

F. No.J-11011/143/2019-IA-II (I)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 18th December, 2019

To,

M/s Kanchi Karpooram Limited,
Village Enadur, Tehsil Kancheepuram,
District **Kancheepuram** (Tamil Nadu)

Sub: Expansion of Camphor and its derivatives manufacturing unit by M/s Kanchi Karpooram Limited at Village Enadur, Tehsil Kancheepuram, District Kancheepuram (Tamil Nadu) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No.IA/TN/IND2/115127/2019 dated 23rd August, 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 expansion of Camphor and its derivatives manufacturing unit by M/s Kanchi Karpooram Limited at Sy.No. 669, 672, 670/2, 676/1 & 674/1, 667/1, 668/1, 668/2A, 667/2, 668/2, 667/2A, 668/2A & 670/1 Village Enadur, Tehsil Kancheepuram, District Kancheepuram (Tamil Nadu).

3. The details of the existing and proposed products are as under:-

S. No	Units	Existing (MT/Month)	Proposed (MT/Month)	Total (MT/Month)
I. Product				
1	Camphor	110	440	550
Sub Total		110	440	550
II. By Products				
1	Terpeneolene / Dipentene	49.6	300	349.6
2	Rosin Oil	5.05	4.95	10
3	Spent Caustic lye	36.11	0	36.11
4	Sodium Acetate Tri Hydrate	115.5	460	575.5
5	Sodium Acetate as liquor/ Alternate to Solid tri hydrate)	193	0	193
6	Gum Rosin	295.62	0	295.62
7	Camphor Oil	2	0	2
Sub Total		696.88	764.95	1461.83
III. Intermediates				
1	Turpentine oil(Turpentine KATEL)	98.475	-	98.475

2	Camphene	110	440	550
3	Iso Bornyl Acetate	170	340	510
4	Esters	15	0	15
5	Maleics	15	0	15
6	Phenolics	20	0	20
7	Rosin Size	100	0	100
8	Other Rosin Derivatives	20	0	20
9	Terpenic Oil	20	0	20
10	Pine Oil (Terpenol)	40	60	100
11	Longifolences	10	0	10
12	Double Distilled Turpentine	10	20	30
13	Pine Tar	15	45	60
14	Pine Pitch	6.5	30	36.5
15	Iso Bornyl Crude	110	440	550
Sub Total		759.975	1375	2134.975
Grand Total (I+II+III)		1566.855	2579.95	4146.805

4. Total land area will be increased from 6.95 acres to 10.23 acres. Greenbelt will be developed in 33% of the total project area. The estimated project cost is Rs.14 crore. Total capital cost earmarked towards environmental pollution control measures is Rs.1.7 crore and the recurring cost (operation and maintenance) will be about Rs.0.3 crore per annum. Total Employment will be 120 persons as direct & 20 persons indirect after expansion.

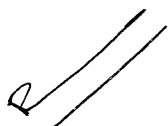
5. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km distance of the project site. Palar and Vegavati river flows at 8.27 km (SSW) and 5.39 km (SW).

6. Total water requirement is estimated to be 96 cum/day, which includes fresh water requirement of 77.5 cum/day proposed to be met from ground water through borewell. Effluent of 11.5 cum/day shall be treated in ETP and treated water shall be reused for plant requirement. There will be no discharge of treated/untreated waste water from the unit, and thus ensuring Zero Liquid Discharge.

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. Standard Terms of Reference for the project was issued on 10th May, 2019. Public hearing for the project has been conducted by the State Pollution Control Board on 16th July, 2019. The Public hearing was presided over by District Collector. The main issues raised during the public hearing are related to greenbelt with medicinal plants, rainwater harvesting and employment to local public, etc.

9. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 23-25 October, 2019, wherein the project proponent and their accredited consultant M/s Hubert Enviro Care Systems (P) Ltd 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 **Expansion of Camphor and its derivatives manufacturing unit by M/s Kanchi Karpooram Limited** located at Village Enadur, Tehsil Kancheepuram, District Kancheepuram (Tamil Nadu), under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as below:-

A. Specific Conditions:-

- i. Fugitive emissions shall be controlled at 99.95% with effective chillers
- ii. No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used
- iii. 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.
- iv. All the commitments made to the public during public consultation/hearing shall be satisfactorily implemented

B. General Conditions:-

I. Statutory compliance

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- ii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
- iii. 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

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and

NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iv. To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- v. Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.
- vi. 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.
- vii. 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

III. Water quality monitoring and preservation

- i. The project proponent shall provide 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 (applicable in case of the projects achieving ZLD)
- ii. As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).
- iii. Total fresh water requirement shall not exceed 77.5 cum/day, proposed to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.
- iv. 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.
- v. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.
- vi. The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.

IV. Noise monitoring and prevention

- i. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- ii. 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.
- iii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

- i. The energy sources for lighting purposes shall preferably be LED based.

VI. Waste management

- i. Fly ash, if any, 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
- ii. Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.
- iii. 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.

- iv. The company shall undertake waste minimization measures as below:-
 - 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

VII. Green Belt

- i. The green belt of at least 4-5m width (two rows) shall be developed in nearly 35% 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.

VIII. Safety, Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. 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.
- iii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iv. 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.
- v. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- vi. There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places

IX. Corporate Environment Responsibility

- i. At least Rs. 20 lakhs shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent 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, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

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. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

13. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

14. 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 Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

15. This issues with the approval of the competent authority.


(Dr. R. B. Lal)

Scientist 'E'/Additional Director

Copy to: -

1. The Principal Secretary, Department of Environment, Ground Floor, Panagal Buildings 1, Jeenis Road, Saidapet, Chennai - 600 015.
2. The APCCF(C), MoEF&CC, Regional Office (SEZ), 1st and 2nd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, **Chennai-34**
3. The Member Secretary, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, **Delhi - 32**
4. Member Secretary, Tamil Nadu Pollution Control Board, 76, Anna Salai, Guindy Industrial Estate, Race View Colony, Guindy, **Chennai - 32 (Tamil Nadu)**
5. District Collector, **Kancheepuram (Tamil Nadu)**
6. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor bagh Road, **New Delhi**
7. Monitoring File/Guard File/Record File
8. Parivesh Portal


(Dr. R. B. Lal)

Scientist 'E'/Additional Director