

F. No. J-11011/110/2010-IA-II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

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

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668
Dated 21st December, 2010

To, ✓
 Shri Satish Kumar Sethi, Director
 M/s PCL Oil & Solvents Limited.
 Survey No. 56, Government Industrial Zone
 Dunetha, Bhenslore
 District Daman – 396 210, U.T.

E-mail : pcloil_del@hotmail.com; Fax :0260 - 2262351

Subject: Expansion of Plastic Additives Manufacturing Unit (15,000 MTPA to 75,000 MTPA) at Sy. No. 56, Govt. Industrial Zone, Dunetha, District Daman (U.T.) of Daman & Diu by M/s PCL Oil & Solvents Limited– Environmental Clearance reg.

Ref. : Your letter no. nil dated 28th June, 2010.

Sir,

Kindly refer your letter dated 28th June, 2010 alongwith project documents including Terms of References, EIA/EMP Report and subsequent clarification vide your letter dated 30th November, 2010 regarding above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that proposal is for expansion of Plastic Additives Manufacturing Unit (15,000 MTPA to 75,000 MTPA) at 56, Govt. Industrial Zone, Dunetha, District Daman (U.T.) of Daman & Diu. Total plot area is 10,200 m². Project cost for proposed expansion is Rs. 4.84 Crores. Inter-state boundary is located within 5 Km. No national park and wild life sanctuary are located within 10 km. Reserve Forest is located within 5 Km. Following existing and proposed products will be manufactured:

S. N.	Products	Existing Quantity (MTPA)	Total Quantity after Expansion (MTPA)
Plastic Additives – Group A			
1	Di-Octyl Phthalate (DOP)	15000	60,000
2	Di-Iso Nonyl Phthalate (DINP)		
3	Di-Iso Decyl Phthalate (DIDP)		
Plastic Additives – Group B			
4	Di-Iso Butyl Phthalate (DBP)		14,000
Plastic Additives – Group C			
5	Di-Octyl Maleate (DOM)		1,000
6	Di-Butyl Maleate (DBM)		
7	Di-Octyl Adipate (DOA)		

2. Reflux condenser shall be provided over reactor.
 3. System of leak detection and repair of pump/pipeline based on preventive maintenance.
 4. 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.
 5. Cathodic protection shall be provided to the underground solvent storage tanks.
- vi) Stacks of adequate height shall be provided to the oil fired boiler, thermic fluid heaters, DG sets, and process vents respectively as per CPCB/PCC standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
 - vii) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including 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 U.T. Pollution Control Committee. The levels of PM₁₀, SO₂, NO_x, and VOCs in ambient air and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.
 - viii) Solvent management shall be as follows :
 - a. Reactor shall be connected to chilled brine condenser system
 - b. Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - c. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - d. Solvents shall be stored in a separate space specified with all safety measures.
 - e. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - f. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
 - ix) Total ground water requirement shall not exceed 32 m³/day and prior permission shall be obtained from the Central Ground Water Authority/State Ground Water Board and a copy submitted to the Ministry's Regional Office at Bhopal. Industrial effluent shall not exceed 16 m³/day and shall be treated in ETP. All the treated wastewater shall be recycled / reused for cooling and green belt development inside the premises. Performance of ETP shall be monitored regularly. No effluent shall be discharged outside the premises and 'Zero' discharge shall be adopted. Domestic sewage shall be disposed off through septic tank followed by soak pit.
 - x) During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.
 - xi) 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 U.T. Pollution Control Committee shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency. ✓

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)/ Pollution Control Committee (PCC) 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. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.
- vii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- 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 adequate funds 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 Daman Pollution Control Committee. 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 U.T. Pollution Control Committee 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.

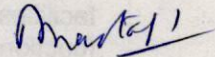
- xvi. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at <http://envfor.nic.in>. This shall be advertised 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 Any appeal against this environmental clearance shall lie with the National Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Authority Act, 1997.

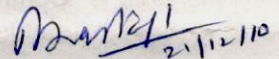
11.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management and Handling) Rules, 1989/2003/ 2008 and the Public Liability Insurance Act, 1991 alongwith their amendments and rules.



(Dr. P. B. Rastogi)
Scientist 'F'

Copy to :-

1. The Conservator of Forest, DD & DNH., Forests & Environment Department, Forest, Daman, Fort Area, Post Office Moti Daman, Daman & Diu (U.T.) - 396220
2. The Chief Conservator of Forests (Western Zone), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Pollution Control Committee, Daman & Diu And Dadra & Nagar Haveli, Fort Area, Moti Daman - 396 220.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Scientist 'G', IA II(I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File/Monitoring File/Record File.

 21/12/10

(Dr. P. B. Rastogi)
Scientist 'F'

- xii) As proposed, ETP Sludge, process residue (organic & inorganic), evaporators salts etc. shall be sent to GEPIL's TSDF at Silvassa. High calorific value waste (organic residue) shall be sent to cement plant. Ash from boiler shall be sold to brick manufacturers. Used oil and batteries shall be sold to registered recycler/re-processor only. Membership for the disposal of hazardous waste in TSDF shall be obtained and a copy of membership submitted to the Ministry's Regional Office.
- xiii) The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. All Transportation of Hazardous Chemicals shall be as per the MVA, 1989.
- xiv) Hazardous chemicals shall be stored in tanks, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be done by pumps.
- xv) 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.
- xvi) 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.
- xvii) 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.
- xviii) Green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines.
- 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) 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 Daman Pollution Control Committee.
- 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, ✓

3.0 Common stack of adequate height is provided to existing furnace oil based steam boiler and 2 Nos. of Thermic Fluid Heaters. Common stack of adequate height will be provided to the proposed furnace oil fired steam boiler -1 and Thermic Fluid Heater 1 & 2. Common stack of adequate height will be provided to the proposed furnace oil based steam boiler-2 and Thermic Fluid Heater-3. The ground water requirement will be increased from 23 m³/day to 32 m³/day after proposed expansion. Industrial wastewater generation will be increased from 5.0 m³/day to 16 m³/day after proposed expansion and domestic effluent generation will be increased from 1.2 m³/day to 1.50 m³/day. Industrial wastewater will be treated in effluent treatment plant (ETP) and treated water will be reused as make up water for cooling tower. ETP Sludge, process residue organic & inorganic, Evaporator's salts will be sent to Treatment Storage Disposal Facility (TSDF) for final disposal. Used oil from process and used batteries will be sold to registered recycler/re-processor. Ash from boiler will be sold to brick manufacturers.

4.0 Public hearing is exempted as per Para 7 (ii) of EIA Notification 2006.

5.0 All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate and applicability of general condition due to location of project site within 10 km of interstate boundary are listed at S.N. 5(f) under category 'A' and appraised at Central level.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th meeting held during 16th-17th September, 2010. 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) Recommendations of the State/U.T. Forest Department shall be obtained regarding likely impact of the proposed plant on the Reserve forest located within 5 Km and implemented.
- ii) Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iii) Ambient air quality data shall be collected as per NAAQES standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009.
- iv) 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. All the proposed products shall be handled in closed circuit. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits prescribed by the Daman Pollution Control Committee. A flare system shall be provided to control accidental release of gaseous system and all the flammable gases shall be routed through quenching system.
- v) For further control of fugitive emission, following steps shall be followed :
 1. Closed handling system shall be provided for chemicals. ✓