

F. No. J-11011/296/2011-IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
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Dated 15th July, 2015

To,
Shri N.Rajeshwar Reddy
M/s Balaji Amines Ltd.
Gat No.197,
Village Tamalwadi
Tehsil Tuljapur
District Osmanabad
Maharashtra

E-mail: ; info@balajiamines.com ; Fax.: 0217-310821

Subject: Expansion of Aliphatic Amines and its Derivatives Manufacturing Unit at Gat No.197, Tamalwadi, Tehsil Tijapur, District Osmanabad, Maharashtra by M/s Balaji Amines Ltd. –Environmental Clearance reg.

Ref.: Your letter no. BEL/TAM/POL/EC/02-13-14 dated 26.03.2013.

Sir,

This has reference to your letter dated 26th March, 2013 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report, Public Hearing Report and subsequent communications vide your letter dated 22nd January, 2015 on the above mentioned subject.

2.0 The Ministry of Environment, Forest and Climate Change has examined the application. It is noted that the proposal is for expansion of Aliphatic Amines and its Derivatives Manufacturing Unit at Gat No.197, Tamalwadi, Tehsil Tijapur, District Osmanabad, Maharashtra by M/s Balaji Amines Ltd. Total plot area is 1,09,882.58 m². The total cost of expansion project is Rs 8.70 Crore. It is reported that no reserve forest/ protected forest/ National Park/ Wildlife Sanctuaries /ecological sensitive area. The following products will be manufactured:

S.N.	Products	Quantity (MTPM)		Total
		Existing Capacity	Expansion Capacity	
1	Mono Methyl Amine (MMA)	240	360	600
2	Di Methyl Amine (DMA)	800	648	1448
3	Tri Methyl Amine (TMA)	160	144	304
4	Mono Methyl Amine (MEA)	40	43.2	83.2
5	Di Ethyl Amine (DEA)	80	93.6	173.6
6	Tri Ethyl Amine (TEA)	180	216	396
7	Di Methyl Amine Hydro Chloride	600	660	1260

	(DMAHCL)			
8	Di methyl Acetamide (DMAC)	125		125
9	Choline Chloride (CC)	150	--	150
10	Di Mthyl Amino Ethanol (DMAE)	125	180	305
11	Di Ethyl Amino Ethanol (DEAE)	100	216	316
12	Mono Methyl Urea (MMU)	150	--	150
13	Try Ethyl Benzyl Ammonium Chloride (TEBAC)	100	--	100
14	Dimethyl Urea (DMU)	300	--	300
15	Methyl Di-Ethanol amine (MDEA)	125	--	125
10	Morpholine	150	180	330
11	Absolute Alcohol	3000 KLPM	--	3000 KLPM
12	Choline Chloride 50 % on Corn cobs (C.C 50%)	500	--	500
13	Choline Chloride 60 % on Corn cobs (C.C 60%)	500	--	500
14	N – Methyl -2- Pyrrolidone(NMP)	300	504	804
15	Gama Butyro Lactone	--	1008	1008
16	2-Pyrrolidone/N-Etyhl-2-Pyrrolidone	--	504	
17	Mono Ethyl Amine Hydrochloride (MEA HCL) / Di Ethyl Amine Hydrochloride (DEAHCL)/Tri Ethyl Amine Hydrochloride (TEAHCL)	--	72	72
18	Tri Methyl Amine Hydrochloride (TMAHCL) / Mono Methyl Amine Hydrochloride (MMAHCL)	--	72	72
By-products:				
1	Hydrogen Gas		49.32	49.32
2	Higher Amines		170.28	170.28

3.0 Bagfilter has been installed in the existing coal fired (14 TPH) boiler and thermic fluid heater. ESP has been installed in the existing coal fired (35 TPH) boiler. Scrubbers are provided in the existing plant -1 (NMPA), plant -4 and Plant -5, ethyl amines plant -2. DMAHCL, methyl amines plant -8 and Di-ethylene glycol (DEG) and Morpholine Plant-10 to control process emissions. Stack of adequate height will be provided to H₂ fired thermic fluid heater. Total water requirement will be increased from 757.4m³/day to 1343.1 m³/day after expansion. Out of which fresh water requirement from ground water source will be 1000 m³/day and remaining quantity will be met from treated/recycled water. Effluent generation will be increased from 180.5m³/day to 327.98 m³/day after expansion. Effluent will be segregated in two different effluent streams viz. stream -I and stream -II. Effluent stream-I will be treated through steam stripper followed by evaporated in Multiple Effect Evaporator (MEE). Stream II comprising cooling blow down and boiler blow down, back wash of filter, DM plant and softener regeneration will be treated in the primary treatment system followed by Reverse Osmosis. Permeate of RO will be reused for boiler feed. MEE condensate will be reused/recycled for cooling tower make up. RO rejects will be sent to MEE for evaporation. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Spent Catalyst, waste oil and used batteries will be sold to authorized recyclers/re-processors. Fly ash will be sent to brick manufacturers/ cement plant.

4.0 Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 20th March, 2013.

5.0 All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate 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 meetings held during 21st-22nd September, 2011, 28th – 30th April, 2014, 19th – 20th December, 2013 and 20th-21st April, 2015 respectively. Project Proponent and the EIA Consultant namely (Equinox Environments (I) Pvt. Ltd.) have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory 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, 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 complied by the unit.
- ii) The gaseous emissions and particulate matter from process and utilities stacks shall conform to the norms prescribed by the CPCB/ Maharashtra Pollution Control Board (MPCB) from time to time. 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. Stack emissions shall be monitored and efficiency of air pollution control device shall be checked regularly through online (24x7) monitoring system. The stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and GPCB.
- iii) Scrubbers shall be provided to process vents to control process emission. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- iv) Ambient air quality data shall be collected as per NAAEQS 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, 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 Maharashtra Pollution Control Board (MPCB).
- v) 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 MPCB.

- 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) Total fresh water requirement from ground water source shall not exceed 1100 m³/day and prior permission shall be obtained from the CGWA/GWA.
- viii) Total industrial effluent generation should not exceed 327 m³/day. Effluent shall be segregated in two different effluent streams viz stream -I and stream -II. Effluent stream-I will be treated through steam stripper followed by evaporated in forced evaporation system. Stream II comprising cooling blow down and boiler blow down, back wash of filter, DM plant and softner regeneration will be treated in the primary treatment followed by RO. Permeate of RO will be reused for boiler feed. MEE condensate will be reused/recycled for cooling tower make up.
- ix) 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- x) Automatic /online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.
- xi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xii) 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.
- xiii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge and process inorganic shall be disposed off to the TSDF. Fly ash shall be sent to brick manufacturers /cement plant.
- xiv) 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 MPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
- xv) 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.
- 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 norms.
- xvii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xviii) All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 20th March, 2013 shall be satisfactorily implemented.

- xix) At least 2.5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xx) As proposed, green belt over 13416 m² shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xxi) 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 must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board (MPCB), State Government and any other statutory authority.
- 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.

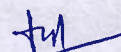
- ix. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- x. The company shall undertake eco-developmental measures including community welfare measures 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. As proposed, 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 Maharashtra 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.

11.0 Environmental Clearance is issued to M/s Balaji Amines Ltd. for expansion of aliphatic amines and its derivatives manufacturing unit at Gat No.197, Tamalwadi, Tehsil Tijapur, District Osmanabad, Maharashtra.



(Lalit Bokolia)
Additional Director

Copy to :-

1. The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, Mumbai - 400 032
2. The Chief Conservator of Forests (Central), Kendriya Paryavaran Bhavan, Link Road No.3, Bhopal-462016.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3rd and 4th floor, Opp. Cine Planet, Sion Circle, Mumbai-400 022.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi.
6. Guard File/ Record File/ Notice Board.



(Lalit Bokolia)
Additional Director