existing flora and fauna. Appropriate green belt shall developed to compensate the habitat loss of tree cutting (if any) from competent authority as per prevailing Act/Rules. The exotic species existing within the existing premises, if any, shall be protected. The greening programme shall include plantation of both exotic and indigenous species.
- ix. Dedicated pedestrian paths shall be provided along the proposed Buildings. Appropriate access shall be provided for physically challenged people in the Pedestrian Paths.
- x. The design of service roads and the entry and exit from the buildings shall conform to the norms & standards prescribed by the State Public Works Department.
- xi. The road system shall have the road cross sections for general traffic, exclusive ways for public mass transport (bus) system, pedestrian paths and ways, utility corridors and green strip.
- xii. Topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site. Balance top soil should be disposed at in

- planned manner for use elsewhere adequate erosion and sediment control measures to be adopted before ensuing construction activities.
- xiii. Prior permission should be obtained from the competent authority for demolition of the existing structure, if any. Waste recycling plans including top soil should be developed prior to beginning of demolition and construction activity. The plans should identify wastes to be generated and designate handling, recycling and disposal method to be followed.
  - xiv. Disposal of muck including excavated material during construction phase should not create any adverse effects in the neighbourhood and the same shall be disposed of taking the necessary precautions for general safety and health aspects.
  - xv. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which should be in the vernacular language, informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority, Jharkhand and the same matter also be sent to Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Ranchi.
  - xvi. Risk assessment study along with Disaster Management Plan (DMP) shall be prepared. The mitigate measures for disaster prevention and control shall be prepared and get approval from competent authority. All other statutory clearances/licenses/permissions from concerned State Governments Departments, Boards and Corporations shall be obtained for directions issued by Central Government/State Government, Central Pollution Control Board/Jharkhand State Pollution Control Board.
  - xvii. Baseline Environmental Condition of Project area i.e. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples should be conducted and report should be submitted to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi prior to start of construction activities.

### **III. Construction Phase :**

- i. It shall be ensured that the construction debris is properly stored on the site prior to disposal. Such requirements shall be made part of the contractor agreement.
- ii. All the top soil excavated during construction activities shall be stored for use in horticulture/landscape development within the project site. Proper erosion control and sediment control measures shall be adopted.
- iii. Earth material generated from excavation shall be reused to the maximum possible extent as filling material during site development. The construction debris and surplus excavated material shall be disposed off by mechanical transport through the Saraikela Municipal Corporation.
- iv. Disposal of muck, including excavated material during construction phase, shall not create any adverse effects on the neighbouring communities and shall be disposed off taking the necessary precautions for general safety and health aspects.

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- v. Low Sulphur diesel generator sets should be used during construction phase. Diesel generator sets during construction phase shall have acoustic enclosures and shall conform to Environment (Protection) Rules, 1986 prescribed for noise emission standards.
- vi. All vehicles/equipment deployed during construction phase shall be ensured in good working condition and shall conform to applicable air and noise emission standards. These shall be operated only during non-peaking hours.
- vii. Ambient noise levels shall conform to the standards prescribed by MoEF & CC, Govt. of India.
- viii. The protective equipment such as nose mask, earplugs etc. shall be provided to construction personnel exposed to high noise levels.
- ix. Construction spoils, including bituminous material and other hazardous materials including oil from construction equipment must not be allowed to contaminate soil/ground water. The dumpsites for such material must be secured so that they shall not leach into the ground water.
- x. Proper and prior planning, sequencing and scheduling of all major construction activities shall be done. Construction material shall be stored in covered sheds. Truck carrying soil, sand and other construction materials shall be duly covered to prevent spilling and dust emission. Adequate dust suppression measures shall be undertaken to control fugitive dust emission. Regular water sprinkling for dust suppression shall be ensured.
- xi. Use of Ready-Mix concrete is recommended for the project.
- xii. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xiii. Regular supervision of the above and other measures shall be in place all through the construction phase so as to avoid disturbance to the surroundings.
- xiv. Water during construction phase should be preferred from Municipal supply.
- xv. All directions of the Airport Authority, Director of Explosives and Fire Department etc. shall be complied.
- xvi. Unskilled construction labourers shall be recruited from the local areas.
- xvii. Provisions shall be made for the integration of solar water heating system.
- xviii. Provision of vermin-composting for the biodegradable solid wastes generated from the proposed extension buildings as well as the large amount of biomass that shall be available from the tree plantation shall be made.
- xix. Monitoring of ground water table and quality once in three months shall be carried out. Construction of tube wells, bore wells shall be strictly regulated.
- xx. Permeable (porous) paving in the parking areas, and walkways should be used to control surface runoff by allowing storm water to infiltrate the soil and return to ground water.
- xxi. All intersections shall be designed and developed as roundabouts.
- xxii. All utility lines (electricity, telephone, cable, water supply, sewage, drainage, etc. shall be laid below ground level. Ducts 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.
- xxiii. The road drainage shall be designed to enable quick runoff of surface water and prevent water logging.



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- xxiv. Adequate provision shall be made to cater the parking needs. Parking spaces standards as given in "Manual on Norms and Standards for Environmental Clearance of Large Construction Projects" issued by Ministry of Environment and Forests, Government of India shall be adopted.
- xxv. Rest room facilities shall be provided for service population.
- xxvi. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi

**IV. Water Body Conservation :**

- i. Water body falling within premises (if any) shall not be lined or no embankment shall be cemented. The water bodies, if any, shall be kept in natural conditions without disturbing the ecological habitat.
- ii. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat.

**V. Post Construction / Operation Phase :**

- i. The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit.
- ii. All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity. Ground water shall not be abstracted without prior permission from the competent authority.
- iii. The storm water management plan shall be implemented in such a manner that the storm water is discharged through an existing dedicated Storm Water Outfall only.
- iv. The height of the stack of the DG sets should be as per norms of Central Pollution Control Board (C.P.C.B.), New Delhi.
- v. Medical (First-Aid) facility must be provided for visitors & employees. Para-medical staff should be attached as Medical facility provider.
- vi. Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs and herbs. Preferential plantation of flowering trees with less timber and fruits value shall be carried out.
- vii. Two chambered container or two separate containers (one for recyclable wastes and other for all organic and compostable wastes) shall be placed at appropriate distance on the roadsides and inside the building. Covered dustbins/garbage collector in convenient places to collect the Municipal solid wastes shall be provided.
- viii. Proper composting / vermi-composting of municipal solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as

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per provisions of the Municipal Solid Wastes (Management and Handling) Rules, 2000 (As amended).

- ix. The use of hand gloves, shoes and safety dress for all waste collectors and sorters shall be enforced

**VI. Entire Life of the Project :**

- i. The project proponent should implement Environmental Monitoring Programme as per details submitted in EMP.
- ii. No expansion/modification activity should be carried out obtaining prior Environmental Clearance as per EIA Notification 2006.
- iii. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stock Emissions & Testing of emission from DG sets should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & JSPCB, Ranchi.

**PART B – SPECIFIC CONDITIONS**

**I. Pre – Construction Phase :**

- i. Project Proponent should obtain prior consent to establish (NOC) under Section 25 & 26 of the Water (Prevention & Control of Pollution) Act' 1974 and under Section 21 of the Air (Prevention & Control of Pollution) Act' 1981 from State Pollution Control Board before start of construction activities.
- ii. It was also advised that CSR activity of the Project Proponent should be measurable and quantifiable, and it should be visible even after the completion of the project. The Project Proponent was also directed to deposit 10% of the CSR cost (2.5% of the total project cost). The security deposit is imposed to ensure the proper performance/implementation of the committed CSR activities.
- iii. Project Proponent should obtain prior permission for ground water withdrawal from CCWA/CGWB if applicable.
- iv. Construction shall conform to the requirements of local seismic regulations. The project proponent shall obtain permission for the plans and designs including structural design, standards and specifications of all construction work from concerned authority.
- v. Use of energy efficient construction materials to achieve the desired thermal comfort shall be incorporated. The desired level of roof assembling "U" factor and insulation "R" value must be achieved. Roof assembling "U" factor for the top roof shall not exceed 0.4 watt/sq.m./degree centigrade with appropriate modifications of specifications and building technologies. The provisions of National Building Code 2005 shall be strictly followed.
- vi. Street/Corridor lighting shall be energy efficient. The High Pressure Sodium Vapour (HPSV) Lamps & Compact Fluorescent Lamps (CFL) along Building premises shall be provided. High intensity, high mast lights to be installed at few strategic points. Solar energy may be used for outdoor lighting.

- vii. Reduction of hard paving-onsite (Open area surrounding all buildings) and/or provision of shades on hard paved surfaces to minimize heat island effect and imperviousness of the site should be undertaken.
- viii. All proposed air/conditioned buildings should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency.
- ix. Monitoring of AAQ as per NAAQs 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG sets should be conducted, and reports should be submitted on monthly basis to State Pollution Control Board (SPCB).
- x. Project proponent shall install Wind Augmentation and Air Purifying Unit (4 Units at one location in Ranchi) on Pilot basis to deal with particulate matter pollution.

## **II. Construction Phase :**

- i. All the conditions laid down in NOC issued by SPCB should be strictly complied with during entire construction cycle of the Project.
- ii. The water treatment plant shall be provided for treatment of water. The treatment shall include screening, sedimentation, filtration and disinfections. Appropriate arrangement shall be made for treatment and reuse of backwash water of filtration plant.
- iii. Project proponent shall provide adequate measuring arrangement at the inlet point of water uptake and at the discharge point for the measurement of water utilized in different categories and monitoring daily water consumption.
- iv. Regular water sprinkling shall be done all around the site to minimize fugitive dust emission during construction activities.
- v. Rain water harvesting structures should be provided as per submitted Plan.

## **III. Post Construction / Operation Phase :**

- i. Project Proponent should obtain prior consent to operate under Air Act, 1981 & Water Act, 1974 from State Pollution Control Board before commissioning of the project.
- ii. Water saving practices such as usage of water saving devices/fixtures, low flushing systems, sensor based fixtures, auto control walls, pressure reducing devices etc. should be adopted.
- iii. Water budget should be adopted as per the plan submitted in the supplementary Form I A & EMP.
- iv. All the generated domestic effluent should be sent to ETP/STP for treatment & further recycling & reuse.
- v. Treated water recovered from STP would be used for flushing the toilets, gardening purpose, make up water in air conditioning systems, etc. As proposed, Fluidized Bed Reactor (FBR) type sewage treatment plant should be installed. The Sewage Treatment Plant shall be ensured before the completion of Building Complex.
- vi. Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Rooftop rainwater harvesting shall be adopted for the proposed Buildings. Every building of proposed extension project shall have rainwater-harvesting facilities.



- Before recharging the surface runoff, pre-treatment must be done to remove suspended matter and oil and grease.
- vii. Municipal solid wastes generated in the proposed extension buildings shall be managed and handled in accordance with the compliance criteria and procedure laid down in Schedule- II of the Municipal Wastes (Management and handling) Rules, 2000 (As amended).
  - viii. The standard for composting & treated leachates as mentioned in Schedule-IV of the Municipal Wastes (Management and handling) Rules, 2000 (As amended) shall be followed.
  - ix. All hazardous wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Hazardous Wastes (Management and Handling) Rules, 1989 (As amended).
  - x. Recycling of all recyclable wastes such as newspaper, aluminium cans, glass bottles, iron scrap and plastics etc. shall be encouraged through private participation. Project proponent shall take appropriate action to ensure minimum utilization of plastic carry bags and plastic small containers etc. within the proposed buildings shall be ensured.
  - xi. Project proponent shall operate and maintain the sewage collection/conveyance system, sewage pumping system and sewage treatment system regularly to ensure the treated water quality within the standards prescribed by Ministry of Environment and Forests, Government of India.
  - xii. Properly treated and disinfected (Ultra Violet Treatment) sewage shall be utilized in flushing the toilets, gardening purpose, make up water in air conditioning systems etc.
  - xiii. Non-mixing of faecal matter with the municipal solid wastes shall be strictly ensured.
  - xiv. Non-mixing of sewage/sludge with rainwater shall be strictly ensured.
  - xv. Noise barriers shall be provided at appropriate locations so as to ensure that the noise levels do not exceed the prescribed standards. D.G. sets shall be provided with necessary acoustic enclosures as per Central Pollution Control Board norms.
  - xvi. Back up supply shall be based on natural Gas/cleaner fuel subject to their availability.
  - xvii. The project proponent shall resort to solar energy at least for street lighting and water heating for Proposed Building Complex, gardens/park areas.
  - xviii. During maintenance, energy efficient electric light fittings & lamps- low power ballasts, low consumption high power luminaries, lux level limiters & timers for street lighting shall be provided.
  - xix. A report on the energy conservation measures confirming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, "R" and "U" factors etc.
  - xx. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG sets & Testing of Untreated & treated effluent samples of STPs should be conducted and report should be submitted on monthly basis to SPCB.

IV. Entire Life of the Project :

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- i. All the conditions laid down in NOC & consent to operate issued by SPCB should be strictly complied with during entire life cycle of the project.
- ii. Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG Sets & Testing of Untreated & treated effluent samples of STPs should be conducted and reports should be submitted on monthly basis to SPCB.
- iii. The project authorities shall ensure that the treated effluent and stack emissions from the unit are within the norms stipulated under the EPC rules or SPCB whichever is more stringent. In case of process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iv. The overall noise levels in and around the project area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules 1989 viz. 75 DBA (day time) and 70 DBA (night time).
- v. The project authorities shall provide requisite funds for both recurring and non-recurring expenditure to implement the conditions stipulated by SEIAA, Jharkhand with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.
- vi. Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs. 15% of the total plot area shall be used for plantations.
- vii. Whenever developer will hand over building to the society, the developer must mention in the agreement or sale deed that 15% green belt area of total plot area should mentioned & Environmental Conditions given by SEIAA, Jharkhand has to be complied/
- viii. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
- ix. The funds earmarked for the environmental protection measures shall not be diverted for other purposes.
- x. In case of any changes in the scope of the project, the project shall require a fresh appraisal by the SEAC/SEIAA.
- xi. The SEAC/SEIAA, Jharkhand will have the right to amend the above conditions and add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
- xii. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal (NGT), if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

- xiii. **The project proponent shall submit six monthly report on the status of compliance of the stipulated Environmental Clearance condition including result of monitored data (both in hard copies as well as by e-mail) to the SEIAA/JSPCB/CPCB/Regional Office of MoEF & CC.**
- xiv. **Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.**
- xv. **The SEIAA, Jharkhand or any other competent Authority may alter modify the above conditions or estipulate any further condition in the interest of Environment Protection.**



Member Secretary

State Level Environment Impact  
Assessment Authority, Jharkhand.



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