



सत्यमेव जयते

F. No. J-11011/265/2013- IA II (I)

Government of India

Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi – 110 003

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Dated: 28th October, 2016

To,

✓ Shri A. Rao,
Vice President Mfg
M/s Indofil Industries Ltd.
Off Swami Vivekanand Road,
Sandoz Baug, Azad Nagar,
Thane West Thane – 400607
Maharashtra

Subject: Setting up specialty chemicals (1,07,485.00 MTPA) at plot no. D-2/CH-12, GIDC, Industrial Estate, village Dahej, Teshil, Vagra, district Bharuch, Gujarat by M/s Indofil Industries – reg EC.

Ref.: Your online proposal no IA/GJ/IND2/48107/2013; dated 5th February, 2016.

Sir,

This has reference to your online proposal no. IA/GJ/IND2/48107/2013; dated 5th February, 2016 along with project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report along with Public Hearing Report regarding above mentioned project.

2.0 The Ministry of Environment, Forests and Climate Change has examined the application. It is noted that proposal is for setting up of Specialty chemicals (107085MTPA) at plot no. D-2/CH-12, GIDC, Industrial Estate, village Dahej, Teshil, Vagra, district Bharuch, Gujarat by M/s Indofil Industries. Plot area is 1,01,900 m² out of which greenbelt will be developed in 33,330 m². Narmada River is flowing at a distance of 17 Km. Arabian Sea is 3 Km away from the project site. It is reported that no national park/biosphere reserve/wildlife sanctuary etc is located within 10 Km. Cost of project is Rs. 480 crores. Following products will be manufactured:

Sr. No.	Name of the Proposed Products	Quantity (MTPA)
A	EBDC FUNGICIDES PRODUCTS	
1	Mancozeb & its Formulation 25000	25000
2	Maneb & its Formulation 500	500
3	Zineb & its Formulation 5000	5000
4	Propineb & its Formulation 5000	5000

A1	HERBICIDES	
1	Glyphosate Tech and its Intermediates Volume	30000
B	SPECIALITY CHEMICALS	
1	Solution Polymers	3634
2	Re-dispersible Powder	11571
3	Plastic Modifiers	20055
4	Acrylic Emulsions	2635
C1	SYNTHESIS TECHNICAL PRODUCTS	
1	Tricyclazole and / or its intermediates: HMBT	1000
2	Myclobutanil	135
3	Metalaxyl	125
4	Cymoxanil	300
5	Dodine	150
6	Hexaconazole	200
7	Propiconazole	300
8	Propargite	400
9	Difenturon	200
10	Tebuconazole	300
11	Difenconazole	200
12	Thifluzamide	200
13	Bispyribac	65
	Sub-total of above 13Products	3575
C2	Out of following 10 products, only 1 product shall be made at a time	
1	Thiamethoxam	225
2	Epoxyconazole	
3	Prothioconazole	
4	Fluazinam	
5	Azoxystrobin	
6	Pyraclostrobin	
7	Boscalid	
8	Cyazofamid	
9	Penconazole	
10	Cyproconazole	
C3	Out of following 5 products, only 1 product shall be made at a time	
1	Spirodiclofen	200
2	Spiromesifen	
3	Tolfenpyrod	
4	Clodinofof	
5	Pretilachlor	
	Total of (C1 + C2 +C3) products	3575 + 225 + 200 = 4000
D	AGRO FORMULATION	
1	Powder Formulation	32000
2	Liquid Formulation	10000
	OR	
1	Glyphosate Formulations	70000

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List of By-products

Sr. No.	Name of the Proposed By-Products	Quantity (MTPM)	End use
1	Manganese Carbonate (MnCO ₃)	980	Sold to MnSO ₄ Manufacturer.
2	Sodium Sulphate (Na ₂ SO ₄)	1200	Collection, Storage and Sold to end users.
3	Spent Sulphuric Acid	2	Collection, Storage and Sold to end users.
4	Aq. Hydrochloric Acid rs. (Conc. 30%)	120	
5	Aq. Sodium Bromide (Conc. 17%)	150	
6	Aq. Potassium Bromide (Conc. 16% to 29%)	175	
7	Aq. Hydrobromic Acid (Conc. 30%)	50	
8	Formic Acid (conc. 50%)	100	
9	(Conc. 20% to 25%) Aq. NaSH	25	
10	Aq. Sodium Sulphite	50	

3.0 The Committee suggested PP to use natural gas as clean fuel. Stack of adequate height shall be provided to the gas fired boiler as per CPCB/SPCB guidelines. Bagfilter will be provided to spray dryer. Adequate stack height will be provided to DG set. Alkali scrubber will be provided to Incinerator. Scrubbers will be provided to control process emissions viz. HCl, HBr, NH₃, CS₂, H₂S etc. Total water requirement will be 2711 m³/day. Out of which, total fresh water requirement from River Damangang through GIDC Vapi will be 1500 m³/day and remaining water requirement (1311 m³/day) will be met from treated effluent/recycled water. Effluent generation will be 1323 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in the effluent treatment plant (ETP) followed by reverse osmosis (RO). No effluent will be discharged outside the plant premises. Process Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers. Catalyst, waste oil and used batteries will be sent to authorized recyclers.

4.0 Public Hearing / Public Consultation meeting was conducted on 27th January, 2016.

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 Expert Appraisal Committee (Industry-2) in its 7th meetings held during 27th-28th April, 2016 and 11th Meeting held during 20th -21st July, 2016 respectively. Project Proponent and the EIA Consultant namely M/s Eco Chem Sales & Services, 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 followed by the unit.
- ii) Stack of adequate height shall be provided to the gas fired boiler as per CPCB/SPCB guidelines. Bag filter shall be provided to spray dryer..
- iii) Scrubbers shall be provided to control process emissions viz. HCl, HBr, NH₃, CS₂, H₂S etc. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels shall go beyond the prescribed standards.
- iv) 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.
- v) Total fresh water requirement from Damanganga River shall not exceed 1500 m³/day.
- vi) Effluent generation shall not exceed 1323 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in the effluent treatment plant (ETP) followed by reverse osmosis (RO). No effluent will be discharged outside the plant premises.
- vii) Continuous online monitoring (24x7) system to be installed within treatment plant and data to be uploaded to company's web site and also provided to respective Regional Office of MoEF&CC and concerned SPCB/CPCB.
- viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- ix) 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.
- x) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- xi) 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 SPCB shall be obtained for disposal of

solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.

- xii) 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.
- xiii) At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on need of local people and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal.
- xiv) 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 and records maintained. The emissions shall conform to the limits stipulated by the GPCB.
- xv) For further control of fugitive emissions, following steps shall be followed :
 - i. Closed handling system shall be provided for chemicals.
 - ii. Reflux condenser shall be provided over reactor.
 - iii. System of leak detection and repair of pump/pipeline based on preventive maintenance.
 - iv. 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.
 - v. Cathodic protection shall be provided to the underground solvent storage tanks.
- xvi) 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.
- xvii) Continuous (24x7) monitoring system for chlorine, HCl and HBr shall be installed at all important places/areas. All necessary steps should be taken for monitoring of VOCs in the plant. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.
- xviii) Ground water quality monitoring including the pesticides shall be carried out every month the monitored data shall be submitted to the Ministry's Regional Office, Bhopal and GPCB.
- xix) 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.
- xx) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xxi) As proposed, green belt over an area of 33,330 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.
- xxii) All the recommendations made in the risk assessment report shall be satisfactorily implemented.
- xxiii) 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 must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GSPCB), 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 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. During transfer of materials, spillages shall be avoided and gulland drains be constructed to avoid mixing of accidental spillages with domestic wastewater and storm water drains.
- vii. Usage of Personnel Protection Equipments by all employees/ workers shall be ensured.
- viii. 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.
- ix. The company shall also comply with all the environmental protection measures and safeguards proposed in the project report 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.

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- x. The company shall undertake CSR activities and all relevant measures for improving the socio-economic conditions of the surrounding area.
- xi. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- xii. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xiii. The company shall earmark sufficient funds for 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.
- xiv. 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 who suggestions/ representations, if any, were received while processing the proposal.
- xv. 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 State Pollution Control Board A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- xvi. The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the Gujarat 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 Bhopal Regional Offices of MoEF by e-mail.
- xvii. 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.
- xviii. 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.

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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.


(Lalit Bokolia)
Additional 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, Forest and Climate Change, Indira Paryavaran Bhawan, Aliganj, Jor Bagh, Road, New Delhi-110003.
6. Guard File/Monitoring File/Record File.


(Lalit Bokolia)
Additional Director