भारत सरकार / Government of India
परमाणु ऊर्जा विभाग / Department of Atomic Energy
निर्माण, सेवा एवं संपदा प्रबंध निदेशालय / Directorate of Construction, Services & Estate Management
वास्तुकला अनुभाग / Architecture Section

प्रधान वास्तुविद (आर) का कार्यालय / Office of Head Architect (R)

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No. DCSE/AR/AN-EC/2023/18 Date. 19-04-2023.

To,
The Addl. Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building Civil Lines,
Nagpur 440001

Subject : Submission of Six-Monthly Environmental Compliance Report of Stipulated Conditions of Environmental Clearance (June, 2022 to November, 2022) for "ANUSHAKTHINAGAR" Residential Township, 'M' (E) ward, Trombay, Anushaktinagar, Mumbai - 400094

Reference : Earlier EC No. SEAC-2010/CR.618/TC.2 dt. 11.03.2011 vide letter SEAC-2010/C.R.618/T.C.2, dated 12.05.2014 & SEIAA -2018/CR-142/EST dated 20.12.2018

Dear Sir

With reference to the above subject, Environmental Clearance (EC) was issued vide letter EC No. SEAC-2010/CR.618/TC.2 dt.11.03.2011 vide letter SEAC-2010/C.R.618/T.C.2, dt. 12.05.2014 & SEIAA -2018/CR-142/EST dt 20.12.2018.

To comply certain conditions of the said EC, we are herewith submitting half yearly compliance report of the conditions imposed in the said EC for the period from June, 2022 to November 2022.

We request you to acknowledge the receipt of the same.

Thanking you

Yours faithfully,

(J. N. Nagaraj)
Head Architect (R)
DCSEM, Dept. of Atomic Energy

Encl: a.a.

ENVIRONMENTAL CLEARANCE

COMPLIANCE REPORT

For the period of
July 2022-December 2022



For
The Expansion of the Anushaktinagar Township
By
M/s Bhaba Atomic Research Centre, Mumbai
EC no: SEAC- 2010/CR.618/TC.2 Dated11 March 2011 subsequently, SEAC 2010/C.R.618 /T.C.2, dated 12.05.2014 revalidation and EC no: SEIAA-2018/CR-142/Est dated 20th December 2018 of EC to M/s BARC for Expansion of the Anushaktinagar at “M” (E) Ward, Trombay, Mumbai.

Conditions of Environmental Clearance

S. No.	Conditions	Compliance Status
01.	Wet garbage should be treated by Nisargruna Biogas Plant and no wet garbage will be disposed outside the premises. Local authority should ensure this.	Wet garbage is treated by Nisargruna Biogas Plant and no wet garbage is disposed outside the premises.
02.	This environmental clearance is issued subject to land use verification. Local authority/ Planning authority should ensure this with request to Rules, Regulations, Notifications, Government Regulations, 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.	The land use of the land will not be changed.
03.	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.	STP, OWC installation have been completed and STP treated water is used in flushing as well as green belt plantation & Organic waste directly disposed to Nisargruna Biogas Plant. We assure that allotment has been provided after completion of all environmental infrastructure facilities.
04.	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.	We have obtained Occupancy certificate from local authorized bodies. We also obtained CTE vide letter No. BO/RO(HQ)/CE/CAC-42 dated 08-04-2011 (Attached as **Annexure 1**) We assure that possession is given after completion of environmental & other infrastructure.
05.	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.	The height, construction built up area of construction is in accordance with the existing FSI/FAR norms of the urban local body. Approved layout plan is attached (Attached as **Annexure 2**)
06.	"Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and its copy shall be submitted to the Environment department before start of any construction work at the site.	"Consent for Establishment" is obtained from Maharashtra Pollution Control Board. It is attached as **Annexure-1**

S. No.	Conditions	Compliance Status
07.	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout phase.	All required sanitary and hygienic measures are in place and maintained throughout the construction phase. Photo proof are attached as **Annexure-3**
08.	A First Aid room will be provided in the project both during construction and operation of the project.	A First Aid room is provided. Photo proof are attached as **Annexure-4**
09.	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.	Local labour were hired during construction work. So there was no requirement for the same.
10.	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.	Adequate drinking water and sanitary facilities was provided for construction workers at the site. Photo proof are attached as **annexure-5** All required sanitary and hygienic measures are in place and maintained throughout the construction phase. Photo proof are attached as **annexure-3**
11.	Arrangement shall be made that waste water and storm water do not get mixed.	There are two drainage system provided for the disposal of treated waste water and storm water. Therefore, there is no probabilities to mixed waste water and storm water.
12.	All the topsoil excavated during construction activities should be stored for use in horticulture/ landscape development within the project site.	All top soil has been reused in the refilling of the excavated site.
13.	Additional soil for levelling of the proposed site shall be generated within the site (to the extent possible) so that natural drainage system of the area is protected and improved.	All top soil has been reused in the refilling of the excavated site so that natural drainage system of the area is protected and improved.
14.	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.	Green belt development has been carried out considering CPCB guidelines including selection of plant species. Photo proof are attached as **Annexure-6**
15.	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	Necessary precautions has been considered during muck disposal.

S. No.	Conditions	Compliance Status
	people, only in approved sites with the approval of competent authority.	
16.	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.	Soil test results are attached as **Annexure-7** and Ground water test reports are attached as **Annexure-8.** It has been observed that the texture of soil is mostly 'Sandy Clay Loam' in the study area. It has been observed that the pH of the soil quality is 7.36 indicating that the soil is 'Neutral' to 'Slightly Alkaline' in nature. The bulk density of soil is 1.29 g/cc. The Electrical Conductivity of the soil was observed to be 0.156 mS/cm. Total Nitrogen, is 153 kg/ha. Available Phosphorous is 32.8 kg/ha. Available Potassium is 322 kg/ha. The analysis of ground water results indicate that the average pH is 7.58, TDS is 778 mg/l, Total Hardness is 330 mg/l, iron content is BDL(<0.05mg/l), nitrate content ranges is 11mg/l was observed.
17.	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dumpsites for such material must be secured so that they should not leach into the ground water.	We have followed the condition "Construction spoils, including bituminous material and other hazardous materials must not be allowed". Hence, There is no chance to contaminated water courses.
18.	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of Maharashtra Pollution Control Board.	As it is township project, Hazardous waste is not generated.
19.	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.	D.G. sets was used during power failure only and the fuel had low sulphur content.
20.	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.	D.G. sets is used during power failure only. Whenever diesel required, it is purchased fresh as and when required.

S. No.	Conditions	Compliance Status
21.	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 on-peak hours.	All the construction material transported with covered Vehicles.
22.	Ambient noise levels should confirm 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/MBCB.	Ambient air Quality was closely monitored and the test results are attached as **Annexure-9** Ambient noise levels test reports are attached as **Annexure-10.** **Daytime Noise Levels** Noise levels during day time were found to be in the range 54.1 dB (A).The monitored location during the Day time is under the prescribed limit. **Night time Noise Levels** Night Time Noise Levels: Noise levels observed to fall in the range 47.6 dB (A) during the night time. The monitored locations during the Night time are under the prescribed limit.
23.	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 28th August 2003. (The above condition is applicable only if the project site is located within the 100 Km of Thermal Power Stations).	Not applicable.
24.	Ready Mixed Concrete must be used in building construction.	Complied.
25.	The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipment etc. as per National Building code including measures from lighting.	Approval for Structural safety has been obtained. It is attached as **Annexure 11**
26.	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Storm water is being stored in the rain water harvesting tank and reused the same. **Annexure 12**
27.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	All the construction has been already completed.
28.	The ground water level and its quality should be monitored regularly in consultation with Ground Water	Ground water test reports are attached as **Annexure-8.**

S. No.	Conditions	Compliance Status
	Authority.	The physicochemical characteristics of ground water and surface water in the study area are presented in the Table 3.13 and Table 3.14 and is compared with the standards (IS 10500: Indian Standards/Specifications for Drinking Water) reference values. The analysis of ground water results indicate that the average pH ranges in between 7.52-7.98, TDS ranges from 533 mg/l - 1174 mg/l, Total Hardness ranges from 290 mg/l - 540 mg/l, iron content ranges from 0.1 –0.23 mg/l, nitrate content ranges from 3 mg /l – 13 mg/l was observed. The analysis of ground water results indicate that the average pH ranges in between 7.48-8.26, TDS ranges from 412 mg/l - 711 mg/l, Total Hardness ranges from 180 mg/l - 310 mg/l, iron content ranges from 0.78 –1.33 mg/l, nitrate content ranges from 6 mg /l – 32 mg/l was observed.
29.	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.	We assure that adequate system has been installed.
30.	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.	After completion of infrastructure, Occupancy certificate has been obtained from concern authorized bodies. Statement of obtained

S. No.	Conditions	Compliance Status
		Occupancy certificate has been attached as **Annexure-13**
31.	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.	Noted.
32.	Permission to draw ground water shall be obtained from the competent Authority prior to construction / operation of the project.	CGWA application is attached as **annexure 14**
33.	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	We have used treated black water for flushing via dual plumbing line. Hence no requirement of separation of grey and black water.
34.	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.	We have fixed low flow pressure reducing devices for showers, toilet flushing and drinking.
35.	The solid waste generated should be properly collected and segregated. Wet garbage should be composed and dry/ inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	Generated solid waste is properly collected and segregated. Wet garbage is composed and reused as soil manure. Photo proof are attached herewith as **Annexure 15**
36.	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coatings in windows.	All necessary measures have been taken.
37.	Roof should meet prescriptive requirement as per Energy Conservation Building code by using appropriate thermal insulation material to fulfil requirement.	As per Energy Conservation Building code, roof has been constructed by using appropriate thermal insulation material to fulfil requirement.
38.	Energy conservation measures like installation of CFLs and TFLs for lighting the areas outside the buildings 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 lighting, common solar water heater system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.	As per energy conservation Building code, we have installed CFLs and TFLs for lighting the areas outside the buildings. We follow the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination during disposal of broken/unused/non-usable CFLs and TFLs. Solar panels photos are attached as **Annexure 16**

S. No.	Conditions	Compliance Status
39.	Diesel power generating set proposed as source of backup power for elevators and common area illumination during operation phase should 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.	Diesel power generating set is used as source of backup power for elevators and common area illumination during operation phase. Height of D.G. set is equal to the height needed. We are using low sulphur content high speed diesel.
40.	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.	We measured noise levels during night time. It is not exceeded the prescribed standards.
41.	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.	There is no Traffic congestion near the entry and exit points from the roads adjoining. Parking is fully internalized and no public space is utilized
42.	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 fulfil requirement.	We followed Energy Conservation Building Code.
43.	The building should have adequate distance between them to allow movement of fresh air passage of natural light, air and ventilation.	All building have adequate distance between them to allow movement of fresh air passage of natural light, air and ventilation
44.	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.	We have followed the same.
45.	Under the provision 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.	Noted the same.
46.	Six monthly monitoring reports should be submitted to the Department and MPCB.	We have followed the same.
47.	A complete set of all the documents submitted to Department should be forwarded to the MPCB.	We have followed the same.
48.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.	Noted the same.
49.	No land development/ construction work preliminary or otherwise relating to the project shall be taken up without obtaining due clearance from respective authorities.	Noted the same.
50.	A separate environment management cell with qualified	A separate environment

S. No.	Conditions	Compliance Status
	staff shall be set up for implementation of the stipulated environmental safeguards.	management cell with qualified staff is set up for implementation of the stipulated environmental safeguards.
51.	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise break-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.	Noted the same.
52.	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	We have followed the same. Public notice is attached as **Annexure-16**
53.	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies in the MPCB & this department, on 1st June & 1st December of each calendar year.	We have followed the same.
54.	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.	Noted the same.
55.	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_2, 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.	Noted and followed the same.
56.	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.	Noted and followed the same.
57.	The environmental statement for each financial year ending 31st march in Form-V as is mandated to be	The used oil produced as the waste is fully reused in the

S. No.	Conditions	Compliance Status
	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.	township itself and no other waste is produced in the project. The condition is being complied.
58.	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.	Noted and followed the same.

List of Annexures

Sr. No.	Annexure
1.	CTE-Consent for Establishment
2.	Approved plan layout
3.	sanitary and hygienic measures Photo
4.	First Aid room Photo
5.	Drinking water photos
6.	Green belt Photo
7.	Soil test reports
8.	Ground water test reports
9.	Ambient Air Quality test results
10.	Ambient noise levels test results
11.	Approval for Structural safety
12.	Storm water storage
13.	Occupancy statement
14.	CGWA application
15.	Solid waste segregation
16.	Solar panels photos
17.	Public Notice

DETAILS OF ENVIRONMENTAL MONITORING

1. AMBIENT AIR QUALITY MONITORING

1.1. Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out near Volleyball court to assess the ambient air quality. This will enable to have analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The locations of the ambient air quality monitoring stations are given in Table 1.1.

Table 1.1. Details of Ambient Air Quality Monitoring Stations

S. No	Location Code	Location	Environmental Setting of surrounding
1	AAQ1	Volleyball court	Commercial

AAQ-1: Project Site

The sampler was placed in the Project site and was free from any obstructions.

Surroundings of the sampling site represent commercial/residential environment.

1.2. Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter (PM10)
- Particulate Matter (PM2.5)
- Sulphur Dioxide (SO2)
- Oxides of Nitrogen (NOx)
- Carbon Monoxide (CO)

PM_{10} and $PM_{2.5}$ have been estimated by gravimetric method. In RDS, ambient air is sucked through a cyclone. Coarse and non-respirable dust is separated from the air stream by centrifugal forces acting on the solid particles, these particles fall through the cyclone's conical hopper and gets collected in the sampling cap placed at the bottom. The fine dust (<10 microns) forming the respirable particulate matter (PM10) passes the cyclone and is retained on the filter paper. A tapping is provided on the suction side of the blower to provide suction for sampling air through a set of impingers which contains absorbing solutions for SO_2 and NOx. Samples of gases are drawn at a flow rate of 0.2 lpm.

$PM_{2.5}$ was determined by Fine Particulate Sampler. The air inlet has a circular symmetry, so that air entry is unaffected by wind direction, and is designed to keep out rain, insects and very large particles. The inlet section immediately leads to an impactor stage designed to trap particles with an aerodynamic diameter larger than 10 microns. Thus the air stream in the down tube consists of only medium and fine particulates. The streamlined air flow of the down tube is accelerated through the nozzle of the well-shaped impactor designed to trap medium size particulates with an aerodynamic diameter between 2.5 and 10 microns. To avoid sampling errors due to the tendency of small particles to bounce off the impaction surface a 37mm diameter GF/A paper immersed in silicone oil is used as an impaction surface. The air stream leaving the WINS impactor consists of microns. These fine particles are collected on a special Teflon membrane filter of 47 mm diameter.

Modified West and Gaeke method (IS-5182 part-II, 1969) has been adopted for estimation of SO_2 and Jacobs-Hochheiser method (IS-5182 part-IV, 1975) has been adopted for the estimation of NOx. The techniques for sampling and analysis of parameters are presented in **Table 1.2** below.

Table 1.2 Techniques used for Ambient Air Quality Monitoring

S. No	Parameters	Instruments/Apparatus used	Method followed	Reference
1	Particulate Matter (PM_{10}), µg/m^3	Respirable Dust Sampler (RDS), balance	Gravimetric (High-Volume with Cyclone)	NAAQS Monitoring & Analysis Guidelines
2	Particulate Matter ($PM_{2.5}$), µg/m^3	$PM_{2.5}$ Sampler (Fine dust sampler), balance	Gravimetric (Fine particulate Sampler)	NAAQS Monitoring & Analysis Guidelines
3	Oxides of Sulphur (SO2), µg/m^3	RDS with Impinger tubes, spectrophotometer	Improved West & Gaeke Method	NAAQS Monitoring & Analysis Guidelines
4	Oxides of Nitrogen (NOx), µg/m^3	RDS with Impinger tubes, spectrophotometer	Jacobs & Hochheiser Modified (Sodium Arsenite) Method	NAAQS Monitoring & Analysis Guidelines
5	Carbon Monoxide, mg/m^3	CO Analyser	NDIR Method	NAAQS Monitoring & Analysis Guidelines

1.3. Ambient Air Quality Monitoring Results

The detailed on-site monitoring results of PM2.5, PM10, SO_2, NO_x and CO are presented in **Table 1.3**

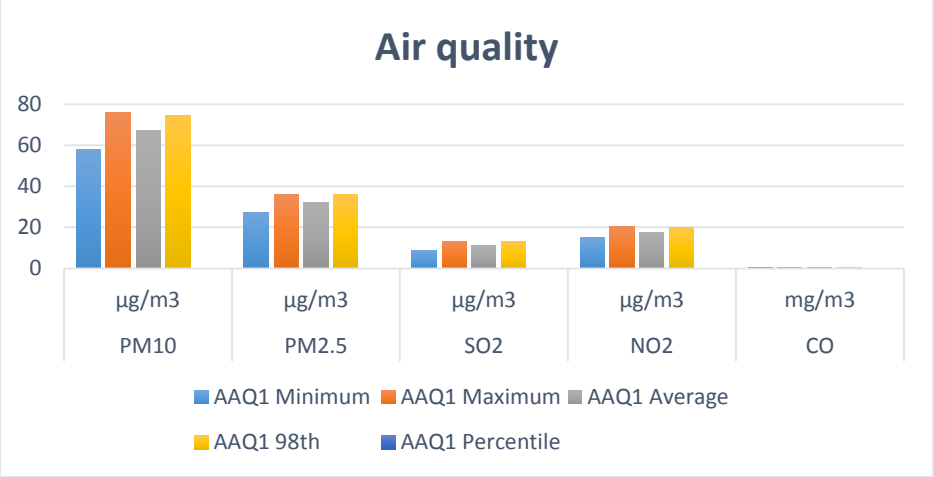
Table 1.3 Ambient Air Quality Monitoring Results

Location	Statistics	PM10 µg/m^3	PM2.5 µg/m^3	SO2 µg/m^3	NO2 µg/m^3	CO mg/m^3
AAQ1	Minimum	58	27	8.9	15.1	0.25
	Maximum	76	36	13.3	20.4	0.55
	Average	67.00	32.13	10.95	17.73	0.41
	98^{th} Percentile	74.62	36	13.024	19.894	0.531

All values are expressed in µg/m^3; BDL: Below Detectable Limit: *Source: ABC Techno Labs India Pvt. Ltd.*

1.4. Discussion on Ambient Air Quality in the Study Area

PM10 and PM2.5 level near site office of project site was observed higher than permissible limit of 100 µg/m_3 and 60 µg/m_3 respectively (for residential, rural and other areas as stipulated in the National Ambient Air Quality Standards). SO_2, NOx and CO was observed within the corresponding stipulated limits (Limit for SO_2 and NOx: 80 mg/m_3 and limit for CO: 4.0 mg/m_3) at the monitoring locations. Station wise variation of ambient air quality parameters has been pictorially shown in Figure below.



2. AMBIENT NOISE MONITORING

2.1. Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels in project site due to various construction allied activities and increased vehicular movement. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at three locations within the boundary of commercial area as given in Table2.1

Table2.1 Details of Ambient Noise Monitoring Stations

S. No	Location Code	Location	Environmental Setting of surrounding
1	N1	AECS-2, Playground	Commercial

2.2. Methodology of Noise Monitoring

Noise, in general, is sound which is composed of many frequency components of various types of loudness distributed over the audible frequency range. Various noise scales have been introduced to describe, in a single number, the response of an average human to a complex sound made up of various frequencies at different loudness levels. The most common and universally accepted scale is the 'A' weighted Scale which is measured as dB (A). This is more suitable for an audible range of 20 to 20,000 Hz. The scale has been designed to weigh various components of noise, according to the response of a human ear.

Sound Pressure Level (SPL) measurements were measured at all locations. The readings were taken for every hour for 24 hours. The day noise levels have been monitored during 6 am to 10 pm and night levels during 10 pm to 6 am at all the locations covered in a 10-km radius of the study area. The noise levels were measured once during the study period. These readings were later tabulated and the frequency distribution table was prepared. Finally, hourly and 24 hourly values for various noise parameters viz. Lday and Lnight were calculated.

For noise levels measured over a given period of time, it is possible to describe important features of noise using statistical quantities. This is calculated using the percent of the time certain noise levels exceed the time interval. The notations for the statistical quantities of noise levels are described below:

L10 is the noise level exceeded 10 percent of the time

L50 is the noise level exceeded 50 percent of the time and L90 is the noise level exceeded 90 percent of the time

2.3. Ambient Noise Monitoring Results

The location wise ambient noise monitoring results is summarized in Table 2.1. The location-wise variation of noise levels are graphically presented in Figure below.

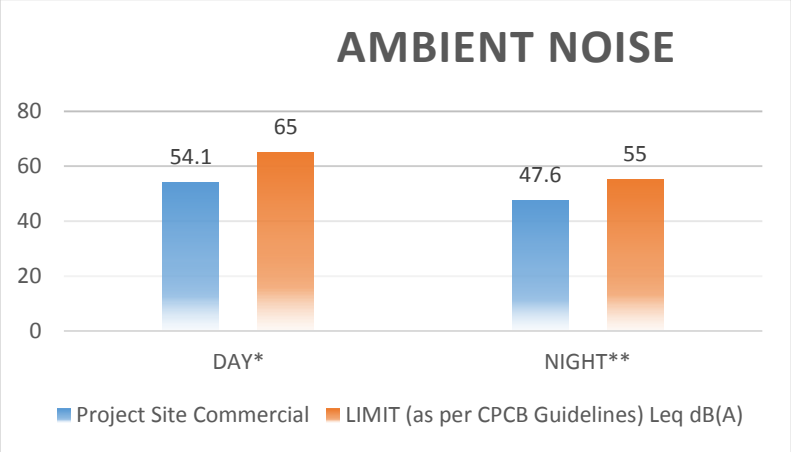
Table 2.1 Ambient Noise Monitoring Results

S.No.	Location code	Location	Zone	LIMIT (as per CPCB Guidelines) Leq dB(A)		Observed value Leq dB(A)	
				DAY*	NIGHT**	DAY*	NIGHT**
1	N1	Project Site	Commercial	65	55	54.1	47.6
*	Leq (6.00AM TO 10.00PM)						
**	Leq (10.00PM TO 6.00AM)						

Note:

i. Day-time is reckoned in between 6:00 a.m and 10:00 p.m.

ii. Night time is reckoned is between 10:00 p.m and 6.00 a.m



2.4. Discussion on Ambient Noise Levels in the Study Area

Noise Levels (Leq) dB(A): The day time noise level Leq at all the monitoring stations were found within limits
prescribed for commercial area i.e. 65 dB(A), Noise Levels (Leq) dB(A): The night time noise level Leq at all the monitoring stations were found within limits prescribed for commercial area i.e. 55 dB(A)

3. GROUNDWATER QUALITY MONITORING

3.1 Groundwater Sampling

A ground water sample was monitored at project site and the result is being produced in Table-3.1

Table-3.1: Ground Water Monitoring Result

S.No	Parameters	Unit	Test Method	Limits as per IS 10500:2012	GW1
1	Colour	Hazen	IS 3025(part 4)1983(RA	5	<1
2	Odour	-	IS 3025(part 8)1984(RA	Agreeable	No Odour
3	Turbidity	NTU	IS:3025 Part 10-	1	BDL(<0.5)
4	pH at 25 °C	-	IS :3025 Part 11-	6.5-8.5	7.58
5	Conductivity at 25 °C	µS/cm	IS :3025 Part 14- 1984	Not Specified	1312
6	Total dissolved solids	mg/l	IS :3025 Part 16-	500	778
7	Total Suspended solids	mg/l	IS :3025 Part 17-	Not Specified	<2
8	Total Alkalinity as	mg /l	IS : 3025 Part 23-	200	280
9	Total Hardness as	mg/l	IS : 3025 Part 21-2009	200	330
10	Calcium as Ca	mg/l	IS : 3025 Part 40-	75	82
11	Magnesium as Mg	mg/l	APHA 23rd EDN 3500 Mg	30	30
12	Chloride as Cl^-	mg/l	IS :3025 Part 32-	250	221
13	Sulphate as SO4	mg/l	APHA 23rd EDN -4500-SO_4^{2-} E	200	96
14	Nitrate as NO3	mg/l	APHA 23rd EDN -4500-	45	11
15	Iron as Fe	mg/l	IS 3025(part	1	BDL(<0.05)
16	Manganese as Mn	mg/l	APHA 23rd EDN -3500-	0.10	BDL(<0.02)
17	Fluoride as F	mg/l	APHA 23rd EDN -4500-F	1.00	0.31
18	odium as Na	mg/l	IS : 3025 Part 45-1993	Not Specified	160
19	Potassium as K	mg/l	IS : 3025 Part 45 -1993	Not Specified	3.3
20	Barium as Ba	mg/l	APHA 23rd EDN -3111 D	0.7	BDL(<0.1)
21	Residual Free Chlorine	mg/l	APHA 23rd EDN -4500-Cl	0.20	BDL(<0.1)

22	Aluminium as Al	mg/l	IS:3025 Part:55	0.03	BDL(<0.03)
23	Cadmium as Cd	mg/l	APHA 23rd EDN -3111 B	0.003	BDL(<0.003)
24	Lead as Pb	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)
25	Copper as Cu	mg/l	APHA 23rd EDN -3111 B	0.05	BDL(<0.03)
26	Zinc as Zn	mg/l	APHA 23rd EDN -3111 B	5.00	0.11
27	Total Chromium as Cr	mg/l	APHA 23rd EDN -3111 B	0.05	BDL(<0.03)
28	Arsenic as As	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)
29	Cyanide as CN	mg/l	APHA 23rd EDN -4500-	0.05	BDL(<0.02)
30	Selenium as Se	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)
31	Mercury as Hg	mg/l	IS APHA 23rd EDN -3112	0.001	BDL(<0.001)
32	Anionic Surfactants as	mg/l	APHA 23rd EDN 5540 C	0.20	BDL(<0.025)
33	Phenolic Compounds	mg/l	APHA 23rd EDN 5530	0.001	BDL(<0.001)
34	Pesticides	mg/l	APHA 23rd EDN -6630 B,	Absent	Absent
35	Total Coliforms	MPN/100ml	IS–1622-1981 (Reaff – 2019)	Absent /100ml	<2
36	E.coli	MPN/100ml	IS–1622-1981 (Reaff– 2019)	Absent /100ml	<2

4. SOIL MONITORING

4.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify the impacts of ongoing project activities on soil quality and also predict impacts, which have arisen due to execution of various constructions allied activities. Accordingly, a study of assessment of the soil quality has been carried out.

To assess impacts of ongoing project activities on the soil in the area, the physicochemical characteristics of soils were examined by obtaining soil samples from selected point and analysis of the same. One sample of soil was collected from the project site for studying soil characteristics, the location of which is listed in Table 3.2

S. No.	Location Code	Location Name/ Description
1.	S1	Project Site

4.2 Methodology of Soil Monitoring

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, Part-1, 21st edition, of American Society for Agronomy and Soil Science Society of America. The homogenized samples were analyzed for physical and chemical characteristics (physical, chemical and heavy metal concentrations). The soil samples were collected in the month of November, 2015.

The samples have been analyzed as per the established scientific methods for physicochemical parameters. The heavy metals have been analyzed by using Atomic Absorption Spectro-photometer and Inductive Coupled Plasma Analyzer.

4.3 Soil Monitoring Results

The physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in Table 3.3

S. No.	Parameters	Test Methods	S1
1	pH	IS -2720(Part 26) 1987(RA 2011)	7.36
2	Bulk Density, g/cc	FAO Chapter 3, ABCTL/SOIL/SOP 1	1.29
3	Electrical Conductivity, mS/cm	IS -14767:2000 (RA 2010)	0.156
4	Total Nitrogen, kg/ha	IS -14684:1999, Reaff:2008	153
5	Available Phosphorous, kg/ha	FAO Chapter 3, ABCTL/SOIL/SOP 2	32.8

6	Available Potassium, kg/ha	FAO Chapter 3, ABCTL/SOIL/SOP 7	322
7	Exchangeable Calcium as Ca,m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 4	16.3
8	Exchangeable Magnesium as Mg, m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 5	5.16
	Exchangeable Sodium as Na, m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 6	1.36
10	Organic matter (%)	IS 2720 (Part 22):1972, Reaff:2010	1.36
10	Texture Classification	Robinson Pipette Method	Clay Loam
11	Sand (%)		36.6
12	Clay (%)		32.8
13	Silt (%)		30.6
14	Sodium Absorption Ratio	ABCTL/SOP/S20	1.31
15	Boron as B, mg/kg	ABCTL/SOP/S13	4.14
16	Iron as Fe, mg/kg	EPA 3500 B & 7000B	374
17	Copper as Cu, mg/kg	EPA 3500 B & 7000B	5.11
18	Manganese as Mn, mg/kg	EPA 3500 B & 7000B	33.5
19	Zinc as Zn, mg/kg	EPA 3500 B & 7000B	15.6
20	Molybdenum as Mo , mg/kg	EPA 3500 B & 7000B	BDL(<2)
21	Lead as Pb, mg/kg	EPA 3500 B & 7000B	BDL(<2)
22	Nickel as Ni, mg/kg	EPA 3500 B & 7000B	BDL(<2)
23	Chromium as Cr, mg/kg	EPA 3500 B & 7000B	BDL(<2)
24	Cadmium as Cd, mg/kg	EPA 3500 B & 7000B	BDL(<2)
25	Arsenic as As, mg/kg	EPA 3500 B & 7000B	BDL(<2)
26	Mercury as Hg, mg/kg	EPA 7471 B	BDL(<0.5)

4.4 Discussion on Soil Characteristics in the Study Area

The soil quality in the project area has not been affected by the project activities.

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

SEIAA-2018/CR-142/Est
Environment Department
Room No. 217, 2nd Floor,
Mantralaya,
Mumbai- 400032.
Date: 20 .12.2018

To
Head, Architecture Section, DCSEM,
Department of Atomic Energy,
4th Floor, North Wing,
Vikram Sarabhai Bhavan,
Anushakatinargar, Mumbai – 400 094.

Sub : Revalidation of EC granted to M/s BARC for expansion of Anushaktinagar Township at "M" (E) Ward, Trombay, Mumbai.

Ref : 1. Your application received for revalidation vide no. DCSE/AR/PA(R)/AN/MoEFCC/2018/11 dt. 19.06.2018.
2. Minutes of 139th meeting of SEIAA dated 28.09.2018..
3. Earlier EC No. SEAC-2010/CR.618/TC.2 dt. 11.03.2011 vide letter no. SEAC-2010/C.R.618/T.C.2, dated 12.05.2014

Sir,

With reference to above subject matter, it is noted that, you have received Environment Clearance vide above ref. (3). Your proposal for revalidation was considered in 139th meeting of SEIAA dated 28.09.2018 and as per decision taken in the meeting, the environment clearance granted vide above ref.(3) is revalidated for a period up to 09.03.2025.

The terms and conditions stipulated in the EC letter vide above ref.(3) will remain same.

(Anil U. Diggikar)
Principle Secretary
& Member Secretary, SEIAA

Item No. 46 (Discussion Item: 2)

Subject: Amendment in environmental clearance for expansion of Anushaktinagar Township at Mumbai by Department of Atomic Energy

Mr. J. N. Nagraj Project Architect (R), Deept of Atomic Energy, Govt. of India vide letter dated 6.02.2014 has approached to SEIAA with a request for amendment in the EC letter issued for Anushaktinagar Township at BARC dated 11.03.2011. The proposed amendment is due to requirement of Pollice Out Post Building with the built up area of 765.36 sq.m. This requirement is from the Mumbai Pollice, Govt of Maharashtra considering the threats to BARC security.

The Authority noted the the proposed amendment as-

Sl. No.	Description	Details as per Environmental Clearance issued	Details for Amendment requested	Remarks
01.	Name of the Project	Expansion of the Anushaktinagar Township	No change	
02.	Project Proponent	M/s. Bhabha Atomic Research Centre (BARC), Mumbai	No change	
03.	Location of Project	"M" (E) Ward of MCGM, at Trombay, Anushaktinagar, Mumbai.	No change	
04.	Type of Project	Construction Project	No change	
05.	Total Plot Area	38,27,942.50 Sqmts.	No change	
06.	Proposed Total built up area	• Existing : 7,90,777.80 m^2. • Expansion Area : 2,98,371.43 m^2. • Total Construction area :10,89,149.23 m^2.	• Existing : No change • Expansion Area : 2,99,136.79 m^2 • Total Construction area : 10,89,914.59 m^2	0.25% increase over already approved area
07.	Estimated cost of project	`. 898 crores	`. 898 + 3 crores : 901 crores	0.33% increase over `.898 cr.
08.	No: of	Proposed buildings : 30	Proposed buildings : 31 no.s	

Chairman

Member Secretary

	Buildings	no.s • Residential Buildings = 19 no.s • Offices = 5 no.s • Hostels = 1 no. • Amenity = 3 no.s • Schools = 2 no.s Out of these 30 buildings some will be new construction and some will be extension to the existing buildings.	• Residential Buildings = No change • Offices = 5 + 1 = 6 no.s • Hostels = No change • Amenity = No change • Schools = No change Out of these 31 buildings some will be new construction and some will be extension to the existing buildings.	
09.	Water Requirement	Existing : 9641 KLD Proposed : 892 KLD Source : MCGM / Recycled water	Existing : No change Proposed : 892 + 09 = 901 KLD Source : MCGM / Recycled water	additional due to police outpost
10.	Waste water generated	Existing : 5193 KLD ; Proposed : 799 KLD ; (Waste water generated from the proposed project will be treated in sewage treatment plant)	Existing : No change Proposed : 799 + 7 = 806 KLD; (Waste water generated from the proposed project will be treated in sewage treatment plant)	
11.	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)	No change	

After detailed discussions, it was felt that as there will be no significant additional impact on the environmental parameters on account of the proposed amendments, SEIAA decided to grant the amendment sought.

Chairman

Member Secretary

Government of Maharashtra

File No.: SEAC- 2010/CR.618/TC.2
Environment department,
Room No. 217, 2nd floor,
Mantralaya Annexe,
Mumbai 400 032
Date: 11th 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 37th 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 33rd meeting held on 28th 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-

Name of the Project	:	Expansion of the Anushaktinagar Township
Project Proponent	:	M/s. Bhaba Atomic Research Centre, Mumbai.
Location of the project	:	"M" (E) ward, of MCGM at Trombhey, Anushaktinagar, Mumbai
Type of Project	:	Construction Project
Total Plot Area	:	38,27,942.50 m^2
Proposed Total built up area	:	• Existing: 7,90,777.80 Sq. m. • Expansion area: 2,98,371.43 sq. m. • Total construction area: 10,89,149.23 sq. m
Estimated cost of the project	:	₹ 898 Cr
No. of Buildings	:	Proposed buildings: 30 nos. • Residential Building = 19 nos. • Office = 5 nos. • Hostel = 1 nos. • Amenity = 3 nos. • School = 2 nos.

		• Out of these 30 buildings, some will be new construction and some will be extension to the existing buildings. 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 form 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; Treaded 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^3; 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 33rd 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.

(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.

(xxxi) Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.

(xxxii) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.

(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 1st June & 1st 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_2, NOx (ambient levels as well as stack emissions) or critical sectorai 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 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.

(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 30days 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)

Consolidated Statement on Environmental aspects

Item	Details
Name of the project:	Environmental Impact Assessment of ANUSHAKTINAGAR Residential Township.
Name & address of Proponent:	**Government of India** Department of Atomic Energy, Directorate of Construction, Services and Estate Management, Vikram Sarabhai Bhavan Anushaktinagar, Mumbai- 400 094.
Name & address of Consultant:	**Mr. Hrushikesh Kolatkar** Director **Building Environment (India) Pvt Ltd.** Office Address: Shop No. 22, Punit Tower-1, Plot No. 31, Sector-11, C.B.D, Belapur, Navi Mumbai Telephone No.: 022-27578554 Mobile No.: 9820522779 Email: hkolatkar@buildingenvironmentindia.com
Type of the project: Housing project / Industrial project / SRA scheme / MHADA / Township or others	This is a 'Township and Area Development' Project.
Whether in Corporation / Municipal / Other area:	The project site comes under jurisdiction of Municipal Corporation of Greater Mumbai (MCGM).
Total Plot Area:	38,27,942.50 m^2
Built up area:	**Existing** : 7,90,777.80 m^2 **Proposed** : 2,98,371.43 m^2
Total Construction Area	10,89,149.290 m^2 (Existing + Proposed)
Permissible FSI (including TDR etc)	**0.75** (As per Table No. 14/ Page 74 of D.C. Rule from MCGM 1991 Amended up to 15th Aug. 2007) Existing FSI Consumed: **0.343** Proposed FSI: **0.130**
Estimated cost of the project:	898 Crores
Location of the project:	The project site is situated in 'M' (E) ward of MCGM at Anushaktinagar, Trombay, Mumbai- 400094
	Town / Tehsil: Kurla
	District: Mumbai, Maharashtra

<table>
<tr><th>Sr. No</th><th>Particular</th><th>Commitment On</th></tr>
<tr><td>1.</td><td>Water Conservation</td><td>
I. Rain Water Harvesting (RWH)

This RWH system will help to initiate water conservation program at site. The rain water harvesting system will be installed at Anushaktinagar to serve the need of water requirement in case of short supply of water from MCGM or in case of any emergency. It will also help to reduce additional load on MCGM.
Rainwater from the rooftops of the proposed 30 buildings will be collected. Daily runoff volume available for recharging is 682.33 cum. sufficient two days capacity tanks are provided for recharging.
Ground water recharging through Bore well.

II.Storm water drainage

Natural water drainage pattern
The residential township of Anushaktinagar has storm water drainage network as per MCGM remarks. The master plan showing SWD network is attached as a hard copy document.

III. Total Water Requirement

Water supply – Source and Quantity

<table>
<tr><th>Water Supply Source</th><th>Quantity (KLD)</th></tr>
<tr><td>Municipal Supply</td><td>6357</td></tr>
<tr><td>Total Treated Water from STP</td><td>4139</td></tr>
</table>

Capacity of Existing STP:-
There are at present 1 STPs in operation with capacity of 1 MLD & 2 of 1.4 MLD respectively. But these are not sufficient enough to treat additional wastewater generated from proposed buildings. Therefore additional STP is required with a capacity of about 0.85 MLD.

</td></tr>
</table>

2.	**Sewage and Wastewater**	**I. Mode of Collection:** The sewage generated from township is conveyed through the sewerage network in the plot to the existing Sewage Treatment Plant. The same procedure will be followed for wastewater generated from proposed buildings. **II. Mode of Treatment**: The wastewater generated from township is treated in STPs installed within the campus. These 1 STPs are of 1 & 2 of 1.4 MLD capacities respectively. The wastewater is treated using technology called 'Fixed Type Surface Aeration'. To treat additional wastewater generated from proposed buildings new STP will be installed with a capacity of about 0.85 MLD based on appropriate technology. **III.Quantity and Quality of the treated wastewater** – From the existing and proposed STP, about 4139 KLD of treated wastewater will be generated and will be used on site for various secondary purposes, like, irrigation gardening, flushing and car washing. Quality of the treated wastewater is attached as **Annexure I**. **IV.Mode of Disposal:** Some quantity of the treated wastewater produced will be used on site for secondary purposes like flushing, irrigation, gardening and car washing. Excess treated wastewater will be discharged to municipal drain, confirming to MPCB norms.
3.	**Solid Waste Management**	**I. Pre Construction and Construction phase** The subject project falls under category of 'Township and Area Development' project. The Anushaktinagar township is already developed. The project further involves proposed construction of 30 residential buildings as an area development part. Thus this section applies only to construction of proposed 30 residential buildings, office buildings, hostel and extension of some of the buildings. • **Waste:-** a) Debris – This waste would be used on site to achieve higher plinth level. Some of the debris would be converted into building block by using appropriate technology. Remaining waste if any would be sent to MCGM approved dumping site. b) Top soil preservation / conservation – 15cm of top soil would be stripped and stored on site in dig having 1 m height. The top soil would be covered with plastic sheet and through garland drain to prevent any loss because of rain or wind erosion. In operation phase this soil would be used for

		landscaping purpose. **II. Operation Phase** • **Segregate garbage** a) Dry quantity (T/day):-15.52 b) Wet quantity (T/day): - 15.50 Mode of Disposal – The solid waste generated from entire township is treated and disposed off with due care. All of the solid waste is sent to 'Nisargruna' plant. Here, the waste is segregated and only biodegradable waste is used for treatment. The residue after treatment is used as manure. The non biodegradable part of waste is handed over to MCGM for dumping. • **Hazardous waste** Quantity of Spent Oil – The quantity of spent oil from DG sets is negligible. By considering maintenance once in a year, the waste oil generated would be around 3000 lit/annum. Mode of Disposal: Spent oil is stored in HDPE tanks properly and handed over to MPCB/ CPCB/ MoEF authorized processor for the facility. • **STP Sludge (Dry Sludge)** a) Quantity:- 1.48 T/day Mode of Disposal: Sewage sludge will be composted and then used as manure.
4.	**Green Belt Development**	**I. Total R.G area** in m^2 **and in (%)** • Total R.G area in m^2 = 9,57,994.44 m^2 • Total R.G area in percentage = 25 % Currently approximately 6800 trees are present on site.

5.	**Energy**	**I. Energy saving by non-conventional methods** It is planned to replace all the lamps (of the premises and at homes) with CFL/LED lamps. **II. Source of power and supply capacity** • **Source of power** – TATA Power/Reliance Infra **III. Distribution System** The electricity to the colony is provided by TATA Power and the cablenet by ANUSAT club. **IV. Alternate supply for essential services** D.G sets are used as an alternate supply to meet emergency load only. **V. D.G Set: Type of Fuel used and Capacity** D.G. Set will be used as an alternate supply of electricity. • **Type of fuel:** High Speed Diesel (HSD) is used as fuel in DG sets • **Capacity & Quantity:** 3 D.G sets of 320 kVA and 4 D.G sets of 125 kVA
6.	**Environmental Management Plan Budgetary Allocation**	**I. Construction phase (with break-up) – Capital** Please refer **Annexure II**. **II. Operation phase (with break-up)** Please refer **Annexure II**. • **O & M** a) Quantum and generation of Corpus fund and commitment b) Responsibility for further O & M Department of Atomic Energy will take the responsibility of operation and maintenance of 'Environment Management Plan' i.e. the members of the department will work as an Environment Management Cell.

7.	**Traffic Management**	**I. Nos. of the junction to the main road and design of confluence** The Anushaktinagar is situated in Trombay, Mumbai. It can be approached from V N Purav Marg from North and and Yashwanthrao Chavan Marg from North-West direction. **II. Parking area** • Required (as per rule): 2529 Nos. Cars (For Existing Building) • Provided: 2483 Nos. + 1787 Nos. Two- wheelers • Proposed (as per rule): 1094 Nos. Cars (For Proposed Buildings) • Proposed to be provided: 1169 Nos. Cars **III. Width of all internal roads** Internal roads will be provided with 9m width.
8.	CRZ / RRZ clearance obtain, if any	Not applicable

Summary of project proposal

1. Plot area	38,27,942.50 m^2
2. Total built up area	7,90,777.80 m^2 (Existing) 2,98,371.43 m^2 (Proposed)
3. FSI consumed	0.473 (Area statement is attached as **Annexure III**.)
4. No. of buildings	Existing 268 nos; proposed 30 nos.
5. Maximum height of building	65.00 m (Dhawalgiri/ Kanchanganga, etc.)
6. Area and nos. of the basement	Nil
7. Area and nos. of podium	Nil
8. Area of amenity space	218489.13 m^2 (5% of the Plot Area)
9. Nos. of phases for project execution	Nil
10. Expected nos. of residents / users	Total population (Existing plus proposed) is Residential: 46236 Commercial: 6477

Date: -

22/12/10

Name & Signature of the project proponent

मुख्य अभियंता (पी.सी.डी.) Chief Engineer (PCD)
भारत सरकार/Govt. of India.
प.क.वि. वि.श.सं.म.नि./D.A.E., D.C.S. & E.M.
वि.स. भवन, अणुशक्तिनगर, मुंबई-400 094.
V.S. Bhavan, Anushaktinagar, Mumbai-400 094.

Checklist of Enclosures

1. Land purchase agreement
2. Building approvals from local authority, PR card, copy of IOD / CC & LOT in case of SRA proposal
3. Land-use / Zoning particulars-relevant portions from the prevailing Local Regulations –
4. Landscape plan with proposed tree plantation
5. Rainwater harvesting plan
6. Sewage treatment plant
7. Water balance statement
8. Cost estimates inclusive of land cost
9. Fire protection measures and approvals obtained –
10. Transportation of construction material and debris
11. Statement on the machinery & manpower during construction –
12. Approval from special bodies (such as Urban Art Commission or heritage areas)
13. Solid waste collection / disposal plan
14. Vehicle parking and management
15. Storm water drainage –
16. Comprehensive listing of building materials for construction
17. Energy balance studies, if carried out
18. Application Form for EC
    a. Form 1
    b. Form 1A
19. Details of EMP with costing
20. Proposal for long term management –
21. FSI calculations
22. Project Drawings with including layout
23. Contour plan

ANNEXURE

Annexure I: Quality of Treated Wastewater

Sr. No.	Polluting Parameters	Existing effluent Characteristics	Final Treated effluent	Unit
1	Flow	17.5-18.0	15-16	Cum/Hr
2	pH	6 - 7	6.5 to 8.5	--
3	Suspended Solids	400 – 600	< 30	Mg/ltr.
4	Biological Oxygen Demand	200 – 350	< 5	Mg/ltr.
5	Chemical Oxygen Demand	300 – 450	< 10	Mg/ltr.
6	Oil & Grease	30 – 40	< 10	Mg/ltr.
7	Total Dissolved Solids	400 – 500	< 2000	Mg/ltr.

Annexure II: EMP Cost for Construction & Operation phase

Description	Capital Cost (lacs)	Running Cost (lacs per year)
Air		
Construction Phase	1	1.4
Operation Phase	1.5	0.5
Noise		
Construction Phase	2	0.1
Operation Phase	1.5	0.4
Water and Land		
Construction Phase	6	0.75
Operation Phase		
Sewage Treatment Plant	800	24
Rainwater Harvesting & Storm water Management	15	2
Solid Waste Management	2	0.5
Energy		
Lighting	3	0.15
Biological		
Landscaping	383	38
Total	**1215**	**67.8**

Annexure III: Area Statement of 'ANUSHAKTINAGAR' Township Project

Project Component	Details	
	Existing	Proposed
Plot Area	38,27,942.50 m2	
Built-up Area (FSI Area + Non FSI Area)	7,90,777.80 m2	2,98,371.43 m2
Total Construction Area	10,89,149.290 m2	
FSI Area	7,90,777.80 m2	2,98,371.43 m2
Non FSI Area (Staircase, Passage etc)	Nil	Nil
FSI Permissible/Available	0.75	
	0.343 (Consumed)	0.130 (Proposed)
Building Foot print	1,69,508.50 m2	26,370.37 m2
Open Area	24,96,690.75 m2	
Road Area	1,77,378.44 m2	
RG Area (25%)	9,57,994.44 m2	
Area of Amenity Space	2,18,489.13 m2	
Basement Area	Nil	Nil
Podium Area	Nil	Nil
Maximum height of building	65 m	--
No. of Buildings	268	30
Residential	232	19
Offices	5	3 buildings + extension of 2 buildings
School & Junior college	6 Schools & 1 Jr. College	Extension to School no. 6 & 4
Hostels	1	1
Guest House	3	1
Amenity	20	Extension Hospital
Population: Residential	40060	6176
Population: Commercial	5584	893
No. of Trees	Approximately 6800	
No. of Parking	2529	1169
Power consumption	2.7 MW	
DG set back up	320 kVA – 3 Nos 125 kVA - 4 Nos	
Water supply	3730 KLD	571 KLD

Total Cost of the Project	898 Crores

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010437/24020781/24014701
Fax: 24023516/24024068/24044531
Website: http://mpcb.gov.in
E-mail: enquiry@mpcb.gov.in

Kalpataru Point, 2nd, 3rd & 4th Floor
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E)
Mumbai- 400 022.

EIC No. MU-2177/11
Infrastructure Project/LSI
Consent No. BO/RO(HQ)/CE/CAC-42

Date: 08 /04/2011

Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundry Movement) Rules 2008.
[To be referred as Water Act, Air Act and HW (M,H &TM) Rules respectively].

Consent to Establish is granted to,

Government of India, Department of Atomic Energy,
Director of Construction Services and Estate Management,
3rd floor, North wing, Vikram Sarabhai, Bhavan,
Anushaktinagar, Mumbai-400094

located in the area declared under the provisions of the Water Act, Air Act and Authorization under the provisions of HW (M,H &TM) Rules subject to the provisions of the Act and the Rules and the orders that may be made further and subject to the following terms and conditions:

1. The Consent to Establish is valid up to Commissioning of the Project or 5 years whichever is earlier.

For development of land / plot as new construction activities for construction of Residential Township at Plot Bearing C.T.S. No. 267 to 271, 273, 278, 279, 282, 284 & 286 of Village Anik; 81, 81/1 to 81/54 of Village Mandala; 443/54 to 443/80, 443/82, 443/84 to 443/90, 443/92 to 443/95, 443/97 to 443/101, 443/103, 443/105 to 443/112, 443/114, 443/115, 443/118, 443/120, 443/121, 443/122, 443/127, 443/128, 443/130 to 443/132, 443/134 to 443/136 to 443/159, 443/161 to 443/177 of Village Denoar; 180a, 181a, 182a/1 to 182a/70, 182a/72 to 182a/165, 183a, 183b/1, 183a/2, 183b/3, 183a/4a, 183b/5 to 183b/7, 183a/8 to 183a/25, 185, 185/1 to 185/8 & 184 of Village Mankhurd; 1, 1/1 to 1/141 of Village Manbudruk; 774 & 776 of Village Borla. on Total Plot area of 38,28,000.00 sq. mtrs., Proposed BUA(as per FSI)of 2,98,000.00 sq. mtrs. and Construction BUA of 2,98,000.00 sq. mtrs,

This project requires Environment Clearance under EIA Notification dt:14/09/2006 of MoEF, GOI as amended on dt. 01/12/2009.Therefore the effective date of this consent to Establish shall be from the date of obtaining Environment Clearance from competent authority by the project proponent.

Maharashtra Pollution Control Board Mumbai

2. **CONDITIONS UNDER WATER (Prevention & Control of Pollution) ACT, 1974 : -**

(i) The quantity of sewage effluent from above construction project shall not exceed **799.0 m^3/day.**

(ii) **Sewage Effluent Treatment:** The Applicant shall provide a comprehensive sewage treatment plant and treatment as is warranted with reference to influent quality and corresponding mode of disposal and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards: -

1.	pH	Not to exceed	6.5 to 9.0	
2.	Suspended Solids	Not to exceed	100	mg/l.
3.	BOD 3 days 27 ^{0}C.	Not to exceed	20	mg/l.
4.	Fecal Coli form	Not to exceed	500/100/l	ml.
5.	Residual Chlorine	Not to exceed	01	mg/l.
6.	Detergent	Not to exceed	01	mg/l.
7.	Floating matters	Not to exceed	10	mg/l
8.	COD	Not to exceed	50	mg/l

(iii) **Sewage effluent Disposal: -**

The treated domestic effluent shall be 80 % recycled and reused for flushing, fire fighting and cooling of Air conditioners and remaining shall be discharged into local body drain / utilized on land for gardening. In no case, effluent shall find its way to any water body directly/indirectly at any time.

(iv) **Non-Hazardous Solid Waste: -**

The total quantity shall be segregated and treated as follows: -

Sr	Type of Segregated solid waste	Quantity (MT/Day)	Treatment	Disposal
1.	Wet Garbage	134.15	Bio- Methanation	Used as fuel in canteen
2.	Dry Garbage	163.95	--	To authorized recycler

3. **Other Conditions (During construction phase):-**

1. All activities shall be in resonance with the provisions of Indian Forest Act, 1927 (16 of 1927), Forest (Conservation) Act, 1980 (69 of 1980) and Wildlife (Protection) Act, 1972 (53 of 1972), and special notification published for area wherever applicable and all the Environmental Statutes and Instruments.
2. This Consent to Establish is issued only for New Construction/Developing Construction Project purposes.
3. No quarrying activities shall be commenced in the area unless appropriate permissions are obtained for a limited quarrying material required for construction of local residential housing and traditional road maintenance work, provided that such quarrying is not done on Forest Lands and the material is not exported to the outside area.
4. There shall be no felling of trees whether on Forest, Government, Revenue or Private lands except as per prevailing Rules.
5. Extraction of Groundwater for the project shall require prior permission of the State Ground Water Authority or other relevant authorities, as applicable;
6. Near the activities that are related to water (like activity of water parks, water sports) and/or in the vicinity of lake, Dissolved Oxygen shall not be less than 5 mg/liter.
7. In order to ensure that the water from this project do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection of chambers following good engineering practices as per the regulations of local body.

Maharashtra Pollution Control Board Mumbai

8. The Applicant shall prepare management plan for water harvesting, roof-water reclamation, water/storm water conservation and implement the same before handling over of complex for occupation.
9. Applicant shall provide 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.
10. The Applicant shall draw plans for the segregation of solid wastes into biodegradable and non-biodegradable components. The biodegradable material shall be recycled through scientific in-house composting (i.e vermi-composting facility within premises) with the approval of local body. The proper demarked area shall be identified for collection & storage of MSW properly which, shall be finally disposed off at approved Municipal Solid Waste landfill site of local body environmentally acceptable location and method. It is clarified that the term solid waste includes domestic, commercial, and garden wastes, but does not include hazardous and bio-medical wastes. The activities of bio-composting and engineered landfill shall be as per the Municipal Solid Waste (M&H) Rules, 2000.
11. Applicant shall be responsible to take adequate precautionary measures as detailed in this consent.
12. The applicant/generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical Waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as defined under BMW (M&H) Rules has to obtain a separate Authorization from Maharashtra Pollution Control Board.
13. For disinfections of waste water ultra violet radiation shall be used in place of chlorination
14. Vehicles hired for construction activities should be operated only during non peak hours.
15. Ready mixed concrete used in building construction should apply separately for consent from the Board.
16. The applicant, during the construction stage shall provide

a) Septic tank and soak pit of adequate capacity for the domestic effluent generated due to workers residing at site.
b) Proper loading and unloading of construction material, excavated material and its proper disposal as per MSW (M&H) Rules 2000.
c) Cutting of trees is not permitted, however in unavoidable conditions necessary permission from the local body shall be obtained.
d) Green belt of 33% of the open space shall be developed.

4. The Applicant shall comply with all the provisions of, the Water (Prevention and Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and Rules as Amended, 2003 and Rules there under: -

The daily water consumption for the following categories shall not exceed, as under

(i)	**Domestic**	**From ULB(In CMD)**	**From other sources (In CMD)**
a)	Domestic	892	NA
b)	Make up water for Swimming pool	NA	NA
c)	Make up for firefighting	NA	NA
d)	Agriculture/Gardening	NA	NA
(ii)	Industrial cooling	NA	NA

5. **CONDITIONS UNDER AIR (Prevention & Control of Pollution) ACT, 1981: -**

(I) The Applicant may install 8 no. of diesel generating sets (DG Set) of capacity 2000 KVA (7No.)and 250 KVA (1Nos) shall be equipped with comprehensive control system as is warranted with reference to generations of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards: -

Maharashtra Pollution Control Board Mumbai

Standards for emissions of air Pollutants

i)	SPM/TPM	Not to Exceed	150	mg/Nm^3
ii)	SO_2 (DG set)	Not to Exceed	5.0	Kg/day

The following measure shall be taken.

a) Adequate mitigation measures shall be taken to control emissions of SO_2, NOx, SPM, RSPM.

b) Applicant shall achieve following Ambient Air Quality standards.

1	SO_2	Not to Exceed (Annual Average)	50	$\mu g/ m^3$
		Not to Exceed (24 hours)	80	$\mu g/ m^3$
2	NO_x	Not to Exceed (Annual Average)	40	$\mu g/ m^3$
		Not to Exceed (24 hours)	80	$\mu g/ m^3$
3	PM_{10}	Not to Exceed (Annual Average)	60	$\mu g/ m^3$
		Not to Exceed (24 hours)	100	$\mu g/ m^3$
4	$PM_{2.5}$	Not to Exceed (Annual Average	40	$\mu g/ m^3$
		Not to Exceed (24 hours)	60	$\mu g/ m^3$

(II) **The Applicant shall observe the following fuel patterns**

No.	Type of Fuel	Quantity
1	Diesel	233 Ltrs /hr

(III) **The Applicant shall erect the Chimney (s) of the following specifications**

S.No.	Chimney attached to DG	Height above roof top of the building in which it is installed.
1	DG set (3Nos) 320 KVA	8.7 mtrs each
2	DG set (4No.) 125 KVA	6.5 mtrs each

(iv) **Conditions for DG Sets: -**

1. Noise from DG Sets shall be controlled by providing acoustic enclosure or by treating the room acoustically.
2. Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room shall be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) shall also be provided. The measurement of insertion loss shall be done at different points at 0.5 meters from acoustic enclosure/ room and then average.
3. The Applicant should make efforts to bring down noise level due to DG Set, outside the premises, with ambient noise level requirements by proper setting and control measures.
4. Installation of DG Set must be strictly in compliance with recommendations of DG set manufacturer;
5. A proper routine and preventive maintenance procedure for DG Set shall be set and followed in consultation with the DG manufacturers, which would help to prevent noise levels of DG Sets from deteriorating with use.
6. The DG set shall be operated only in case of power failure. The applicant shall make arrangement for regular electrical power.
7. The Applicant shall not cause any nuisance in the surrounding area due to operation of DG sets.

Maharashtra Pollution Control Board Mumbai

8. In case of problems, the D.G. set shall not be operated until it is set back to satisfactory position.

(IV) **Other Conditions:**

a) The Applicant shall provide ports in the chimney and facilities such as ladder, platform etc for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's staff. The chimneys shall be numbered, as S-1, S-2 etc and these shall be painted/ displayed to facilitate identification.

b) Water spraying shall be done on ground to avoid fugitive emissions.

c) Construction material shall be carried in enclosed vehicles during construction activities.

(V) **Conditions for Utilities like Kitchen, Eating Places etc: -**

1. The kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney through ducting.
2. The toilet shall be provided with exhaust system connected to chimney through ducting.
3. The air conditioner shall be vibration proof and the noise shall not exceed 68 dB (A).
4. The exhaust hot air from A.C. shall be attached to Chimney at least 5 mtrs. higher than the nearest tallest building through ducting and shall discharge into open air in such way that no nuisance is caused to neighbors.

(VI) The Applicant shall take adequate measures for control of noise levels from its own sources within the complex (residential cum Commercial) in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Daytime is reckoned as between 6 a.m. to 10 p.m. and Nighttime is reckoned between 10 p.m. to 6 a.m.

(VII) Construction equipments generating noise of less than 65/90 db(A) are permitted.

(VIII) No construction work is permitted during night time.

6. **CONDITIONS UNDER HW (M, H &TM) RULES, 2008:**

(i) The applicant shall handle hazardous wastes as specified below:

Sr. No.	HW as per Schedule-I	Type of Waste	Quantity	Disposal
The Applicant Shall not generate any type of Hazrdous Waste				

(ii) The authorization is hereby granted to operate a facility for collection, storage, transport and disposal of hazardous waste.

7. The applicant shall certify that the bricks used in construction are manufactured using the ash from Thermal Power stations if it is within a radius of 100 km. from Thermal Power Plant and submit the names of bricks manufacturer.

8. **The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.**

9. The applicant shall adopt environment friendly technology in development of the project.

10. The applicant shall take the proper remediation measures to ensure that the ground water and soil contamination is prevented and follow due diligence at the construction stage.

11. The applicant shall use fly ash based material/products as per the provisions of fly ash Notification of 14.09.1999 and as amended on 27.08.2003.

12. Energy conservation measures like installation of solar panels for lighting the area outside the building should be integrated part of the project design.

Maharashtra Pollution Control Board Mumbai

13. This Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the Applicant.

14. The applicant should not take any effective steps for implementation of the project before obtaining Environment Clearance as per EIA notification, 2006 and amendment thereto.

15. The applicant shall submit a Bank Guarantee of Rs.10,00,000/-(Rupees ten lacs only)for compliance of the consent conditions.

16. This is issued with the approval of **Consent Appraisal Committee** of the Board in its meeting held on 19 March, 2011.

17. The capital investment of the project is **Rs. 898.00 Crores.**

Maharashtra Pollution Control Board Mumbai

8/4/2011

(Radheshyam Mopalwaar, IAS)
Member Secretary

To,
Government of India,
Department of Atomic Energy,
Director of Construction Services and Estate Management,
3rd floor, North wing, Vikram Sarabhai, Bhavan,
Anushaktinagar, Mumbai-400094

Copy forwarded with compliments to-
The Commissioner, MCGM, Mumbai.

Copy to-

1. Regional Officer, MPCB, Mumbai
2. Sub Regional officer, Mumbai-I, MPCB,
3. Chief Accounts Officer, Mumbai, MPCB,
   Received consent fee of:-

Amount	DD No.	Date	Drawn on
Rs 8,98,000.00	914438	14/02/2011	SBI
Rs 100.00	723179	25/02/2011	Federal Bank

4. Cess Branch, MPCB, Mumbai.
5. Master file

REDMI 9 POWER

27/09/2022 16:05

TOILET
REDMI 9 POWER
27/09/2022 17:24


TOILET
REDMI 9 POWER
27/09/2022 17:24


312 flat Type V E site old manadala
DCSEM


HCC
312 flats Type V E site mandala
FIRST
AID


312 flat Type V E site old manadala
DCSEM


FIRST
AID


FIRST AID


MINERALLA
MINERALLA


MINERALLA
MINERALLA


MINERALLA


MINERALLA
MINERALLA


water tank


















240





"ANUSHAKTHINAGAR" Residential Township at Trombay, Anushaktinagar, Kurla, Mumbai, Maharashtra-400094

Soil test reports

Parameters	Test Methods	S1
pH	IS -2720(Part 26) 1987(RA 2011)	7.36
Bulk Density, g/cc	FAO Chapter 3, ABCTL/SOIL/SOP 1	1.29
Electrical Conductivity, mS/cm	IS -14767:2000 (RA 2010)	0.156
Total Nitrogen, kg/ha	IS -14684:1999, Reaff:2008	153
Available Phosphorous, kg/ha	FAO Chapter 3, ABCTL/SOIL/SOP 2	32.8
Available Potassium, kg/ha	FAO Chapter 3, ABCTL/SOIL/SOP 7	322
Exchangeable Calcium as Ca,m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 4	16.3
Exchangeable Magnesium as Mg, m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 5	5.16
Exchangeable Sodium as Na, m.eq/100g	FAO Chapter 3, ABCTL/SOIL/SOP 6	1.36
Organic matter (%)	IS 2720 (Part 22):1972, Reaff:2010	1.36
Texture Classification	Robinson Pipette Method	Clay Loam
Sand (%)		36.6
Clay (%)		32.8
Silt (%)		30.6
Sodium Absorption Ratio	ABCTL/SOP/S20	1.31
Boron as B, mg/kg	ABCTL/SOP/S13	4.14
Iron as Fe, mg/kg	EPA 3500 B & 7000B	374
Copper as Cu, mg/kg	EPA 3500 B & 7000B	5.11
Manganese as Mn, mg/kg	EPA 3500 B & 7000B	33.5
Zinc as Zn, mg/kg	EPA 3500 B & 7000B	15.6
Molybdenum as Mo , mg/kg	EPA 3500 B & 7000B	BDL(<2)
Lead as Pb, mg/kg	EPA 3500 B & 7000B	BDL(<2)
Nickel as Ni, mg/kg	EPA 3500 B & 7000B	BDL(<2)
Chromium as Cr, mg/kg	EPA 3500 B & 7000B	BDL(<2)
Cadmium as Cd, mg/kg	EPA 3500 B & 7000B	BDL(<2)
Arsenic as As, mg/kg	EPA 3500 B & 7000B	BDL(<2)
Mercury as Hg, mg/kg	EPA 7471 B	BDL(<0.5)

"ANUSHAKTHINAGAR" Residential Township at Trombay, Anushaktinagar, Kurla, Mumbai, Maharashtra-400094

Ground Water Monitoring Results

S.No	Parameters	Unit	Test Method	Limits as per IS 10500:2012	GW1
1	Colour	Hazen	IS 3025(part 4)1983(RA 2017)	5	<1
2	Odour	-	IS 3025(part 8)1984(RA 2017)	Agreeable	No Odour Observed
3	Turbidity	NTU	IS:3025 Part 10-1984(Reaff: 2017)	1	BDL(<0.5)
4	pH at 25 °C	-	IS :3025 Part 11-1983(Reaff: 2017)	6.5-8.5	7.58
5	Conductivity at 25 °C	µS/cm	IS :3025 Part 14- 1984 (Reaff:2017)	Not Specified	1312
6	Total dissolved solids	mg/l	IS :3025 Part 16-1984(Reaff: 2017)	500	778
7	Total Suspended solids	mg/l	IS :3025 Part 17-1984(Reaff: 2017)	Not Specified	<2
8	Total Alkalinity as $CaCO_3$	mg /l	IS : 3025 Part 23-1986(Reaff: 2019)	200	280
9	Total Hardness as $CaCO_3$	mg/l	IS : 3025 Part 21-2009	200	330
10	Calcium as Ca	mg/l	IS : 3025 Part 40-1991(Reaff: 2019)	75	82
11	Magnesium as Mg	mg/l	APHA 23rd EDN 3500 Mg B	30	30
12	Chloride as Cl^-	mg/l	IS :3025 Part 32-1988(Reaff: 2019)	250	221
13	Sulphate as SO_4	mg/l	APHA 23rd EDN -4500-SO_4^{2-} E	200	96
14	Nitrate as NO_3	mg/l	APHA 23rd EDN -4500- NO_3^- B	45	11
15	Iron as Fe	mg/l	IS 3025(part 53)1987(Reaff: 2019)	1	BDL(<0.05)
16	Manganese as Mn	mg/l	APHA 23rd EDN -3500-Mn D	0.10	BDL(<0.02)
17	Fluoride as F	mg/l	APHA 23rd EDN -4500-F B&D	1.00	0.31
18	Sodium as Na	mg/l	IS : 3025 Part 45-1993 (Reaff:2019)	Not Specified	160
19	Potassium as K	mg/l	IS : 3025 Part 45 -1993 (Reaff:2019)	Not Specified	3.3
20	Barium as Ba	mg/l	APHA 23rd EDN -3111 D	0.7	BDL(<0.1)
21	Residual Free Chlorine	mg/l	APHA 23rd EDN -4500-Cl B	0.20	BDL(<0.1)
22	Aluminium as Al	mg/l	IS:3025 Part:55 (Reaff:2019)	0.03	BDL(<0.03)
23	Cadmium as Cd	mg/l	APHA 23rd EDN -3111 B	0.003	BDL(<0.003)
24	Lead as Pb	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)
25	Copper as Cu	mg/l	APHA 23rd EDN -3111 B	0.05	BDL(<0.03)
26	Zinc as Zn	mg/l	APHA 23rd EDN -3111 B	5.00	0.11
27	Total Chromium as Cr	mg/l	APHA 23rd EDN -3111 B	0.05	BDL(<0.03)
28	Arsenic as As	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)

S.No	Parameters	Unit	Test Method	Limits as per IS 10500:2012	GW1
29	Cyanide as CN	mg/l	APHA 23rd EDN -4500-CN E	0.05	BDL(<0.02)
30	Selenium as Se	mg/l	APHA 23rd EDN -3113 B	0.01	BDL(<0.01)
31	Mercury as Hg	mg/l	IS APHA 23rd EDN -3112 B	0.001	BDL(<0.001)
32	Anionic Surfactants as MBAS	mg/l	APHA 23rd EDN 5540 C	0.20	BDL(<0.025)
33	Phenolic Compounds as Phenol	mg/l	APHA 23rd EDN 5530 B,C,D	0.001	BDL(<0.001)
34	Pesticides	mg/l	APHA 23rd EDN -6630 B, C	Absent	Absent
35	Total Coliforms	MPN/100ml	IS–1622-1981 (Reaff –2019)	Absent /100ml	<2
36	E.coli	MPN/100ml	IS–1622-1981 (Reaff–2019)	Absent /100ml	<2

Report number	:	ABCTL/ANUSHAKTHI/EIA/2021/03/AAQ1
Sample drawn by	:	ABC Techno Labs India Private Limited
Sample description	:	**Ambient Air Quality Monitoring** -24 Hourly Basis
Location of sampling	:	**AAQ 1: Project Site**
Project name	:	**Proposed Expansion of "ANUSHAKTHINAGAR" Residential Township, 'M' (E) ward, Trombay, Anushaktinagar, Kurla, Mumbai – 400094**
Date of sampling	:	02-12-2022
Report date	:	03-12-2022

Location	Statistics	PM10 µg/m³	PM2.5 µg/m³	SO2 µg/m³	NO2 µg/m³	CO mg/m³
AAQ1	Minimum	58	27	8.9	15.1	0.25
	Maximum	76	36	13.3	20.4	0.55
	Average	67.00	32.13	10.95	17.73	0.41
	98^{th} Percentile	74.62	36	13.024	19.894	0.531

"ANUSHAKTHINAGAR" Residential Township at Trombay, Anushaktinagar, Kurla, Mumbai, Maharashtra-400094

Ambient Noise Level

Noise Quality data							
S.No.	**Location code**	**Location**	**Zone**	**LIMIT (as per CPCB Guidelines) Leq dB(A)**		**Observed value Leq dB(A)**	
				DAY*	**NIGHT****	**DAY***	**NIGHT****
1	N1	Project Site	Commercial	65	55	54.1	47.6
	*	Leq (6.00AM TO 10.00PM)					
	**	Leq (10.00PM TO 6.00AM)					

दूरध्वनि 022-24686313
Telephone 022-24686313

विक्रम साराभाई भवन
Vikram Sarabhai Bhavan
अनुशक्तिनगर, मुंबई-४०० ०९४
3rd Floor, South Wing
Anushakti Nagar,Mumbai-94

भारत सरकार
GOVERNMENT OF INDIA
परमाणु ऊर्जा विभाग / Department of Atomic Energy
निदेशक केंद्रीय कार्य संगठन निदेशालय /
Directorate of Construction, Services and Estate Management
संरचनात्मक डिज़ाइन अनुभाग / Structural Design Section

Ref: DCSEM/SDS/AN/VSB Ext/2022/134 Date: 25.07.2022

Subject: Structural Stability Certificate for Extension to Vikram Sarabhai Bhavan at Anushaktinagar, Mumbai – 400 094

Structural Stability Certificate

It is certified that the Structure as well Foundation of **"Extension to Vikram Sarabhai Bhavan at Anushaktinagar, Mumbai – 400 094"** has been designed for all possible loads such as Dead load, Live load, Seismic load and Wind load including load combinations in accordance with code requirements and provisions laid down in Part 6 'Structural Design' of the National Building Code of India, IS: 456 – 2000, IS: 875 (part 2), IS: 875 (part 3), IS: 1893 (part 1) and IS: 13920. Further, it is certified that the same structure is safe and stable for the purpose for which it is intended.

This Structural Stability Certificate is being issued solely for the purpose of obtaining the Fire NOC of building.

S. K. Soni
Head, Structural Design Section

दूरभाष 022-25486313
Telephone 022-25486313

भारत सरकार
GOVERNMENT OF INDIA
परमाणु उर्जा विभाग
Department of Atomic Energy
निर्माण सेवा एवं संपदा प्रबंध निदेशालय
Directorate of Construction, Services and Estate Management

विक्रम साराभाई भवन
Vikram Sarabhai Bhawan
तीसरी मंजिल, दक्षिण विंग
3rd Floor , South Wing
अणुशक्ति नगर, मुंबई-९४
Anushakti Nagar/Mumbai-94

Ref. DCSEM/SDS/HBNI/2022/143 Date: 18th November 2022

To,
The Executive Engineer Building Proposal (Special Cell).
Municipal Training Centre,
Raheja Vihar Complex, Powai, Andheri- East Mumbai.

Sub: - Proposed Hostel Complex for Trainees of HBNI/BARC near Aravali Building, Anushaktinagar on land bearing CTS No. 267 to 271, 273, 278, 279, 282, 284 & 286 of Village Anik 81, 81/1 to 81/54 of Village Mandala 443/54 to 443/80, 443/82, 443/84 to 443/90, 443/92 to 443/95, 443/97 to 443/101, 443/103, 443/105 to 443/112, 443/114, 443/115, 443/118, 443/120, 443/121, 443/122, 443/127, 443/128, 443/130 to 443/132, 443/134 to 443/159, 443/161 to 443/177 of Village Deonar, 180a, 181a, 1/82a, 182a/1 to 182a/70, 182a/72 to 182a/165, 183a, 183b/1, 183a/2, 183b/3, 183a/4a, 183b/5 to 183b/7, 183a/8 to 183a/25, 185, 185/1 to 185/8 & 184 of Village Mankhurd, 1, 1/1 to 1/141 of Village Manbudruk, 774 & 776 of Village Borla.

Ref: - CHE/98/BP (SPL. CELL)/AME/337 dtd. 18th July 2011

Sir,

I, S. K. Saini (Scientific Officer-G), working as Head, Structural Design Section of Directorate of Construction, Services & Estate Management (DCSEM), Department of Atomic Energy, Government of India, hereby state that structural analysis & design of subject cited building has been carried out by SDS, DCSEM as per the architectural plans prepared by the Architect Shri. J. N. Nagaraj, Project Architect (R), DCSEM. Construction of the above building has been carried out by following contractors:

1. M/s. Era Infra Engg Ltd
2. M/s. Kalpana Struct-con Pvt. Ltd.
3. M/s. Renjin Construction.

on plot bearing CTS no. 1 (part) of Manbudruk Village (M-Ward) at Anushaktinagar under the supervision of Shri. Arvind V. Shroff, CPE(AS), Engineer-in-Charge, DCSEM.

Based on the reports issued by Engineer-in-charge and periodic inspections carried out by Structural Design Section (SDS), from time to time, I certify that, to the best my knowledge and belief, the structural work has been carried out per the structural designs and drawings prepared by SDS.

This certificate is issued on the clear understanding that SDS responsibility for the structural stability of the building and its proper structural performance will cease the moment any additions or alterations to the structural frame by accident or due to tampering by the users/occupants for any reasons whatsoever. SDS responsibility will also cease in the event of overloading or lack of proper maintenance of structure or any such act, which is detrimental to the structure.

S. K. Saini,
Head SDS, DCSEM, DAE
Structural License No./STR:840010841




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2023.03.02 14:39



EXISTING APPROVED PROJECTS AT ANUSHAKTINAGAR : (AS PER APPROVED FILE No.:SEAC - 2010/CR.618/TC.2 DATED 11th MARCH, 2011)

	PROPOSAL No.	TYPE	PROPOSAL DESCRIPTION	No. OF FLOORS	No. OF FLATS PER FLOORS	AREA OF BLOCK (IN SQ. MTS)	GROUND COVERAGE (IN SQ. MTS)	STATUS OF PROJECT	STATUS OF OCCUPANCY CERTIFICATE
	A	HOSTEL	PROPOSED HOSTEL FOR TRAINEES OF HBNI / BARC.	G+7 / S+12	---	35,245.00	5,254.23	Construction Completed	Obtained
	B	OFFICE	PROPOSED EXTENSION TO V S BHAVAN.	G+12	---	11,514.00	912.96	Construction Completed	
	C	RESIDENTIAL	PROPOSED CISF QUARTERS	S+6 / S+12	---	13,206.28	1,251.49	Construction Completed	Obtained
	D	OFFICE	PROPOSED OFFICE BUILDING FOR NPCIL.	G+20	---	42,069.00	2,851.96	Construction Completed	
	E	OFFICE	PROPOSED EXTENSION TO NUB FOR NPCIL (ADDDITIONAL FLOOR ABOVE D, E, F, BLOCKS.)	Addl. Floor	---	1,930.00	Addl. Floor	Construction Completed	Obtained
	F	SCHOOL	PROPOSED EXTENSION TO SCHOOL No. 6 (ADDITIONAL FLOOR.)	Addl. Floor	---	1,666.42	Addl. Floor	Construction Completed	Obtained
	G	SCHOOL	PROPOSED EXTENSION TO SCHOOL No. 4.	G+2	---	1,789.59	596.53	Construction Completed	Obtained
	H	OFFICE	PROPOSED OFFICE BUILDING	S+12	---	19,200.00	1,600.00	Yet to be taken up	
	J	AMENITY	PROPOSED PHASE - II CRECHE FACILIT.Y	G+1	---	2,501.14	1,250.57	Construction Completed	Obtained
	K	AMENITY	PROPOSED EXTENSION TO BARC HOSPITAL.	G+7	---	7,600.00	1,951.63	Construction Completed	Obtained
	L	OFFICE	PROPOSED 4th BUILDING NEAR AERB.	G+5	---	4,580.00	910.09	Under Construction	
	M	RESIDENTIAL	PROPOSED JERLINA TYPE FLATS (24 No.s).	S+12	2	9,820.00	516.62	Yet to be taken up	
2011	1	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E1	S+18	3	10,650.00	559.63	Construction Completed	
2011	2	RESIDENTIAL	PROPOSED TYPE - D QUARTERS (104 No.s) BLOCK - D1	S+18	6	11,150.00	586.54	Construction Completed	
2011	3	RESIDENTIAL	PROPOSED TYPE - D QUARTERS (104 No.s) BLOCK - D2	S+18	6	11,150.00	586.54	Construction Completed	
2011	4	RESIDENTIAL	PROPOSED TYPE - C QUARTERS (24 No.s) BLOCK - C1	S+6	4	1,700.00	236.32	Construction Completed	Obtained
2011	5	RESIDENTIAL	PROPOSED TYPE - C QUARTERS (24 No.s) BLOCK - C2	S+6	4	1,700.00	236.32	Construction Completed	Obtained
2011	6	RESIDENTIAL	PROPOSED TYPE - C QUARTERS (24 No.s) BLOCK - C3	S+6	4	1,700.00	236.32	Construction Completed	Obtained
2011	7	RESIDENTIAL	PROPOSED TYPE - C QUARTERS (24 No.s) BLOCK - C4	S+6	4	1,700.00	236.32	Construction Completed	Obtained
2011	8	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E2	S+18	3	10,650.00	559.63	Construction Completed	
2011	9	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E3	S+18	3	10,650.00	559.63	Construction Completed	
2011	10	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E4	S+18	3	10,650.00	559.63	Construction Completed	
2011	11	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E5	S+18	3	10,650.00	559.63	Construction Completed	
2011	12	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E6	S+18	3	10,650.00	559.63	Construction Completed	
2011	13	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E7	S+18	3	10,650.00	559.63	Construction Completed	
2011	14	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E8	S+18	3	10,650.00	559.63	Yet to be taken up	
2011	15	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E9	S+18	3	10,650.00	559.63	Yet to be taken up	
2011	16	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E10	S+18	3	10,650.00	559.63	Yet to be taken up	
2011	17	RESIDENTIAL	PROPOSED TYPE - E QUARTERS (52 No.s) BLOCK - E11	S+18	3	10,650.00	559.63	Yet to be taken up	
2011	18	AMENITY	PROPOSED COMMUNITY SHOPS	G	---	1,000.00	1,000.00	Yet to be taken up	
2014	19	AMENITY	PROPOSED POLICE OUT POST	G	---	765.36.00	333.00	Construction Completed	Obtained
	TOTAL BUILT UP AREA OF PROPOSED BUILDINGS IN ANUSHAKTINAGAR					2,99,136.79			
	TOTAL GROUND COVERAGE AREA OF PROPOSED BUILDINGS IN ANUSHAKTINAGAR						26,703.37		

BRIHANMUMBAI MUNICIPAL CORPORATION
PUBLIC HEALTH DEPARTMENT
INSECTICIDE BRANCH

(Office: Mankhurd Fire Station Building, Swami Vivekanand Marg, Cadbury Mankhurd-400088
No. HO/ INS/ 710/ 22, Dt. 31/ 05/ 22.

To,
Scientific Officer,
Govt. Of India, B.A.R.C.
DCSEM Vikram Bhawan,
Anushaktinagar,
Mumbai 400094.

Sub:- Permission to dig one (1) new bore well and to use the water from bore well for Non-potable purpose at BARC Colony, Anushaktinagar, Mumbai-400094, location near School no.24.

Ref:- 1.Your application dated 20.04.2022 received under P2003700035R
2. Indemnity and undertaking submitted by the applicant
3.NOC issued by AE/WW of Mulund vide no. AE/WW/ME/993/R, Dt.07.05.2022

Sir,

Permission to dig one (1) new bore well and allow the use of water from the bore well for Non-potable purposes at the above place is hereby granted to you subject to the compliance with the conditions mentioned in the memo of conditions duly signed by you. A board prohibiting the use of the well water for drinking, bathing, cooking purpose shall be exhibited at a conspicuous place.

The permission is liable to be summarily revoked, if any of the conditions in the memo of conditions is not found to have been complied with or Breached, in that case you will be liable to legal action prescribed under Mumbai Municipal Corporation Act.

The said Tube well shall be dug within 30 days of permission being granted as otherwise the said permission automatically stands void / revoked.

31/5/22

(Rajiv Nanaware)
Insecticide Officer




7
8




2021-3-5 11:55




GENERAL ARRANGEMENT
PLANT LAYOUT
BALLOON ENCLOSURE
BURNER
MODULAR
BIOGAS PLANT
Material - MS + FRP
BIOGAS
BALLOON
CAP - 10 M³
SCHEMATIC LAYOUT
INSTALLED & OPERATED BY AVNI ENTEPRISES
SATYA



















DSCN3929.JPG



DSCN3946.JPG



DSCN3919.JPG



GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
DIRECTORATE OF CONSTRUCTION, SERVICES & ESTATE MANAGEMENT
Vikram Sarabhai Bhavan, Anushaktinagar, Mumbai – 400 094

PUBLIC NOTICE

Directorate of Construction, Services & Estate Management (DCSEM), Government of India, Department of Atomic Energy, has obtained Environmental Clearance for the construction projects under Expansion of the Anushaktinagar Township, Located under the jurisdiction of "M"(E) ward, of MCGM at Trombay, Anushaktinagar, Mumbai, from Environment Department, Government of Maharashtra, , Mantralaya Annexe, Mumbai, vide their reference file No. SEAC-2010/CR.618/TC.2, dated 11th March, 2011 and is also granted consent to establish by Maharashtra Pollution Control Board, Kalpataru Point, 2nd, 3rd & 4th Floor, Sion (E), Mumbai, vide EIC No. MU-2177/11; Infrastructure Project/LSI; Consent No. BO/RO(HQ)/CE/CAC-42, dated 08.04.2011.

The clearance covers thirty (30) proposed buildings (i. e. 19 Residential, 5 Offices, 1 Hostel, 3 Amenities and 2 Schools) having total built up area of 298371 sq.m for an Estimated cost of Rs.898 crores. Out of these 30 buildings, some will be new construction and some will be extension to the existing structures.

These Projects shall be constructed on the land of Anushaktinagar Township bearing C.T.S. No. 267 to 271, 273, 278, 279, 282, 284 & 286 of Village Anik; 81, 81/1 to 81/54 of Village Mandala; 443/54 to 443/80, 443/82, 443/84 to 443/90, 443/92 to 443/95, 443/97 to 443/101, 443/103, 443/105 to 443/112, 443/114, 443/115, 443/118, 443/120, 443/121, 443/122, 443/127, 443/128, 443/130 to 443/132, 443/134 to 443/136 to 443/159, 443/161 to 443/177 of Village Denoar; 180a, 181a, 182a/1 to 182a/70, 182a/72 to 182a/165, 183a, 183b/1, 183a/2, 183b/3, 183a/4a, 183b/5 to 183b/7, 183a/8 to 183a/25, 185, 185/1 to 185/8 & 184 of Village Mankhurd; 1, 1/1 to 1/141 of Village Manbudruk; 774 & 776 of Village Borla.

In this respect, 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 and Departmental Website www.dcsem.gov.in. *(This is published as a statutory requirement of above cited SEAC clearance).* ***- Director, DCSEM.***