STATE EXPERT APPRAISAL COMMITTEE (SEAC), BIHAR

Ref. No- 06.

Patna-23, Date- 07/01/19.

- To,
- Shri Murarijee Mishra Vijay Nagar, Near Temple, Rukunpura, Patna - 800014.

 Dr. Samir Kumar Sinha, Wildlife Trust of India, F-13, Sector - 8, Noida, Uttar Pradesh - 201301.

 Dr. Amar Nath Verma, 10192 ATS Advantage, Ahinsha Khand - 1, Near Habitat Centre, Indirapuram, Ghaziabad - 201014.

- 4. Dr. Shardendu,
 Professor,
 Department of Botany,
 Patna Science College, Patna.
- 5. Dr. Birendra Prasad. Professor,
 Department of Botany,
 Patna University,
 Patna - 800 005
- Dr. Sudhanshu Kumar.
 C 3 /1401, Puri Pranayama
 Sector 82 and 85,
 Furidabad 121 007 (Haryana)
- Dr. Rakesh Kumar Singh G - 600, 12th Street, GAMA - II, Greater Noida (UP) - 201 310

1 | Page

8. Dr. Dilip Kumar Paul,

Associate Professor and Course Coordinator, M.Sc. Environment Science and Management, Post-Graduation Department of Zoology, Patna University, Patna, Bihar - 800 005

Sub :- Proceedings of meeting of State level Expert Appraisal Committee held on 28.12.2018.

Sir,

Please find enclosed herewith proceedings of the State Expert Appraisal Committee (SEAC) held on 28th December, 2018 in the meeting hall of SEIAA, Bihar, Patna.

Sincerety ours 7/1/19

(Alok Kumar) Member Secretary SEAC, Bihar

Proceedings of the State Expert Appraisal Committee (SEAC) meeting dated 28th December, 2018

A meeting of SEAC was held in the meeting hall of SEIAA, Bihar, 2nd Floor, Beltron Bhawan, Shastri Nagar, Patna- 28th December, 2018 presided over by the Chairman, SEAC. The following members of the Committee were present in the meeting:

- 1. Dr. Samir Kumar Sinha,
- 2. Dr. Amar Nath Verma,
- 3. Dr. Shardendu,
- 4. Dr. Birendra Prasad,
- 5. Dr. Sudhanshu Kumar,
- 6. Dr. Rakesh Kumar Singh,
- 7. Dr. Dilip Kumar Paul,
- 8. Shri Alok Kumar, Member Secretary

The records of projects included in the agenda were put up before the Committee by supporting staff/officials for necessary appraisal. The Project Proponents / Consultants of the respective project proposals made presentation before the Committee.

The Committee discussed project proposals and made the following observations/recommendations for various projects and/or sought compliance on the points raised in relation thereto-

A.1. Proposed Cultural Centre at Bodhgaya, Bihar by Tourism Department, Government of Bihar At Bodhgaya, State – Bihar. Total Plot Area:- 88,788 m² (21.93 Acres) Total Built-up Area:- 21,830 m² (Proposal No. - SIA/8(a)/598/18). Online Proposal No.:- SIA/BR/NCP/79705/2018).

Proponent :- Department of Tourism, Govt. of Bihar.

Consultant :- Amaltas Enviro Industrial Consultants Ltd. New Delhi

Proposed Cultural Centre at Bodhgaya, Bihar by Tourism Department, Government of Bihar, at Bodhgaya, State – Bihar. Total Plot Area is 88,788 m² (21.93 Acres) and Total Built-up Area is 21,830 m² with four co-ordinates [Corner – A is 24° 41'

3 | Page

55.19" N 84° 58' 52.28" E, Corner – B is 24° 41' 53.52" N 84° 59' 00.63" E, Corner – C is 24° 41' 44.74" N 84° 58' 48.32" E, Corner – D is 24° 41' 43.09" N 84° 58' 58.02" E]. Maximum height of the building is 34.18 meters. Total cost of the project is ₹ 1,40,00,00,000/–.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 10th October, 2018 for obtaining Environmental Clearance (EC).

Earlier, in the meeting dated-7/8 December 2018 the Committee had directed the project proponent to submit revised plan and documents as mentioned in the proceeding of that meeting. The Project Proponent has complied. With reference to general parking area outside of project premises the project proponent assured that relevant permission from the competent authority shall be furnished within 2-3 days.

The Committee considered the compliance submitted by project proponent and the proposal is recommended for necessary Environmental Clearance as Annexure - I

 A.2. Upgradation of A. N. Magadh Medical College & Hospital" at Gaya By A.N Magadh Medical College & Hospital, Gaya, Total Plot Area:- 18,500 m², Total Built-up Area:- 21,067.00 m². (Proposal No. - SIA/8(a)/567/18) Online Proposal No.:-SIA/BR/NCP/78299/2018).

Proponent :- A.N Magadh Medical College & Hospital, Gaya.

Consultant :- Amaltas Enviro Industrial Consultants Ltd. New Delhi

Proposed project "Upgradation of A. N. Magadh Medical College & Hospital" at Gaya by A. N Magadh Medical College Hospital. The Total Plot Area of the proposed project is 18,500 m² and Total Built-up Area of the project is 21,067.00 m². with four coordinates [Corner – A is 24° 46' 9.01" N 84° 57' 18.63" E, Corner – B is 24° 46' 9.21" N 84° 57' 22.79" E, Corner – C is 24° 46' 13.04" N 84° 57' 24.77" E, Corner D is 24° 46' 14.78" N 84° 57' 20.46" E]. Maximum height of the building is 30.55 meters.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 04th October, 2018 for obtaining Environmental Clearance (EC).

Earlier, in the meeting dated-7/8 December 2018 the Committee had directed the project proponent to submit revised plan and documents as mentioned in the proceeding of that meeting. The Project Proponent has complied.

The Committee considered the compliance submitted by project proponent and the proposal is recommended for necessary Environmental Clearance as Annexure – II

A.3. Dr. A. P. J. Abdul Kalam Science City (A Project of Science and Technology Department, Government of Bihar), Mauza - Saidpur Musallah, Tehsil:- Patna Sadar, District:- Patna, State:- Bihar, Total Plot Area:- 82,895.12 m² Total Built-up Area:- 49,165.32 m². (Proposal No. - SIA/8(a)/599/18) Online Proposal No.:- SIA/BR/MIS/86089/2018).

Proponent :- Department of Science and Technology, Govt. of Bihar. Consultant :- Mantras Green Resources Ltd. Nasik.

Proposed Project Dr. A. P. J. ABDUL KALAM SCIENCE CITY, Patna, Bihar, by Department of Science and Technology, Govt. of Bihar Total Plot Area is 82,895.12 m² (20.4838 Acres) and Total Built-up Area is 49165.32 m² with co-ordinates is [25° 36' 43.08" N 85° 10' 20.55" E]. Maximum height of the building is 17.5 meters. Total cost of the project is ₹ 262.34 Crores.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 22nd November, 2018 for obtaining Environmental Clearance (EC).

Earlier, in the meeting dated-7/8 December 2018 the Committee had directed the project proponent to submit documents as mentioned in the proceeding of that meeting. The Project Proponent has complied. The Proponent and consultant presented their proposal before the committee. The SEAC decided to make a site visit of area. The project is recommended for Environmental Clearance subject to condition that facts on the ground are found in accordance with presentation made by the project proponent on Inspection by the SEAC team. As Annexure- I.

A.4. Government Medical College and Hospital at JP University Site, in Chapra, District
 Saran, Bihar by Department of Health, Government of Bihar, Total Plot Area: 1,01,171.41 m². (25 Acres) Total Built-up Area: 1,19,581.72 m² (Proposal No. SIA/8(a)/568/18) Online Proposal No.:- SIA/BR/NCP/75202/2018).

Proponent :- Department of Health, Govt. of Bihar.

Consultant :- Amaltas Enviro Industrial Consultants Ltd. New Delhi.

This proposal is for Government Medical College and Hospital at JP University, Chapra Dist-Saran by Department of Health, Government of Bihar. Total Plot Area is $1,01,171.41 \text{ m}^2$ and Total Built-up Area is $1,19,581.72 \text{ m}^2$ with co-ordinates is $[25^{\circ} 47' 2.95" \text{ N } 84^{\circ} 47' 3.95" \text{ E}]$. Maximum height of the building is 30.86 meters.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 4th October, 2018 for obtaining Environmental Clearance (EC).

This project was earlier discussed in SEAC on 7/8 December 2018. The Proponent and Consultant presented the proposal before the committee, which after due discussion and consideration directed the project proponent to submit additional informations:

- (i) Specify the location of DG Set stack(s) and stack height(s) and submit the supporting air dispersion simulation report along with the softcopies of input and output files. For the dispersion study worst case scenarios, and nearby buildings / structures must be considered for the assessment of effect due to the building downwash. It is recommended to use CFD (Computational Fluid Dynamics) model for the simulation.
- (ii) Study of Traffic Circulation System and connectivity with a view to ensure adequate parking, conflict free movements.
- (iii) Present status of Air Quality ,Water quality and Noise Levels; likely impacts of the project during construction and operational phases.
- (iv) Submit revised Form-I.
- (v) Revised Water Balance Chart with a view to promote waste water treatment, recycle, reuse and water conservation. Submit the water balancing diagram (for pre & post monsoon) considering zero balance / discharge.

A

6 | Page

(vi) Submit EMP reports with detailed budget provision.

B.1. Proposed Construction of Govt. Medical College and Hospital Block at Govt. Sadar Hospital Complex, Line Bazar, Purnia town, Tehsil - Purnia East, District - Purnia, State:- Bihar, Total Plot Area:- 93,364.29 m² (9.34 ha.) Total Built-up Area:- 1,21,727.97 m². (Proposal No. - SIA/8(a)/600/18) Online Proposal No.:- SIA/BR/NCP/78262/2018).

Proponent :- Department of Health, Govt. of Bihar.

Consultant :- Bhagavathi Ana Labs Pvt. Ltd. Hyderabad

Proposed proposal of Government Medical College and Hospital Block at Government Sadar Hospital complex in Purnia by Department of Health, Govt. of Bihar. Total Plot Area is 93,364.29 m² (9.34 ha.) and Total Built-up Area is 1,21,727.97 m² with co-ordinates is [Corner A - 25° 47' 13.87" N 87° 29' 15.00" E, Corner B - 25° 47' 14.76" N 87° 29' 23.58" E, Corner C - 25° 47' 03.50" N 87° 29' 23.03" E, Corner D - 25° 47' 00.73" N 87° 29' 11.06" E]. Maximum height of the building is 28.95 meters. Estimated cost of the project is ₹ 346 Crores.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 14th December, 2018 for obtaining Environmental Clearance (EC).

The Proponent and Consultant presented the proposal before the Committee, which after discussion and due consideration directed the project proponent to submit a revised report including the following:-

- (i) Relocate the STP/ETP away from Hospital building.
- (ii) Specify the location of DG Set stack(s) and stack height(s) and submit the supporting air dispersion simulation report along with the softcopies of input and output files. For the dispersion study – worst case scenarios, and nearby buildings / structures must be considered for the assessment of effect due to the building down wash. It is recommended to use CFD (Computational Fluid Dynamics) model for the simulation.
- (iii) Study of Traffic Circulation System and connectivity with a view to ensure adequate parking, conflict free movements.



- (iv) Present status of Air Quality ,Water quality and Noise Levels; likely impacts of the project during construction and operational phases.
- (v) Submit revised Form-I.
- (vi) Revised Water Balance Chart with a view to promote waste water treatment, recycle, reuse and water conservation.Submit the water balancing diagram (for pre & post monsoon) considering zero balance / discharge.
- (vii) Submit EMP reports with detailed budget outlay.
- (viii) Submit an affidavit/oath leave the vacant space in the premises as such i.e no construction shall take place in future in these vacant spaces.
- B.2. EC for proposed Govt. Dental College and Hospital, Village Paithna, Taluka Rahui, District Nalanda, State:- Bihar, Total Plot Area:- 77,804.58 m² (9.34 Acres) Total Built-up Area:- 1,09,806.51 m². (Proposal No. SIA/8(a)/601/18) Online Proposal No.:- SIA/BR/NCP/79747/2018).

Proponent :- Department of Health, Govt. of Bihar.

Consultant :- Bhagavathi Ana Labs Pvt. Ltd. Hyderabad

This Proposal is for Government Dental College and Hospital at Village Paithna, Rahui Taluka, District - Nalanda by Department of Health, Govt. of Bihar. Total Plot Area is 77,804.58 m² and Total Built-up Area is 1,09,806.51 m² with co-ordinates is [Corner A - 25° 17' 22.86" N 85° 31' 25.34" E, Corner B - 25° 17' 22.44" N 85° 31' 35.57" E, Corner C - 25° 17' 09.96" N 85° 31' 35.31" E, Corner D - 25° 17' 09.73" N 85° 31' 21.25" E]. Estimated cost of the project is ₹ 404 Crores.

An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 14th December, 2018 for obtaining Environmental Clearance (EC).

The Proponent and Consultant presented the proposal before the Committee, which after discussion and due consideration directed the project proponent to submit a revised report including the following:-

(i) Specify the location of DG Set stack(s) and stack height(s) and submit the supporting air dispersion simulation report along with the softcopies of input and output files. For the dispersion study – worst case scenarios, and nearby buildings / structures must be

8 | Page

considered for the assessment of effect due to the building downwash. It is recommended to use CFD (Computational Fluid Dynamics) model for the simulation.

- (ii) Study of Traffic Circulation System and connectivity with a view to ensure adequate parking, conflict free movements.
- (iii) Present status of Air Quality ,Water quality and Noise Levels; likely impacts of the project during construction and operational phases.
- (iv) Submit revised Form-I.
- (v) Revised Water Balance Chart with a view to promote waste water treatment, recycle, reuse and water conservation.Submit the water balancing diagram (for pre & post monsoon) considering zero balance / discharge.
- (vi) Submit EMP reports with detailed budget outlay.

Violation Case

 B.3. PROPOSED RESIDENTIAL APARTMENT "SAI ENCLAVE" Developer: M/s Sri Anuanand Construction Pvt. Ltd., Village:- Mustafapur, Tehsil:- Danapur, Ditsrict:- Patna, State:- Bihar, Total Plot Area:- 24,633.43 m² Total Built-up Area:-72,661.74 m². (Proposal No. - SIA/8(a)/602/18) Online Proposal No.:-SIA/BR/MIS/83570/2018).

Proponent :- Shri Bimal Kumar (M/s Anu Anand Construction Private Limited). Consultant :- Mantras Green Resources Ltd. Nasik.

Proposed Residential Building Project "SAI ENCLAVE" Complex which is consistent with the surroundings of the project area. Proposed Project is coming up on land under Development Agreement between land owners and Developer at Mauza Mustafapur, Thana Phulwari, Thana No.- 36, Tauzi No.- 5276 Phulwari, Plot No. 159, 160, 161, 162, 163, 166, 168, 169, 170, 171, 172, 173, 174, 176, 177, 179, 180, 181, 182, 184, 185 and 186 Khata no. 165, 167, 168, 169, 170, 171, 190, 193, 198, 239, 240 and 242. Total Plot Area Is 24,633,44 m² and Total Built-up Area is 72,661.74 m² with coordinates is [Corner N - 25° 36' 03.26" N 85° 02' 21.61" E, Corner S - 25° 35' 57.57" N 85° 02' 24.08" E, Corner W - 25° 36' 01.79" N 85° 02' 19.50" E, Corner E - 25° 35' 58.98" N 85° 02' 27.17" E]. Estimated cost of the project is ₹ 108.5 Crores. An application along with filled up 'Form - I', Form-IA and Conceptual Plan in the prescribed format was submitted to SEIAA, Bihar on 17th December, 2018 for obtaining Environmental Clearance (EC).

The Proponent and consultant presented their proposal before the committee. The committee observed that the project proponent has already started construction work without obtaining Environmental Clearance. Presently 4 blocks have been fully constructed 8 blocks are in different stages of construction were as 2 more blocks are proposed. This is violation of EIA Notification 2006 and required to be dealt within under the provision of Notification S.O. 1030(E) dated-08.03.2018. The SEAC decided to make a site inspection of the area to assess the situation on the spot before reaching on any conclusion. The project shall be taken up against in the next meeting.

 C. 1 Harinagar Sugar Mills Ltd., Village:- Harinagar, Tehsil:- Ramnagar, District:-West Champaran, State:- Bihar, Expansion capacity from 10,000 TCD to 11,500 TCD (Proposal No. - SIA/5(j)/523/18) Online Proposal No.:-SIA/BR/IND2/25875/2018).

Proponent :- M/s Harinagar Sugar Mills Limited.

Consultant :- Mantras Green Resources Ltd. Nasik.

Harinagar Sugar Mills Ltd. (HSML), is situataed at Harinagar, P.O. Harinagar, Block Ramnagar in District West Champaran, Bihar. The existing production of the unit is 10,000 TCD and the proposed expansion in the production is 1,500 TCD. The total production of the unit would be 11,500 TCD after expansion. Total capacity of the plant is 1,150 MT/Day (Existing capacity - 1,000 MT/Day and Proposed Additional Capacity -150 MT/Day) with co-ordinates is [27° 09' 22.91" N 84° 19' 50.16" E]. Total cost of the project is ₹ 52,64,70,000/-.

An application along with filled up 'Form - I' and pre-feasibility report in the prescribed format was submitted to SEIAA, Bihar on 11.05.2018 for obtaining approved Term of Reference (ToR). The SEIAA issued ToR Vide F. No. SIA/5(j)/523/18 dated 05.09.2018 and public hearing for the proposed expansion project was conducted on 20.11.2018. Final EIA report submitted by Project Proponent dated -14.12.2018.

The Proponent and consultant presented their proposal before the committee. After due consideration and discussion the committee is recommend to Environmental clearance as Annexure -III

- (i) Fixing water sprinklers in plant campus, and use water tanker for sprinkling water on approach road of the unit at least twice daily or as per requirement. to minimize air pollution due to dust.
- (ii) Mist spraying system for dust suppression in the campus.

D.1. Mirzapur Stone Mining Project, Village - Mirzapur, Tehsil - Manpur, District -Gaya, Block No.- 01, Area- 5.06 ha. Online Proposal No.:-SIA/BR/MIN/17375/2015).

Proponent :- M/s Sanik Foods Private Limited. Consultant :- Vardhan Environet.

Mirzapur Stone Mine Project of Block No.- 01 is located at Village - Mirzapur, Anchal - Manpur, District - Gaya of Bihar. The project site having mining lease area is 5.06 ha. The proposed project having a Khesra No. 2 (CS). The project site having latitude and longitude of four coordinates are Corner A - 24° 48' 39.60" N 85° 03' 36.19" E, Corner B - 24° 48' 45.70" N 85° 03' 54.77" E, Corner C - 24° 48' 34.43" N 85° 03' 43.22" E, Corner D - 24° 48' 36.82" N 85° 03' 36.20" E. The proposed production of the project is 3,64,000 TPA. Total cost of the proposed project is ₹ 95,00,000/-.

The Proponent and consultant presented their proposal before the committee. After due consideration and discussion, it is seen that this site is situated very close to habitation and is not suitable for mining activity as per MMR, 1961. It is surprising that Department of Mines and Geology, Government of Bihar, has issued Letter of Intent in violation of MMR, 1961 which creates suspicion on credibility of their decision. The Department needs to be informed about such cases and cautioned to take care in future.

The accredited consultant must have advised the project proponent about unsuitability of the site for mining, which it has not done. The consultant tried to mislead the SEAC for which they require to be reprimanded/taken action against. There was wide spread protest of local people during public consultation against the proposal. The committee has considered the matter in the light of District Magistrate, Gaya letter no. 2406/Mines Dated-27-08-2018 and other relevant factors and as such the proposal is not fit for Environmental Clearance.

Sd/-(Dr. Shardendu) (Member, SEAC)

Sd/-(Dr. Rakesh Kumar Singh) (Member, SEAC)

Sd/-(Dr.Amar NathVerma) (Member, SEAC)

Sd/-(Dilip Kumar Paul) (Member, SEAC)

Sd/-(Dr. Birendra Prasad) (Member, SEAC)

Sd/-(Dr. Sudhanshu Kumar) (Member, SEAC)

Sd/-(Dr. Samir Kumar Sinha) (Member, SEAC)

100-2/1/19

(Alok Kumar) Member Secretary, SEAC

19

(Murarijee Mishra) Chairman, SEAC

Annexure - I

PART A- SPECIFIC CONDITIONS

I. <u>Pre-Construction Phase</u>

- 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.
- Project Proponent should obtain prior permission for ground water withdrawal from CGWB/SGWB.
- iii. 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 competent authority.
- iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be an integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

II. Construction Phase

i. 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.

ii. 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.

14 | Page

- iii. Regular water sprinkling shall be done all around the site to minimize fugitive dust emission during construction activities.
- iv. 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.
- v. Rain water harvesting structures should be provided as per submitted Plan/
- vi. 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.
- vii. All proposed air/conditioned buildings should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency.
- viii. Provision of double plumbing for re-use of treated water for garden, fountain and similar uses.

III. Post Construction/Operation Phase

- 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.
- ii. Water budget should be adopted as per the plan submitted in the supplementary Form I A & EMP.
- iii. Treated water recovered from STP would be used for flushing the toilets, gardening purpose, make up water in air conditioning systems, etc. As proposed, moving bcd biolilm rector (MBBR) type sewage treatment plant should be installed. The Sewage Treatment Plant shall be ensured before the completion of Building Complex.
- iv. Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Rooftop rainwater harvesting shall be adopted for the proposed

15 | Page

Buildings. Every building of proposed extension project shall have rainwaterharvesting facilities.

 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).

- vi. 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.
- vii. 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).
- viii. 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.
- ix. 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 MoEF&CC Government of India.
- x. 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.
- xi. Non-mixing of faecal matter with the municipal solid wastes shall be strictly onsured.
- xii. Non-mixing of sewage/sludge with rainwater shall be strictly ensured.
- xiii. 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.

- xiv. Back up supply shall be based on natural Gas/cleaner fuel subject to their availability.
- xv. The project proponent shall resort to solar energy at least for street lighting and water heating for Proposed Building Complex, gardens/park areas.
- xvi. 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.
- xvii. A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, "R" and "U" factors etc.

IV. Entire Life of the Project

- 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 Air, Noise Level & 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 half yearly basis to SPCB.
- iii. A continuous (24x7) ambient air quality (AAQ) monitoring system shall be installed and its data should be linked to the SPCB portal along with continuous display of result at the main gate of premises for public.
- iv. 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.
 - v. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

17 | Page

- vi. The overall noise levels in and around the project area shall be kept well within the standards as per CPCB norms.
- vii. Solar power plant and other solar energy related equipment shall be operated and maintained properly.
- viii. A proper record regarding groundwater abstraction shall be maintained by installation of water meter.
- ix. Water consumption, its reuse and disposal shall be maintained on daily basis and shall maintain a record on daily basis.
- x. A proper record regarding groundwater abstraction, water consumption, its reuse and disposal shall be maintained on daily basis and shall maintain a record of readings of each such meter on daily basis.
- xi. The project authorities shall provide requisite funds for both recurring and nonrecurring expenditure to implement the conditions stipulated by SEIAA, Bihar with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.
- xii. Provision of vermi-composting for the biodegradable solid wastes generated from the proposed extension of buildings as well as the large amount of biomass that shall be available from the tree plantation shall be made.
- xiii. The green cover i.e. minimum 33% of the project area consisting of mixture of available indigenous and fast growing species of trees and perennial shrubs must be created and maintained. Plantation of (minimum 5 feet tall plants) must be planted in the coming rainy season i.e. (year 2018). 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 preferably evergreen species trees shall be completed in the initial phase of the construction stage itself.
- xiv. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.

18 | Page

- xv. The funds earmarked for the environmental protection measures shall not be diverted for other purposes.
- xvi. The Project proponent shall provide all necessary logistic support to the authorised officer of this authority as when required. They will facilitate and assist the authority in site inspection and monitoring.
- xvii. Project Proponent shall submit (to the SEIAA, Bihar, Regional Office of MoEF&CC at Ranchi, Bihar State Pollution Control Board) six monthly compliance report of the conditions within a fortnight after the end of every six month.
- xviii. EC conditions must be displayed at prominent place which can be easily visible to public.
- xix. In case of any changes in the scope of the project, the project shall require a fresh appraisal by the SEIAA.
- xx. The SEIAA Bihar 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.

PART B - GENERAL CONDITIONS

I. <u>Pre-Construction Phase</u>

- i. Project proponent shall erect a signboard on his project site and display information regarding name of the project, No. date and validity period of EC, total built-up area and other relevant information for the general public.
- ii. Environmental clearance shall remain valid for a maximum period of 5 years or completion of project whichever is earlier.
- iii. All around the boundary of activity site 30 feet façade should be erected before starting any demolition or construction work.
- iv. Provision shall be made for the housing of construction labour within or close to the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, solid wastes management, waste

19 | Page

water disposal etc. The housing may be in the form of temporary structures to be removed after completion of the project.

- v. 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.
- vi. Adequate safety measures shall be adopted for the construction workers.
- vii. 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.
- viii. Fencing of the project boundary before start of construction activities.
- ix. Use of energy efficient construction materials shall be ensured to achieve the desired thermal comfort.
- x. Use of fly ash based bricks/blocks/tiles/products shall be used in accordance with fly ash utilization Notification issued by the MoEE&CC, Govt. of India.
- xi. 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 be developed to compensate the habitat loss of tree cutting (if any) from competent authority as per local Act/Rules. The exotic species existing within the existing premises, if any, shall be protected.
- xii. 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.
- xiii. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which should 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, Bihar,
- xiv. Risk assessment study along with Disaster Management Plan (DMP) shall be prepared. The mitigational measures for disaster prevention and control shall be prepared and get approved from competent authority. All other statutory

20 | Page

clearances/licenses/permissions from concerned State Governments Departments, Boards and Corporations shall be obtained as per directions issued by Central Government/State Government, Central Pollution Control Board/Bihar State Pollution Control Board.

II. 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.
- 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 at place designated by local municipal Corporation.
- iv. Dedicated pedestrian paths shall be provided along the proposed Buildings. Appropriate access shall be provided for physically challenged people in the Pedestrian Paths.
- v. 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.
- vi. 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.
- vii. 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.
- vill. 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.

21 | Page

- ix. 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.
- Ambient noise levels shall confirm to the standards prescribed by MoEF&CC, Govt.
 of India.
- xi. The protective equipment such as nose mask, earplugs etc. shall be provided to construction personnel exposed to high noise levels.
- xii. 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.
- xiii. 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.

xiv. Use of Ready-Mix concrete is recommended for the project.

- xv. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xvi. Regular supervision of the above and other measures shall be in place all through the construction phase so as to avoid disturbance to the surrounding habitation.
- xvii. Water during construction phase should be preferred from Municipal supply.
- xviii. All directions of the Airport Authority, Director of Explosives and Fire Department etc. shall be complied with.
- xix. Unskilled construction labourers shall be recruited from the local areas.
- xx. Provisions shall be made for the integration of solar water heating system.
- xxi. Monitoring of ground water table and quality once in six months shall be carried out by installing network of piezometer in consultation with the CGWB/SGWB.
- xxii. 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 recharge ground water.

22 | Page

- xxiii. All intersections shall be designed and developed as roundabouts.
- xxiv. 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.
- xxv. The road drainage shall be designed to enable quick runoff of surface water and prevent water logging.
- xxvi. 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.
- xxvii. Rest room facilities shall be provided for service population.

III. 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 though an existing dedicated Storm Water Outfall only.
- iv. The height of the stack of the DG sets should be as per norms of CPCB.
- v. 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.

- vi. 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.
- vii. Proper composting / vermi-composting of municipal and biodegradable solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Municipal Solid Wastes (Management and Handling) Rules, 2000 (As amended).
- viii. The use of hand gloves, shoes and safety dress for all waste collectors and sorters shall be enforced.

IV. 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 without obtaining prior Environmental Clearance as per EIA Notification, 2006.
- Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stock Emissions & Testing of Effluent from DG sets should be conducted and report should be submitted on half yearly basis to Regional Office of MoEF&CC, Ranchi, SEIAA, Bihar & B.S.P.C.B., Patna. The half yearly compliance report shall also be uploaded in the website along with EC conditions.

ANNEXURE - II

PART A- SPECIFIC CONDITIONS

I. <u>Pre-Construction Phase</u>

- 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. Project Proponent should obtain prior permission for ground water withdrawal from CGWB/SGWB.
- iii. 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 competent authority.
- iv. Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be an integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

II. <u>Construction Phase</u>

- i. 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.
- ii. 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.

- iii. Regular water sprinkling shall be done all around the site to minimize fugitive dust emission during construction activities.
- iv. 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.
- v. Rain water harvesting structures should be provided as per submitted Plan/
- vi. 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.
- vii. Fountains shall be installed and maintained at all intersections of roads and roundabouts to minimize air/dust pollution in the campus.
- viii. All proposed air/conditioned buildings should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency.
- ix. Provision of double plumbing for re-use of treated water for garden, fountain and similar uses.

III. Post Construction/Operation Phase

- i. 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.
- ii. Water budget should be adopted as per the plan submitted in the supplementary Form I A& EMP.
- Treated water recovered from STP would be used for flushing the toilets, gardening purpose, make up water in air conditioning systems, etc. As proposed, moving bed biofilm rector (MBBR) type sewage treatment plant should be installed. The Sewage Treatment Plant shall be ensured before the completion of Building Complex.

- iv. 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 rainwaterharvesting facilities.
- 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).
- vi. 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.
- vii. 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).
- viii. 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.
- ix. 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 MoEF&CC Government of India.
- 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.
- xi. Non-mixing of faecal matter with the municipal solid wastes shall be strictly ensured.
- xii. Non-mixing of sewage/sludge with rainwater shall be strictly ensured.

- xiii. 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.
- xiv. Back up supply shall be based on natural Gas/cleaner fuel subject to their availability.
- xv. The project proponent shall resort to solar energy at least for street lighting and water heating for Proposed Building Complex, gardens/park areas.
- xvi. 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.
- xvii. A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, "R" and "U" factors etc.

IV. Entire Life of the Project

- 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.
- Monitoring of Ambient Air Quality, Noise Ground Water Stack Emissions from DG Sets & effluent samples of STPs should be conducted and reports should be submitted on half yearly basis to SPCB.
- iii. A continuous ambient air quality (AAQ) monitoring system shall be installed and its data should be linked to the SPCB portal along with continuous display of result at the main gate of premises for public.
- iv. 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.

- v. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
- vi. The project proponent shall ensure safe drinking water supply to the habitants.
- vii. The facilities provided for collection, segregation, handling, on site storage & processing of solid waste such as chute system for multi-storey buildings, wet & dry bins, collection centre & mechanical composter etc. shall be properly maintained. The collected solid waste shall be segregated at site. The recyclable solid waste shall be sold out to the authorized vendors for which a written tie-up must be done with the authorized recyclers.
- viii. Bio-Medical waste to be generated in the hospital shall be handled and managed as per the provisions of Bio-Medical waste (Management & Handling) Rules, 2016.
 Radioactive waste management program shall be adopted and implemented at the site in order to mitigate the effects coming out due to use of atomic radiation in different equipment's.
- ix. Hazardous waste/E-waste should be disposed off as per Rules applicable and with the necessary approval of the Bihar State Pollution Control Board.
- x. Solar power plant and other solar energy related equipment's shall be operated and maintained properly.
- xi. A separate Environmental Cell with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization
- xii. A proper record regarding groundwater abstraction shall be maintained by installation of water meter.
- xiii. Water consumption, its reuse and disposal shall be maintained on daily basis and shall maintain a record on daily basis.
- xiv. The overall noise levels in and around the project area shall be kept well within the standards as per CPCB norms.
- xv. The project authorities shall provide requisite funds for both recurring and nonrecurring expenditure to implement the conditions stipulated by SEIAA, Bihar with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.

- xvi. Provision of vermi-composting for the biodegradable solid wastes generated from the proposed extension of buildings as well as the large amount of biomass that shall be available from the tree plantation shall be made.
- xvii. The green cover i.e. minimum 33% of the project area consisting of mixture of available indigenous and fast growing species of trees and perennial shrubs must be created and maintained. Plantation of (minimum 5 feet tall plants) must be planted in the coming rainy season i.e. (year 2018). 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 preferably evergreen species trees shall be completed in the initial phase of the construction stage itself.
- xviii. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.
- xix. The funds earmarked for the environmental protection measures shall not be diverted for other purposes.
- xx. The Project proponent shall provide all necessary logistic support to the authorized officer of this authority as when required. They will facilitate and assist the authority in site inspection and monitoring.
- xxi. Project Proponent shall submit (to the SEIAA, Bihar, Regional Office of MoEF&CC at Ranchi, Bihar State Pollution Control Board) six monthly compliance report of the conditions within a fortnight after the end of every six month.
- xxii. EC conditions must be displayed at prominent place which can be easily visible to public.
- xxiii. In case of any changes in the scope of the project, the project shall require a fresh appraisal by the SFIAA
- xxiv. The SEIAA Bihar 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.

PART B – GENERAL CONDITIONS

I. <u>Pre- Construction Phase</u>

- i. Project proponent shall erect a signboard on his project site and display information regarding name of the project, No. date and validity period of EC, total built-up area and other relevant information for the general public.
- ii. Environmental clearance shall remain valid for a maximum period of 5 years or completion of project whichever is earlier.
- iii. All around the boundary of activity site 30 feet façade should be erected before starting any demolition or construction work.
- iv. Provision shall be made for the housing of construction labour within or close to the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, solid wastes management, waste water disposal etc. The housing may be in the form of temporary structures to be removed after completion of the project.
- v. 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.
- vi. Adequate safety measures shall be adopted for the construction workers.
- vii. 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.
- viii. Fencing of the project boundary before start of construction activities.
- ix. Use of energy efficient construction materials shall be ensured to achieve the desired thermal comfort.
- x. Use of fly ash based bricks/blocks/tiles/products shall be used in accordance with fly ash utilization Notification issued by the MoEE&CC, Govt. of India.

- xi. 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 be developed to compensate the habitat loss of tree cutting (if any) from competent authority as per local Act/Rules. The exotic species existing within the existing premises, if any, shall be protected.
- xii. 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.
- xiii. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which should 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, Bihar,
- xiv. Risk assessment study along with Disaster Management Plan (DMP) shall be prepared. The mitigational measures for disaster prevention and control shall be prepared and get approved from competent authority. All other statutory clearances/licenses/permissions from concerned State Governments Departments, Boards and Corporations shall be obtained as per directions issued by Central Government/State Government, Central Pollution Control Board/Bihar State Pollution Control Board.

II. 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.
- 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 at place designated by local municipal Corporation.

- Dedicated pedestrian paths shall be provided along the proposed Buildings. Appropriate access shall be provided for physically challenged people in the Pedestrian Paths.
- v. 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.
- vi. 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.
- vii. Disposal of muck, including excavated material during construction phase, shall not create any adverse effects on the neighboring communities and shall be disposed off taking the necessary precautions for general safety and health aspects.
- viii. 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.
- 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.
- x. Ambient noise levels shall confirm to the standards prescribed by MoEF&CC, Govt. of India.
- xi. The protective equipment such as nose mask, earplugs etc. shall be provided to construction personnel exposed to high noise levels.
- xii. Construction spoils, including bituminous material and other hazardous materials including oil from construction equipment must not be allowed to contaminate soll/ground water. The dumpsites for such material must be secured so that they shall not leach into the ground water.
- xiii. 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

33 | Page

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.

xiv. Use of Ready-Mix concrete is recommended for the project.

- xv. Accumulation/stagnation of water shall be avoided ensuring vector control.
- xvi. Regular supervision of the above and other measures shall be in place all through the construction phase so as to avoid disturbance to the surrounding habitation.
- xvii. Water during construction phase should be preferred from Municipal supply.
- xviii. All directions of the Airport Authority, Director of Explosives and Fire Department etc. shall be complied with.
- xix. Unskilled construction labourers shall be recruited from the local areas.
- xx. Provisions shall be made for the integration of solar water heating system.
- xxi. Monitoring of ground water table and quality once in six months shall be carried out by installing network of piezometer in consultation with the CGWB/SGWB.
- xxii. 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 recharge ground water.
- xxiii. All intersections shall be designed and developed as roundabouts.
- xxiv. 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.
- xxv. The road drainage shall be designed to enable quick runoff of surface water and prevent water logging.
- xxvi. 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.
- xxvii. Rest room facilities shall be provided for service population.

34 | Page

III. 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 though an existing dedicated Storm Water Outfall only.
- iv. The height of the stack of the DG sets should be as per norms of CPCB.
- v. 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.
- vi. 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.
- vii. Proper composting / vermi-composting of municipal and biodegradable solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Municipal Solid Wastes (Management and Handling) Rules, 2000 (As amended).
- viii. The use of hand gloves, shoes and safety dress for all waste collectors and sorters shall be enforced.

IV. 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 without obtaining prior Environmental Clearance as per EIA Notification, 2006.
- Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stock Emissions & Testing of Effluent from DG sets should be conducted and report should be submitted on half yearly basis to Regional Office of MoEF&CC, Ranchi, SEIAA, Bihar & B.S.P.C.B., Patna. The half yearly compliance report shall also be uploaded on the website along with EC conditions.

ANNEXURE - III

I. Statutory compliance

- a. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- b. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- c. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of schedule-I species in the study area).
- d. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board / Committee.
- e. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
- f. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

II. Air quality monitoring and preservation

- a. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification by SPCB.
- b. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PK₁₀ and PM_{2.5} in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120 each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous).

37 | Page

- c. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.
- d. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- e. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.
- f. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB / SPCB guidelines.
- g. The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.
- h. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.

III. Water quality monitoring and preservation

- a. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises (applicable in case of the projects achieving ZLD) and connected to SPCB and CPCB online servers.
- b. Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).
- c. Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
- d. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.
- e. Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.

- f. Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MIEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system.
- g. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.

IV. Noise monitoring and prevention

- a. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- b. The overall noise levels in and around the plant 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.
- c. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

a. The energy sources for lighting purposes shall preferably be LED based.

VI. Waste management

- a. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.
- b. Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- c. The company shall undertake waste minimization measures as below:
 - i. Metering and control of quantities of active ingredients to minimize waste.
 - ii. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - iii. Use of automated filling to minimize spillage.
 - iv. Use of Close Feed system into batch reactors.
 - v. Venting equipment through vapour recovery system.
 - vi. Use of high pressure hoses for equipment clearing to reduce wastewater generation

39 | Page

VII. Green Belt

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

VIII. Safety, Public hearing and Human health issues

- a. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- b. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- c. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- d. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- e. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- f. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.

IX. Corporate Environment Responsibility

- a. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- b. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest /wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the Regional

40 | Page

Office (Ranchi) of MoEF&CC, SEIAA, Bihar, BSPCB, Patna as a part of six-monthly report.

- c. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- d. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- e. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

- a. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- b. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- c. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- d. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- e. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- f. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the

41 | Page

Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- g. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- h. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- i. The project proponent shall abide by all the commitments and recommendations made in the EIA / EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- j. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- k. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- 1. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- m. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- n. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- o. EC conditions must be displayed at prominent place which can be easily visible to public.
- p. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- q. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

42 | Page