

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY - DELHI
OFFICE OF DELHI POLLUTION CONTROL COMMITTEE
4TH FLOOR, ISBT BUILDING, KASHMERE GATE, DELHI-110006
visit us at : <http://dpcc.delhigovt.nic.in>

F.No. 82/DPCC/SEIAA-SEAC/10/2545-2549

Dated: 16.03.2012

To,

Mr. Anupam Shrivastava,
University Engineer,
Engineering Department, (North Campus),
Delhi University, Delhi- 110007

E-mail: anu_srivastava_64@yahoo.com
Telephone: 011-27667157, 27667725, 9958381113
Fax No. : 011- 27666007

Sub: Proposed Development of Institutional Buildings: Chemistry Laboratory, Arts & Social Science, Examination Building and Botany Building at North Campus, Delhi University, Delhi - Environmental Clearance- Regd.

Consultant to the Project: M/s IRG Systems South Asia Pvt. Ltd.

This has reference to communication no. UE/5938/DU received on 26.04.2010 followed by subsequent letters received on 11.05.2010, 28.07.2010, 01.09.2010, 28.09.2010, 29.03.2011, 04.04.2011, 09.06.2011, 30.06.2011, 25.10.2011, 09.12.2011, 19.12.2011, 21.12.2011, 29.12.2011 and 27.02.2012 made to State Level Expert Appraisal Committee, NCT-Delhi, constituted vide GOI notification no. S.O. 1888(E) dated 30.07.2008 and reconstituted vide GOI notification no. 1845(E) dated 08.08.2011, seeking prior Environmental Clearance for the above project under EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under EIA Notification, 2006 and as amended to date on the basis of mandatory documents enclosed with the application along with the additional clarifications furnished in response to the observations of State Expert Appraisal Committee constituted by Competent Authority in its meetings held on 14.05.2010, 29.07.2010, 03.09.2010, 29.09.2010, 20.04.2011, 30.06.2011, 31.10.2011, 20.12.2011, 22.12.2011 and 11.01.2012.

1. It is interalia noted that the proposal is for grant of Environmental Clearance for Development of Institutional Buildings: Chemistry Laboratory, Arts & Social Science, Examination Building and Botany Building at North Campus, Delhi University, Delhi on a plot area of 17460 sq.mt. The proposed built-up area is 41277 sq.mt. The project includes construction of Chemistry Laboratory Building with B+G+5 floors, Botany Building with B+G+2 floors, Examination Building with B+G+2 floors and Arts & Social Science Building with B+G+6 floors. The total proposed Ground Coverage area is 6952.04 sq.mt. (Examination Building: 1541 sq.mt. + Chemistry Laboratory Building: 1627.66 sq.mt. + Botany Building: 1140.1 sq.mt. + Arts & Social Science Building: 2643.28 sq.mt.). The total proposed FAR area is 33504.84 sq.mt. (Examination Building: 4263 sq.mt. + Chemistry Laboratory Building: 9548.37 sq.mt. + Botany Building: 2808 sq.mt. + Arts & Social Science Building: 16885.468 sq.mt.). The total basement area is 7772.16 (Examination Building: 1901 sq.mt. + Chemistry Laboratory Building: 1627.66 sq.mt. + Botany Building: 1568.58 sq.mt. + Arts & Social Science Building: 2674.92 sq.mt.). The proposed Green Belt area is 2870 sq.mt. The total expected student

- (xxi) Fixtures for toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- (xxii) Energy Conservation Building Code to be strictly adopted in all aspects of building design and construction.
- (xxiii) Approval of competent authority shall be obtained for structural safety of the building due to earthquake, adequacy for fire fighting equipments etc as per National Building Code including protection measures from lightening etc.
- (xxiv) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to all surroundings.

II. Operation Phase

- (i) Consent to Operate under Air and Water Acts shall be obtained from DPCC before operation, failing which the Environmental Clearance herein shall be deemed to be withdrawn.
- (ii) Scrubbers to be installed for fumes from chemistry lab with exhaust chimney above roof level. Three types of fire extinguishers, viz. Foam based, Dry powder based and CO₂ based, should be installed in Chemistry Laboratory Building.
- (iii) An Effluent Treatment Plant (ETP) should be installed for treatment of effluent generated from chemistry and botany building. Scrubbing water from scrubbers installed in chemistry lab should be discharged into ETP for treatment. STP(s) should also be installed for the entire North Campus and the treated wastewater should be used for horticulture within 3 years in order to achieve zero discharge. The STP and ETP should be certified by an independent expert and adequacy report in this regard should be submitted to Delhi Pollution Control Committee before the project is commissioned for operation. Necessary measures should be made to mitigate the odour problem from STP and ETP.
- (iv) Since subsoil water is high, the shallow borewell water should be used for horticulture and not DJB water. No fresh water should be used for horticulture. However, the ground water drawl during operation phase should be done only with the prior permission of DJB. The ground water level and its quality should also be monitored regularly in consultation with DJB.
- (v) The solid waste (dry as well as wet garbage) generated should be properly collected and segregated. Biodegradable (wet) garbage generated should be converted to compost or biogas by suitable technology. Non-Biodegradable waste should be outsourced properly after recovery of recyclable material. Common Paper recycling unit should be installed for recycle and reuse of waste paper. Adequate measures should be taken to prevent odour problem.
- (vi) Radioactive isotopes from new botany block should be dealt as per Atomic Energy Regulatory Board guidelines. Separate storehouses should be provided for individual chemicals.
- (vii) Utilization of Diesel power generating sets is subject to power failure condition only. The DG sets proposed as a source of power back up during operation phase should be of enclosed type, low sulphur diesel run and conform to rules made under the Environment (Protection) Act, 1986. The DG sets should be subjected to periodic noise and stack monitoring in consultation with DPCC. Waste/used diesel should be stored and managed as per Hazardous Waste (Management and Handling) Rules, 2000 as amended to date and be sold to CPCB approved recyclers. Clearance from AAI should be obtained for stack height of D.G Set.

- (viii) Traffic congestion near the entry and exit points from the roads adjoining the project site must be avoided. Parking should be fully internalized and no public space should be utilized. Parking provision should be provided for handicapped persons.
- (ix) Energy Conservation measures such as solar lighting for common areas, installation of solar water heating system in all the proposed buildings, CFLs/TFLs for lighting of areas, LED lights for signage, solar inverters etc should be adopted.
- (x) Used CFLs/TFLs should be properly collected and disposed off/ sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.
- (xi) A Report on 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 and submit a copy to Ministry of Environment & Forests, Regional Office, Chandigarh and DPCC in three months time with intimation to SEIAA.

PART B- GENERAL CONDITIONS

- (i) The environmental safeguards and monitoring schedule as contained in the EMP should be implemented in letter and spirit & there will be no departure from the final project proposal as approval herein. One architect and one environmentalist should be included in Works Advisory Committee of Delhi University.
- (ii) Continuous monitoring of environmental quality and green cover should be carried out and to achieve this, the Department of Environmental Studies should be strengthened in terms of manpower and infrastructure.
- (iii) Officials from Ministry of Environment & Forests, Regional Office, Chandigarh and Delhi Pollution Control Committee, who would be monitoring the implementation of environmental safeguards, should be given full cooperation, facilities and documents/data on site by the project proponents during their site inspection. A complete set of all the documents submitted to SEAC should be forwarded to Ministry of Environment & Forests, Regional Office, Chandigarh & DPCC. Six monthly monitoring reports should also be submitted to Ministry of Environment & Forests, Regional Office, Chandigarh & DPCC.
- (iv) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEAC.
- (v) In compliance to Hon'ble High Court's Order dated 7th August, 2008, use, sale and storage of all kinds of plastic bags shall be forbidden.
- (vi) E-waste generated in the complex should be managed as per E-waste (Management and Handling) Rules, 2011 and disposed through approved e-waste recyclers.
- (vii) State Environmental Impact Assessment Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including the revoking of the environmental 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.
- (viii) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department etc shall be obtained, as applicable by project proponents from the respective competent authorities.
- (ix) These stipulations would be enforced among others under the provisions of Water (Prevention and Control) Pollution Act, 1974, the Air (Prevention and Control) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006, as amended to date.
- (x) The project proponent should prominently advertise in at least two local Newspapers widely circulated in the region indicating that the project has been accorded Environmental

population will be 2700 persons (Chemistry Laboratory Building: 787 persons + Arts & Social Science Building: 1463 persons + Botany Building: 200 persons + Examination Building: 250 persons). The proposed parking provision will be 117 ECS (52 ECS in surface and 65 ECS in basement) in Arts & Social Science Building, 59 ECS (30 ECS in surface and 29 ECS in basement) in Chemistry laboratory building, 74 ECS (26 ECS in surface and 48 ECS in basement) in Examination Building and 25 ECS in basement of Botany building. The fresh water requirement will be 130.11 KLD (36.39 KLD in Chemistry laboratory building + 9.6 KLD in Botany building + 11.98 KLD in Examination Building + 72.14 KLD in Arts & Social Science building), out of which 121.5 KLD will be used as Institutional water demand and rest of 8.61 KLD will be used for horticulture. The source of water supply will be DJB. The total wastewater generation will be 103.26 KLD which will be disposed off to STP of DJB through sewers of DJB. It is proposed to install an ETP of 12 KLD capacity for treatment of effluents generated from chemistry and botany building before disposing it off. The Municipal Solid Waste generation will be 200 kg/day, which will be disposed off by a private agency at present working in the university. The total power requirement will be 4358 KW. The power supply is met from NDPL. Rainwater Harvesting system has been proposed. The estimated cost of the project is Rs. 243.40 Crores. SEIAA has not examined their requirements as the same has been taken into account by SEAC during the appraisal of project.

2. The State Expert Appraisal Committee, in its 30th meeting held on 20.04.2011, had taken note of revised application received from proponents and had noticed that the total built-up area for the project exceeded 1,50,000 sq.mt. under screening category 8(a) as mentioned in schedule of EIA Notification 2006 and as amended to date and this project did not fall under Category B projects and hence, the Committee transferred the case to Expert Appraisal Committee (EAC) of the Ministry of Environment and Forests (MoEF), GOI for consideration for Environmental Clearance. The Ministry of Environment and Forests returned the case to SEAC vide its letter no. 19-82/2011-IA.III dated 03.06.2011 with reference to its Office Memorandum dated 25.04.2011 stating that all the projects under items 8(a) and 8(b) do not attract general condition and hence, would continue to remain as Category 'B' and would continue to be appraised by the respective State Environmental Impact Assessment Authorities (SEIAAs). The SEAC, in its 33rd meeting, advised to the project proponent to submit application(s) for Environmental Clearance for expansion of existing buildings or new buildings as per the EIA notification 2006 and as amended to date. The proponent then furnished revised application as per the decision of the Committee. The Committee after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to the observations, has recommended this project to State Environmental Impact Assessment Authority (SEIAA) for grant of Environmental Clearance. After considering different aspects and SEAC recommendations, SEIAA in its 16th meeting held on 27.02.2012 hereby accords necessary Environmental Clearance for the above project as per provisions of Environment Impact Assessment Notification, 2006 and its subsequent amendments, subject to compliance of the terms and conditions as follows:

PART A- SPECIFIC CONDITIONS

I. Construction Phase

- (i) Construction to be started after Consent to Establish has been obtained from Delhi Pollution Control Committee under Air and Water Acts and a copy shall be submitted to the SEAC- NCT Delhi, failing which project shall be discontinued.

Clearance and copy of clearance is available with the DPCC and may also be seen on the website of DPCC at <http://www.dpcc.delhigovt.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter.

- (xi) The project proponent should submit copy of Environmental Clearance to the Heads of Local bodies, Panchayats and Municipal bodies in addition to relevant offices of Government who in turn has to display the same for 30 days from the date of receipt.
- (xii) Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.

(Sandeep Mishra)
Member Secretary (SEIAA)

Copy to:

1. **The Secretary (Environment) cum Chairman (DPCC)**, Department of Environment, Government of NCT Delhi, Secretariat Building, 6th Level, C-Wing, I.P.Estate, New Delhi.
2. **Sh. Kaushal Kumar Mathur, Chairman, State Level Environment Impact Assessment Authority**, 4, Defence Enclave, Vikas Marg, Delhi - 110092.
3. **The Director, Impact Assessment III– Division**, Ministry of Environment & Forests, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003.
4. **The Additional Director/Conservator of Forests**, Ministry of Environment & Forests, Regional Office (NZ), Bays No.24-25, Sector 31 A, Dakshin Marg, Chandigarh - 160030.

(Sandeep Mishra)
Member Secretary (SEIAA)

- (ii) A first aid room to be provided in the project both during construction and operation phase.
- (iii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structures to be removed after completion of the project.
- (iv) Health and safety norms of CPWD should be followed during construction.
- (v) Top soil excavated during construction activities should be stored for horticulture/landscape development within site.
- (vi) Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (vii) Proper measures should be adopted to control dust emissions during construction phase.
- (viii) Soil and water samples of the site should be tested by the proponent through DPCC recognized laboratory to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants, on quarterly basis for inclusion in the six monthly report.
- (ix) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- (x) Any hazardous waste generated during construction and operation phase should be disposed off as per applicable rules and norms with necessary approvals of the Delhi Pollution Control Committee.
- (xi) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment Protection Rules prescribed for air and noise emission standards.
- (xii) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.
- (xiii) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours. The construction material loaded or unloaded should be covered before transportation to avoid fugitive emissions etc.
- (xiv) Ambient noise levels should conform to prescribed residential standards both during day and night. Adequate measures should be made to reduce ambient air and noise level during construction and operation phase, so as to conform to the norms stipulated by CPCB/DPCC. Ambient air and noise monitoring should be done by an accredited lab and data should also be submitted, on six monthly basis.
- (xv) Thick green belt of the adequate width and density, as per plan submitted, shall be raised along the periphery of the plot so as to provide protection against particulates and noise. Native species of trees should also be planted. 2-3 rows large no. of potted plants/drums should be put up.
- (xvii) The ground water drawl during construction phase should be done only with the prior permission of DJB. The ground water level and its quality should also be monitored regularly in consultation with DJB.
- (xviii) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003.
- (xix) Ready Mix Concrete must be used in building construction.
- (xx) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices preferred.