

F. No.J-11011/49/2019-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division

Indira Paryavaran Bhawan
Jor Bagh Road, N Delhi - 3
Dated: 25th October, 2019

To,

M/s Aarav Fragrances & Flavors Pvt. Ltd
Aarav House, Plot No. A-152/A-153, Road No. 25,
Wagle Industrial Area,
District Thane (W)-400604 (Maharashtra)

Sub: Setting up synthetic organic chemicals manufacturing unit of capacity 372 TPM by M/s Aarav Fragrances & Flavors Pvt. Ltd at village Lakhmapur and Jamghar, Taluka Wada, District Palghar (Maharashtra) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No.IA/MH/IND2/94966/2019 dated 13th June, 2019 for environmental clearance to the above project.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the project for setting up synthetic organic chemicals manufacturing unit of capacity 372 TPM by M/s Aarav Fragrances & Flavors Pvt. Ltd in an area of 97,750 sqm at Gut No./ Survey No.: 150, 151, 166 to 172 of village Lakhmapur and Gut No./ Survey No. 239A, 242, 286 (Part), 287 (Part), 289 (Part), 290(2), 291 (Part), 292 to 296 of village Jamghar, Taluka Wada, District Palghar (Maharashtra).

3. The details of products are as under:-

| S. No. | Products | Capacity (TPM) |
|--------|---|----------------|
| 1. | R & D for fragrances and Flavors | -- |
| 2. | Perfumery & Flavor Esters Products in various grades | 372 |
| 3. | Perfumery & Flavor Alcohol Products in various grades | |
| 4. | Perfumery & Flavor Aldehyde and Aldehyde derivatives Products in various grades | |
| 5. | Dimerization and Trimerization of simple olefins Products in various grades | |
| 6. | Ketals / Acetals / substituted 1,3-propanediols Products in various grades | |
| 7. | Macro cyclic and polycyclic musks derived from propylene/ butadiene and other propylene derivatives Products in various grades | |
| 8. | Aldehydes & Ketones by Aldol Condensation Products in various grades | |
| 9. | Acetylene and other alkyne derivatives Products in various grades | |
| 10. | Cyclo Alkylation/Acetylation, Diel Alders Reactions: Cyclization Reaction, Etherification of Alkyl Halide and Alcohol, Epoxidation of Alkenes /Friedel Craft Reactions Products in various grades | |
| 11. | Hydrogenation Products in various grades | |
| | Total | 372 |

4. Total land area is estimated to be 97,750 sqm. Green belt will be developed in 33% i.e. 41,481.65 sqm out of total project area. The estimated project cost is Rs.20 crores and the existing project investment cost is Rs.25.96 crores. Total capital cost earmarked towards

environmental pollution measures is Rs.98.5 Lakhs & the recurring cost (operation & maintenance) will be about Rs. 30 Lakhs per annum.

5. Tansa wildlife sanctuary lies within 10 km distance. River Tansa flows at 3.5 km in north direction.

6. Total water requirement is 118 m³/day out of which fresh water requirement of 79 m³/day will be met from borewell & in case of emergency from tanker. The NOC has been obtained by the CGWA vide letter dated 11th December, 2018 for abstract ground water of 115.50 cum/day. Industrial effluent will be treated through ETP followed by flash distillation for high organic effluent load. Treated effluent will be reused. Domestic effluent will be treated in the STP and treated effluent will be used for gardening. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

Power requirement for establishment project will be 500 KVA & 330 KVA and will be met from MSEDCL (Maharashtra State Electricity Distribution Corporation Limited). Existing unit has 2 DG sets of 63 KVA & 160 KVA each. Additionally two DG sets of 500 KVA & 160 KVA are used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed DG sets.

Existing unit has 700 Kg/hr furnace oil Fired boiler. Additionally, 5 TPH Agricultural Waste OR Bio briquette OR Furnace oil Fired boiler & 3 Lac kJ/hr Agricultural Waste OR Bio briquette OR Furnace oil fired Thermic Fluid Heater will be installed. Scrubber with a stack height of 30 m for boiler & 27 m for TFH will be installed for controlling the Particulate emissions within statutory limit of 115 mg/Nm³ respectively.

7. The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central level in the Ministry.

8. The standard ToR for the project was granted on 18th March 2019. Public hearing for the project was conducted by the State Pollution Control Board on 26th July 2017.

9. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 10th meeting held on 29-31 July, 2019, wherein the project proponent and their accredited consultant presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for **setting up synthetic organic chemicals manufacturing unit of capacity 372 TPM by M/s Aarav Fragrances & Flavors Pvt. Ltd** at Gut No./ Survey No.: 150, 151, 166 to 172 of village Lakhmapur and Gut No./ Survey No. 239A, 242, 286 (Part), 287 (Part), 289 (Part), 290(2), 291 (Part), 292 to 296 of village Jamghar, Taluka Wada, District Palghar (Maharashtra), under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as below:-

(a) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

- (b) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- (c) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (d) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.
- (e) No raw material/solvents prohibited by the concerned regulatory authorities from time to time, shall be used.
- (f) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines. Fugitive emissions shall be controlled at 99.5% with effective chillers.
- (g) Solvent management shall be carried out as follows:
- (i) Reactor shall be connected to chilled brine condenser system.
 - (ii) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - (iii) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
 - (iv) Solvents shall be stored in a separate space specified with all safety measures.
 - (v) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - (vi) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
 - (vii) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- (h) Total fresh water requirement shall not exceed 79 m³/day, proposed to be met from borewell. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.
- (i) Industrial/trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE. Low TDS effluent stream shall be treated in ETP/RO to meet the prescribed standards.
- (j) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.
- (k) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.
- (l) Briquettes shall be used as boiler fuel. ESP shall be used to control particulate emissions.
- (m) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(n) 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, 1989.

(o) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.

(p) The company shall undertake waste minimization measures as below:-

- (i) Metering and control of quantities of active ingredients to minimize waste.
- (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
- (iii) Use of automated filling to minimize spillage.
- (iv) Use of Close Feed system into batch reactors.
- (v) Venting equipment through vapour recovery system.
- (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(q) The green belt of at least 5-10 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(r) All the commitments made regarding issues raised during the public hearing/consultation meeting shall be satisfactorily implemented.

(s) Pucca road shall be maintained in the plant premises and nearby villages to minimize dust pollution.

(t) As committed, funds allocation for the Corporate Environment Responsibility (CER) shall be 2% of the total project cost. Item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

(u) Safety and visual reality training shall be provided to employees.

(v) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

14 (w) 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.

(x) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(y) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(z) Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken accordingly.

10.1 The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:-

- (i) The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), State Government and/ or 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, Forest and Climate Change. 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 each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- (iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.
- (v) 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).
- (vi) The Company shall harvest rainwater from the roof tops of the buildings to recharge ground water, and to utilize the same for different industrial operations within the plant.
- (vii) 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.
- (viii) The company shall 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 shall be implemented.
- (ix) The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.
- (x) A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- (xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change 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.

(xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(xiii) 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&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(xiv) 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&CC by e-mail.

(xv) 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://moef.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.

11. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

12. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991, read with subsequent amendments therein.


(Sharath Kumar Pallerla)
Scientist F

Copy to:-

1. The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, **Mumbai** (Maharashtra) – 32
2. The Additional Principal Chief Conservator of Forests, Regional Office (WCZ), Ministry of Environment, Forest and Climate Change, **Nagpur** (Maharashtra)
3. The Member Secretary, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, **Delhi** - 32
4. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 3rd & 4th floor, Opp. Cine Planet, Sion Circle, **Mumbai** - 22
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, **New Delhi** – 3

6. Member Secretary, Central Ground Water Authority, 18/11, Jamnagar House, Man Singh Road, **New Delhi-110011**
7. District Collector, **Palghar, (Maharashtra)**
8. Guard File/Record File/Monitoring File/Website of MoEF&CC



(Sharath Kumar Pallerla)
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