



सत्यमेव जयते

Government of India
Ministry of Environment and Forests

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CGO Complex, Lodhi Road
New Delhi – 110 003

F. No. J-11011/458/2011- IA II (I)

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To

Dated: 7th January 2014

Shri Shanmugam Rawaswamy,
Plant Manager
M/s Bayer Material Science Pvt.Ltd.
Sy.No.135/1A, SOPCOT Industrial Area, Phase-II,
Village Semmakuppam, Cuddalore-607005, Tamil Nadu

E-mail: shanmugam.ramaswamy@bayer.com ; Fax No. 04142-239911:

Subject: Increase in production of Thermoplastic Polyurethane (from 210 MTPM to 500 MTPM) and formulation of Polyether and Polyester of Polyol Blends (1500 MTPM) at Sy.No. 135/1A, SIPCOT Industrial Area, Phase-II, Village Semmakuppam, Mandal & District Cuddalore, Tamil Nadu by M/s Bayer Material Science Pvt. Ltd- Environmental Clearance reg.

Sir,

Kindly refer to your letter dated 12th April, 2013 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report and subsequent submission of additional information vide letter dated 4th July, 2013 regarding above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for increase in production of Thermoplastic Polyurethane (from 210 MTPM to 500 MTPM) and formulation of Polyether and Polyester of Polyol Blends (1500 MTPM) at Sy.No. 135/1A, SIPCOT Industrial Area, Phase-II, Village Semmakuppam, Mandal & District Cuddalore, Tamil Nadu by M/s Bayer Material Science Pvt. Ltd. Expansion will be carried out within the existing plant premises. Total plot area is 7.62 acres of which greenbelt will be developed in 2.7 acre. Total cost of the expansion project is Rs.34.60 Crore. It is reported that no national park/wildlife sanctuary/reserve forest is located within 10 Km of the study area. Following products will be manufactured:

S.N.	Products	Existing Capacity	Production Capacity after Expansion
1	Thermoplastic Polyurethane	210 MTPM	500 MTPM
2	Blending Unit for Polyether Polyol formulation system of foam	1500 MTPM	1500 MTPM

3.0 Scrubber will be provided to control process emissions. Total fresh water requirement from ground water source will be 40 m³/day. Total industrial effluent generation will be 4.2 m³/day. Industrial effluent will be treated in effluent treatment plant (ETP) followed by reverse osmosis (RO). Treated effluent will be recycled/reused in the process. RO rejects will be

evaporated in multiple effect evaporator (MEE). No effluent will be discharged outside the plant premises and 'Zero' discharge concept will be adopted. ETP sludge and MEE salt will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Used/spent oil will be sold to authorized re-processor.

4.0 Public hearing was exempted under per section 7(i), (iii) Stage (3), Para (i)(b) of EIA Notification, 2006.

5.0 All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, due to location of the project within 10 km of the Critically Polluted Area (Cuddalore) and applicability of general condition, proposal is appraised at Central level.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 31st, 8th and 11th meetings held during 12th-13th January, 2012, 16th-17th May, 2013 and 26th-27th August, 2013 respectively. The Committee recommended the proposal for environmental clearance. Project Proponent and the EIA Consultant namely M/s Ramky Enviro Engineers Ltd, have presented EIA / EMP report as per the TOR. EAC has found the EIA Study / EMP Report to be adequate and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, presentation made by the proponent and M/s Ramky Enviro Engineers Ltd, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14th September 2006, subject to the compliance of the following Specific and General Conditions:

A. SPECIFIC CONDITIONS

- i) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.
- ii) Stack of adequate height shall be provided to gas fired boiler to disperse the gaseous emissions as per standards prescribed.
- i) Scrubber shall be provided to control process emissions. The scrubbed water shall be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system shall be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant shall be automatically stopped. Stack monitoring shall be done regularly and report shall be submitted to Tamil Nadu Pollution Control Board (TNPCB) and the Ministry's regional office at Bangalore.
- ii) Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, VOC and HC (Methane and Non-methane) shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its 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 Tamil Nadu Pollution Control Board (TNPCB).

- iii) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored.
- iv) Continuous monitoring system for VOCs shall be installed at all important places/areas. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.
- v) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vi) Total fresh water requirement from ground water source shall not exceed 40 m³/day and prior permission for drawl of water shall be obtained from the CGWA/SGWA.
- vii) Total industrial wastewater generation shall not exceed 4.2 m³/day. Industrial effluent shall be treated in ETP followed by Reverse Osmosis. Effluent shall be treated in the ETP comprising primary, secondary and tertiary treatment followed by RO. RO permeate shall be recycled/reused in the process. RO rejects shall be evaporated in MEE. No effluent shall be discharged outside the plant premises and Zero effluent discharge condition shall be maintained.
- viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- ix) As proposed, MEE salt and ETP sludge shall be sent to the TSDF. Spent catalyst/ resin and spent oil shall be sent to authorized recycler/re-processor.
- x) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from TNPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
- xi) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- xii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms. Fire hydrant system shall be provided alongwith fire monitor and flame detection system in the process as well as storage areas.
- xiii) The company shall comply with the recommendations made in the EIA/EMP/Risk assessment report. Risk assessment shall be included in the safety Manual.
- xiv) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted. Occupational health surveillance of the

workers shall be done on a regular basis and records maintained as per the Factories Act.

- xv) As proposed, greenbelt shall be developed in 22031 m³ out of total plant area. Selection of plant species shall be as per the CPCB guidelines.
- xvi) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xvii) The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xviii) Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.

B. GENERAL CONDITIONS

- i. The project authorities shall strictly adhere to the stipulations made by the State Government and T.N. Pollution Control Board.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- iii. The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- iv. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- v. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- vi. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- vii. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.

risk mitigation measures and public hearing relating to the project shall be implemented.

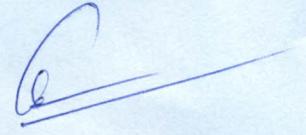
- ix. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- x. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- xi. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xii. The company shall earmark sufficient funds toward capital cost and recurring cost/annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- xiii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.
- xiv. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance 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 T.N. Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- xv. The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- xvi. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- xvii. The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

8.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

9.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act,

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.



(Dr. T. Chandini)
Director

Copy to :

1. The Principal Secretary, Department of Environment, Ground Floor, Panagal Buildings 1, Jeenias Road, Saidapet, Chennai - 600 015.
2. The Chief Conservator of Forests, Regional Office (Southern Zone, Bangalore) Kendriya Sadan, 4th Floor, E&F Wing, II Block Koramangala, Bangalore-560034.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Tamil Nadu Pollution Control Board, Corporate Office, 76, Anna Salai, Guindy, Chennai - 600 032.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File/Monitoring File/Notice Board..