

F. No. J-11011/518/2011- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi – 110 003

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Telefax:011: 2436 0549
Dated 7th December, 2012

To

The Director
M/s Momentive Performance Materials (India) Pvt. Ltd.
B-3, SIPCOT Industrial Estate,
Oragadam-602105, Taluk Sriperumbudur,
Kancheepuram, T.N.

E-mail: abc@abcenviro.com ; Fax No.044-30412030.

Subject: Expansion of Silicon and Silicon Derivatives Manufacturing Unit (from 917 MTPM to 1104 MTPM) at Plot No. B-3, Oragadam, Sriperumbudur, Chennai, Tamil Nadu by M/s Momentive Performance Materials (India) Pvt. Ltd. – Environmental Clearance reg.

Ref. : Your letter no. nil dated nil and received in the Ministry on 14th February, 2012.

Sir,

Kindly refer to your letter received in the Ministry on 14th February, 2012 along with project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report and regarding above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that the proposal is for expansion of Silicon and Silicon Derivatives Manufacturing Unit (917 MTPM to 1104 MTPM) at Plot No. B-3, Oragadam, Sriperumbudur, Chennai, Tamil Nadu by M/s Momentive Performance Materials (India) Pvt. Ltd. Total plot area is 15.10 acres. No reserve forest and protected forest is located within 10 Km. Total project cost is Rs. 88.60 Crores. Following products will be manufactured:

S.N.	Products	Quantity (MTPM)
1	Silicon Fluids (Aminos/PDMS/)	141
2	A (B)n /Quats	78
3	Silicon Emulsion	156
4	Hard Coats	27
5	Silicon Polymer & Elastomers-(HCR/)	135
6	Silicon Sealant Repacking	125
7	Silicon Surfants (UA/Personal Care blend)	243
	Intermediate Products	
1	Octa Methyl Cyclo Tetra Siloxane (OMCTS)/Poly Dimethyl Siloxane (PDMS)	150
2	HCR Gum	49
Total		1104

Handwritten notes:
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3.0 Stack of adequate height will be provided to the oil fired boiler. Adequate scrubbing arrangement will be provided to process stack to control process emissions. Total fresh water requirement from SIPCOT water supply will be 231 m³/day. Total industrial effluent generation will be 55.24 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 factory premises and 'Zero' discharge concept will be adopted. Sewage will be treated in the sewage treatment plant (STP). ETP sludge, MEE salt and silicon residue will be sent to Treatment Storage Disposal Facility (TSD) 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 The synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located inside the industrial area/estate are listed at S.N. 5(f) under Category 'B' and appraised at the State level. Due to non-existent of the SEAC in Tamil Nadu, project proposal is treated as category 'A' project and appraised at Central Level.

6.0 The proposal was considered by the State Level Expert Appraisal Committee, Tamil Nadu in its 17th meeting held during 8th-9th April, 2010 and Expert Appraisal Committee (Industry-2) in its 32nd meeting held during 16th-17th February, 2012. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, 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) Compliance to all the specific and general conditions mentioned in the existing environmental clearance letter no. J-11011/603/2007-IAI (I) dated 1st April, 2008 shall be ensured.
- iii) Stack of adequate height shall be provided to the FO fired boiler to disperse gaseous emissions. Boiler shall be provided with the automatic modulation control systems to ensure right air to fuel ratio to reduce the emission.
- iv) Adequate scrubbing arrangement shall be provided to process stack to control process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- v) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM₁₀, SO₂, NO_x, VOC and CO 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).

- vi) 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. The emissions shall conform to the limits stipulated by the TNPCB.
- vii) For further control of fugitive emissions, following steps shall be followed :
 - a. Closed handling system shall be provided for chemicals.
 - b. Reflux condenser shall be provided over reactor.
 - c. System of leak detection and repair of pump/pipeline based on preventive maintenance.
 - d. The acids shall be taken from storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.
 - e. Cathodic protection shall be provided to the underground solvent storage tanks.
- viii) 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.
- ix) Total fresh water requirement from SIPCOT water supply shall not exceed 231 m³/day and prior permission shall be obtained from the concerned Authority. No ground water should be used. Copy of permission from the CGWA/SGWA shall be submitted to the Ministry's Regional Office.
- x) Trade effluent shall be treated in effluent treatment plant (ETP) followed by reverse osmosis (RO). Treated effluent shall be recycled/reused in the process. RO rejects shall be evaporated in multiple effect evaporator (MEE). Treated water shall be recycled/reused within factory premises. Sewage shall be treated in STP.
- xi) No effluent shall be discharged outside the factory premises and 'Zero' discharge concept shall be adopted.
- xii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xiii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- xiv) As proposed, silicon residue, 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.
- xv) 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.
- xvi) 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.

- xvii) The company shall undertake following waste minimization measures :-
 - a. Metering and control of quantities of active ingredients to minimize waste.
 - b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - c. Use of automated filling to minimize spillage.
 - d. Use of Close Feed system into batch reactors.
 - e. Venting equipment through vapour recovery system.
 - f. Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- xviii) 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 OISD 117 norms.
- xix) The company shall comply with the recommendations made in the EIA/EMP/Risk assessment report. Risk assessment shall be included in the safety Manual.
- xx) 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.
- xxi) As proposed, green belt shall be developed in 4.98 acres out of total land 15.10 acres. Selection of plant species shall be as per the CPCB guidelines.
- xxii) 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, mobile sewage treatment plant, 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 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 stations 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.
- viii. The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, 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 Parishad/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, 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.

(A.N. Singh)
Dy. Director (S)

Copy to :-

1. The Principal Secretary, Department of Environment, Ground Floor, Panagal Buildings 1, Jeenies 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. Joint Secretary, IA II(I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File/Monitoring File/Record File.

(A.N. Singh)
Dy. Director (S)