

MINUTES OF 14<sup>TH</sup> MEETING OF EXPERT APPRAISAL COMMITTEE, UNION TERRITORY, CHANDIGARH HELD ON 03.07.2012 at 3:00 P.M. IN THE DEPARTMENT OF BOTANY, PANJAB UNIVERSITY, CHANDIGARH UNDER THE CHAIRMANSHIP OF DR. R.K. KOHLI, CHAIRMAN, EXPERT APPRAISAL COMMITTEE, UT, CHANDIGARH

A meeting of Expert Appraisal Committee, Union Territory, Chandigarh was held on 03.07.2012 at 3:00 P.M. in the Department of Botany, Panjab University, Chandigarh under the chairmanship of Dr. R.K. Kohli, to discuss the issue for the grant of environmental clearance to the Post Graduate Institute of Medical Education and Research, Chandigarh by addition of hospital, hostels and houses.

Following members were present in the meeting:-

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| 1. | Prof. M.S.Johal,<br>Department Zoology,<br>Panjab University, Chandigarh.                      | Member    |
| 2. | Sh. Surinder Singh,<br>Divisional Forest Officer (Retd.)<br>H.No. 995, Sector 41-A, Chandigarh | Member    |
| 3. | Sh. Vivek Pandey,<br>Scientist 'B'.<br>Chandigarh Pollution Control Committee,<br>Chandigarh.  | Member    |
| 4. | Sh.P.J.S. Dadhwal,<br>Additional Director,<br>Environment Department<br>U.T., Chandigarh.      | Secretary |

The project proponent has submitted application for the grant of environmental clearance for expansion of their institute namely Post Graduate Institute of Medical Education & Research, Sector 12, Chandigarh by addition of hospital, hostels and houses with a built up area of 75161.73 sq.m.

The case was considered by SEAC in its 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> 13<sup>th</sup> and 14<sup>th</sup> meetings held on 21.02.2012, 20.03.2012, 21.04.2012, 09.05.2012, 28.05.2012, 09.06.2012 and 03.07.2012 respectively. As per the procedure and on the basis of documents enclosed with the application form viz Form 1 and Form 1A, conceptual plan and the additional clarifications furnished in response to the observations of the EAC in writing and verbally during the presentation and site visit. The committee has resolved to forward the project to State Environment Impact Assessment Authority, Chandigarh, for the grant of environmental clearance,

The members unanimously decided to send the recommendations to the State Environment <sup>Impact</sup> Assessment Authority for the grant of Environmental Clearance as per conditions given below:-

**Project brief:**

1. **Building, Area and Estimated cost:-** The proponent has proposed for expansion of Post Graduate Institute of Medical Education and Research by addition of hospital, hostels and houses with a built up area of 75161.73 sq.m. The existing total built up area is 153417.64 Sq.m. in campus in Sector 12, Chandigarh. The proposed buildings includes 250 bedded hospital, National Institute of Para Medical Sciences College, Hostel and Mess, Nursing Hostel and Mess, Married/Bachelor Doctor hostel, classroom, Type II/III/IV/V/VI houses. The buildings are without basement except for 250 bedded hospital which is with the single basement. The height of the building varies

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from G+1 to G+4. The total area of the institution is 277 Acres, out of which ground coverage for already constructed area is 33 Acres, ground coverage for proposed building is 4.67 Acres. An area of 122.20 Acres is under green belt/parks. Ground coverage for parking is 24.25 Acres. Area under footpath/road is 35 Acres and other open area is 57.88 Acres. The total estimated cost of the project is Rs. 183 Crores out of which 990 lacs have been proposed to be spent on environment protection measures.. The project design population is 2220 with a floating population of 220.

**2. Water and Energy:-** The domestic water demand for expansion is 150 KLD and that for cooling for expansion is 700 KLD. The water to be supplied by MC, Chandigarh yet ground water recharging is proposed through rainwater harvesting @ 10240 KL/annum. Total wastewater generated @112 KLD shall be treated and recycled for irrigation. Total energy consumption shall be 5411 KW to be provided by Electricity Department out of which 3011 KW for hostels and residences and 2400 KW for 250 bedded hospital after energy saving. These would be achieved by following ECBC, 2007 norms and include measures as (1)CFL/LEDS (2) a 25% mix for solar lights in external lighting (3) building designs as per ECBC norms (4) Provision of solar water heater in hostels. 9 Nos. of DG sets of total capacity of 10250 KVA for standby use only with acoustic enclosures has been proposed. 21 Nos. DG sets of 9405 KVA already exist. In addition unit has 4 baby boilers, 2 of 850 kg/hour and 2 of 1000 kg/hour. There are 2 Nos. incinerators of 200 kg/hr.

**3. Disposal of waste:-** Solid waste @888 kg/day shall be generated. It shall be segregated to biodegradable and non-biodegradable waste in the earmarked area. The recyclable inorganic waste shall be sold to local resellers. Any non recyclable waste or non-usable (inert waste) shall be sent to dumping site of MC. Present quantity of bio-medical waste is @932 kg/day and @125kg/day shall be generated from the expansion project. The incinerable component of waste is burnt in two no. incinerators of 200 kg/hour each. On expansion, the various components of biomedical waste shall be handed over to the authorized bio-medical waste service provider as notified by CPCC and or shall be burnt in incinerator provided at PGI or disposed of as per rules laid down. E-waste has not been quantified by the unit but assured that it shall be handled as per E-waste (M&H) Rules 2011. The hazardous waste (used oil from DG sets) shall be stored in lock and key and shall be sent to CPCC authorized recyclers. The proponent has supplied the correspondence held with the Nimbua Green Field for the disposal of Hazardous waste. The construction waste shall be recycled to the extent possible within project for flooring and roads or sold to recyclers. The unit has further submitted that there is no Radioactive waste generated in their institution except in the Department of Nuclear Medicine which will be disposed off lawfully.

**4. Plantation and landscaping:-** Out of 277 acres of campus area 122 acres is earmarked for green belt and parks and there are 21625 trees on campus area out of which 9500 were planted last year only. The project site is part of once a continuous, thick and wide green belt of established trees, raised and maintained by forest department along banks of Patiala choe and Sukhna choe to ameliorate climatic conditions of the city Chandigarh. The proponent in its initial document dated 18.11.2011 reported the project site as barren but later on after protracted

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correspondence admitted the presence of 230 trees out of which 159 trees are to be felled for building area. The unit has submitted module of plantation of 500 trees as project plantation with a cost of Rs.7.50 lacs and of 750 plants to mitigate loss of 159 trees as compensatory plantation at a cost of Rs.11.50 lacs. During site visit the committee observed dense growth of trees of different age groups which formed part of once a continuous green belt.

It is evident that a change in ecology of the area has occurred by creation of a gap in the erstwhile green belt of trees as can also be envisaged from the Google View submitted by proponent as Annex.1 of the document dated 07.06.2012. The ecological loss can be compensated only by planned way of successful plantation of maximum number of trees, maintaining the existing ones and raising thick belt, not less than three rows, of ever green trees along the peripheral area of the campus. The whole process of plantation and maintenance needs to be controlled and monitored by a committee of experts to be so constituted by the proponent.

5. **Sewage Treatment Plant:-** Three STP-cum-ETP of 1200 KLD, 750 KLD, 1000 KLD and One (1) STP of 500 KLD has been proposed. The sewage cum effluent treatment plant based on extended aeration (activated sludge process) SART (submerged Aerobic Fixed Film Reactor)/ MBBR (Moving Bed Bio Reactor) Technology has been suggested. The treated sewage water shall be used for irrigation.

6. **Parking:-** A total of 24.25 acres is earmarked for parking. Provision of parking area of 163818 Sq.ft. for expansion is made. The unit has proposed a parking for 750 cars for 250 bedded hospital. The hostels and residences will have parking within the plots both open and under stilt.

#### Part-A: Specific Conditions

1. Since the proponent has constructed built up area of 70101.10 sq.m. without having prior environmental clearance for which unit has agreed and consented that the violation has been done. The committee has asked the proponent to put the matter relating to violation to the Board of Directors of the Institution and a written commitment in the form of resolution be submitted that in future no such violations shall be undertaken prior to issuance of environmental clearance. The request may also be made to the Chandigarh Administration to impose penalty as desired by MoEF, Government of India vide its circular No.J-11013/41/2006-IA.II(I) dated 16.11.2010 for such cases of violation.
2. Since the distance of project site from Sukhna Wildlife Sanctuary is 2.8 Kms and from City Bird Sanctuary is 3.3 kms respectively, The project proponent shall obtain clearance from Standing Committee of the National Board for Wildlife for which, the unit has already applied.
3. Hazardous waste will be handed over to the Nimbua Green Field Ltd. A copy of MoU with Nimbua Greenfield Ltd., would be furnished within one month of issuance of environmental clearance.
4. The 159 trees out of 230 trees standing at project site shall be felled only after getting due permission of the competent authority and the balance 71 trees to be retained at project site will be properly maintained.
5. The areas along boundary wall, STP area and DG set areas are prone to more environmental hazards and will be planted with at least three rows of evergreen trees to mitigate bad effects. The other areas like road beams, vehicle parking areas and parks etc. will be planted with ever green, deciduous and fruit/ medicinal value trees depending upon site conditions.
6. All the existing tree growth of erstwhile green belt and now in possession of proponent will be enumerated and counted as part of total plant stock of the campus and maintained. The ecological loss of the area so caused by creation of gaps in the erstwhile green belt will be overcome with a planned and systematic way of successful plantation of large number of trees over available spaces and planting of maximum number of rows, not less than three, of ever green trees

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along the peripheral area of the campus. The whole process of plantation will be controlled and monitored by a committee of experts to be so constituted by the proponent.

**I. Construction Phase:**

- i. The total already built up area is 153417.64 sq. m. and proposed built up area for expansion is 75161.73 sq. m. and any additional construction shall require revised environmental clearance as an expansion project.
- ii. As per undertaking furnished, there shall be no deviation in the conceptual plan submitted.
- iii. Vehicles hired for construction activities should be operated only during non-peak hours.
- iv. All the top soil excavated during construction activities should be stored for use in horticulture / landscape developments within the project site.
- v. Ready mixed concrete shall be used in building constructions.
- vi. Water demand during construction shall be reduced by use of premixed concrete, curing agents and other best practices.
- vii. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction / operation of the project.
- viii. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- ix. Use of glass may be reduced up-to 50% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
- x. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.
- xi. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.
- xii. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.
- xiii. All required sanitary and hygienic measures including portable toilets/septic tank etc. for labour should be in place before starting construction activities and to be maintained through the construction phase.
- xiv. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.
- xv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- xvi. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.
- xvii. Diesel power generating sets used during construction phase should be of "enclosed type" to prevent noise and should conform to rules made under Environment (Protection) Act, 1986, prescribed for air and noise emission standards.
- xviii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.
- xix. The construction agencies shall use fly ash based material / products as per the provisions of fly ash notification of 14.09.1999 as amended on 27.08.2003.

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- xx. Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under Control"(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- xxi. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.
- xxii. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the Chandigarh Pollution Control Committee.
- xxiii. Under the provisions of the Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that the expansion of the project had started without obtaining environmental clearance.
- xxiv. The diesel required for operating DG set shall be stored in underground tanks and if required, clearance from the Chief controller of Explosives shall be taken.
- xxv. The approval of the competent authority shall be obtained for structural safety of the building due to earthquake, adequacy of fire fighting equipments etc. as per national Building Code including protection measures from lightening etc.
- xxvi. 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 the surroundings.

**Operational Phase:** The environmental clearance recommended to the project is subject to the specific conditions as follows:

- i. The unit shall operate after obtaining consent to operate from Chandigarh Pollution Control Committee (CPCC) u/s 25/26 of Water (Prevention and Control of Pollution) Act, 1974; Air (Prevention and Control of Pollution) Act, 1981 and authorization under Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.
- ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed institution.
- iii. A Sewage Treatment Plant based on suitable technology shall be installed for the treatment of the sewage generated. The BOD of the treated sewage for irrigation/landscape or for discharge into public sewer shall not exceed 30 mg/l. No waste water should be discharge into public sewer without treatment. The installation of the Sewage Treatment Plant and related facilities as above should be certified by an independent expert and a report in this regard should be submitted to the monitoring authority that is regional office of MoEF and CPCC within six months of the grant of environmental clearance.
- iv. The installation of three Nos. STP-cum-ETP and One STP shall be completed in a time bound manner in a period of 2 ½ year as per the undertaking submitted.
- v. All queries of CPCC towards grant of consent to establish/operate under Air (Prevention and Control of Pollution) Act, 1981 Water (Prevention and Control of Pollution) Act, 1974 including monitoring of DG set emission shall be taken up in a time bound manner to ensure that same are obtained prior to start the construction.
- vi. Only 9 DG sets as per the proposal shall be installed which shall be provided with acoustic enclosures, stacks and sampling platforms as required under Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and laid down by Central Pollution Control Board. The stack emissions from the DG sets shall be monitored for PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC once every six months from a NABL accredited/ MoEF approved laboratory. Regular maintenance and service of the DG sets shall be undertaken to ensure that there is no substantial increase in emissions in subsequent monitoring. DG sets shall be used only as standby in case of failure of electricity.

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- vii. Representative 24/8/1 Hour ambient air quality at the project site shall be monitored at three locations every season except monsoon for PM2.5, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, O<sub>3</sub>, NH<sub>3</sub> and Pb in PM as per the Ambient Air Quality Standards, 2009 from a NABL accredited/ MoEF approved laboratory. The trends in AAQ shall be studied and any increase in AAQ over a period of time (two years) shall be analyzed and report submitted to CPCC and Regional office North, MoEF with corrective measures to contain the AAQ and improve the same.
- viii. The peak activity Day/Night time ambient noise levels shall be monitored along the boundary of the project at-least once every six month. The trends in noise levels shall be studied and any increase in noise levels over a period of time (two years) shall be analyzed and report submitted to CPCC and Regional office North, MoEF with corrective measures to contain the noise levels and improve the same. The noise levels from the DG sets shall be monitored once every year and shall meet the prescribed standards, else otherwise corrective measures shall be taken under intimation to the monitoring authority to contain the noise levels.
- ix. The solid waste shall be segregated on site into recyclable and biodegradable components as disposed off as per the conditions imposed by CPCC. ~~The hazardous wastes including e-waste shall also be disposed off~~ per the conditions imposed by CPCC and appropriate records shall be maintained. An audit of the waste generation shall be undertaken over a period of time (two years) and attempts shall be made to minimize the waste generation.
- x. Weep holes shall be provided in the compound walls to ensure there is no obstruction to natural drainage of rainwater in the catchment area during the monsoon period.
- xi. As undertaken, re-using of rainwater be done. The open area used for parking and walking paths shall use perforated tiles to help percolate rainfall in natural manner.
- xii. The greenbelt and landscaping as per the proposed plan shall be provided and its land use shall not be altered. The sites like boundary wall, STP area and DG set area should have thick belt of ever green trees with at least three rows of trees forming three tier canopies to mitigate environment hazards. The other areas like parks, vehicle parking, road sides etc., may be planted with evergreen deciduous or fruit trees as per requirement of the site. A report on the status of plantation, including no. and variety of trees shall be submitted to monitoring authority every six months.
- xiii. The treated sewage for the purpose of irrigation shall be applied in scientific manner ensuring conditions as water accumulation, mosquito breeding, odour pollution are not caused. Three representative samples of soil shall be drawn once every year from a depth of up to one meter from the treated sewage irrigated area and analyzed to ensure that the quality of the soil does not deteriorate over a period of time. Corrective measures shall be suggested and undertaken in case any deterioration is observed.
- xiv. The net fresh water demand shall be met from the municipal supply only and no tube well shall be installed within the project site.
- xv. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- xvi. A report on the energy conservation measures should be prepared incorporating details with regard to compliance with ECBC guidelines and or as provided in the documents submitted for environmental clearance and shall be submitted to the monitoring authority in six months time. An energy audit shall be conducted to verify the energy consumption and to suggest measures to reduce it further. The solar lights outside shall be installed as proposed.
- xvii. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the residential premises.
- xviii. A report on expenditure done on environment protection including corporate social responsibility as per the documents submitted for environmental clearance shall be submitted once every six months to the monitoring authority. The CSR measures shall be specific to unit and shall not pertain to entire group. These CSR measures shall also not be limited to unit

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employees and intra-campus activities but shall extend to nearby communities including steps to improve the environment conditions in the area.

xix. All the radioactive waste if generated should be disposed of as per rules.

**Part- B General Conditions:**

- i) The environmental safeguards contained in the documents should be implemented in letter and spirit.
- ii) The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Level Environment Impact Assessment Authority, CPCC and Regional Office of MoEF, North and may also be seen at the website of the unit. The advertisement should be made within seven days from the day of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office, Ministry of Environment & Forests, Chandigarh.
- iii) Reports shall be submitted to the Regional Office North of MoEF on compliance to environmental conditions every six months. The reports including that of air, noise, soil and treated sewage quality shall also be placed on the website of the project proponent within a period of six month from the grant of environmental clearance. A display board shall also be provided at the gate of the unit showing date of grant consents and its validity and key pollution related parameters for the information of the general public as per the guidelines given by CPCC
- iv) The unit shall obtain clearances as for fire safety, structural safety, storage of fuel, sewerage connection, permission from airport authority of India etc. as applicable prior to start of operations.
- v) Officials from the Regional Office of MoEF, Chandigarh who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to SEIAA/SEAC should be forwarded to the Regional office North of MoEF, Chandigarh.
- vi) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this SEIAA
- vii) The EAC suggested to create three tier system of green belts along the boundary wall, STP area and DGset area with ever green, indigenous, dense foliage trees preferably having medicinal, fruit and socio economic values. The vehicle parking areas, parks and other areas are suggested to be planted with evergreen or deciduous trees with suitable heights and of above said values depending upon the requirements of site conditions
- viii) The SEIAA reserves the right to modify/add additional environmental safeguards subsequently, if found necessary, Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.
- ix) These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991. The stricter of the conditions as imposed under the Acts as above or as imposed in environmental clearance shall apply.
- x) In case project proponent sells/sublets the property, it shall enter in to a MoU with all such users/owners, if any, to ensure operation and maintenance of the STP and other assets and shall provide an Environment cell to ensure compliance to all environmental conditions imposed for the entire life of the property.
- xi) A First Aid Room will be provided at the project site both during construction and operation of the project.
- xii) The project proponent will take constant to improve upon its environmental performance and may go for voluntary accreditations as ISO-14000/Green rating systems.

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- xiii) Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.



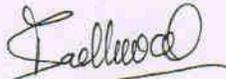
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Sh. P.J.S. Dadhwal,  
Secretary



Dr. R.K. Kohli,  
Chairman