



**State Level Environment Impact Assessment Authority
Madhya Pradesh
Government of India
Ministry of Environment & Forests**

Madhya Pradesh Pollution Control Board

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Bhopal-4620 16
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No: 221/ EPCO-SEIAA/10
Date:-13-07-2010

To,
The Chief Executive Officer
Chirayu Hospital & Medical College
Bhaisakhedi, Indore Road
Bhopal-M.P.

Sub: Prior Environmental Clearance to the Proposed 825 Chirayu Hospital & Medical College, Bhaisakhedi, Indore Road, Bhopal-M.P. Case no 494/2009

This has reference to your letter No. Nil dated 17/12/2009 and subsequent letters dated 18/02/2010, 20/4/2010 and 27/4/2010 seeking Prior Environmental Clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., the Form I, IA, EMP and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 29/01/2010 and 28/04/2010.

2. It is interalia, noted that the project involves the construction of a hospital and medical college on a plot of area 129100 Sq.m. The project will have a 825 beds hospital, college building, auditorium, residential complex, public utility and other infrastructures. The total water requirement is 675 KLD. The domestic supply shall be 310 KLD. About 90% of domestic supply is expected to be generated as sewage which shall be diverted to the Sewage Treatment Plant (STP). The capacity of the STP shall be 400 KLD. Treated waste water shall be used for horticulture and flushing. Total Municipal Solid Waste generation will be 1683 Kg/day. Total bio-medical waste generated will be 286 Kg/day and shall be disposed as per the provisions of Bio-medical waste (Management and Handling

Rules, 1988) and its subsequent amendments. The power requirement is 1200 KW Total cost of the project is Rs.42.00 crores.

3. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environmental Clearance for the project mentioned above. Accordingly, the SEIAA considered the project in its 40th meeting held on 01/07/2010 and decided to accept the recommendations of SEAC and hereby accord Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification, 2006 and its subsequent amendments; subject to strict compliance of the terms and conditions as follows:

PART A - SPECIFIC CONDITIONS

I. Construction Phase

- (i) Consent for Establishment shall be obtained from M.P. Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ii) Under the provisions of Environment (Protection) Act, 1986, The State government has been informed by the SEIAA to take necessary action against the project proponent, since the construction of the project has been started without obtaining environmental clearance.
- (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 the completion of the project.
- (iv) Construction of STP shall be taken up only at the time of construction of residential block.

- (v) The ETP/STP should be shifted towards North-eastern corner where the Club/Gym has been located presently. The Club/gym may be relocated at any other suitable place. No waste water from the STP/ETP should go into the nallah.
- (vi) Natural slope of the proposed 9 mt. wide green belt should be kept away from the nallah as per the report of the SEAC.
- (vii) Total green area should be more than 33% of the total plot area instead already existing green belt in 7.5 acres of land. Green belt should be developed at an elevated level by raising the ground level by around two feet and sloping away from the nallah.
- (viii) The reserved green area and 9 mt wide green belt along the side of the nallah should be kept as "No Activity Zone". No construction or storage is allowed in this area.
- (ix) Height of the toe-wall should be raised to 8 feet. Project Proponent should strictly ensure that no waste whether solid or liquid is put/thrown into the nallah.
- (x) A First Aid Room will be provided in the project both during construction and operation of the project.
- (xi) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- (xii) 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.
- (xiii) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.

- (xiv) 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.
- (xv) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the M.P. Pollution Control Board.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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.
- (xix) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ MPPCB.
- (xx) 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. As the site is located within the 100 Km of Thermal Power Stations.
- (xxi) Ready mixed concrete must be used in building construction.

- (xxii) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxiii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxiv) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxv) Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.
- (xxvi) 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.
- (xxvii) Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxviii) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
- (xxix) 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 material to fulfill requirement.
- (xxx) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.

- (xxxi) 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.

II. Operation Phase

- (i) The installation of the Sewage Treatment Plant (STP) 400 KLD capacity should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards of the M.P. Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.
- (ii) The bio-medical waste generated should be disposed off as per the provisions of Bio-medical waste (Management and Handling) Rules 1988.
- (iii) All hazardous wastes generated in the activity shall be stored and disposed of as per the provision of the Hazardous Waste (Management, Handling & Transboundary Movement) Rules.
- (iv) The solid waste generated should be properly collected and segregated and be managed as per the provision of BMW (M&H) Rules. Wet garbage should be composted and dried to an inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable materials.
- (v) All measures shall be taken to prevent percolation of wastes from the hospital premises in to the near by nallah.
- (vi) Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be

of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with M.P. Pollution Control Board.

- (vii) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (viii) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- (ix) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- (x) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore well for rainwater recharging should be kept at least 5 mts. above the highest ground water table.
- (xi) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- (xii) 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.
- (xiii) A Report on the energy conservation measures confirming to energy conservation norms finalize by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.

- (xiv) Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and 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. Use of solar panels may be done to the extent possible.
- (xv) Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.
- (xvi) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.
- (xvii) Project Proponent has to comply with the following commitments made during the SEAC/SEIAA meeting and the plan submitted for consideration of Upper lake and environment of the region.
 - a. Hospital being a sensitive its structures shall be designed/built according to the design parameters recommended by NBO for the buildings falling in seismic zone-II, to prevent it from the possible impacts due to earthquakes.
 - b. A new STP, shall be constructed towards eastern boundary of the site along with the construction of residential accommodation.
 - c. The existing structure for the ETP shall be dismantled and the new ETP will be constructed as per revised details and at least 9.0 m away from the boundary wall along the nallah.
 - d. The RCC boundary wall with adequate depth below ground level shall be constructed all along the nallah and with HDPE lining to prevent seepage. Depth of the boundary wall will be kept such that no effluent from the premises/ETP is percolated in to the nallah.

- e. Characteristics of the raw and treated liquid waste from hospital activities have to be monitored regularly along with the measurement of Total Organic Carbon (TOC).
- f. Commitment for returning land of the existing green belt in 7.5 acres to the state government shall be fulfilled by Project Proponent.
- g. Provision of covered space enough to store BMW generated in two days and another covered storage for manure shall be provided in the premises as per provision.
- h. Rain water collection pits will be provided with oil/grease and silt trap to ensure safe and uncontaminated rain water for harvesting. The Project Proponent will ensure that no contaminated water is used for recharge. Regular monitoring of this water has to be conducted and reported to the authorities.
- i. Eight meters wide green belt should be created on other three boundaries (in addition to point f) of the premises even if the total green area exceeds 33% of the total plot area.

PART B. GENERAL CONDITIONS

- (i) The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.
- (ii) The project proponent shall also submit six monthly reports on 1st June and 1st December of each calendar year on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the SEIAA of M.P., Regional Office of MoEF, Bhopal, the respective Zonal Office of CPCB and the SPCB.

4. Officials from the Regional Office of MOEF, Bhopal 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 should be forwarded to the CCF, Regional office of MoEF, Bhopal.
5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA.
6. The Ministry/SEIAA reserves the right to 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.
7. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
8. 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.
9. 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 M.P. Pollution Control Board and may also be seen on the website of the State Level Environment Impact Assessment Authority (SEIAA) at **www.mpseiaa.nic.in**. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.
10. 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.

12. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/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.
13. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
14. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

Sd/-

(Ashok Shah)

Member Secretary, SEIAA

Endt No.222/SEIAA/EPCO/10

Dated:13-7-2010

Copy to:-

1. The Secretary, Department of Housing & Environment, Government of Madhya Pradesh, Mantralaya, Bhopal
2. The Collector, Distt-Bhopal
3. The Commissioner, Municipal Corpn., Bhopal
4. The Member Secretary, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal-462016
5. The Jt.Director, Town & Country Planning, Bhopal
6. Division, Monitoring Cell, MoEF, New Delhi- 110 003
7. The Regional Officer, MOEF, Bhopal
8. Guard file.

Sd/-

(Ashok Shah)

Member Secretary, SEIAA