

# State Level Environment Impact Assessment Authority, Uttar Pradesh

**Directorate of Environment, U.P.**

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To,

Shri Rajeev Garg,  
Superintending Engineer & Head, IWD,  
IIT, Kanpur- 208016

Ref. No...../Parya/SEAC/2256/2013/ AD(H)

Date: ( ) November, 2014

**Sub: Environmental Clearance for Institutional project "Indian Institute of Technology" located at Kanpur, U.P. Regarding.**

Dear Sir,

Please refer to your application/letters dated 21-04-2014, 27-06-2014, 28-08-2014, 30-09-2014 addressed to the Secretary, SEAC and Director, Directorate of Environment Govt. of UP on the subject as above. A presentation was made by the representative of the project proponent along with their consultant M/s GRC India Pvt. Ltd. of the project in State Level Expert Appraisal Committee (SEAC) meeting dated 21-10-2014.

The Project proponent, through documents (submitted to SEAC) and presentation made during meeting, has informed to the SEAC that:-

1. The environmental clearance is sought for "Indian Institute of Technology" located at Kanpur, U.P.
2. Area details of the project is as follows:

| S. N.     | Particulars                       | Existing Area (m <sup>2</sup> ) | Proposed Area (m <sup>2</sup> ) | Total Area (m <sup>2</sup> ) | Percentage                                    |
|-----------|-----------------------------------|---------------------------------|---------------------------------|------------------------------|---|
| Plot Area |                                   | 42,69,433.52 m <sup>2</sup>     |                                 |                              |   |
| 1         | Permissible F.A.R                 |                                 |                                 | 42,69,433.52 m <sup>2</sup>  |   |
| 2         | Proposed F.A.R                    |                                 |                                 | 6,01,654.41                  |   |
| 3         | Ground Coverage                   | 2,82,589                        | 39,129.82                       | 3,21,718.82 (7.54%)          | 7.54%   |
| 4         | Plinth Area                       | 4,96,941.5                      | 1,71,563.4                      | 668504.9                     |   |
| 5         | Stilt                             | -                               | 17291                           | 17291                        |   |
| 6         | Basement                          | -                               | 8,227                           | 8,227                        |   |
| 7         | Built Up Area                     | 4,96,941.5                      | 1,97,081.4                      | 694022.9                     |   |
| 8         | Road Area                         |                                 | -                               | 4,07,303.96                  |   |
| 9         | Open Spaces                       |                                 | -                               | 39,47,714.7                  |   |
| 10        | Parking area in open              |                                 | -                               | 95,946.87                    | 92.46%  |
| 11        | Landscape Plan (50% of open area) | 15,62,637.06                    | 4,11,220.29                     | 19,73,857.35                 | 46.23% of total plot area (part of open area) |
| 12        | Open Parking Area                 |                                 |                                 | 170175.424                   | 3.9 % (included in open area)                 |

3. Salient features of the project is as follows:

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Upd  
15/11/14  
VIKAS C. AGRAWAL  
S.P.O.  
Directorate of Environment

| S.N. | DESCRIPTION                             | DETAILS   |
|------|---|---|
| 1.   | Name of Project                         | Institutional project "Indian Institute of Technology"  |
| 2.   | Name of the Project Proponent           | Indian Institute of Technology  |
| 3.   | Location                                | Kalyanpur, Kanpur, U.P  |
| 4.   | Centre coordinates of Project Site      | Latitude: 26°30'47"N<br>Longitude: 80°13'57"E   |
| 8.   | Size of plot                            | 42,69,433.52 m <sup>2</sup>   |
| 9.   | Built Up Area                           | 694022.9m <sup>2</sup>  |
| 10.  | Projected Population                    | 16,190 (Residents + staff + visitors)   |
| 11.  | Fresh Water Requirement                 | 2,723 KLD   |
| 12.  | Solid Waste Generated                   | 7,126 kg/day  |
| 13.  | Electricity load                        | 12 MVA; Agency – Kanpur Electricity Supply Company Limited.   |
| 14.  | Power Backup                            | Total 16 nos. of 6,800 kVA capacity DG sets will be provided for power back up in the project premises. Out of which 14 DG sets of total capacity 5,300 KVA (1x200 + 3x250 + 5x320 + 4x500 + 1x750 KVA) are installed for existing area while 2 DG sets are proposed of 1,500 KVA (2x750 KVA) capacity for proposed area. |
| 15.  | Total no. of rain water harvesting pits | 14 pits   |

4. Solid waste generation details of the project are as follows:

| S. No.   | Category                                 | Occupancy (Existing) | Occupancy (Proposed) | kg per capita per day | Total waste generated (kg/day) |
|----------|--|----------------------|----------------------|-----------------------|--------------------------------|
| <b>A</b> | Domestic Waste                           |                      |                      |                       |                                |
|          | • Student                                | 6,167                | 1,000                | @ 0.50                | 3,583.50                       |
|          | • Faculty & Staff (Residential + Beds)   | 5,410                | 559                  | @ 0.50                | 2,984.50                       |
|          | • Staff                                  |                      | 20                   | @ 0.25                | 5                              |
|          | • Visitors/Floating Population           | 2,000                | 1,034                | @ 0.15                | 455.10                         |
|          | Total Domestic Waste (A)                 |                      |                      |                       | 7,028.1 or 7028                |
| <b>B</b> | Landscape Waste                          | 487.75 acres         | @ 0.2 kg/acre/day    |                       | 97.55                          |
|          | <b>Total solid waste generated (A+B)</b> |                      |                      |                       | <b>7,126</b>                   |

5. Water requirement details of the project are as follows:

| S. N. | Category                               | Existing | Proposed (Additional) | Total (KLD) |
|-------|--|----------|-----------------------|-------------|
| 1.    | Total water requirement                | 2,870    | 681                   | 3,551       |
| 2.    | Total Fresh water requirement          | 2,156    | 567                   | 2,723       |
| 3.    | Water Required for Flushing            | 308      | 48                    | 356         |
| 4.    | Waste Water generated                  | 892      | 143                   | 1035        |
| 5.    | STP capacity                           | 1070     | 175                   | 1,245       |
| 6.    | ETP                                    |          | 15                    | 15          |
| 7.    | Horticulture and Landscape development | 1,562    | 411                   | 1,973       |

6. The project proposals are covered under category 8"b" of EIA Notification, 2006.



Based on the recommendations of the State Level Expert Appraisal Committee Meeting (SEAC) held on 21-10-2014 the State Level Environment Impact Assessment Authority (SEIAA) in its Meeting held on 30-10-2014 decided to grant the Environmental Clearance to the project subject to the effective implementation of the following general and specific conditions:-

**General Conditions:**

1. It shall be ensured that all standards related to ambient environmental quality and the emission/effluent standards as prescribed by the MoEF are strictly complied with.
2. It shall be ensured that obtain the no objection certificate from the U P pollution control board before start of construction.
3. It shall be ensured that no construction work or preparation of land by the project management except for securing the land is started on the project or the activity without the prior environmental clearance.
4. The proposed land use shall be in accordance to the prescribed land use. A land use certificate issued by the competent Authority shall be obtained in this regards.
5. All trees felling in the project area shall be as permitted by the forest department under the prescribed rules. Suitable clearance in this regard shall be obtained from the competent Authority.
6. Impact of drainage pattern on environment should be provided.
7. Surface hydrology and water regime of the project area within 10 km should be provided.
8. A suitable plan for providing shelter, light and fuel, water and waste disposal for construction labour during the construction phase shall be provided along with the number of proposed workers.
9. Measures shall be undertaken to recycle and reuse treated effluents for horticulture and plantation. A suitable plan for waste water recycling shall be submitted.
10. Obtain proper permission from competent authorities regarding enhanced traffic during and due to construction and operation of project.
11. Obtain necessary clearances from the competent Authority on the abstraction and use of ground water during the construction and operation phases.
12. Hazardous/inflammable/Explosive materials likely to be stored during the construction and operation phases shall be as per standard procedure as prescribed under law, Necessary clearances in this regards shall be obtained.
13. Solid wastes shall be suitably segregated and disposed. A separate and isolated municipal waste collection center should be provided. Necessary plans should be submitted in this regards.
14. Suitable rainwater harvesting systems as per designs of groundwater department shall be installed. Complete proposals in this regard should be submitted.
15. The emissions and effluents etc. from machines, Instruments and transport during construction and operation phases should be according to the prescribed standards. Necessary plans in this regard shall be submitted.
16. Water sprinklers and other dust control measures should be undertaken to take care of dust generated during the construction and operation phases. Necessary plans in this regard shall be submitted.
17. Suitable noise abatement measures shall be adopted during the construction and operation phases in order to ensure that the noise emissions do not violate the prescribed ambient noise standards. Necessary plans in this regard shall be submitted.
18. Separate stock piles shall be maintained for excavated top soil and the top soil should be utilized for preparation of green belt.
19. Sewage effluents shall be kept separate from rain water collection and storage system and separately disposed. Other effluents should not be allowed to mix with domestic effluents.
20. Hazardous/Solid wastes generated during construction and operation phases should be disposed off as prescribed under law. Necessary clearances in this regard shall be obtained.
21. Alternate technologies for solid waste disposals (like vermin-culture etc.) should be used in consultation with expert organizations.
22. No wetland should be infringed during construction and operation phases. Any wetland coming in the project area should be suitably rejuvenated and conserved.
23. Pavements shall be so constructed as to allow infiltration of surface run-off of rain water. Fully impermeable pavements shall not be constructed. Construction of pavements around trees shall



- be as per scientifically accepted principles in order to provide suitable watering, aeration and nutrition to the tree.
24. The Green building Concept suggested by Indian Green Building Council, which is a part of CII-Godrej GBC, shall be studied and followed as far as possible.
  25. Compliance with the safety procedures, norms and guidelines as outlined in National Building Code 2005 shall be compulsorily ensured.
  26. Ensure usage of dual flush systems for flush cisterns and explore options to use sensor based fixtures, waterless urinals and other water saving techniques.
  27. Explore options for use of dual pipe plumbing for use of water with different qualities such as municipal supply, recycled water, ground water etc.
  28. Ensure use of measures for reducing water demand for landscaping and using xeriscaping, efficient irrigation equipments & controlled watering systems.
  29. Make suitable provisions for using solar energy as alternative source of energy. Solar energy application should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. Present a detailed report showing how much percentage of backup power for institution can be provided through solar energy so that use and polluting effects of DG sets can be minimized.
  30. Make separate provision for segregation, collection, transport and disposal of e-waste.
  31. Educate citizens and other stake-holders by putting up hoardings at different places to create environmental awareness.
  32. 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.
  33. Prepare and present disaster management plan.
  34. The project proponents shall ensure that no construction activity is undertaken without obtaining pre-environmental clearance.
  35. 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 and technology, R & U Factors etc.
  36. Fly ash should be used as building material in the construction as per the provision of fly ash notification of September, 1999 and amended as on August, 2003 (The above condition is applicable only if the project lies within 100 km of Thermal Power Station).
  37. The DG sets to be used during construction phase should use low sulphur diesel type and should conform to E.P. rules prescribed for air and noise emission standards.
  38. Alternate technologies to Chlorination (for disinfection of waste water) including methods like Ultra Violet radiation, Ozonation etc. shall be examined and a report submitted with justification for selected technology.
  39. The green belt design along the periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for residential land use. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous variety.
  40. The construction of the building and the consequent increased traffic load should be such that the micro climate of the area is not adversely affected.
  41. The building should be designed so as to take sufficient safeguards regarding seismic zone sensitivity.
  42. High rise buildings should obtain clearance from aviation department or concerned authority.
  43. Suitable measures shall be taken to restrain the development of small commercial activities or slums in the vicinity of the complex. All commercial activities should be restricted to special areas earmarked for the purpose.
  44. It is suggested that literacy program for weaker sections of society/women/adults (including domestic help) and under privileged children could be provided in a formal way.
  45. The use of Compact Fluorescent lamps should be encouraged. A management plan for the safe disposal of used/damaged CFLs should be submitted.
  46. It shall be ensured that all Street and park lighting is solar powered. 50% of the same may be provided with dual (solar/electrical) alternatives.
  47. Solar water heater shall be installed to the maximum possible capacity. Plans may be drawn up accordingly and submitted with justification.



48. Treated effluents shall be maximally reused to aim for zero discharge. Where ever not possible, a detailed management plan for disposal should be provided with quantities and quality of waste water.
49. The treated effluents should normally not be discharged into public sewers with terminal treatment facilities as they adversely affect the hydraulic capacity of STP. If unable, necessary permission from authorities should be taken.
50. Construction activities including movements of vehicles should be so managed so that no disturbance is caused to nearby residents.
51. All necessary statutory clearances should be obtained and submitted before start of any construction activity and if this condition is violated the clearance, if and when given, shall be automatically deemed to have been cancelled.
52. Parking areas should be in accordance with the norms of MOEF, Government of India. Plans may be drawn up accordingly and submitted.
53. The location of the STP should be such that it is away from human habitation and does not cause problem of odor. Odorless technology options should be examined and a report submitted.
54. The Environment Management plan should also include the break up costs on various activities and the management issues also so that the residents also participate in the implementation of the environment management plan.
55. Detailed plans for safe disposal of STP sludge shall be provided along with ultimate disposal location, quantitative estimates and measures proposed.
56. Status of the project as on date shall be submitted along with photographs from North, South, West and East side facing camera and adjoining areas should be provided.
57. Specific location along with dimensions with reference to STP, Parking, Open areas and Green belt etc. should be provided on the layout plan.
58. The DG sets shall be so installed so as to conform to prescribed stack heights and regulations and also to the noise standards as prescribed. Details should be submitted.
59. E-Waste Management should be done as per MoEF guidelines.
60. Electrical waste should be segregated & disposed suitably as not to impose Environmental Risk.
61. The use of suitably processed plastic waste in the construction of roads should be considered.
62. Displaced persons shall be suitably rehabilitated as per prescribed norms.
63. Dispensary for first aid shall be provided.
64. Safe disposal arrangement of used toiletries items in Hotels should be ensured. Toiletries items could be given complementary to guests, adopting suitable measures.
65. Diesel generating set stacks should be monitored for CO and HC.
66. Ground Water downstream of Rain Water Harvesting pit nearest to STP should be monitored for bacterial contamination. Necessary Hand Pumps should be provided for sampling. The monitoring is to be done both in pre and post monsoon, seasons.
67. The green belt shall consist of 50% trees, 25% shrubs and 25% grass as per MoEF norms.
68. A Separate electric meter shall be provided to monitor consumption of energy for the operation of sewage/effluent treatment in tanks.
69. An energy audit should be annually carried out during the operational phase and submitted to the authority.
70. Project proponents shall endeavor to obtain ISO: 14001 certification. All general and specific conditions mentioned under this environmental clearance should be included in the environmental manual to be prepared for the certification purposes and compliance.
71. Environmental Corporate Responsibility (ECR) plan along with budgetary provision amounting to 2% of total project cost shall be submitted (within the month) on need base assessment study in the study area. Income generating measures which can help in up-liftment of weaker section of society consistent with the traditional skills of the people identified. The program me can include activities such as old age homes, rain water harvesting provisions in nearby areas, development of fodder farm, fruit bearing orchards, vocational training etc. In addition, vocational training for individuals shall be imparted so that poor section of society can take up self employment and jobs. Separate budget for community development activities and income generating programmers shall be specified. Revised ECR plan is to be submitted within 3 month. Failing which, the environmental Clearance shall be deemed to be cancelled.



72. Appropriate safety measures should be made for accidental fire.
73. Smoke meters should be installed as warning measures for accidental fires.
74. Plan for safe disposal of R.O reject is to be submitted.
75. Project falling within 10 Km. area of Wild Life Sanctuary is to obtain a clearance from National Board Wild Life (NBWL) even if the eco-sensitive zone is not earmarked.

**Specific Conditions**

1. 100% waste water shall be treated in STP and shall be completely recycled within the project for flushing, gardening, Genset cooling etc. to achieve zero discharge.
2. Laboratory effluent shall be given primary treatment prior to the STP.
3. Paper waste shall be segregated and given to paper recyclers.
4. Municipal Solid Waste shall be managed and disposed as per MSW Rules, 2000 (as amended).
5. Leaf droppings and organic waste should be put to organic convertor.
6. Manure generated from STP sludge and Organic convertor should be used in-house and excess may be given for Gardening to outside users. A plan in this regard may be submitted.
7. E-waste should be stored in a secured place till it is given to approved recyclers from CPCB.
8. Noise level in the premises should be contained towards forest area in confirmation to prescribed standards.
9. The proponent will implement the EMP including waste water use for flushing in existing buildings as committed.
10. Environmental Corporate Responsibility (ECR) plan along with budgetary provision amounting to 2% of total project cost shall be submitted (within 03 months) on need base assessment study in the study area.
11. Excavated soil during the construction shall be used within the project premises.
12. LED lights should be used in place of CFLs in all common areas and corridors. Solar lights shall be used for open areas.
13. Adequate Parking areas shall be provided minimum upto MoEF norms. No parking shall be allowed on roadside.
14. Wetlands should not be infringed.
15. Check dam/retaining wall shall be constructed on the project land to contain storm water flow towards lake/water body.
16. 100 % provision of Rain Water Harvesting is to be made. RWH shall be initially done only from the roof top. RWH from green and other open areas shall be done only after permission from CGWB.
17. A thick green belt consisting of three rows around the project shall be developed as per CPCB guidelines.
18. Regarding solar panel the proponent informed that 2 MW substation is already under execution. However it was ensured by the proponent that they will explore the possibility of solar provision for street lighting as dense trees planted are major hurdle in providing solar poles. An action taken report may be submitted.

No construction/operation is to be started without obtaining Prior Environmental Clearance. Concealing factual data and information or submission of false/fabricated data and failure to comply with any of the conditions stipulated in the Prior Environmental Clearance attract action under the provision of Environmental (Protection) Act, 1986.

This Environmental Clearance is subject to ownership of the site by the project proponents in confirmation with approved Master Plan for Kanpur. In case of violation, it would not be effective and would automatically be stand cancelled.

You are also directed to ensure that the proposed site is not a part of any no-development zone as required/prescribed/identified under law. In case of violation, this permission shall automatically deem to be cancelled. Also, in the event of any dispute on ownership or land use of the proposed site, this clearance shall automatically deemed to be cancelled.

The project proponent will have to submit approved plans and proposals incorporating the conditions specified in the Environmental Clearance within 03 months of issue of the clearance. The SEIAA/MoEF reserves the right to revoke the environmental clearance, if conditions stipulated are not implemented to the satisfaction of SEIAA/MoEF. SEIAA may impose additional environmental

These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006 including the amendments and rules made thereafter. .

This is to request you to take further necessary action in the matter as per provision of Gazette Notification No. S.O. 1533(E) dated 14.9.2006, as amended and send regular compliance reports to the authority as prescribed in the aforesaid notification.


(J. S. Yadav)  
Member Secretary, SEIAA

Dated: As above

No.....1766..... /Parya/SEAC/2256/2013/AD(H)

Copy with enclosure for information and necessary action to:

1. The Principal Secretary, Department of Environment, Govt. of Uttar Pradesh, Lucknow.
2. Advisor, IA Division, Ministry of Environment & Forests, Govt. of India, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi.
3. Chief Conservator, Regional Office, Ministry of Environment & Forests, (Central Region), Kendriya Bhawan, 5th Floor, Sector-H, Aliganj, Lucknow.
4. District Magistrate, Kanpur.
5. The Member Secretary, U.P. Pollution Control Board, Gomti Nagar, Lucknow.
6. Copy to Web Master/ guard file.

  
(Dr. R.K. Sardana)  
Secretary, SEAC/  
Director (I/C), Environment