



सत्यमेव जयते

File No: IA-J-11011/55/2023-IA-II(I)  
Government of India  
Ministry of Environment, Forest and Climate  
Change  
IA Division  
\*\*\*



Date 28/12/2023



To,

Vadiraj Seturamrao Mulugund  
GHARDA CHEMICALS LIMITED  
Gharda House, 48, Hill Road, Bandra (West), Mumbai, Maharashtra-415722. , Bandra West,  
MUMBAI, MAHARASHTRA, 415722  
vsmulugund@gharda.com

**Subject:** Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their intermediates manufacturing plant with production capacity (after expansion) of 12975 TPA of products and intermediates, 13874 TPA of By-Products/Co-Products, 8600 TPA of Non-EC products including Formulations and 120813 TPA of By-Products/Co-Products (Non-EC) located at Plot Nos. A-81 to A-84, B-22 to B-24, B-26 to B-29 & OS-4, Phase-I, MIDC Dombivli (East), Taluka Kalyan, District Thane, Maharashtra by M/s Gharda Chemicals Limited - Grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 -regarding.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/MH/IND3/427401/2023 dated 14/09/2023 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23A2001MH5224966N
(ii) File No.	IA-J-11011/55/2023-IA-II(I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	5(b) Pesticides industry and pesticide specific intermediates (excluding formulations),5(f) Synthetic organic chemicals industry ,5(f) Synthetic organic chemicals industry
(vi) Sector	Industrial Projects - 3
(vii) Name of Project	Expansion of Agrochemicals, Synthetic Organic Chemicals & their intermediates manufacturing

	plant
<b>(viii) Name of Company/Organization</b>	GHARDA CHEMICALS LIMITED
<b>(ix) Location of Project (District, State)</b>	THANE, MAHARASHTRA
<b>(x) Issuing Authority</b>	MoEF&CC
<b>(xi) Applicability of General Conditions as per EIA Notification, 2006</b>	No

3. The proposal is for the environmental clearance for the Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their intermediates manufacturing plant with production capacity (after expansion) of 12975 TPA of products and intermediates, 13874 TPA of By-Products/Co-Products, 8600 TPA of Non-EC products including Formulations and 120813 TPA of By-Products/Co-Products (Non-EC) located at Plot Nos. A-81 to A-84, B-22 to B-24, B-26 to B-29 & OS-4, Phase-I, MIDC Dombivli (East), Taluka Kalyan, District Thane, Maharashtra by M/s Gharda Chemicals Limited.

4. The project/activity is covered under Category 'A' of Item 5(b) and 5(f), Pesticide industry and Synthetic organic chemicals industry respectively, of Schedule of EIA Notification, 2006 (as amended). The PP reported that the project is located in the Critically Polluted Area.

5. The ToR was issued by the Ministry vide letter no. IA-J-11011/55/2023-IA-II(I) dated 9.3.2023. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is an **Expansion case**. The proposal is placed in this 67th EAC meeting on 27th September, 2023, wherein the PP along with accredited Consultant, M/s. Perfact Enviro Solutions Pvt. Ltd [Accreditation number NABET/EIA/2225/RA 0284 valid till 29.11.2025] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

6. The PP reported that the Existing land area is 42,408 sq.m., and the same will be used for the proposed expansion and no R& R is involved in the Project. The details of the product submitted by the PP are attached as **Annexure-3**.

7. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.

8. The PP reported that the unit is operational as per the latest CTO issued vide letter no. BO/CAC-Cell/UAN No 0000073289/R/8th CAC- 1909000949 dated 25.09.2019 valid up to 31/07/2024.

9. The PP reported that the Certified Compliance report for latest CTO has been issued by MPCB vide letter no. MPCB/SROK-I/166 dated 31.07.2023 in which all the CTO conditions have been complied.

10. The PP reported that there is no wildlife sanctuary within 10 km distance. PP informed that project site is located at a distance of 9.81km from Matheran ESZ boundary. Ulhas River is flowing at a distance of 1.40 km in NNW direction. There is a Reserve Forest near Brahmanpada at a distance of 7.20 Km in NNW direction. There is ASI monument- The Temple of Ambernath at a distance of 7.00 Km in direction ESE. Nearest railway station is Thakurli Railway Station at 1.62 Km in NW direction. No Schedule-I species are found in the study area.

11. The PP reported that Ambient air quality monitoring was carried out at 8 locations during October 2022 to December 2022 and the baseline data indicates the ranges of concentrations as: PM10 (66.34-132.93  $\mu\text{g}/\text{m}^3$ ), PM2.5 (22.72-47.46  $\mu\text{g}/\text{m}^3$ ), SO2 (12.36-25.35  $\mu\text{g}/\text{m}^3$ ) and NO2 (23.44-55.50  $\mu\text{g}/\text{m}^3$ ). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.01  $\mu\text{g}/\text{m}^3$ , 2.51  $\mu\text{g}/\text{m}^3$ , 5.03  $\mu\text{g}/\text{m}^3$  and 3.27  $\mu\text{g}/\text{m}^3$  with respect to PM2.5, PM10, NO2 and SOx respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS); however only the maximum values of PM10 are higher at all the sampling locations both in core & buffer zone except for Dwarli Gaon. **Noise Level:** Monitoring was carried out at 10 locations and the results showed that core zone Leq values ranged from 69.3 dB(A) to 69.5 dB(A) for the day time and 66.9 dB(A) to 67.2 dB(A) for the Night time. Whereas, Buffer Zone: 56.9 dB(A) to 73.4 dB(A) for the day time and 47.0 (A) to 66.3 dB(A) for the Night time. It may be concluded that ambient noise level during day time and night time is within the standard limit of Industrial area ~ 75 dB (A) for day time and 70 dB (A) for night time for core zone. In the buffer zone, residential and commercial areas in the buffer zone noise level is higher than the limit due to nearby industrial activities, residential activity and vehicular activity.

12. **Ground water Quality** Monitoring was carried out at 7 locations; Core Zone and buffer zone data shows that all the parameters (Colour, Odour, Turbidity, pH Value, Temperature, Conductivity, TDS, Chloride, Fluoride, Total Hardness, Ca, Mg, SO4, Na, K, TSS, Alkalinity, Nitrate Nitrogen are within the drinking water standards and quality shows range of primary characteristics as pH: 7.52-8.59, Total Hardness: 44-108 mg/l, Chlorides: 18-63 mg/l, TDS: 90-332 mg/l. **Surface Water Quality** Monitoring was carried out at 6 locations in Buffer Zone: pH: 7.19- 7.64; DO: 4.1-5.5

mg/l and BOD: 3.8-10.4 mg/l, COD: 16.0-48.0 mg/l. The Surface water quality of the surface water sampling locations The Surface water quality of Golavli Pond (SW1), Ulhas River Upstream (SW2), Kala Talao (SW4), Nilaje Lake (SW5) can be placed in Class "C" i.e. Drinking water source after conventional treatment and disinfection as per IS 2296/ CPCB water quality criteria for designated best use and Ulhas River Downstream (SW3) & River Near Agasen Desai Khadi (SW6) can be placed in Class "B" i.e. Outdoor bathing (Organised) as per IS 2296/ CPCB water quality criteria for designated best use. **Soil Quality** Monitoring was carried out at 8 locations and the analysis showed that samples range from Texture- [Sand% (9.4-24.4), Silt % (14.0-22.6), Clay % (55.6-75.4)], Organic Matter-0.34-0.72 %, Available Nitrogen (54.6- 119.0 mg/kg), Available Potassium (12.8- 37.5 mg/kg), Available Phosphorus (8.0-16.6 mg/kg). It is concluded that soil is low fertile in the core Zone and buffer zone due to the availability of low amounts of nitrogen, phosphorus and potassium.

13. The PP reported that after expansion, total water requirement will be 1620 KLD (Fresh water from MIDC Supply-1088 KLD, recovered water from process-149 KLD, Recycled Condensate water from boiler- 119 KLD, Rainwater- 48 KLD, treated water from STP- 90 KLD, Treated water from RO & MEE-126 KLD) Total wastewater generation after expansion will be 889 KLD. Domestic sewage of 95 KLD will be treated in STP and the treated water obtained will be reused in gardening and cooling. Cooling tower blowdown of 72 KLD will be treated in RO. RO reject will be sent to MEE & RO Permeate obtained will be reused in the cooling tower. A high concentration stream of 378 KLD including High COD-TDS process wastewater & scrubbing wastewater will be treated in MEE. MEE condensate will be partially sent to ETP for further treatment and rest for reuse in cooling towers and MEE concentrate will be sent to ATFD. Low concentration stream of 344 KLD including R&D Lab & Pilot plant effluent, Low COD-TDS process wastewater & Boiler blowdown & steam condensate will be treated in ETP. Treated water of 590 KLD obtained from ETP will be discharged to CETP. After expansion the capacity of treatment units will be STP- 100 KLD, RO- 400 KLD, MEE- 470 KLD & ETP- 620 KLD

14. The connected load of 7259 kW will be met from Maharashtra State Electricity Transmission Company Limited (MSEDCL), wind energy, and solar energy (after expansion). Existing unit has DG sets of 2 X 1000 KVA and 1 X 1250 KVA (standby) during power failure and no additional DG set will be required after proposed expansion. Stack height of 11.8 m and 12.8 m respectively as per CPCB norms has been provided.

Existing unit has multi- fuel based boilers of capacity 1 x 14 TPH and 1 x 12 TPH (standby) each with a common stack height of 58 m. ESP has been provided for boiler 1 x 14 TPH (Existing and working) and a Common Wet Scrubber has been provided for both boilers 1 x 14 TPH (Existing and working) and 1 x 12 TPH (Existing and at standby) & additional ESP with dry lime addition to coal has been provided to 1 x 14 TPH (Existing and working) , for controlling the particulate emissions within the statutory limit of 50 mg/Nm<sup>3</sup> for the boilers. No additional boiler and APCS will be required for expansion.

Source	Fuel	Height from ground (m)	APCS
<b>EXISTING AND TO BE CONTINUED AFTER EXPANSION</b>			
Boiler 1 - 14 ton/hr	Existing- Imported Coal, After expansion- Agro briquettes will be used as primary fuel and in case of its non-availability, imported coal with Lime addition for desulphurization will be used. Within 5 years, coal as a fuel will be phased out as per techno-economic feasibility where as possible.	58 (Common stack)	Wet scrubber (common), ESP with dry lime addition to coal
Boiler 2 (standby) 12 ton/hr	Existing- FO , After expansion- LDO/LSHS Premium	58 (Common stack)	Wet scrubber (Common).
DG Set 1- 1000 kVA	HSD	11.8	-
DG Set 2- 1000 kVA	HSD	11.8	-
DG Set 3- 1250 kVA	HSD	12.8	-

**15. Details of Process Emissions Generation and its Management:**

Source	Height of Stack in Mtr above ground	Pollution Control Measure	Emission parameters

Existing and continued after expansion			
Process Stack 1	26 m above GL	Water & Alkali scrubber	Existing- SO <sub>2</sub> , HCl, After expansion- same to be continued
Process Stack 2	26 m above GL	Water & Alkali scrubber	Existing- HCl, After expansion- same to be continued
Process Stack 3	15.5 m above GL	Water scrubber	Existing- CO <sub>2</sub> , NH <sub>3</sub> , DMA, After expansion- same to be continued
Process Stack 4	15.5 m above GL	Alkali scrubber	Existing- Cl <sub>2</sub> , After expansion- same to be continued
ADDITION FOR EXPANSION			
Process Stack 5	26 m above GL	Methanol & Alkali scrubber	Existing- NA, After expansion- CH <sub>3</sub> Cl (Methyl Chloride)
Process Stack 6	26 m above GL	Alkali scrubber	Existing- NA, After expansion- Br <sub>2</sub>
Process Stack 7	26 m above GL	Water & Alkali scrubber	Existing-NA, After expansion- HF
Process Stack 8	26 m above GL	Acid scrubber	Existing- NA, After expansion- NO <sub>x</sub>
Process Stack 9	26 m above GL	Flame arrestor followed by blowdown tank	Existing- NA, After expansion- H <sub>2</sub>

#### 16. Details of Solid Waste/ Hazardous Waste Generation and its Management:

##### Solid Waste Management

Category	Type of Waste	Existing (TPA)	Proposed (TPA)	After expansion (TPA)	Treatment/Disposal
Biodegradable	Organic Waste	40.3	0	40.3	Collection & disposal through Kalyan-Dombivli Municipal Corporation
Non-Biodegradable	Recyclable Waste (Plastic, paper, wood, glass, etc)	18.0	0	18.0	Authorized vendor
	<b>Total</b>	58.3	0	58.3	

##### Non- Hazardous Waste Management

Process Waste	Unit	Quantity of generation (Existing)	Proposed Quantity	Total after expansion	Treatment/Disposal
Metallic scrap	MTPA	302.4	0	302.4	Sale
Waste insulation material	MTPA	10.8	0	10.8	Sale
Civil debris	MTPA	350	0	350	Land filling
Stationary paper waste	MTPA	57.6	0	57.6	Incineration/Sale to recycle
Non-metallic scrap	MTPA	10.8	0	10.8	Sale
Boiler ash	MTPA	1962	588.6	2550.6	Sale to Cement/Brick manufacturer
STP Sludge	Kg/annum	0	8910.0	8910.0	Inhouse horticulture development

##### Hazardous Waste Management

S.	Waste	Category	Unit	Existing	Proposed	Total after	Disposal
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No.		(as per HWM Rules,2016)		expansion			
				Quantity of generation	Quantity of generation	Quantity of generation	
<b>From Process</b>							
1	Spent activated carbon from process	28.3	MT/A	2	24	26	Incineration at CHWTSDF / Pre-processing /Co-processing
2	Process waste & residue	29.1	MT/A	782	3436	4218	Incineration at CHWTSDF / Pre-processing / Co-processing
3	Potassium chloride + Potassium fluoride	29.1	MT/A	209	139	348	CHWTSDF /Sale to authorized end user
4	Calcium carbonate + palladium	29.1	MT/A	0	486	486	CHWTSDF /Sale to authorized end user
5	Cupric chloride	29.1	MT/A	1475	34	1508	CHWTSDF /Sale to authorized end user
6	Methane sulfinic /sulfonic acid sodium salt	29.1	MT/A	26	443	468	CHWTSDF /Sale to authorized end user
7	Processed chorobutanone	29.1	MT/A	1421	43	1464	CHWTSDF /Sale to authorized end user/Pre-processing /Co-processing
8	Sodium chloride	29.1	MT/A	82	520	603	CHWTSDF /Sale to authorized end user
9	Sodium bicarbonate	29.1	MT/A	1120	11746	12865	CHWTSDF /Sale to authorized end user
10	Sodium carbonate	29.1	MT/A	751	7585	8337	CHWTSDF /Sale to authorized end user
11	Sodium sulfite	29.1	MT/A	56	507	563	CHWTSDF /Sale to authorized end user
12	Methyl Acetate	29.1	MT/A	0	365	365	CHWTSDF /Sale to authorized end user/Pre-processing /Co-processing
13	Spent Solvent	29.4	MT/A	0	1,478	1478	Incineration at CHWTSDF / Pre-processing /Co-processing
14	Spent Catalyst	29.5	MT/A	15	384	399	Authorized recycler / To CHWTSDF
15	Inorganic Acids	29.6	MT/A	1,531	16,217	17748	Authorized end user
<b>From Utilities and production</b>							
1	Used/spent oil	5. 1	MT/A	7.5	2.5	10	Authorized recyclers or refiners / CHWTSDF / Co-processing / Pre-processing
2	Waste or residues containing oil	5..2	MT/A	4.8	0	4.8	CHWTSDF / Co-processing / Pre-processing
3	Date expired and off specifications pesticides	29.3	MT/A	10	0	10	Incineration at CHWTSDF
4	Discarded containers/barrels / liners	33. 1	MT/A	270	30	300	Authorized decontamination facility / Authorized recyclers / Sent back to suppliers / Sale after decontamination / CHWTSDF
5	contaminated cotton	33.2	MT/A	4.8	0	4.8	Incineration at CHWTSDF

	rag or other cleaning materials						
6	Chemical sludge from wastewater treatment (MEE salt)	35.3	MT/A	8,392.27	8,959	17,351	Secured Landfilling at CHWTSDF / Co-processing
7	Chemical sludge from wastewater treatment (ETP sludge)	35.3	MT/A	2,200.00	0	2,200.00	Secured Land Filling at CHWTSDF
8	Spent activated carbon from waste water treatment	36.2	MT/A	46	0	46	Incineration at CHWTSDF / Pre-processing / Co-processing

#### E-Waste, Battery Waste and Bio-Medical Waste

Source of Generation	Name of the waste	Qty (TPA)	Mode of disposal
Office electronic items	E- waste	1.5	Sale/dispose to authorized vendor as per E- waste (Management) rules, 2022
Battery waste	Used batteries	2.5	Sale/dispose to authorized vendors as per the Battery Management Rules, 2022.
Occupational Health Center	Biomedical Waste categorized as per BMW Rules 2016	1.152	Disposed to vendor having approval as CBWTF from MPCB

17. The Budget earmarked towards the Environmental Management Plan (EMP) is 89.68 Crore (Existing 41.55Crore & Proposed towards expansion 48.13 Crore (capital) and the Recurring Cost (operation and maintenance) will be about 71.74 Cr per annum (Existing- .24.25 Crore & Proposed 47.49 Crore. Industry proposes to allocate Rs.0.90 crores towards social welfare / corporate environment responsibility (CER) which shall be spent towards activities like skill development for women, vocational skill training, support to local hospitals, health care services, sanitation and drinking water provisions in the area etc.

18. Total green area of 17386.56 sq.m green area (i.e. 41.0 % of total plot area) will be developed after proposed expansion comprising of 9009.45 sq.m (i.e.,21.2 % of total plot area) within the site and balance 8377.11 sq.m in the surroundings area within MIDC (i.e., 19.8 % of total plot area). Considering tree density @2500 trees per ha of green area, a total 4347 no. of trees (2252 no. inside and 2094 no. outside the plot) are required to be planted. Out of 4347 no. of trees, 1381 no. of trees (583 inside and 528 outside the plot) were surviving as of 2022. The balance 2966 no. of trees (1399 no. of trees inside and 1566 no. of trees outside the plot) are hence required to be planted. To comply with the requirement of planting 2966 no. of trees, an estimated 3707 no. of saplings are required (1749 no. of saplings inside and 1958 no. of saplings outside the plot) to be planted considering a nominal 80% survival ratio. Out of these 3707 saplings; about 3514 no. of saplings (1749 no. inside and 1765 no. outside the plot) have already been planted till 31st August 2023 and the balance 193 (outside the plot) shall be planted by 30th October 2023.

19. The PP reported that the Public hearing is exempted as per the Para 7.III. Stage (3) (i) (b) of the EIA Notification, 2006 as the Project site is located within MIDC, Dombivli, Maharashtra which is declared as notified industrial area vide Notification No. May 17, 1962 /VYSK 27, 1884.

20. The PP proposed to set up an Environment Management Cell (EMC) by engaging Vice President Environment and Sustainability- Site Head Sr. Manager Environment - Manager Environment- Deputy Manager Environment - ETP in operator - - MEE operator for the functioning of EMC.

21. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.

22. The estimated project cost after expansion is Rs.448.26 Crores including existing investment of Rs. 388.26 Crore and Proposed- Rs.60 Crore. Total Existing Employment is 1061 persons as direct & indirect and after expansion will remain the same.

#### 23. Deliberations by the EAC:

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members /domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures

are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the fuel, greenbelt development, quantified and specific compliance of OM dated 31.10.2019 and advised the PP to submit the following:

- Action plan for use of cleaner fuel.
- Action plan for plantation of 193 saplings and additional avenue plantation to be done apart from 17,386.56 sq.m. (i.e. 41.0 % of total plot area) of green area being developed onsite & in the nearby area within the MIDC.
- Undertaking for no violation of condition for the green belt development as mentioned in the CTO.
- Revised specific compliance of OM dated 31.10.2019.

The PP submitted the above information/documents and the EAC found these to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The PP shall obtain 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, from the State Pollution Control Board, prior to construction & operation of the project.

24. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I.**

25. Based on the proposal submitted by the project proponent and recommendations made by EAC in 67th and 68th EAC meeting, Ministry of Environment, Forest and Climate Change hereby accords ToR to the project ***“Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their intermediates manufacturing plant with production capacity (after expansion) of 12975 TPA of products and intermediates, 13874 TPA of By-Products/Co-Products, 8600 TPA of Non-EC products including Formulations and 120813 TPA of By-Products/Co-Products (Non-EC) located at Plot Nos. A-81 to A-84, B-22 to B-24, B-26 to B-29 & OS-4, Phase-I, MIDC Dombivli (East), Taluka Kalyan, District Thane, Maharashtra by M/s Gharda Chemicals Limited”*** under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as mentioned at Annexure-1.

26. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.

27. 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.

28. The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing 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.

29. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate

account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

30. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

31. 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.

32. Any appeal against this EC 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.

This issues with the approval of the Competent Authority

### **Copy To**

1. The Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur- 440001.
2. The Secretary, Environment and Climate Change Department, Govt. of Maharashtra, New Administrative Bhavan, 15th Floor, Madame Cama Road, Mantralaya, MUMBAI - 400032, Maharashtra, India.
3. The Office of the Principal Chief Conservator of Forests (Head of Forests Force) M.S. Nagpur, 3rd Floor Van Bhavan Ramgiri Road Civil Lines Nagpur 440 001.
4. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
5. The Member, Central Ground Water Authority, 18/11, Jamnagar House, Mansingh Road, New Delhi – 110011.
6. The Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3rd and 4th floor, Opp. PVR Cinema, Sion Circle, Mumbai-400 022.
7. Guard File/Record File/Monitoring File/MoEF&CC Website.
8. Office Of District Collector, Thane, Court Naka, Ad Prabhakar Hegde Rd, Kharkar Alley, Thane West, Thane, Maharashtra 400601

### **Annexure 1**

#### **Specific EC Conditions for (Synthetic Organic Chemicals Industry)**

#### **1. Specific Condition**

<b>S. No</b>	<b>EC Conditions</b>
<b>1.1</b>	<ol style="list-style-type: none"><li>1. Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards.</li><li>2. CEMS shall be installed and connected to SPCB/CPCB Server.</li><li>3. Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.</li><li>4. Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.</li></ol>



S. No	EC Conditions
	<p>5. As proposed, agro-briquettes shall be used as a primary fuel in the boiler and coal with added Lime for desulphurization shall be used as a secondary fuel, LDO/ LSHS Premium shall be used during the unavailability of agro briquettes. The secondary fuel may be phased <b>out over a period of 5 years.</b></p> <p>6. The best available technology shall be used.</p> <p>7. The PP shall develop/maintain greenbelt over an area of (41.0%) 9009.45 sqm (i.e.,21.2 % of total plot area) within the site and balance 8377.11 sq.m in the surroundings area within the MIDC (i.e., 19.8 % of total plot area), preferably within one year of grant of EC. The 3707 number of saplings shall be planted and should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before &amp; after with geo-location date &amp; time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&amp;CC before 1<sup>st</sup> July of every year for the activities carried out during previous year.</p> <p>8. Unit shall also develop additional avenue plantation in the nearby of the project site within the MIDC area .</p> <p>9. The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.</p> <p>10. The wastewater generated is treated in STP, ETP, RO, MEE and reused within the process wherever feasible.</p> <p>11. Continuous monitoring of effluent quality shall be monitored which shall be connected to the SPCB and CPCB server.</p> <p>12. All storm water outlets shall be provided with concrete barrier throughout the non-rainy season. Runoff of 1<sup>st</sup> &amp; 2<sup>nd</sup> rainfall from rooftops other than above mentioned areas and surface area shall be channelized to ETP for treatment and from 3<sup>rd</sup> rainfall onwards concrete barrier is broken &amp; runoff shall be channelized to the nearby storm water drainage of MIDC.</p> <p>13. The total discharge to CETP shall be 590 KLD.</p>

S. No	EC Conditions
	<p>14. Domestic wastewater generation shall be 95 KLD and same shall be treated in the proposed STP of capacity 100 KLD and treated water of 90 KLD shall be reused in gardening (30 KLD) and cooling (60 KLD).</p> <p>15. Quantity of Boiler ash shall increase to 2550.6 TPA and same shall be sold to Cement / brick manufacturers.</p> <p>16. Process waste &amp; residue (4218 TPA), Spent solvent (1,478 TPA) and Spent activated carbon (26 TPA) from process shall be sent for Incineration at CHWTSDF / Pre-processing or Co-processing, Spent catalyst (399 TPA) shall be sent to Authorised recycler / CHWTSDF, Inorganic acid (17,748 TPA) shall be sent to Authorised end user, other hazardous waste from process like Potassium chloride + Potassium fluoride (348 TPA), Calcium carbonate + palladium (486 TPA), Cupric chloride (1508 TPA), Methane sulfinic /sulfonic acid sodium salt (468 TPA), Sodium chloride (603 TPA), Sodium bicarbonate (12865 TPA), Sodium carbonate (8337 TPA) &amp; Sodium sulfite (563 TPA) shall be sent to CHWTSDF /Sale to authorised end user and other hazardous waste from process like Processed chorobutanone (1464 TPA) &amp; methyl acetate (365 TPA) shall be sent to CHWTSDF /Sale to authorised end user/Pre-processing /Co-processing.</p> <p>17. Discarded containers/barrels/liners (300 TPA), shall be sent to Authorized decontamination facility / Authorised recyclers / Sent back to suppliers / Sale after decontamination / CHWTSDF, Waste or residues containing oil (4.8 TPA) shall be sent to CHWTSDF / Co-processing / Pre-processing, Used/spent oil (10 TPA) shall be sent to Authorised recyclers or refiners / CHWTSDF / Co-processing / Pre-processing, Contaminated cotton rags or other cleaning materials (4.8 TPA) &amp; Date expired and off specifications pesticides (10 TPA), shall be sent for Incineration at CHWTSDF, Chemical sludge from wastewater treatment (MEE salt) (17351 TPA) shall be sent to Secured Landfilling at CHWTSDF / Co-processing and Chemical sludge from wastewater treatment (ETP sludge) (2,200 TPA) shall be sent for Secured Landfilling at CHWTSDF and Spent activated carbon (46 TPA) from waste water treatment shall be sent to Incineration at CHWTSDF / Pre-processing / Co-processing</p> <p>18. Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.</p> <p>19. As proposed, an amount of 90 lakhs shall be allocated towards CER for Livelihood promotion, support to nearby hospitals, support to nearby schools by enabling E-library etc., health awareness camps, improving sanitation and water supply in the area. Moreover, green belt development in the area shall be supported via social forestry, avenue plantation etc in the government buildings, MIDC roads and buildings</p> <p>20. A separate Environmental Management Cell (having qualified persons with Environmental</p>

S. No	EC Conditions
	<p>Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage Vice President Environment and Sustainability- Site Head Sr. Manager Environment - Manager Environment- Deputy Manager Environment - ETP in operator - - MEE operator. In addition to this one safety &amp; health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&amp;CC before 1<sup>st</sup> July of every year for the activities carried out during previous year.</p> <p>21. 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, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is 48.13 Crore (Capital cost) and Rs. 47.49 Crore per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before &amp; after with geo-location date &amp; time) and other document as applicable to the Regional Office of MoEF&amp;CC before 1<sup>st</sup> July of every year for the activities carried out during previous year.</p> <p>22. The total water requirement shall not exceed 1620 KLD (Fresh water from MIDC Supply- 1088 KLD, recovered water from process-149 KLD, Recycled Condensate water from boiler- 119 KLD, Rainwater- 48 KLD, treated water from STP- 90 KLD, Treated water from RO &amp; MEE- 126 KLD. The PP shall ensure that water supply should not be above the permissible limit and fresh water shall be withdrawn only after obtaining requisite permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&amp;CC before 1<sup>st</sup> July of every year for the activities carried out during the previous year.</p> <p>23. No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.</p> <p>24. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&amp;CC in this regard.</p> <p>25. The project proponent shall comply with the environment norms for 'Pesticide industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13.6.2011 under the provisions of the Environment (Protection) Rules, 1986.</p>

S. No	EC Conditions
	<p>26. The project proponent shall comply with the environment norms for 'synthetic organic chemicals' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608 (E), dated 21<sup>st</sup> July, 2010 under the provisions of the Environment (Protection) Rules, 1986.</p> <p>27. All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.</p> <p>28. The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.</p> <p>29. The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.</p> <p>30. The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers &amp; employees shall be provided with required safety kits/mask for personal protection.</p> <p>31. Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.</p> <p>32. 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.</p> <p>33. The 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) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.</p> <p>34. The PP 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</p>

S. No	EC Conditions
	minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

**Standard EC Conditions for (Synthetic organic chemicals industry)**

**1.**

S. No	EC Conditions
1.1	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. 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/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
1.2	The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
1.3	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
1.4	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 the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
1.5	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
1.6	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.
1.7	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
1.8	The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored

S. No	EC Conditions
	data to the respective Integrated 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.
1.9	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 Integrated Regional Office of MoEF&CC by e-mail.
1.10	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 and at <a href="https://parivesh.nic.in/">https://parivesh.nic.in/</a> . 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.
1.11	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.
1.12	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

#### **Additional EC Conditions**

1. Adequate Scrubbers shall be provided to control process emissions viz. Ammonia, HCl, HF, CH<sub>3</sub>Cl, DMA, Cl<sub>2</sub>, NO<sub>x</sub>, Br<sub>2</sub> and SO<sub>2</sub>. The scrubbing media shall be reclaimed or 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.
2. Total wastewater generation after expansion shall not exceed 889 KLD. Domestic sewage of 95 KLD shall be treated in STP and the treated water shall be reused in gardening and cooling tower make up. Cooling tower blowdown of 72 KLD shall be treated in RO. RO reject will be sent to MEE & RO Permeate obtained will be reused in the cooling tower. A high concentration stream of 378 KLD including High COD-TDS process wastewater & scrubbing wastewater will be treated in MEE. MEE condensate shall be partially sent to ETP for further treatment and rest for reuse in cooling towers and MEE concentrate shall be sent to ATFD. Low concentration stream of 344 KLD including R&D Lab & Pilot plant effluent, Low COD-TDS process wastewater & Boiler blowdown & steam condensate shall be treated in ETP. Treated water of 590 KLD from ETP shall be discharged to CETP after meeting the standards prescribed by SPCB/CETP. As proposed, after expansion, the capacity of treatment units will be STP- 100 KLD, RO- 400 KLD, MEE- 470 KLD & ETP- 620 KLD.
3. PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority

**Annexure 2**

**Details of the Project**

<b>S. No.</b>	<b>Particulars</b>	<b>Details</b>	
a.	Details of the Project	Expansion of Agrochemicals, Synthetic Organic Chemicals & their intermediates manufacturing plant	
b.	Latitude and Longitude of the project site	19.21594040180828,73.11125283650925 19.21741295606077,73.11311310355491	
c.	Land Requirement (in Ha) of the project or activity	<b>Nature of Land involved</b>	<b>Area in Ha</b>
		Non-Forest Land (A)	4.2408
		Forest Land (B)	0
		Total Land (A+B)	4.2408
d.	Date of Public Consultation	Public consultation for the project was held on	
e.	Rehabilitation and Resettlement (R&R) involvement	NO	
f.	Project Cost (in lacs)	44826	
g.	EMP Cost (in lacs)	8968.21	
h.	Employment Details	11700	

## Annexure-3

The details of the products submitted by the PP are as follows:

Particulars	Existing Capacity (TPA)	Capacity as per business as usual scenario	
		Proposed (TPA)	Total (TPA)
<b>Products and intermediates including R&amp;D products -</b> (5f & 5b - A = A1 + A2)	7,208	5,767	12,975
<b>Sub-Total (Product &amp; its Intermediates including R&amp;D products) -</b> (5f only - A1)	355	120	475
<b>Sub-Total (Product &amp; its Intermediates including R&amp;D products) -</b> (5f & 5b) - A2	6,853	5,647	12,500
<b>Non- EC products -</b> (B = B1+B2+B3)	3,600	5,000	8,600
<b>Hand Sanitizer -</b> (B1)	100	0	100
<b>Sodium Hypochlorite 5% solution (as Disinfectant) -</b> (B2)	500	0	500
<b>Pesticide Liquid &amp; Solid Formulations (Formulations from own technical products or by procuring technical products from outside) -</b> (B3)	3,000	5,000	8,000
<b>Byproduct/ Co-product - EC (5f &amp; 5b) &amp; Non EC -</b> (C = C1+C2)	34396	100291	134687
<b>Sub-Total (Byproduct/ Co-product) -</b> (5f & 5b - C1)	469	13405	13874
<b>Sub-Total (Byproduct/ Co-product) -</b> (Non-EC - C2)	33927	86886	120813

## Detailed Product List

Name of the product	Product/Intermediate/	Category as per EIA Notification 5(f) or 5(b)	CAS No.	End Use	Existing (TPA)	Capacity as per business-as-usual scenario	
						Proposed (TPA)	Total (TPA)
<b>IA) Bispyribac Sodium;</b>	Product	5b	1254-01-92-5	Herbicide	50	1400	1450
<b>IB) Diuron;</b>	Product	5b	330-54-1	Herbicide	560	890	
<b>IB-i) N Methyl-N-(3,4 Dichloro) Phenyl Carbamate;</b>	Intermediate	5b	1918-18-9	Used as herbicide intermediates and also in other chemical industries			



<b>IC) Imazethapyr;</b>	Product	5b	8133 5-77- 5	Herbicide	69	1381
<b>ID) Isoproturon;</b>	Product	5b	3412 3-59- 6	Herbicide	155	1295
<b>IE) Cyprosulfamide;</b>	Product	5b	2216 67- 31-8	Herbicide	0	1450
<b>IE-i) p-Toluene sulfonyl chloride;</b>	Intermediate	5f	98- 59-9	Used as herbicide intermediates and also in other chemical industries		
<b>IE-ii) p-Toluene sulfonamide;</b>	Intermediate	5f	70- 55-3			
<b>IE-iii) p-Carboxy-benzene sulfonamide;</b>	Intermediate	5f	138- 41-0			
<b>IE-iv) Amid chloride;</b>	Intermediate	5f	8164 31- 72-8			
<b>IF) Aclonifen;</b>	Product	5b	7407 0-46- 5	Herbicide	0	1450
<b>IF-i) a. 2,3,4-Trichloro nitro benzene;</b>	Intermediate	5f	1770 0-09- 3	Used as herbicide intermediates and also in other chemical industries		
<b>IF-ii) b. 2,3-Dichloro-6-nitro aniline (DICONA);</b>	Intermediate	5f	6507 8-77- 5			
<b>IG) Metolachlor;</b>	Product	5b	5121 8-45- 2	Herbicide	0	1450
<b>IH) Glufosinate Ammonium;</b>	Product	5b	7718 2-82- 2	Herbicide	0	1450
<b>II) Pyroxsulam;</b>	Product	5b	4225 56- 08-9	Herbicide	0	1450
<b>IJ) Sulfentrazone;</b>	Product	5b	1228 36- 35-5	Herbicide	0	1450
<b>IJ-i) 5-Methyl-2-phenyl-2,4-dihydro-[1,2,4]-triazol-3-one (PT);</b>	Intermediate	5f	2286 3-24- 7	Used as herbicide intermediates and also in other chemical industries		
<b>IJ-iii) 4-Difluoromethyl-5-methyl-2-phenyl-2,4-dihydro-[1,2,4]-triazol-3-one (DFMPT);</b>	Intermediate	5b	1338 40- 80-9			
<b>IJ-iii) 4-Difluoromethyl-5-methyl-2-(2,4-dichlorophenyl)-2,4-dihydro-[1,2,4]-triazol-3-one (DCPT);</b>	Intermediate	5b	1119 92- 16-6			
<b>IJ-iv) 4-Difluoromethyl-5-methyl-2-(2,4-dichloro-5-nitrophenyl)-2,4-dihydro-[1,2,4]-</b>	Intermediate	5b	1119 92- 17-7			

triazol-3-one (DCNPT);						
IJ-v) 4-Difluoromethyl-5-methyl-2-(5-amino-2,4-dichlorophenyl)-2,4-dihydro-[1,2,4]-triazol-3-one (ADCPT);	Intermediate	5b	1119 92- 18-8			
IK) Pinoxaden (Route 1);	Product	5b	2439 73- 20-8	Herbicide	0	1450
IK-i) 2,6-diethyl -4-methyl bromobenzene;	Intermediate	5f	3140 84- 61-2	Used as herbicide intermediates and also in other chemical industries		
IK-ii) 1-(2,6-diethyl -4-methyl phenyl)-malononitrile;	Intermediate	5f	3140 20- 53-6			
IK-iii) 1-(2,6-Diethyl-4-methyl-phenyl)-malonamide;	Intermediate	5b	3140 20- 40-1			
IK-iv) N,N'-diacetylhydrazine (DAH);	Intermediate	5f	3148 -73-0			
IK-v) 2,2'-Dichlorodiethyl ether (DCDEE);	Intermediate	5b	111- 44-4			
IK-vi) 4,5-Diacetyl-1,4,5-hexahydro-oxadiazepine (DAODAP);	Intermediate	5b	8359 8-13- 4			
IK-vii) Hexahydro-1,4,5-oxadiazepine HCl (OXA.HCl);	Intermediate	5b	4052 81- 14-3			
IK-viii) Pyrazole-oxadiazepine;	Intermediate	5b	3140 20- 44-5			
IL) Pinoxaden (Route 2);	Product	5b	2439 73- 20-8	Herbicide	0	1450
IL-i) heptylene-4-malonitrile ;	Intermediate	5f	NA	Used as herbicide intermediates and also in other chemical industries		
IL-ii) 2-(2,6-diethyl -4-methyl phenyl) - malonitrile ;	Intermediate	5f	3140 20- 53-6			
IL-iii) 1-(2,6-Diethyl-4-methyl-phenyl)-malonamide;	Intermediate	5b	3140 20- 40-1			
IL-iv) N,N'-diacetylhydrazine (DAH);	Intermediate	5f	3148 -73-0			
IL-v) 2,2'-Dichlorodiethyl ether (DCDEE);	Intermediate	5b	111- 44-4			
IL-vi) 4,5-Diacetyl-1,4,5-hexahydro-oxadiazepine (DAODAP);	Intermediate	5b	8359 8-13- 4			

<b>IL-vii) Hexahydro-1,4,5-oxadiazepine HCl (OXA.HCl);</b>	Intermediate	5b	4052 81- 14-3			
<b>IL-viii) Pyrazole-oxadiazepine;</b>	Intermediate	5b	3140 20- 44-5			
<b>IM) Bromoxynil Octanoate;</b>	Product	5b	1689 -99-2	Herbicide	0	1450
<b>IM-i) p-Hydroxy benzonitrile;</b>	Intermediate	5f	767- 00-0	Used as herbicide intermediates and also in other chemical industries		
<b>IM-ii) 2,6-Dibromo-4-cyano-phenol;</b>	Intermediate	5f	1689 -84-5			
<b>IM-iii) Octanoyl chloride;</b>	Intermediate	5f	111- 64-8			
<b>IN) Bromoxynil Heptanoate;</b>	Product	5b	5663 4-95- 8	Herbicide	0	1450
<b>IN-i) p-Hydroxy benzonitrile;</b>	Intermediate	5f	767- 00-0	Used as herbicide intermediates and also in other chemical industries		
<b>IN-ii) 2,6-Dibromo-4-cyano-phenol;</b>	Intermediate	5f	1689 -84-5			
<b>IN-iii) Heptanoyl chloride ;</b>	Intermediate	5f	111- 64-8			
<b>IO) Triclopyr Acid Butofyl Ester;</b>	Product	5b	6470 0-56- 7	Herbicide	20	1430
<b>IO-i) 3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL);</b>	Intermediate	5b	3743 9-34- 2	Used as herbicide intermediates and also in other chemical industries		
<b>IO-ii) Triclopyr Acid Methyl Ester;</b>	Intermediate	5b	6082 5-26- 5			
<b>IO-iii) 3,5,6-Trichloro-2-pyridinyloxy acetic acid (Triclopyr Acid);</b>	Intermediate	5b	5533 -06-5 3			
<b>IP) Sulcotrione;</b>	Product	5b	9910 5-77- 8	Herbicide	0	1450
<b>IP-i) 4-Methyl sulfonyl toluene (MST);</b>	Intermediate	5f	3185 -99-7	Used as herbicide intermediates and also in other chemical industries		
<b>IP-ii) 2-Chloro-4-Methyl sulfonyl toluene (CMST);</b>	Intermediate	5f	1671 -18-7			
<b>IP-iii) 2-Chloro-4-Methyl Sulfonyl Benzoic Acid (CMSBA);</b>	Intermediate	5f	5325 0-83- 2			
<b>IP-iv) 2 Chloro-4-Methyl sulfonyl benzoic acid chloride (CMSBAc);</b>	Intermediate	5f	1069 04- 10-3			
<b>IP-v) 1,3-Cyclohexanedione (1,3 CHD);</b>	Intermediate	5f	504- 02-9			
<b>IP-vi) Sulcotrione Ester;</b>	Intermediate	5f	1149 11- 83-0			

<b>IQ) Clodinafop Propargyl;</b>	Product	5b	1055 12- 06-9	Herbicide	24	1426
<b>IQ-i) FPDPA Preparation;</b>	Intermediate	5b	1144 20- 56-3	Used as herbicide intermediates and also in other chemical industries		
<b>IQ-ii) FPDPA Preparation;</b>	Intermediate	5b	1010 53- 90-1			
<b>IR) Trichlopyr acid;</b>	Product	5b	5533 -06-5 3			
<b>IR-i) 3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL);</b>	Intermediate	5b	3743 9-34- 2			
<b>IR-ii) Triclopyr Acid Methyl Ester;</b>	Intermediate	5b	6082 5-26- 5			
<b>IS) OR Mesotrione (MCB Route);</b>	Product	5b	1042 06- 82-8			
<b>IS-i) 4-chloro benzene sulfonyl chloride ( MCB sulfonyl chloride);</b>	Intermediate	5f	98- 60-2	Used as herbicide intermediates and also in other chemical industries		1411
<b>IS-ii) 1-Chloro-4-(methyl sulfonyl) benzene;</b>	Intermediate	5f	98- 57-7			
<b>IS-iii) 1-Chloro-2-nitro4-( methyl sulfonyl) benzene (Chloro NMSB);</b>	Intermediate	5f	97- 07-4			
<b>IS-iv) Methyl-2-Cyano-2-(4-(methyl sulfonyl)-2-Nitrophenyl) acetate Cyano NMSB);</b>	Intermediate	5b	1939 104- 66-1			
<b>IS-v) 2-Nitro-4-methyl sulfonyl benzoic acid (NMSBA);</b>	Intermediate	5b	1109 64- 79-9			
<b>IS-vi) 2-Nitro-4-methyl sulfonyl benzoyl chloride (NMSBAc);</b>	Intermediate	5b	1109 64- 80-2			
<b>IS-vii) 1,3-Cyclohexane dione -sodium salt (1,3-CHD -Na salt);</b>	Intermediate	5f	504- 02-9			
<b>IS-viii) 3-(4'-methylsulfonyl-2'-nitro-benzoyloxy)-2-cyclohexene-1-one (Mesotrione enol ester);</b>	Intermediate	5b	2269 44- 49-6			
<b>IT) Mesotrione (TSC Route);</b>	Product	5b	1042 06- 82-8	Herbicide	30	1420

<b>IT-i) 4-Methyl sulfonyl toluene (MST);</b>	Intermediate	5f	3185-99-7	Used as herbicide intermediates and also in other chemical industries			
<b>IT-ii) 2-Nitro-4-methyl sulfonyl toluene (NMST);</b>	Intermediate	5f	1671-49-4				
<b>IT-iii) 2-Nitro-4-methyl sulfonyl benzoic acid (NMSBA);</b>	Intermediate	5f	110964-79-9				
<b>IT-iv) Methyl-2-Cyano-2-(4-(methyl sulfonyl)-2-Nitrophenyl) acetate (cyano NMSB);</b>	Intermediate	5f	-				
<b>IT-iv) 2-nitro -4-(methyl sulfony) benzoyl chloride (NMSBAc);</b>	Intermediate	5f	110964-80-2				
<b>IT-v) 1,3-Cyclohexane dione -sodium salt( 1,3-CHD -Na salt);</b>	Intermediate	5f	504-02-9				
<b>IT-vi) 3-(4'-methylsulfonyl-2'-nitro-benzoyloxy)-2-cyclohexene-1-one (Mesotrione enol ester);</b>	Intermediate	5b	226944-49-6				
<b>I (BP)-i) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647-01-0	Chemical	400.6	2504.6	2905
<b>I (BP)-ii) Ammonium nitrate 40%;</b>	By-product	Non-EC	6484-52-2	Chemical	59.3	1187.5	1247
<b>I (BP)-iii) Ortho nitro cumine;</b>	By-product	5f	6526-72-3	Chemical	63.1	527.1	590
<b>I (BP)-iv) Dimethyl amine;</b>	By-product	5f	124-40-3	Chemical	141.0	153.8	295
<b>I (BP)-v) Diethyl-5-ethyl-pyridine-2,3-dicarboxylic acid (Diacid);</b>	By-product	5f	105151-39-1	Chemical	16.3	325.9	342
<b>I (BP)-vi) Methanol;</b>	By-product	5f	67-56-1	Chemical	21.3	226.7	248
<b>I (BP)-vii) Ethanol;</b>	By-product	5f	64-17-5	Chemical	0.0	646.7	647
<b>I (BP)-viii) Sodium bisulfite;</b>	By-product	Non-EC	7631-90-5	Chemical	32.7	1940.8	1973
<b>I (BP)-ix) Ammonium hydroxide;</b>	By-product	Non-EC	1336-21-6	Chemical	34.9	442.8	478
<b>I (BP)-x) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446-09-5	Chemical	16.4	895.0	911
<b>I (BP)-xi) Potassium Chloride;</b>	By-product	Non-EC	7447-40-7	Chemical	0.0	641.4	641
<b>I (BP)-xii) Manganese dioxide;</b>	By-product	Non-EC	1313-13-9	Chemical	0.0	749.7	750

<b>1 (BP)-xiii) 2,6-DE-4-Me-Phenol;</b>	By-product	5f	3505 0-88- 5	Chemical	0.0	330.3	330
<b>1 (BP)-xiv) Bromine;</b>	By-product	Non- EC	7726 -95-6	Chemical	0.0	929.5	930
<b>1 (BP)-xv) Ammonium Chloride;</b>	By-product	Non- EC	1212 5-02- 9	Chemical	0.0	466.4	466
<b>1 (BP)-xvi) Methyl acetate;</b>	By-product	5f	79- 20-9	Chemical	0.0	678.8	679
<b>2A) Tembotrione;</b>	Product	5b	3351 04- 84-2	Herbicide	0	750	750
<b>2A-i) Methane thiol;</b>	Intermediate	5f	74- 93-1	Used as herbicide intermediates and also in other chemical industries			
<b>2A-ii) 3-Chloro-2-methyl phenyl methyl sulphide (CMTT);</b>	Intermediate	5f	8296 1-52- 2				
<b>2A-iii) 2-Chloro-3-methyl-4-methylthio acetophenone (Acyl CMTT);</b>	Intermediate	5f	1819 97- 71-7				
<b>2A-iv) 2-chloro-3-methyl -4-methyl sulfonyl acetophenone;</b>	Intermediate	5b	1819 97- 72-8				
<b>2A-v) 2-chloro-3-methyl -4-methyl sulfonyl benzoic acid (CMMSBA);</b>	Intermediate	5b	1069 04- 09-0				
<b>2A-vi) 2-chloro-3-methyl -4-methyl sulfonyl benzoic acid methyl ester (CMMSBA Ester);</b>	Intermediate	5b	1201 00- 04-1				
<b>2A-vii) Methyl-(2-chloro-3-bromomethyl-4-methyl sulfonyl benzoate (CBrMMSBA Ester);</b>	Intermediate	5b	1201 00- 44-9				
<b>2A-viii) 2-chloro-4-(methylsulfonyl)-3-[(2,2,2-trifluoroethoxy)methyl] benzoic acid (CTFEMMSBA );</b>	Intermediate	5b	1201 00- 77-8				
<b>2A-ix) 2-chloro-4-(methylsulfonyl)-3-[(2,2,2-trifluoroethoxy)methyl] benzoyl chloride (CTFEMMSBAc );</b>	Intermediate	5b	1118 729- 23-9				
<b>2A-x) 1,3-Cyclohexane dione -sodium salt (1,3-CHD -Na salt);</b>	Intermediate	5f	504- 02-9				

<b>2A-xi) 3-oxo-cyclohexyl-2-chloro-4-(methyl sulfonyl)-3-((2,2,2-trifluoroethoxy)methyl) benzoate (Tembotrione enol ester);</b>	Intermediate	5f	2634 01- 21-4			
<b>2B) Sulfosulfuron;</b>	Product	5b	1417 76- 32-1	Herbicide	4	746
<b>2B-i) IPG Preparation;</b>	Intermediate	5b	1262 02- 06-0	Used as herbicide intermediates and also in other chemical industries		
<b>2B-ii) CIP Preparation;</b>	Intermediate	5b	571/3 999			
<b>2B-iii) CIPSA Preparation;</b>	Intermediate	5b	1125 66- 17-3			
<b>2B-iv) EIPS Preparation;</b>	Intermediate	5b	1125 83- 03-6			
<b>2B-v) EIPSO2 Preparation;</b>	Intermediate	5b	1417 76- 47-8			
<b>2B-vi) Carbamate Preparation;</b>	Intermediate	5b	302- 11-4			
<b>2C) Penoxsulam;</b>	Product	5b	2197 14- 96-2	Herbicide	0	750
<b>2C-i) Methyl 3-hydroxy-2-methoxyacrylate sodium salt ;</b>	Intermediate	5f	( 1041 51- 54-4)	Used as herbicide intermediates and also in other chemical industries		
<b>2C-ii) 2,5-dimethoxy-4-hydroxy pyrimidine ;</b>	Intermediate	5f	(370 103- 23-4)			
<b>2C-iii) 2,5-dimethoxy-4-chloropyrimidine;</b>	Intermediate	5f	(370 125- 25-6)			
<b>2C-iv) 4-Hydrazino-2,5-dimethoxypyrimidine ;</b>	Intermediate	5f	(381 666- 22-4)			
<b>2C-v) 3-amino-5,8-dimethoxy[1,2,4]t razolo[4,3-c]pyrimidine ;</b>	Intermediate	5f	(381 666- 24-6)			
<b>2C-vi) 5,8-dimethoxy[1,2,4]t razolo[4,3-c]pyrimidin-2-amine Int-A;</b>	Intermediate	5b	2197 15- 62-5			
<b>2C-vii) 4-Nitro-2-Chloro Benzotrifluoride;</b>	Intermediate	5f	777- 37-7			
<b>2C-viii) 4-Nitro-2-(trifluoromethyl) Aniline;</b>	Intermediate	5f	121- 01-7			
<b>2C-ix) 2-Bromo-4-Nitro-6-(trifluoromethyl) Aniline;</b>	Intermediate	5f	400- 66-8			

2C-x) N-(2-Bromo-4-Nitro-6-(trifluoromethyl) Phenyl acetamide;	Intermediate	5f	8597 7-20-4				
2C-xi) N-(2-Fluoro-4-Nitro-6-(trifluoromethyl) Phenyl acetamide;	Intermediate	5f	NA				
2C-xii) N-(4-amino-2-Fluoro-6-(trifluoromethyl) Phenyl acetamide;	Intermediate	5f	8828 8-08-8				
2C-xiii) N-(2-Fluoro-6-(trifluoromethyl) Phenyl acetamide;	Intermediate	5f	NA				
2C-xiv) 2-Fluoro-6-(trifluoromethyl) aniline;	Intermediate	5f	1448 51-61-6				
2C-xv) 2-Fluoro-6-(trifluoromethyl) Benzene sulfonic acid;	Intermediate	5f	NA				
2C-xvi) 2-Fluoro-6-(trifluoromethyl) benzene sulfonyl chloride Int-B;	Intermediate	5b	4052 64-04-2				
2 (BP)-i) Aluminium chloride 25%;	By-product	Non-EC	7446 -70-0	Chemical	0	2901	2901
2 (BP)-ii) Chloroform;	By-product	5f	67- 66-3	Chemical	0	520	520
2 (BP)-iii) Sulfur dioxide gas (compressed);	By-product	Non-EC	7446 -09-5	Chemical	0	162	162
2 (BP)-iv) Sodium bromide;	By-product	Non-EC	7647 -15-6	Chemical	0	314	314
2 (BP)-v) Hydrochloric acid;	By-product	Non-EC	7647 -01-0	Chemical	8.2	1524	1532
2 (BP)-vi) Acetic acid;	By-product	5f	64- 19-7	Chemical	0	170	170
2 (BP)-vii) Potassium bromide;	By-product	Non-EC	3/2/7 758	Chemical	0	347	347
2 (BP)-viii) Methanol;	By-product	5f	67- 56-1	Chemical	1.5	409	410
3A) Thiophanate Methyl;	Product	5b	2356 4-05-8	Fungicide	150	450	600
3B) Propiconazole;	Product	5b	6020 7-90-1	Fungicide	24	576	
3B-i) 2-(2,4-dichlorophenyl)-2-methyl-4-n-	Intermediate	5b	NA	Used as Fungicide intermediates			



<b>propyl-1,3-dioxolane (Ketal);</b>				and also in other chemical industries			
<b>3B-ii) 2-(2,4-dichlorophenyl)-2-bromomethyl-4-n-propyl-1,3-dioxolane.;</b>	Intermediate	5b	NA				
<b>3C) Metalaxyl;</b>	Product	5b	5783 7-19- 1	Fungicide	0	600	
<b>3C-i) Methoxy Acetyl Chloride;</b>	Intermediate	5f	3887 0-89- 2	Used as Fungicide intermediates and also in other chemical industries			
<b>3C-ii) Methyl (2,6-Dimethyl Phenylamino) Propanoate (Alaninate);</b>	Intermediate	5b	5288 8-49- 0				
<b>3 (BP-i) Sodium sulfite solution;</b>	By-product	Non-EC	7757 -83-7	Chemical	0	787.2	787.2
<b>3 (BP-ii) Calcium Chloride Brine (35% );</b>	By-product	Non-EC	1004 3-52- 4	Chemical	0	473.4	473.4
<b>4A) Azoxystrobin;</b>	Product	5b	1318 60- 33-8	Fungicide	69	431	500
<b>4A-i) 3-Methoxymethylene benzofuran-2(3H)-one (MMB);</b>	Intermediate	5b	4080 0-90- 6	Used as Fungicide intermediates and also in other chemical industries			
<b>4A-ii) Methyl 2-(2-hydroxyphenyl)-3,3-dimethoxy propanoate (MMB inter);</b>	Intermediate	5b	1759 71- 61-6				
<b>4A-iii) 2-((6-chloropyrimidin-4-yl)oxy) benzonitrile (CPOB);</b>	Intermediate	5b	9138 46- 53-4				
<b>4A-iv) Dimethoxy Azoxystrobin;</b>	Intermediate	5b	NA				
<b>4B) Pyraclostrobin;</b>	Product	5b	1750 13- 18-0	Fungicide	69	431	
<b>4B-i) Sodium salt of 1-(4-chlorophenyl)-3-hydroxypyrazole;</b>	Intermediate	5b	7620 5-19- 1	Used as Fungicide intermediates and also in other chemical industries			
<b>4B-ii) 1-(4-chlorophenyl)-3-[2-(nitrophenyl)-methoxy]-1H-pyrazole (PNBE);</b>	Intermediate	5b	2203 68- 29-6				
<b>4B-iii) Methyl N-hydroxy-N-(2-[[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl] phenyl) Carbamate (PHABEC);</b>	Intermediate	5b	NA				

<b>4C) Trifloxystrobin;</b>	Product	5b	1415 17- 21-7	Fungicide	0	500	
<b>4C-i) 3-Bromo benzotrifluoride;</b>	Intermediate	5f	401- 78-5	Used as Fungicide intermediates and also in other chemical industries			
<b>4C-ii) 3-Trifluoromethyl acetophenone;</b>	Intermediate	5f	349- 76-8				
<b>4C-iii) 3-Trifluoromethyl acetophenone oxime;</b>	Intermediate	5f	9970 5-50- 7				
<b>4C-iv) Methyl -2-oxo-2-(o-tolyl) acetate;</b>	Intermediate	5f	3496 6-54- 6				
<b>4C-v) Methyl-2-(2'-bromoethylphenyl)-2-oxoacetate;</b>	Intermediate	5b	1265 34- 57-4				
<b>4C-vi) Methyl (E)-2-oxo-2-(2-(((1-(3 (trifluoromethyl) phenyl) ethylidene) amino) oxy) methyl) phenyl) acetate;</b>	Intermediate	5b	1414 93- 05-2				
<b>4C-vii) Methyl(Z)-2-(hydroxyimino)-2-(2-(((E)-1-(3 (trifluoromethyl) phenyl) ethylidene) amino) oxy) methyl) phenyl acetate (Oxime Product);</b>	Intermediate	5b	NA				
<b>4 (BP)-i) Acetic acid;</b>	By-product	5f	64- 19-7	Chemical	43	267	309.3
<b>4 (BP)-ii) Methyl acetate;</b>	By-product	5f	79- 20-9	Chemical	53	329	381.7
<b>4 (BP)-iii) Sodium acetate;</b>	By-product	5f	127- 09-3	Chemical	17	109	126.2
<b>4 (BP)-iv) Potassium chloride;</b>	By-product	Non-EC	7447 -40-7	Chemical	58	359	416.8
<b>4 (BP)-v) Sodium bicarbonate 30%;</b>	By-product	Non-EC	144- 55-8	Chemical	77	478	554.7
<b>4 (BP)-vi) Calcium chloride 30%;</b>	By-product	Non-EC	1004 3-52- 4	Chemical	0	1733	173.2.6
<b>4 (BP)-vii) Calcium fluoride;</b>	By-product	Non-EC	7782 -41-4	Chemical	0	65	65.3
<b>4 (BP)-viii) Hydrogen bromide 30%;</b>	By-product	Non-EC	1003 5-10- 6	Chemical	0	1362	136.1.6
<b>4 (BP)-ix) Benzotrifluoride (BTF);</b>	By-product	5f	98- 08-8	Chemical	0	52	52.4
<b>4 (BP)-x) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647 -01-0	Chemical	0	930	930.1

<b>4 (BP)-xi) Magnesium sulfate;</b>	By-product	Non-EC	7487-88-9	Chemical	0	549	549.0
<b>4 (BP)-xii) Methanol;</b>	By-product	5f	67-56-1	Chemical	12	68	80.0
<b>4 (BP)-xiii) Succinimide;</b>	By-product	5f	123-56-8	Chemical	0	166	166.2
<b>4 (BP)-xiv) Bromine;</b>	By-product	Non-EC	7726-95-6	Chemical	0	223.6	223.6
<b>5A) Diflubenzuron;</b>	Product	5b	35367-38-5	Insecticide	8	1442	1450
<b>5A-i) 2,6-Difluorobenzamide (2,6-DFBA);</b>	Intermediate	5f	18063-03-1	Used as Insecticide intermediates and also in other chemical industries			
<b>5B) Cartap Hydrochloride;</b>	Product	5b	15263-52-2	Insecticide	50	1400	
<b>5B-i) N,N-Dimethyl allyl amine;</b>	Intermediate	5f	2155-94-4	Used as Insecticide intermediates and also in other chemical industries			
<b>5B-ii) 2,3-Dichloro-N,N-Dimethyl propyl amine hydrochloride (DCDMPA.HCl);</b>	Intermediate	5f	50786-84-1	Used as Insecticide intermediates and also in other chemical industries			
<b>5B-iii) 2-N,N-dimethylanino-1-Sodium-3-thiosulphate propane (Monosultap);</b>	Intermediate	5b	29547-00-0				
<b>5C) Acetamiprid;</b>	Product	5b	135410-20-7	Insecticide	9	1441	
<b>5C-i) Dry HCl gas;</b>	Intermediate	Non-EC	7647-01-0	Used as Insecticide intermediates and also in other chemical industries			
<b>5C-ii) Methyl-N-Cyano acetamide (NCMA);</b>	Intermediate	5f	5652-84-6	Used as Insecticide intermediates and also in other chemical industries			
<b>5C-iii) 2-Chloro-5(Methylaminomethyl)Pyridine (CMPMA);</b>	Intermediate	5f	120739-62-0	Used as Insecticide intermediates and also in other chemical industries			
<b>5D) Pyriproxyfen;</b>	Product	5b	95737-68-1	Insecticide	8	1442	
<b>5E) Diafenthiuron;</b>	Product	5b	80060-09-9	Insecticide	150	1300	
<b>5E-i) 1-(2,6-Disisopropyl-4-Phenoxyphenyl) (Thiourea);</b>	Intermediate	5f	135252-10-7	Used as Insecticide intermediates and also in other chemical industries			
<b>5E-ii) 4-phenoxy-2,6-diisopropylaniline isothiocyanate;</b>	Intermediate	5f	80058-93-1	Used as Insecticide intermediates and also in other chemical industries			
<b>5E-iii) 2,6-Difluorobenzamide (2,6-DFBA);</b>	Intermediate	5f	18063-03-1	Used as Insecticide intermediates and also in other chemical industries			

<b>5F) Imidacloprid;</b>	Product	5b	1382 61- 41-3	Insecticide	0	1450
<b>5F-i) Nitro Guanidine;</b>	Intermediate	5f	556- 88-7	Used as Insecticide intermediates and also in other chemical industries		
<b>5F-ii) N-(Nitro- imono) imidazolidine (NIIMDA);</b>	Intermediate	5f	5465 -96-3			
<b>5F-iii) 2-Chloro-5-Methyl Pyridine (CMP);</b>	Intermediate	5f	1836 8-64- 4			
<b>5F-d) 2-Chloro-5-chloromethyl pyridine (CCMP);</b>	Intermediate	5f	7025 8-18- 3			
<b>5G) Clothianidin;</b>	Product	5b	2108 80- 92-5	Insecticide	0	1450
<b>5G-i) 2,3 Dichloropropene (2,3-DCP);</b>	Intermediate	5f	78- 88-6	Used as Insecticide intermediates and also in other chemical industries		
<b>5G-ii) 2-Chloroallyl isothiocyanate;</b>	Intermediate	5f	1421 4-31- 4			
<b>5G-iii) 2-Chloro-5-chloromethylthiazole (CCMT);</b>	Intermediate	5f	1058 27- 91-6			
<b>5G-iv) Nitro guanidine;</b>	Intermediate	5f	556- 88-7			
<b>5G-v) N-methyl-N'-nitro guanidine;</b>	Intermediate	5f	4245 -76-5			
<b>5G-vi) 1,5-dimethyl-2-nitroimino-hexahydro-1,3,5-triazine (DMNITCH);</b>	Intermediate	5f	1365 16- 16-0			
<b>5G-vii) 1-(2-chloro-5-thiazolylmethyl)-3,5-dimethyl-2-nitroimino-hexahydro-1,3,5-triazine (DMNITCH + CCMT);</b>	Intermediate	5f	NA			
<b>5H) Ethiprole Route1 or ;</b>	Product	5b	1215 87- 01-9	Insecticide	0	1450
<b>5H-i) Diethyl disulfide;</b>	Intermediate	5f	110- 81-6	Used as Insecticide intermediates and also in other chemical industries		
<b>5H-ii) Ethyl thiopyrazole;</b>	Intermediate	5f	1200 68- 56-6			
<b>5I) Ethiprole Route2 Or;</b>	Product	5b	1215 87- 01-9	Insecticide	0	1450
<b>5I-i) Diethyl disulfide;</b>	Intermediate	5f	110- 81-6	Used as Insecticide intermediates and also in other chemical industries		
<b>5I-ii) Ethyl thiopyrazole;</b>	Intermediate	5f	1200 68- 56-6			

<b>5J) Ethiprole Route3;</b>	Product	5b	1215 87- 01-9	Insecticide	0	1450	
<b>5J-i) APR Disulphide;</b>	Intermediate	5f	1307 55- 46-3	Used as Insecticide intermediates and also in other chemical industries			
<b>5J-ii) Ethyl thiopyrazole;</b>	Intermediate	5f	1200 68- 56-6				
<b>5 (BP)-i) Methyl chloride;</b>	By-product	5f	74- 87-3		Chemical	22.5	630.0
<b>5 (BP)-ii) Bisultap;</b>	By-product	5f	5220 7-48- 4	Chemical	42.6	1193.7	1236.3
<b>5 (BP)-iii) Methanol;</b>	By-product	5f	67- 56-1	Chemical	1.4	218.9	220.3
<b>5 (BP)-iv) Hydrogen bromide;</b>	By-product	Non-EC	1003 5-10- 6	Chemical	43.4	376.2	419.6
<b>5 (BP)-v) Potassium bromide;</b>	By-product	Non-EC	2/3/7 758	Chemical	59.3	514.1	573.4
<b>5 (BP)-vi) Ammonium Sulphate ;</b>	By-product	Non-EC	7783 -20-2	Chemical	0.0	997.6	997.6
<b>5 (BP)-vii) Dimethyl amine solution 40 %;</b>	By-product	5f	124- 40-3	Chemical	0.0	1033.5	1033.5
<b>5 (BP)-viii) Benzyl Chloride;</b>	By-product	5f	100- 44-7	Chemical	0.0	929.6	929.6
<b>5 (BP)-ix) Phosphoric Acid (H3PO4) ;</b>	By-product	Non-EC	7664 -38-2	Chemical	0.0	898.8	898.8
<b>5 (BP)-x) Acetic Acid;</b>	By-product	5f	64- 19-7	Chemical	0.0	550.9	550.9
<b>5 (BP)-xi) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647 -01-0	Chemical	0.0	4060.9	4060.9
<b>5 (BP)-xii) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446 -09- 5	Chemical	0.0	833.1	833.1
<b>5 (BP)-xiii) Ammonium hydroxide 20%;</b>	By-product	Non-EC	1336 -21-6	Chemical	0.0	666.3	666.3
<b>5 (BP)-xiv) Potassium chloride 25%;</b>	By-product	Non-EC	7447 -40-7	Chemical	0.0	9705.3	9705.3
<b>5 (BP)-xv) N,N-bis (dichloromethyl) methyl amine;</b>	By-product	5f	6634 8-28- 5	Chemical	0.0	742.4	742.4
<b>5 (BP)-xvi) Bromine;</b>	By-product	Non-EC	7726 -95-6	Chemical	0.0	323.4	323.4
<b>5 (BP)-xvii) Ethiprole sulfone;</b>	By-product	5f	1200 68- 68-0	Chemical	0.0	39.2	39.2
<b>6A1) Chlorantranilprole Route1;</b>	Product	5b	5000 08- 45-7	Insecticide	0	1000	1000
<b>6A1-i) 2,3-Dichloropyridine (DCP);</b>	Intermediate	5f	2402 -77-9	Used as Insecticide intermediates and also in other chemical industries			
<b>6A1-ii) 3-Chloro-2-</b>	Intermediate	5f	2284 1-92- 5				

hydrazinopyridin e (CHP);					
6A1-iii) Ethyl 2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPy);	Intermediate	5b	5000 11- 88-1		
6A1-iv) Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-4,5-dihydro-1H-pyrazole-5-carboxylate (DHBrPy);	Intermediate	5b	5000 11- 91-6		
6A1-v) Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BrPy);	Intermediate	5b	5000 11- 92-7		
6A1-vi) 3-Bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Intermediate-B);	Intermediate	5b	5000 11- 86-9		
6A1-vii) 2-Hydroxyimino-N-o-tolyl-acetamide (Isonitroso);	Intermediate	5b	1132 -03-2		
6A1-viii) 7-Methylisatin /7-Methylindole-2,3-dione;	Intermediate	5f	1127 -59-9		
6A1-ix) 5-Chloro-7-methylisatin/5-Chloro-7-methylindole-2,3-dione;	Intermediate	5b	1438 9-06- 1		
6A1-x) 6-Chloro-8-methylisatoic anhydride/6-chloro-8-methyl-1H-benzo[d][1,3]oxazine-2,4-dione;	Intermediate	5f	1203 74- 68-7		
6A2) Chlorantranilpro le Route2;	Product	5b	5000 08- 45-7	Insecticide	
6A2-i) 3-Chloro-2-hydrazinopyridin e (CHP);	Intermediate	5f	2284 1-92- 5	Used as Insecticide intermediates and also in other chemical industries	
6A2-ii) Ethyl 2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPy);	Intermediate	5b	5000 11- 88-1		
6A2-iii) Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-4,5-	Intermediate	5b	5000 11- 91-6		

<b>dihydro-1H-pyrazole-5-carboxylate (DHBrPy);</b>							
<b>6A2-iv) Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BrPy);</b>	Intermediate	5b	5000 11- 92-7				
<b>6A2-v) 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Inter-B);</b>	Intermediate	5b	5000 11- 86-9				
<b>6A2-vi) Isonitroso;</b>	Intermediate	5b	1132 -03-2				
<b>6A2-vii) 7-Methylisatin;</b>	Intermediate	5b	1127 -59-9				
<b>6A2-viii) 5-Chloro-7-methylisatin (5-Chloro-7-methylindole-2,3-dione);</b>	Intermediate	5b	1438 9-06- 1				
<b>6A2-ix) 2-Amino-5-chloro-3-methylbenzoic acid (ACMBA);</b>	Intermediate	5b	2077 6-67- 4				
<b>6B) Fipronil;</b>	Product	5b	1200 68- 37-3	Insecticide	144	856	
<b>6B-i) Trichloro methyl sulfonyl chloride;</b>	Intermediate	5f	594- 42-3	Used as Fungicide intermediates and also in other chemical industries			
<b>6B-ii) Thiophosgene;</b>	Intermediate	5f	463- 71-8				
<b>6B-iii) Ortho-Chloro benzyl trifluoromethyl sulfide (OCBTMS);</b>	Intermediate	5f	2519 26- 48-4				
<b>6B-iv) Trifluoromethyl sulfonyl chloride (CF<sub>3</sub>SOCl);</b>	Intermediate	5f	2062 1-29- 8				
<b>6B-v) Aminopyrazole;</b>	Intermediate	5f	1200 68- 79-3				
<b>6C) Cyantraniliprole;</b>	Product	5b	7369 94- 63-1	Insecticide	0	1000	
<b>6C-i) Diisopropyl maleate;</b>	Intermediate	5f	108- 31-6	Used as Insecticide intermediates and also in other chemical industries			
<b>6C-ii) 3-Chloro-2-hydrazinopyridine (CHPy);</b>	Intermediate	5f	2284 1-92- 5				
<b>6C-iii) Isopropyl 2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPE);</b>	Intermediate	5f	1055 071- 81-2				

<b>6C-iv) Preparation of Isopropyl 3-bromo-1-(3-chloro-2-pyridinyl)-4,5-dihydro-1H-pyrazole-5-carboxylate (DHBrPy);</b>	Intermediate	5f	1055 072- 00-8				
<b>6C-v) Isopropyl 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BPE);</b>	Intermediate	5f	1045 077- 27-7				
<b>6C-vi) Preparation of 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Inter-B);</b>	Intermediate	5f	5000 11- 86-9				
<b>6C-vii) 8-Methylisatoic anhydride;</b>	Intermediate	5f	6617 6-17- 8				
<b>6C-viii) 2-Amino-N,3-dimethylbenzamide (ADMBz);</b>	Intermediate	5f	8709 97- 57-2				
<b>6C-ix) 2-Amino-5-bromo-N,3-dimethylbenzamide (ABDMBz);</b>	Intermediate	5f	8907 07- 30-9				
<b>6C-x) 2-Amino-5-cyano-N,3-dimethylbenzamide (ACnDMBz) Int-A;</b>	Intermediate	5f	8907 07- 29-6				
<b>6D) Tetrachlorantraniliprole;</b>	Product	5b	1104 384- 14-6	Insecticide	0	1000	
<b>6 (BP)-i) Sodium carbonate;</b>	By-product	Non-EC	497- 19-8	Chemical	0	8275. 0	827 5.0
<b>6 (BP)-ii) Potassium bisulfate;</b>	By-product	Non-EC	7773 -03-7	Chemical	0	782.6	782. 6
<b>6 (BP)-iii) Ethanol ;</b>	By-product	5f	64- 17-5	Chemical	0	489.4	489. 4
<b>6 (BP)-iv) Ammonium Sulphate;</b>	By-product	Non-EC	7783 -20-2	Chemical	0	777.4	777. 4
<b>6 (BP)-v) Bromine;</b>	By-product	Non-EC	7726 -95-6	Chemical	0	848.2	848. 2
<b>6 (BP)-vi) Hydrochloric acid;</b>	By-product	Non-EC	7647 -01-0	Chemical	0	3085. 0	308 5.0
<b>6 (BP)-vii) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446 -09- 5	Chemical	0	1623. 0	162 3.0
<b>6 (BP)-viii) Iso propyl alcohol;</b>	By-product	5f	67- 63-0	Chemical	0	154.0	154. 0



<b>6 (BP)-ix) Phosphoric acid;</b>	By-product	Non-EC	7664-38-2	Chemical	0	110.3	110.3
<b>6 (BP)-x) Methane sulfonyl chloride;</b>	By-product	5f	124-63-0	Chemical	0	445.3	445.3
<b>7) Alphamethrin;</b>	Product	5b	67375-30-80	Pyrethroid	500	0	500
<b>7A-i) Tetrachloro Butyronitrile (TBN);</b>	Intermediate	5f	41797-95-9	Used as Pyrethroid intermediates and also in other chemical industries			
<b>7B-ii) Tetrachloro Butyric Acid (TBA);</b>	Intermediate	5f	4387-77-3				
<b>7C-iii) Tetrachloro Butyric Acid Chloride (TBAC);</b>	Intermediate	5f	68121-36-8				
<b>7D-iv) 2 Chlorobutanone (2-CB);</b>	Intermediate	5f	68697-08-5				
<b>7E-v) Cypermethric Acid (CMA);</b>	Intermediate	5b	59042-49-8				
<b>7F-vi) Cypermethric Acid Chloride (CMAC);</b>	Intermediate	5b	52314-67-7				
<b>7G-vii) Cypermethrin;</b>	Intermediate	5b	52315-07-8				
<b>7 (BP)-i) Ammonium chloride 11%;</b>	By-product	Non-EC	12125-02-9	Chemical	1808	0	1808
<b>7 (BP)-ii) Sodium bisulfite 30%;</b>	By-product	Non-EC	7631-90-5	Chemical	890	0	890
<b>7 (BP)-iii) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446-09-5	Chemical	165	0	165
<b>7 (BP)-iv) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647-01-0	Chemical	718	0	718
<b>8A) Deltamethrin;</b>	Product	5b	52918-63-5	Pyrethroid	50	4950	5000
<b>8B) Lambda Cyhalothrin;</b>	Product	5b	91465-08-6	Pyrethroid	24	4976	
<b>8B-i) 3-(2 Chloro 3 Trifluoro Propenyl -2, 2-Dimethyl Cyclopropane Carbonyl Chloride (CHAC);</b>	Intermediate	5b	393870-46-7	Used as Insecticide intermediates and also in other chemical industries			
<b>8C) Cypermethrin;</b>	Product	5b	52315-07-8	Pyrethroid	2450	2550	
<b>8C-i) Tetrachloro Butyronitrile (TBN);</b>	Intermediate	5f	41797-95-9	Used as Insecticide intermediates and also in other			
<b>8C-ii) Tetrachloro Butyric Acid (TBA);</b>	Intermediate	5f	4387-77-3				

<b>8C-iii) Tetrachloro Butyric Acid Chloride (TBAC);</b>	Intermediate	5f	6812 1-36- 8	chemical industries		
<b>8C-iv) 2 Chlorobutanone (2-CB);</b>	Intermediate	5f	6869 7-08- 5			
<b>8C-v) Cypermethric Acid (CMA);</b>	Intermediate	5b	5904 2-49- 8			
<b>8C-vi) Cypermethric Acid Chloride (CMAC);</b>	Intermediate	5b	5231 4-67- 7			
<b>8D) Permethrin;</b>	Product	5b	5264 5-53- 1	Pyrethroid	50	4950
<b>8D-i) Tetrachloro Butyronitrile (TBN);</b>	Intermediate	5f	4179 7-95- 9	Used as Insecticide intermediates and also in other chemical industries		
<b>8D-ii) Tetrachloro Butyric Acid (TBA);</b>	Intermediate	5f	4387 -77-3			
<b>8D-iii) Tetrachloro Butyric Acid Chloride (TBAC);</b>	Intermediate	5f	6812 1-36- 8			
<b>8D-iv) 2 Chlorobutanone (2-CB);</b>	Intermediate	5f	6869 7-08- 5			
<b>8D-v) Cypermethric Acid (CMA);</b>	Intermediate	5b	5904 2-49- 8			
<b>8D-vi) Cypermethric Acid Chloride (CMAC);</b>	Intermediate	5b	5231 4-67- 7			
<b>8E) Cypermethric Acid Chloride (CMAC);</b>	Product	5b	Cis: 6853 9-75- 3 Tran s: 6191 4-47- 4	Pesticide Intermediate and also in other chemical industries	2000	3000
<b>8E-i) Tetra Chloro Butyro Nitrile;</b>	Intermediate	5f	4179 7-95- 9			
<b>8E-ii) Tetra chloro Butyric Acid;</b>	Intermediate	5f	4387 -77-3			
<b>8E-iii) Tetra chloro Butyric Acid;</b>	Intermediate	5f	6812 1-36- 8			
<b>8E-iv) 2-Chloro Butanone;</b>	Intermediate	5f	6869 7-08- 5			
<b>8E-v) Cypermethric Acid;</b>	Intermediate	5b	5904 2-49- 8			
<b>8F) Cypermethric Acid (CMA);</b>	Product	5b	Cis: 5904 2-49- 8	Pesticide Intermediate and also in other	100	4900

			Trans: 5904 2-50- 1	chemical industries			
<b>8F-i) Tetra Chloro Butyro Nitrile;</b>	Intermediate	5b	4179 7-95- 9				
<b>8F-ii) Tetra chloro Butyric Acid;</b>	Intermediate	5b	4387 -77-3				
<b>8F-iii) Tetra chloro Butyric Acid Chloride;</b>	Intermediate	5b	6812 1-36- 8				
<b>8F-iv) 2-Chloro Butanone;</b>	Intermediate	5b	6869 7-08- 5				
<b>8 (BP)-i) Ammonium chloride 11%;</b>	By-product	Non-EC	1212 5-02- 9	Chemical	1470 0.0	6299. 0	209 99.0
<b>8 (BP)-ii) Sodium bisulfite 30%;</b>	By-product	Non-EC	7631 -90-5	Chemical	7148 .4	3180. 2	103 28.6
<b>8 (BP)-iii) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446 -09- 5	Chemical	1328 .5	585.4	191 4.0
<b>8 (BP)-iv) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647 -01-0	Chemical	5786 .2	2551. 1	833 7.3
<b>9) Mepiquat Chloride;</b>	Product	5b	2430 7-26- 4	Growth Regulator	15	135	150
<b>10A) Rafoxanide;</b>	Product	5f	2266 2-39- 1	Veterinary drug	12	88	100
<b>10A-i) ICL;</b>	Intermediate	5b	NA	Intermediate and also in other chemical industries			
<b>10A-ii) DISA;</b>	Intermediate	5b	NA				
<b>10A-iii) NE;</b>	Intermediate	5b	NA				
<b>10A-iv) AE;</b>	Intermediate	5b	NA				
<b>10B) Oxyclozanide;</b>	Product	5f	2277 -92-1	Veterinary drug (Flukicide)	60	40	
<b>10B-i) Oxy (C);</b>	Intermediate	5f	NA	Intermediate and also in other chemical industries			
<b>10B-ii) Oxy (S/D);</b>	Intermediate	5f	NA				
<b>10 (BP)-i) Phosphorous acid;</b>	By-product	Non-EC	1359 8-36- 2	Chemical	0.5	3.9	4.4
<b>10 (BP)-ii) Potassium Chloride;</b>	By-product	Non-EC	7447 -40-7	Chemical	1.4	10.5	11.9
<b>11) Phase Transfer Catalyst (PTC);</b>	Product	5f	6339 3-96- 4	Chemical	37	213	250
<b>12A) Poly Ether Imide (PEI) &amp; its monomer &amp; Polymer;</b>	Product	5f	6112 8-46- 9	Polymer & intermediate	14	186	200
<b>12B) Poly Ether Ketone - PEKK &amp; its monomer &amp; Polymer;</b>	Product	5f	7497 0-25- 5	Polymer & intermediate	14	186	

<b>12C) Poly Ether Ketone - PEK &amp; its monomer &amp; Polymer;</b>	Product	5f	2738 0-27-4	Polymer & intermediate	14	186	
<b>12C-i) PCBC;</b>	Intermediate	5f	104 83 6				
<b>12C-ii) PCHB;</b>	Intermediate	5f	4201 9-78-3				
<b>12D) Chloro Hydroxy Benzo Phenone (CHBP);</b>	Product	5f	4201 9-78-3	Polymer & intermediate	14	186	
<b>12E) DPSO2;</b>	Product	5f	NA	Polymer & intermediate	25	175	
<b>12F) ABPBI;</b>	Product	5f	2592 8-81-8	Polymer & intermediate	22	178	
<b>12 (BP)-i) Aluminium chloride 28%;</b>	By-product	Non-EC	7446 -70-0	Chemical	135.4	952.0	1087
<b>12 (BP)-ii) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647 -01-0	Chemical	108.0	819.6	928
<b>12 (BP)-iii) Sodium bisulfite;</b>	By-product	Non-EC	7631 -90-5	Chemical	124.1	1004	1128
<b>13) Pigment Red;</b>	Product	5f	8463 2-65-5 / 0000 980-26-7	Pigment	25	0	25
<b>13-i) DTBS;</b>	Intermediate	5f	926- 26-1	Pigment intermediate			
<b>13 (BP)-i) Tert Butanol ;</b>	By-product	5f	75- 65-0	Chemical	10.4	0.0	10.4
<b>13 (BP)-ii) Sodium acetate;</b>	By-product	5f	127- 09-3	Chemical	24.1	0.0	24.1
<b>14) Vanillin;</b>	Product	5f	121- 33-5	Chemical intermediate for Food/Perfume/P harmaceutical	130	-130	0
<b>14 (BP)-i) Sodium bromide;</b>	By-product	Non-EC	7647 -15-6	Chemical	225	-225	0
<b>15A) 3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL);</b>	Product	5f	3743 9-34-2	Synthetic Organic Chemical intermediates	0	500	500
<b>15B) R,R-Sodium salt of Cypermethric Acid (Na-CMA);</b>	Product	5b	1282 41-41-8				
<b>15C) RR Cypermethric Acid (RRCMA);</b>	Product	5b	5566 7-40-8				
<b>15D) 2,3 Dichloro Aniline (DCA);</b>	Product	5f	608- 27-5				
<b>15E) 2,5-Dichlorophenol (DCP);</b>	Product	5f	[583- 78-8]				
<b>15F) Aminopyrazole (APR);</b>	Product	5f	1200 68-79-3				

<b>15G) 5-Chloro Indanone (5-CI);</b>	Product	5f	[423 48- 86-7]				
<b>15H) 5-Chloro Indanone Ester (5-CIE);</b>	Product	5f	[657 38- 56-9]				
<b>15 (BP)-i) Ammonium chloride (11%);</b>	By-product	Non-EC	1212 5-02- 9	Chemical	<b>0</b>	1887. 60	188 7.60
<b>15 (BP)-ii) Sodium bisulfite;</b>	By-product	Non-EC	7631 -90-5	Chemical	<b>0</b>	546.9 7	546. 97
<b>15 (BP)-iii) SSCMAC;</b>	By-product	5b	1282 41- 41-8	Chemical	<b>0</b>	594.7 5	594. 75
<b>15 (BP)-iv) Hydrochloric acid 30%;</b>	By-product	Non-EC	7647 -01-0	Chemical	<b>0</b>	3713. 60	371 3.60
<b>15 (BP)-v) Para dichloro benzene;</b>	By-product	5f	[106- 46-7]	Chemical	<b>0</b>	1649. 10	164 9.10
<b>15 (BP)-vi) Meta dichloro benzene;</b>	By-product	5f	541- 73-1	Chemical	<b>0</b>	19.79	19.7 9
<b>15 (BP)-vii) Trichloro benzene;</b>	By-product	5f	[120- 82-1] / [87- 61-6] / [108- 70-3]	Chemical	<b>0</b>	21.44	21.4 4
<b>15 (BP)-viii) 2,5 Dichloro nitro benzene;</b>	By-product	5f	[89- 61-2]	Chemical	<b>0</b>	81.80	81.8 0
<b>15 (BP)-ix) Ortho dichlorobenzene;</b>	By-product	5f	[95- 50-1]	Chemical	<b>0</b>	164.3 4	164. 34
<b>15 (BP)-x) Sulfur dioxide gas (compressed);</b>	By-product	Non-EC	7446 -09- 5	Chemical	<b>0.0</b>	442.5 0	442. 5
<b>15 (BP)-xi) Aluminium chloride 20%;</b>	By-product	Non-EC	7446 -70-0	Chemical	<b>0</b>	9272. 50	927 2.5
<b>15 (BP)-xii) Methanol;</b>	By-product	5f	67- 56-1	Chemical	<b>0</b>	147.0 0	147
<b>16) Products from R &amp; D Activities;</b>	Product	5b & 5f	--	Agrochemicals, basic chemical intermediates	<b>0</b>	500	500
<b>17) Hand Sanitizer;</b>	Product	Non-EC	NA	Chemical	100	0	100
<b>18) Sodium Hypochlorite 5% solution (as Disinfectant);</b>	Product	Non-EC	1002 2-70- 5	Chemical	500	0	500
<b>19) Pesticide Liquid &amp; Solid Formulations - Formulations from own technical products or by procuring technical products from outside;</b>	Product	Non-EC	-	-	3000	5,000	8,00 0