#### Government of Maharashtra

FileNo.: SEAC- 2010/CR./ TC.2

Environment department, Room No. 217, 2<sup>nd</sup> floor, Mantralaya Annexe, Mumbai 400 032

Date: 22nd November, 2010

To,
M/s. Lucina Land Development Ltd.
One Indiabulls Centre,
Plot No. 841, 4<sup>th</sup> Floor,
Tower 2 B, Jupiter Mills,
Fitwala Road, Elphinstone (W)
Mumbai
Maharashra

Subject: Residential scheme including MRTP rental scheme called "Indiabulls Greens" at Village: Kon & Arivali, Taluka: Panvel, District: Raigad - 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 30<sup>th</sup> and 31<sup>st</sup> meetings 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 27<sup>th</sup> meeting held on 17<sup>th</sup> September, 2010.

 It is noted that the proposal is for grant of Environmental Clearance for Residential scheme including MRTP rental scheme called "Indiabulls Greens" at Village Kon & Arivali, Taluka Panvel, District - Raigad. SEAC considered the project under screening category is 8(b) as per EIA Notification 2006.

Brief Information of the project is summarized as below-

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Name of the Project		Residential scheme including MRTP rental scheme called "INDIABULLS GREENS"				
Project Proponent	:	M/s. Lucina Land Development Ltd.				
Location of the project	÷	S. NO. 80A,83/2A, 83/3, 83/7 + 4B + 5B, 85/0, 86/1,90/1A, 90/1B, 90/3B, 90/4, 90/7, 90/8, 90/9, 90/10, 90/11 & 91/5 Village Kon & Arivali, Taluka - Panvel, Dist. Raigad, State – Maharashtra				
Type of Project	*	Construction Project				
Total Plot Area	:	95,570 Sq. mt.				
Total construction area	:	6,03,339.07 Sq. mt.				
Estimated cost of the project	1	₹ 1208 Crores				

Valar-1.

### No. of Buildings:

Sectors	No. of Bldg & Floors	No. of Flats	No of Shops
Sale Buildings			
Sector 1 (Commercial)	1 bldg –B +G+17 flrs		
Sector 2	3 bldg -B+ ST + P + 35 flrs	469	
Sector 3	5 bldg -B+ ST + P + 35 flrs	737	
Sector 4	7 bldg -B+ ST + P + 35 flrs	1139	
Sector 5	3 bldg -B+ ST + P + 35 flrs	737	
Rental Buildings			
Sector 6	7 bldg -G +18 flrs 8 bldg -G +17 flrs	4989	225

Water Requirement: Total: 6190 m<sup>3</sup>/day

1. Fresh water: 3720 m<sup>3</sup>/day from MIDC

2. Recycled water: 2470 m<sup>3</sup>/day from STP

Wastewater generated: 4900 m<sup>3</sup>/day; Wastewater will be treated in STP

Capacity of STP: 5000 m3; Technology: SAFF Technology

- Treated sewage will be reused for flushing and gardening and cooling tower makeup water.
- Excess treated sewage will be disposed to proposed sewer line of CIDCO.

# Rain water Harvesting:

- Rain water from terrace area will be collected in Rain water harvesting tank.
- It is proposed to provide rain water collection tank of total capacity 1000 m3.
- Surface runoff will be used to recharge the ground water sources through 25 recharge pits each with 1200 mm diameter.
- Ground Water Authority shall be consulted for finalization of appropriate rainwater harvesting technology.

# Solid Waste Generation:

# Construction phase

Debris: Excavation quantity: 349679.34 m3; This material shall be used for back filling and leveling of the plot and remaining will be disposed to authorized sites.

Top soil preservation / conservation: 18411.534 m3; Shall be preserved and reused with in the site for landscaping.

# Operation Phase:

1. Dry quantity :- 6248 kg/day

Walls

Wet quantity: - 13057 kg/day
 STP Sludge: 735 Kg/day

#### Disposal:

- Wet garbage will be treated in a Vessel Composting (OWC) and the dry garbage will be handed over to authorized recyclers.
- Waste oil which is generated due to usage of DG sets shall be stored and subsequently given to the authorized hazardous waste management agencies recognized by MPCB.
- E Waste from Commercial development (Offices) will be such as keyboard, CD's, discarded monitors etc. will be stored separately and recycled through authorized dealers.
- STP Sludge will be used as manure.

#### Energy:

Power Requirement:

During construction phase: 100 KW

During operation phase: connected load: 26805 kW; Max. Demand: 16083 kW

Source: MSEB

Total 10 DG sets :3 Nos of 2000 kVA+3 Nos of 750 kVA +2 Nos of 625 kVA +1 No of 990kVA + 1 No of 500 kVA for residential buildings(only during power failure for critical load in residential and 100% back up in commercial component).

#### Energy Conservation:

- All lifts are proposed on VFD drives which results in 15% saving in consumption.
- Most of the common area lighting are proposed to work on high energy efficient lamps (CFL/T5) with low watt loss ballast, as specified in bureau of energy efficiency, which again results in saving in general consumption. The LPD is working less than 1W/m2.
- Solar water heating shall be provided for residential flats for preheating geysers.
- Also total lighting to be proposed on 30% stages operation with automatic switch on and timer based. Also presence and photo sensors are proposed at critical junctions.
- All internal common area lighting system is proposed to have either high efficiency lamps (T5/T8) / CFL. These give us a LPD less than 10W/m2 but still achieving the required 200 LUX for ambient lighting.
- · Use of solar based pole lights for landscape lighting.

Green Belt Development: area for green belt: 28111.65 Sq.mt; 1112 Nos. of trees will be planted

Traffic Management: parking area: 83783.96 Sq.mt.; 2544 Nos. of 4-wheeler and will be provided.

#### Environmental Management Plan:

Construction phase: ₹ 26.0 Lakhs

Operation Phase: Total capital cost for EMP shall be ₹ 1055.32 Lakhs and O & M for EMP shall be ₹ 324.82lakhs.

#### Budgetary Allocation for EMP:

Construction phase:

Sr. No.	Parameter	Total cost (in lakhs)	
1	Water For Dust Suppression	3.00	
2	Site Sanitation	2.00	
3	Environmental Monitoring	3.00	
4	Disinfection	3.00	



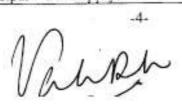
5	Health Check Up	15.00	
6	Total Cost	₹ 26.0	

Operation Phase:

Sr. No.	Parameter	Set Up Cost Rs. (In lacs)	Operational & Maintainace Cost Rs. (In lacs)/ Annum	
1	STP cost	442.00	232.51	
2	Rain Water Harvesting (20 recharge pits)	7,50	0.38	
3	Rain Water Harvesting (RWH tanks, 300 kl)	70.00	3.50	
4	Environmental Monitoring	MOEF approved agency for monitoring	52.92	
5	Solar Energy(Lights)	25.00	0.50	
5	Solar Energy- Water Heating	308.203	3.08	
7	Gardening	154.61	24.74	
8	Solid Waste Management	48.00	7.20	
9	Total Cost	1055.32	324.82	

Environmental Management Plan shall be implemented as follows:

Component	During construction phase	During operation phase	
Air & Noise Environment	Use of RMC Dust control: water sprinkling, cover on trucks Barricades provided along the periphery of the site. Ear plugs for laborers. Vehicle trips: PUC, Night trips, smooth flow. No noise pollution work during night trips, smooth flow DG: as per CPCB norms, Proper Maintenance, LSD fuel use, proper and safe storage of fuel.	CPCB norms and LSD fuel shall lused  Acoustical Enclosures for DG sets Providing trees on the Site Adequate Parking provision.  Smooth traffic flow and regulation PUC shall be checked	
Water Environment	Drinking water check up.     Provision of temporary toilets     Construction water will be channelised properly before disposal into municipal drain.     Use of tanker water for construction. No burden on municipal water supply.	Rain water harvesting     Recycling of water through STP     Strom water drainage will properly maintained.	



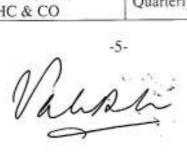
Land Environment	Separate storage of Construction material and debris     Usage of Oil trays wherever oil spillage is expected.     Most use of electrically operated machinery instead of diesel     Disposal of debris to authorized contractor.     Segregation of garbage.     Top soil will be stock piled and maintained for green belt development.	Segregation at source for all solid waste streams     Proper disposal of waste through well managed Solid waste management team     Dry waste will be recycled.     Wet garbage shall be composted and will be used as manure.     Use of paver blocks instead of fully impermeable pavement to control run off.
Biological Environment	Plantation of trees for operational phase will start in mid of construction phase     Regulation of vehicular trips and proper maintenance of machinery	<ul> <li>Landscaping, avenue plantation</li> <li>Plant species selected based on adaptability to geographic conditions and</li> <li>Keeping in view the local species and their benefits to site.</li> <li>Providing trees on the site</li> </ul>
Socio economic Environment	Adequate drinking water, toilet and bathing facilities.     Personal protective and safety equipments will be provided.     First aid facility.     Regular health check up     Regular pest control will be done.     Educational and awareness programme for safety measures.	Environmental awareness programme for surrounding area.     Emergency preparedness plan will be explained with the help of local NGO's

Environmental Monitoring Plan:
All parameters shall be monitored by MOEF approved lab.
During Construction Phase:

Item	Parameters	Frequency	Location
Ambient Air Quality	SPM,RSPM,SO2 NOX ,HC & CO	Quarterly	At major construction area. ( total 4 stations )
Noise Level	Equivalent noise Level dB(A)	Daily	At major construction area.
Water Analysis	Physical, chemical and Biological parameters	Monthly	Municipal water supply

During Operation Phase:

Item	Parameters	Frequency	Location
Ambient Air	SPM,RSPM,SO2,	Ounstants	Total 4 Stations
Quality	NOX,HC & CO	Quarterly	around periphery of



			the site.
Noise Level	Equivalent noise level	Quarterly	Near DG sets, Near STP, Near parking area.
Exhaust from DG Set	SPM, SO2	Quarterly	Stack of DG sets.
Water Analysis	Physical, chemical and Biological parameters	Weekly during rainy season	Harvested water stored in tank(After treatment)
Wastewater Analysis	pH, BOD, COD, TSS TDS, O & G	Daily	Before & after treatment from STP.

# Emergency Preparedness Plan in Operational Phase:

## On Site Emergency Preparedness plan:

- · Locator for exit routes, display of building plans to direct person to the nearest entry and exit during emergency.
- Display of Emergency phone nos. (Includes phone number and address of nearby hospital. fire station, police station, public help service etc.)
- Mock drill in every six months to check the working of all emergency services.
- Training to all occupiers for different type of emergencies.

# Off Site Emergency Preparedness plan:

- Awareness programme for any disaster will be conducted with the help of local NGO's
- · The disaster preparedness board will be displayed in the close proximity of the building to make roadside people and nearby residing people to be aware of the situation.
- · During the mock drill training of the occupants, some of the local responsible people will also be invited and will be given training for the emergency preparedness.
- · Nearby fire station, hospital, police station and local helpline will be displayed in the surrounding area for the better contact.
- The proposal has been considered by SEIAA in its 27th meetings & 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:-
  - This environmental clearance is subject to conditions stipulated in Rental Housing (i) project scheme of MMRDA.
  - Project proponent shall ensure completion of STP, MSW disposal facility, green belt (ii) 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 commissioning of sewer line, water requirement in Para 2. Prior certification from appropriate authority shall be obtained.
  - Local body should ensure that no occupation certificate will be issued prior to (iii) 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.
  - The height, Construction built up area of proposed construction shall be in accordance (iv) 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 FSI calculations regarding the construction area which is very high compared to the plot area zoning permissibility for the proposed project as per the approved development plan of the area.

- (v) "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.
- (vi) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
- (vii) A First Aid Room will be provided in the project both during construction and operation of the project.
- (viii) 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.
- (ix) 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.
- (x) Arrangement shall be made that waste water and storm water do not get mixed.
- (xi) All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
- (xii) 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.
- (xiii) Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xiv) 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.
- (xv) 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.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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.
- (xix) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
- (xx) 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 nonpeak hours.
- (xxi) 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.

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- (xxii) 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).
- (xxiii) Ready mixed concrete must be used in building construction.
- (xxiv) 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.
- (xxv) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxvi) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxvii) The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
- (xxviii)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.
- (xxix) 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.
- (xxx) Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.
- (xxxi) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxxii) Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
- (xxxiii)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.
- (xxxiv)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
- (xxxv) 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.
- (xxxvi)Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement
- (xxxvii) 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.
- (xxxviii) 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

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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.

(xxxix)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.

Traffic congestion near the entry and exit points from the roads adjoining the proposed (xl)project site must be avoided. Parking should be fully internalized and no public space

should be utilized.

- Opaque wall should meet prescriptive requirement as per Energy Conservation (xli) 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
- The building should have adequate distance between them to allow movement of (xlii) fresh air and passage of natural light, air and ventilation
- (xliii) 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.
- (xliv) 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.
- Six monthly monitoring reports should be submitted to the Department and MPCB.
- (xlvi) A complete set of all the documents submitted to Department should be forwarded to the MPCB
- (xlvii) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
- (xlviii) No land development / construction work preliminary or otherwise relating to the project shall be taken up without obtaining due clearance from respective authorities.
- A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- Separate funds shall be allocated for implementation of environmental protection (1) 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.
- The project management shall advertise at least in two local newspapers widely (li) 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.
- Project management should submit half yearly compliance reports in respect of the (lii) 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.
- A copy of the clearance letter shall be sent by proponent to the concerned Municipal (liii) 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.
- The proponent shall upload the status of compliance of the stipulated EC conditions, (liv) 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;

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- SPM, RSPM. SO<sub>2</sub>, NOx (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.
- (Iv) 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.
- (Ivi) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- (Ivii) 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.
- Project proponent should submit exactly same documents for approval of building plans to the concern authority as per the documents submitted to the SEIAA for prior Environmental Clearance
- 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.
- 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.
- 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.
- Validity of Environment Clearance: The environmental clearance accorded shall be valid for a period of 5 years.
- 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.
- 10. 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.

March -10-

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

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

### Copy to:

- Shri. Ashok Basak, IAS (Retd.), Chairman, SEIAA, 502, Charleville. 'A' Road. Church gate, Mumbai- 400 020, Maharashtra.
- Shri. P.M.A Hakeem, IAS (Retd.), Chairman, SEAC, 'Jugnu' Kottaram Road. Calicut- 673 006 Kerla.
- Additional Secretary, MOEF, 'Paryavaran Bhawan' CGO Complex. Lodhi Road. New Delhi – 110510
- Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
- 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).
- Regional Office, MPCB, Raigad.
- 7. Collector, Raigad.
- 8. Chairperson, Raigad Zilla Parishad.
- IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
- Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment Department.
- Select file (TC-3).