

F. No. J-11011/462/2011-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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Dated 10th September, 2013

To,

Shri J. K. T. Aghera, Director
M/s Sarthi Chem Pvt. Ltd.
Plot No. H/254, GIDC Kuvadava,
Taluka & District Rajkot, Gujarat

E-mail : info@sarthichem.com ; Fax No.:0281 2784490

Subject: Expansion of Methyl Bromide (from 20 MTPD to 40 MTPD) Manufacturing Unit at Plot No. H/254, GIDC Industrial Estate, Village Kuvadva, Tehsil & District Rajkot, Gujarat by M/s Sarthi Chem Pvt. Ltd. - Environmental Clearance reg.

Ref. : Your letter no. nil dated 30th December, 2011.

Sir,

Kindly refer to your letter dated 30th December, 2011 alongwith project documents including Form I, Terms of References, Pre-feasibility Report alongwith EIA/EMP Report and subsequent submission of additional information vide letters dated 2nd June, 2012 and 21st January, 2013 as well as GPCB's letter no. GPCB/CCA/RJ-354/134531 dated 9th January, 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 expansion of Methyl Bromide from 20 MTPD to 40 MTPD Manufacturing Unit at Plot No. H/254, GIDC Industrial Estate, Village Kuvadva, Tehsil & District Rajkot, Gujarat. Total plot area is 2,211 m² and no additional land is required. The cost for expansion project is Rs. 32.25 Lacs. No protected area notified under the wild life (Protection) Act 1972 & Eco Sensitive area notified under section 3 of the EPA 1986 are located within 10km distance. Beti river is located at 5.2 Km. Following products will be manufactured:

S. N.	Products / By-Products	Production Capacity (MTPM)			Use of product
		Existing	Proposed	Total after Expansion	
1	Methyl Bromide	20.0	20.0	40.0	Soil Fumigant
2	Hydrogen Bromide (By-Product)	4.0	63.0	67.0	--
3	Sodium Bromide (By-Product)	Nil	0.75	0.75	--

3.0 Water scrubber followed by alkali dipping tank will be provided to control process emissions viz. HBr. Water requirement from ground water source will be increased from 0.32 m³/day to 4.8 m³/day. Industries effluent generation will be increased from 0.15 m³/day to 2.8 m³/day and treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. Treated effluent will be recycled/reused for cooling tower make up and horticulture purpose after achieving adequate water quality for reuse. No effluent will be discharged outside the plant premises. Sulphur sludge and ETP sludge will be sent to Treatment, Storage & Disposal Facility (TSDF) for hazardous waste. Waste oil and used batteries will be sold to authorized recyclers/re-processors.

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

5.0 All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

6.0 The proposal was considered by the SEAC, Gujarat in its meeting held on 20th February, 2010 and the Expert Appraisal Committee (Industry-2) in its 31st and 36th meetings held during 12th-13th January, 2012 and 11th-12th June, 2012 respectively. 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 Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and 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) Water scrubber followed by alkali dipping tank to control process gas emission from manufacturing of Methyl Bromide. The scrubbing solution should be recovered as byproduct. 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 should be automatically stopped.
- iii) 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, CO, VOC and HBr 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 GPCB.
- iv) 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 GPCB.
- v) 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.
- vi) 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.
- vii) Solvent management shall be carried out 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.
 - g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- viii) A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per CPCB guidelines. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.
- ix) All necessary steps should be taken for monitoring of Br₂ in the proposed plant. Continuous monitoring system alongwith alarm system should be provided at all the important places in the plant. Calibration of monitoring system should be carried for reliable operation.
- x) Total fresh water requirement from ground water source shall not exceed 4.8 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- xi) Industries effluent generation shall not exceed 2.8 m³/day and treated in ETP comprising primary and tertiary treatment. Treated effluent will be recycled/reused for cooling tower make up and horticulture purpose after achieving adequate water quality for reuse No effluent shall be discharged outside the factory premises. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the GPCB.
- xii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xiii) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.
- xiv) Organic waste having high calorific value shall be sent to cement industries. ETP sludge shall be disposed off to the TSDF.

- 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 GPCB 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) All Equipment and Hardware employed in "Transportation, Unloading, Storage and Distribution of Bromine in the Plant" shall be designed and constructed as per acceptable Code of Practice for safety.
- 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) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xx) The company shall carry out extensive training of its Operating, Maintenance and other factory personnel on handling emergency management of Bromine related incidence.
- xxi) Thick green belt shall be developed in 33% of the plant area to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO.
- 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 Gujarat 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.
- 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 per 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 Gujarat 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.


(V P Upadhyay)
Director

Copy to :-

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
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, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Guard File/Monitoring File/Record File/Notice Board.


(V P Upadhyay)
Director