

F. No. J-11011/318/2016-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: 15th January, 2018

To,

M/s Hikal Limited
Plot No A-18, MIDC Mahad
District Raigad (Maharashtra)

Sub: Change in Product mix of Pesticides manufacturing unit by M/s Hikal Limited at Plot No A-18, MIDC Mahad, District Raigad (Maharashtra) - Environmental Clearance - reg.

Ref: Online proposal no. IA/MH/IND2/70505/2016 dated 27th October, 2017

Sir,

This has reference to your online proposal no IA/MH/IND2/70505/2016 dated 27th October, 2017 along with project documents namely, EIA/EMP Report on the above subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for grant of environmental clearance to the project 'Change in Product mix of Pesticides manufacturing unit' with the production capacity reduced from the present of 993 TPM to 881.67 TPM by M/s Hikal Limited in a total plot area of 27007 sqm at Plot No A-18, MIDC Mahad, District Raigad (Maharashtra). In addition, there shall be pesticides production of 84 TPM through formulations, and the by-products increased from the present of 828.78 TPM to 1350.78 TPM.

3. The details of the products presently manufactured and after the proposed expansion are as under:-

S. No.	Product	TPM		
		Existing	Proposed Addition/ Deletion	Total
1	Ethyclozate	03.00	(-) 01.33	01.67
2	Amitrol	15.00	(-) 15.00	00.00
3	5 Methoxy methyl Pyridine 2 , 3 Dicarboxylic acid	50.00	(+) 00.00	50.00
4	Diuron	310.00	(+) 190.00	500.00
5	Sodium Hypochloride	480.00	(-) 480.00	00.00
6	3,5 Dichloroaniline	80.00	(+) 70.00	150.00
7	2 Amino 2 Methyl isopropyloxy 6 methyl propiophenone	25.00	(-) 08.33	16.67
8	4 acetoxo 6 tert butyl 8 floro 2 3 dimethylequinoline	10.00	(-) 01.67	08.33
9	Benefuresate	05.00	(+) 05.00	10.00
10	Benzophenaf	15.00	(+) 00.00	15.00
11	Clothianidin	00.00	(+) 15.00	15.00
12	Trifloxystrobin	00.00	(+) 25.00	25.00

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13	Azoxystrobin	00.00	(+) 25.00	25.00
14	Thiacloprid	00.00	(+) 25.00	25.00
15	SMPGM (S-Methyl Phenyl Glycine Methylenelester)	00.00	(+)15.00	15.00
16	Fludioxanil	00.00	(+) 25.00	25.00
Total		993.00	(-) 111.33	881.67
Formulations		0	84	84
		993.00	(-) 27.33	965.67

S. No.	By-Product	TPM		
		Existing	Proposed Addition/Deletion	Total
1	Calcium Sulphate (Gypsum)	212.542	00	212.542
2	Sodium Bromide solution (20%)	300	300	600.00
3	Spent Catalyst	0.988	00	0.988
4	Hydrochloric Acid (30 %)	50	00	50.00
5	Acetone	43.5	00	43.50
6	35% Spent Sulphuric Acid	119.75	00	119.75
7	10% H ₂ SO ₄ (From 3, 5 DCA mfg.)	102	00	102.00
8	Potassium bromide	0	172	172.00
9	TMA + Methanol	0	50	50.00
Total		828.78	522.00	1350.78

4. Existing land area is 27007 sqm and no additional land will be required for the proposed project. Industry has already developed greenbelt in an area of 6817 sqm, and additional 2095 sqm of green belt will be developed at Nana-Nani Park to meet the norms in this regard. The total project cost is Rs.107.92 crore, including existing investment of Rs.27.92 crores. Total capital cost earmarked for pollution control measures is Rs.8.70 Cr and the recurring cost (operation and maintenance) will be about Rs.119.88 lakhs/ annum.

5. There are no National Park, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km from the project site. Savitri River is flowing at a distance of 1 km in the North.

6. Total water requirement (one time) is estimated to be 581 cum/day (existing 305 cum/day + proposed 276 cum/day), proposed to be met from MIDC water supply. Out of it, 211 cum/day is to be recovered from the RO and the sewage treatment plant for recycling in the industrial operations and thus limiting the regular fresh water requirement to 370 cum/day. Total effluent generation would be increased to 240 cum/day from the present of 130 cum/day, to be taken to the in-house ETP for primary treatment and then to the CETP for further treatment.

Power requirement will be 3.5 MW and the same will be met from the Maharashtra State Power Distribution Corporation Limited (MSPDCL). Existing unit has one DG set of 125 kVA capacity and additionally 2 DG sets of 500 kVA will be required.

Existing unit has 2 nos. of boilers having capacities 4 TPH (Briquette fired) & 5 TPH (Furnace oil). One Furnace oil fired Thermopack of 2 lakh kcal/h capacity is also existing and sharing the common stack of 40 m with the boilers. No additional boiler is proposed to be installed. Scrubber with 10 m stack height will be provided to control process emission.

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7. Details of Solid waste/ hazardous waste generation and its management are as under:
- (i) Sludge and filters contaminated with oil of 1.80 TPA will be sold to authorized reprocessor/CHWTSDf for Incineration.
 - (ii) Chemical sludge from waste water treatment of 67.8 TPA will be sent to CHWTSDf for landfill.
 - (iii) Filters and filter material which have organic liquid of 6 TPA will be sent to CHWTSDf for incineration.
 - (iv) Spent catalyst of 36 TPA will be sent to authorized reprocessor / CHWTSDf for Incineration.
 - (v) Used / spent oil of 0.60 TPA will be Disposed to authorized reprocessor or / CHWTSDf for Incineration.
 - (vi) Spent solvents of 30.00 TPA will be sent to authorized reprocessor or / CHWTSDf for Incineration.
 - (vii) Distillation Residue of 99.00 TPA will be sent to CHWTSDf/ co-processing to cement industries.
 - (viii) Process waste sludge/residues of 300.00 TPA will be sent to CHWTSDf/ coprocessing to cement industries.
 - (ix) Discarded containers/barrels/liners of 6000.00 TPA will be decontaminated / puncture/cut/disposal through MPCB approved unit.
 - (x) Discarded containers (Plastic/PP/Rubber/Glass.) of 30.00 TPA will be sent to CHWTSDf for disposal as per waste disposal criteria.
 - (xi) Evaporator salts of 4465 TPA will be sent to CHWTSDf for landfill.

8. The project/activity is covered under category A of item 5(b) 'Pesticides' of the schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry.

9. The ToR for the project was granted on 31st January 2017, and amended on 22nd June, 2017 providing exemption from public hearing as per the provisions contained in para 7 III Stage (3)(i)(b) of the EIA Notification, 2006.

10. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 31st meeting held during 23-24 November, 2017. Project Proponent and their accredited consultant M/s Goldfinch Engineering Systems Private Limited have presented EIA / EMP report as per the ToR. EAC found the EIA/ EMP Report to be satisfactory and in consonance with the presented ToR. The Committee has recommended the proposal for grant of environmental clearance.

11. Based on the proposal submitted by the project proponent and recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to project for '**Change in Product mix of Pesticides manufacturing unit**' with the production capacity reduced from the present 993 TPM to 881.67 TPM by M/s Hikal Limited in a total area of 27007 sqm at Plot No A-18, MIDC Mahad, District Raigad (Maharashtra), under the provisions of the EIA Notification, 2006, and the amendments therein, subject to the compliance of the terms and conditions as under:

- (a) Total production of pesticides shall include manufacturing at least 10% of bio-pesticides.
- (b) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.



- (c) Total effluent after treatment shall not exceed 64 cum/day to be discharged to the CETP drain. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.
- (d) 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.
- (e) 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.
- (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.
- (g) Solvent management, if any, 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 98% 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 370 cum/day proposed to be met from MIDC supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.
- (i) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- (j) 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.
- (k) 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.
- (l) 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.
- (m) 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.
- (n) The green belt of 5-10 m width shall be developed in more than 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.
- (o) At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.
- (p) The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.
- (q) 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.
- (r) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (s) Continuous online (24X7) monitoring system for stack emissions and the effluent, shall be installed for measurement of flow/discharge and the pollutants concentration, and the emission and effluent monitoring data to be transmitted to the CPCB and SPCB server as per the directions of CPCB in this regard.
- (t) Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions. Raw material storage should not exceed 3 days at any point of time.
- (u) The energy sources for lighting purposes shall preferably be LED based. A minimum of 10- 20% of the total power requirement for the industrial operations shall be met from nonconventional energy resources/solar supply.

11.1 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 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 stations



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 and storm water drains to recharge the ground water and 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 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.
- (xii) 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 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, 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

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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.

12. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not found to be satisfactory.

13. The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

14. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and 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.

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15/11/2018

(S. K. Srivastava)
Scientist E

Copy to:-

1. The Additional Principal Chief Conservator of Forests, Regional Office (WCZ), Ministry of Environment, Forest and Climate Change, **Nagpur** (Maharashtra)
2. The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, **Mumbai** (Maharashtra) - 32
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 and 4th floor, Opp. Cine Planet, Sion Circle, **Mumbai** - 22
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jor Bagh Road, **New Delhi** - 3
6. Guard File/Monitoring File/Record File

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15/11/2018

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