

**Government of Maharashtra**

**File No.: SEAC- 2010/CR.618/TC.2**  
Environment department,  
Room No. 217, 2<sup>nd</sup> floor,  
Mantralaya Annexe,  
Mumbai 400 032  
Date: 11<sup>th</sup> March, 2011

To,  
M/s Bhaba Atomic Research Centre,  
Vikram Sarabhai Bhavan,  
Directorate of Construction, Services and Estate Management,  
Annushaktinagar, Mumbai - 400094  
Maharashtra

**Subject: Expansion of the Anushaktinagar Township by M/s Bhaba Atomic Research Centre, Mumbai - Environmental clearance regarding.**

Sir,

This has reference to your communication dated nil on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee, Maharashtra in its 37<sup>th</sup> meeting and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 33<sup>rd</sup> meeting held on 28<sup>th</sup> January, 2011.

2. It is noted that the proposal is for grant of Environmental Clearance for expansion of the Anushaktinagar Township by M/s Bhaba Atomic Research Centre, Mumbai. SEAC considered the project under screening category 8 (b) as per EIA Notification 2006. Project proponent submitted EIA report.

**Brief Information of the project is summarized as below-**

<b>Name of the Project</b>	:	Expansion of the Anushaktinagar Township
<b>Project Proponent</b>	:	M/s. Bhaba Atomic Research Centre, Mumbai.
<b>Location of the project</b>	:	"M" (E) ward, of MCGM at Trombhey, Anushaktinagar, Mumbai
<b>Type of Project</b>	:	Construction Project
<b>Total Plot Area</b>	:	38,27,942.50 m <sup>2</sup>
<b>Proposed Total built up area</b>	:	<ul style="list-style-type: none"><li>• Existing: 7,90,777.80 Sq. m.</li><li>• Expansion area: 2,98,371.43 sq. m.</li><li>• Total construction area: 10,89,149.23 sq. m</li></ul>
<b>Estimated cost of the project</b>	:	₹ 898 Cr
<b>No. of Buildings</b>	:	Proposed buildings: 30 nos. <ul style="list-style-type: none"><li>• Residential Building = 19 nos.</li><li>• Office = 5 nos.</li><li>• Hostel = 1 nos.</li><li>• Amenity = 3 nos.</li><li>• School = 2 nos.</li></ul>



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|  | <ul style="list-style-type: none"> <li>• Out of these 30 buildings, some will be new construction and some will be extension to the existing buildings.</li> </ul> |
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Existing buildings: 268 nos.

**Water Requirement:** Existing:9641 KLD; Proposed:892 KLD; Source: MCGM/ Recycled water

**Wastewater generated:** Existing: 5193 KLD; Proposed: 799 KLD. Waste water generated from the proposed project will be treated in sewage treatment plant.

**Capacity of STP:**

- Existing : 1 MLD & 2 x 1.4 MLD (fixed type surface aeration /diffused aeration technology )
- Proposed: 850 KLD; Treated waste water will be reused for landscaping.

**Rain water Harvesting & Storm Water Drainage:**

- Ground water recharging through bore well.
- Rainwater from the rooftops of 30 building will be collected.
- Daily runoff volume available for recharging is 682.33 m<sup>3</sup>; sufficient two days capacity tanks will be provided for storing rain water.
- Collected water will pass through sedimentation chambers, oil and grease separators , and suspended baffles before going ground water discharge.
- Ground Water Authority shall be consulted for finalization of appropriate rainwater harvesting technology.

**Solid Waste Generation:**

Construction phase:

- Segregation of waste at the source.
- Reuse of construction debris at the site itself for land leveling.

Operation Phase:

- Biodegradable waste – 15.52 TPD
- Non - Biodegradable waste – 15.50 TPD
- STP sludge: 1.48 TPD

Disposal:

- Biodegradable waste will be treated within campus through 'Nisargruna Biogas Plant'
- Non - Biodegradable waste will be handed over to authorized recycler.
- STP sludge will be used as manure.

**Energy:**

Power requirement: construction phase: 2.7 MW ; Source of Power: TATA power / Reliance DG set of 3 nos. x 320 KVA and 4 nos. x 125 KVA capacity will be provided

**Energy conservation measures:**

- Architectural design to reduce energy consumption.
- Use of energy efficient lamps eg. T5 tubes, LED and PL lamps.
- All mercury vapour lamps in public area will be replaced by sodium vapour lamps.
- Solar water heater will be provided.
- Providing China mosaic on all roof tops.
- Providing bank of capacitor to achieve power factor 1.
- Timer will be provided for corridor / car parking lightings.



- Timer and photoelectric sensor will be used to switch on/off of external lighting.

**Green Belt Development:** area for green belt: 9,57,994.44 sq. m, 6800 Nos. of new trees will be planted.

**Traffic Management:**

Total Parking: 4270 nos. for existing and 1169 nos. for proposed.

**Environmental Management Plan:** Operation Phase: Total capital cost for EMP shall be ₹ 1215 Lakhs and O & M for EMP shall be ₹ 67.8 lakhs per year.

3. The proposal has been considered by SEIAA in its 33<sup>rd</sup> meeting & decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :-

- (i) Wet garbage should be treated by Nisargruna Biogas Plant' and no wet garbage will be disposed outside the premises. Local authority should ensure this.
- (ii) This environmental clearance is issued subject to land use verification. Local authority / planning authority should ensure this with request to Rules, Regulations, Notifications, Government Resolutions, Circulars, etc. issued if any. This environmental clearance issued with respect to the environmental consideration and it does not mean that State Level Impact Assessment Authority (SEIAA) approved the proposed land use.
- (iii) Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.
- (iv) Local body should ensure that no occupation certificate will be issued prior to operation of STP/MSW site with due permission of MPCB. Physical possession should be given only after completion of environmental & other infrastructure for which development charges are being collected by local body.
- (v) The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. ULB should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
- (vi) "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
- (vii) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
- (viii) A First Aid Room will be provided in the project both during construction and operation of the project.
- (ix) 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.

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- (x) Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- (xi) Arrangement shall be made that waste water and storm water do not get mixed.
- (xii) All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
- (xiii) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xiv) Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xv) Disposal of muck during construction phase should not create any adverse effect on the neighboring 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.
- (xvi) 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.
- (xvii) Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
- (xviii) Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
- (xix) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.
- (xx) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
- (xxi) 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.
- (xxii) 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/MPCB.
- (xxiii) 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. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
- (xxiv) Ready mixed concrete must be used in building construction.
- (xxv) The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including measures from lighting.
- (xxvi) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxvii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxviii) The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.



- (xxix) The installation of the Sewage Treatment Plant (STP) 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/refused to the maximum extent possible. Treatment of 100% gray water by decentralized treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Maharashtra Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.
- (xxx) Project proponent shall ensure completion of STP, MSW disposal facility prior to occupation of the buildings and should obtain completion certification for these systems/aspects from MPCB.
- (xxxii) Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.
- (xxxiii) Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
- (xxxiv) 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.
- (xxxv) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material
- (xxxvi) Use of glass may be reduced up to 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxxvii) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement
- (xxxviii) 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 like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non conventional energy source as source of energy.
- (xxxix) 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 low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.
- (xl) Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (xli) 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.
- (xlii) 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



- (xliii) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation
- (xliv) 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.
- (xlv) Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.
- (xlvi) Six monthly monitoring reports should be submitted to the Department and MPCB.
- (xlvii) A complete set of all the documents submitted to Department should be forwarded to the MPCB
- (xlviii) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
- (xlix) No land development / construction work preliminary or otherwise relating to the project shall be taken up without obtaining due clearance from respective authorities.
- (l) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (li) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department.
- (lii) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <http://envis.maharashtra.gov.in>.
- (liii) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1<sup>st</sup> June & 1<sup>st</sup> December of each calendar year.
- (liv) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation 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.
- (lv) 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, SO<sub>2</sub>, NO<sub>x</sub> (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.
- (lvi) The project proponent shall also submit six monthly reports 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 respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
- (lvii) The environmental statement for each financial year ending 31<sup>st</sup> 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.



- (lviii) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.
4. This environmental clearance is issued as per EIA Notification, 2006. If any part of the plot is affected by CRZ then project proponent should obtain NOC from MCZMA as per FSI applicability. If there is change in building plan accordingly, project proponent should approach SEIAA with corrected plans.
  5. Project proponent should submit exactly same documents for approval of building plans to the concern authorities as per the documents submitted to the SEIAA for prior Environmental Clearance. If there is any change stipulated by HRC / any other concern authorities then recast plan should be submitted to the Authority for approval.
  6. If there is any change in local town planning rules including FSI, Non FSI, parking area, RG area etc which changes building plans, then Project Proponent should approach SEIAA again. It is the sole responsibility of the Project Proponent to submit the same building plans otherwise liable to initiate due action under E P Act.
  7. Project proponent shall not make any change in Layout Plan/ Master Plan submitted to the Authority without its prior permission and shall submit approved layout plan to Department before commencement of construction work.
  8. In case of submission of false document and non compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environmental Clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
  9. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
  10. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years.
  11. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
  12. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution ) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling ) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.



13. Any appeal against this environmental clearance shall lie with the National Environmental Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environmental Appellate Act, 1997.



(Valsa R Nair Singh)  
Secretary, Environment  
department & MS, SEIAA

**Copy to:**

1. Shri. Ashok Basak, IAS (Retd.), Chairman, SEIAA, 502, Charleville, 'A' Road, Church gate, Mumbai- 400 020, Maharashtra.
2. Shri. P.M.A Hakeem, IAS (Retd.), Chairman, SEAC, 'Jugnu' Kottaram Road, Calicut- 673 006 Kerla.
3. Additional Secretary, MOEF, 'Paryavaran Bhawan' CGO Complex, Lodhi Road, New Delhi - 110510
4. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
5. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
6. Regional Office, MPCB, Mumbai.
7. Collector, Mumbai.
8. Commissioner, Brihan Mumbai Municipal Corporation.
9. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
10. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment Department.
11. Select file (TC-3).