सत्यमेव जयते

File No: J-11011/09/2016-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Date **02/01/2024**

To,

GHARDA CHEMICALS LIMITED
Plot B-1/6, B-1/7, D-1/2, OS-8 & F-1/1 MIDC, Lote Parshuram, Taluka Khed, District Ratnagiri, Maharashtra-415722
neeraj.garg@gharda.com

Subject: **Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their Intermediates Manufacturing Plant Capacity, Captive Co-generation Power Plant (CPP) and Installation of Chlor-alkali manufacturing plant up to the production capacity of 89190.0 TPA for Products & Intermediates, 27480.0 TPA for Non-EC products (Pesticide Formulations) & 900439.2 TPA for Byproducts/Co-products, 28000 TPA for Inorganic products, CPP- 4.0 MW to 11 MW and WHRS 2.4MW to 6.4 MW located at Plot Nos. B-1/6, B-1/7, D-1/2, OS-8 & F-1/1 MIDC, Lote Parshuram, Taluka Khed, District Ratnagiri, 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/IND3/434383/2023 dated 18/08/2023 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.	EC23A2001MH5257632N
(ii) File No.	J-11011/09/2016-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 ,1(d) Thermal Power Plants,4(d) Chlor-alkali industry,1(d) Thermal Power Plants
(vi) Sector	Industrial Projects - 3
(vii) Name of Project	Expansion of Agrochemicals, Synthetic Organic

	Chemicals & their Intermediates manufacturing plant and Captive Co-generation Power Plant and installation of Chlor-alkali manufacturing plant by Gharda Chemicals Limited
(viii) Name of Company/Organization	GHARDA CHEMICALS LIMITED
(ix) Location of Project (District, State)	RATNAGIRI, MAHARASHTRA
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. The proposal is for the Environmental Clearance to the project for Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their Intermediates Manufacturing Plant Capacity, Captive Co-generation Power Plant and Installation of Chlor-alkali manufacturing plant upto the production capacity of 89190.0 TPA for Products & Intermediates, 27480.0 TPA for Non-EC products (Pesticide Formulations) & 900439.2 TPA for Byproducts/Co-products, 28000 TPA for Inorganic products, CPP- 4.0 MW to 11 MW and WHRS 2.4MW to 6.4 MW located at Plot Nos. B-1/6, B-1/7, D-1/2, OS-8 & F-1/1 MIDC, Lote Parshuram, Taluka Khed, District Ratnagiri, Maharashtra by M/s Gharda Chemicals Limited

4. The project/activity is covered under Category 'A' of Item 5(f), Synthetic Organic Chemicals & their intermediates manufacturing plant and Pesticides industry and pesticide specific intermediates (excluding formulations) (Unit 1 & 4) which are listed under Activity 5(f) and 5(b), Captive Cogeneration Power Plant (Unit 3) listed under activity 1(d) and Chlor-alkali manufacturing plant listed under activity 4(d). The project falls under Category 'A' as any project falling under activity 5(b) is considered under Category 'A' only as per the EIA Notification 2006 and its subsequent amendments. As the product include pesticide specific intermediates (excluding formulations) products. The project requires to appraise at the Central Level in the Ministry.

5. The Standard ToR was issued by the Ministry, vide letter no J-11011/09/2016-IA-II(I) dated 3rd June, 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 63rd EAC meeting on 31st August, 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 201935 sq.m and after expansion will be increased to be 220640.97 sq.m that will be used for proposed expansion. The details of products to be manufactured are attached at **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 Agrochemicals, Synthetic Organic Chemicals & their Intermediates manufacturing plant (Unit 1 & 4) has capacity 32487.8 TPA for Products & Intermediates, 15480.0 TPA for Non-EC products (Pesticide formulations) & 147410.9 TPA for Byproducts/Co-products which after expansion shall be increased to 89190.0 TPA, 27480.0 TPA & 9,00,439.2 TPA respectively, this unit also has CTE for manufacturing of Inorganic Chemicals of capacity 28000 TPA granted and the same will remain after expansion. Co-gen Power plant (Unit 3) has capacity 4 MW for coal based fuel which shall be increased to 11 MW for coal based fuel, existing capacity of 2.4 MW based on waste heat recovery will increase to 6.4 MW after expansion and N_2 & CO_2 gas recovery of 55468.8 TPA and 15120 TPA respectively will remain the same after expansion. A new manufacturing plant for Chlor-alkali products (Unit 7) will be installed after expansion for a capacity of 18000 TPA and CTE is granted for

manufacturing inorganic chemicals & purification of chemicals for 23600 TPA for Unit 7. The latest CTO for **Unit 1 and 4** vide letter no. Format 1.0/CAC/UAN No. 0000092566/ CR- 2009000532 dated 09.09.2020 valid upto 31.07.2025 has been granted. The latest CTO for **Unit 3** vide letter no. Format 1.0/CC/UAN No. 0000114907/CO-2108000721 dated 11.08.2021 valid upto 31.12.2023 was granted. This unit also has CTE for manufacturing of Inorganic Chemicals granted vide letter No. Format 1.0/CAC/UAN No.0000080212/ CE-2008000936 dated 26.08.2020 and valid up to 25.08.2025. The CTE for **Unit 7** vide letter no. Format 1.0/RO/UAN No. 0000162062/CE/2303000540 dated 08.03.2023 valid upto 07.03.2028 was granted for manufacturing inorganic chemicals & purification of chemicals.

9. The PP reported that the Certified Compliance report for latest CTO (Format 1.0/CAC/UAN No.0000092566/CR-2009000532 dated 09.09.2020 valid up to 31/07/2025) has been obtained from MPCB vide letter no. MPCB/SRO/CH/263/23 dated 22.05.2023 for unit 1 & 4 in which all the CTO conditions have been complied. Certified Compliance report for latest CTO (Format 1.0/CC/UAN No. 0000114907/CO-2108000721 dated 11.08.2021 valid up to 31.12.2023) has been obtained by MPCB vide letter no. MPCB/SRO/CH/264/23 dated 22.05.2023 for Unit 3 in which all the CTO conditions have been complied.

10. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Lavel dam (2.21 km NNE) and Vashishti River (4.5 km SW). 8 Schedule I species found- Monitor Lizard, Indian Python, Peacock, Himalayan Brown Bear, Ran Dukkar, Panther, Marsh Crocodile and Sloth Bear were observed in the 10 km radius from the proposed project for which conservation plan has been prepared and approved by the Chief Conservator of Forest dated 14.8.2023.

11. The PP reported that **the Ambient air quality** monitoring was carried out at 8 locations during Dec 21 to Feb 2022 to and the baseline data indicates the ranges of concentrations as: PM_{10} (53.93-92.99 **µ**g/m^3), $PM_{2.5}$ (19.85- 36.85 **µ**g/m^3), SO_2 (9.02-17.10 **µ**g/m^3) and NO_2 (16.42- 33.05 **µ**g/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.72 **µ**g/m^3, 2.64 **µ**g/m^3, 5.66 **µ**g/m^3 and 2.87 **µ**g/m^3 with respect to $PM_{2.5}$, PM_{10}, NO_2 and SO_x respectively. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Annual air results (104 measurement)- The mean value of PM10 at core zone locations ranges from (57.7-57.9 **µ**g/m3) & PM2.5 ranges from (26.5- 27.2 **µ**g/m3), SO2 ranges from (24.5-24.9 **µ**g/m3), NO2 ranges from (33.2 - 34 µg/m3), CO (0.91- 0.92 mg/m3) & Ammonia, Benzene, Ozone, Benzopyrenes, Arsenic, Nickel and lead are BDL. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise Level Monitoring** was carried out at 10 locations and the results showed that core zone Leq values ranged from 68.8 dB(A) to 69.3 dB(A) for the day time and 65.1 dB(A) to 67.2 dB(A) for the Night time. Whereas, Buffer Zone: Leq values ranged from 56.3 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. In the buffer zone, residential and commercial areas in the buffer zone noise level is slightly higher than the limit due to residential activity and vehicular activity. **Ground Water Quality** Monitoring was carried out at 8 locations; Core Zone and buffer zone data shows that all the parameters (Color, Odour, Turbidity, pH Value, Temperature, Conductivity, TDS, Chloride, Fluoride, Total Hardness, Ca, Mg, SO_4, Na, K, TSS, Alkalinity, Nitrate Nitrogen ~~are~~ were within the drinking water standards and quality showed ranges of primary characteristics as pH: 4.46-7.90, Total Hardness: 28-80 mg/l, Chlorides: 15-32 mg/l, TDS: 48-124 mg/l. Surface Water Quality Monitoring was carried out at 5 locations in Buffer Zone: pH: 6.5-7.9 ; DO: 4.8-5.4 mg/l and BOD: 4.3-5.7 mg/l, COD: 24-48 mg/l. The Surface water quality of the surface water

sampling locationsDrain nearby site, Lavel Dam, Vashishti River Downstream, are meeting the criteria defined by class "C" as per IS 2296/ CPCB water quality criteria for designated best use. Whereas, the Surface water quality of the surface water sampling locations, Vashishti River Upstream and Jagbudi River are meeting the criteria defined by Class "B" 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 the paramers of samples ranged from Texture- [Sand% (13.3- 76.8), Silt % (4.0-10.6), Clay % (16.0-82.6)], Organic Matter-0.37-2.27 %, Available Nitrogen (46.2- 119.0 mg/kg), Available Potassium (5.9- 27.3 mg/kg) - 15.3, Available Phosphorus (6.2-18.2 mg/kg). It is concluded that soil is low fertile in the core Zone and buffer zone.

12. The PP reported that the For Unit 1, 4 &7, the total water requirement for existing unit is 4074 KLD out of which fresh water of 2138 KLD is from MIDC, 78 KLD treated from STP, 1550 KLD recycled condensate, 63 KLD rainwater, 14 KLD recovered water from process and 231 KLD treated water from RO & MEE. After expansion, the total water requirement is 7540 KLD out of which fresh water of 3612 KLD will be sourced from MIDC, 86 KLD treated from STP, 2051 KLD recycled condensate, 63 KLD rainwater, 129 KLD recovered water from process and 1600 KLD treated water from MEE and RO. For Unit 3, the total water requirement for existing unit is 2982 KLD out of which fresh water of 2656 KLD will be sourced from MIDC, 28 KLD recycled condensate, 57 KLD rainwater and 241 KLD treated water from RO & SEE. After expansion the total water requirement is 5155 KLD out of which fresh water of 3185 KLD will be sourced from MIDC, 1416 KLD recycled condensate, 57 KLD rainwater and 497 KLD treated water from RO & SEE. For Unit 1,4 & 7 existing, total effluent generation is 1526 KLD and after expansion shall be increased to 3542 KLD. Effluent generation from scrubbing water, process High COD High TDS stream & RO reject is treated in MEE of capacity 612 KLD and after expansion shall be treated in MEE of capacity 3050 KLD. MEE concentrate is sent to ATFD in existing and the same shall be followed after expansion. MEE condensate is partially sent to ETP for further treatment partially for reuse and the same will be followed after proposed expansion. In existing unit, R&D effluent, vessel cleaning, blowdown from R & D boiler and condensate recycled from cogen boiler of unit 3, low COD low TDS stream from process, MEE condensate is treated in ETP of capacity 1200 KLD followed by discharge of 1084 KLD to CETP and after expansion shall be treated in ETP of capacity 3700 KLD followed by partial discharge of 1500 KLD to CETP & rest to be further treated in RO. In the existing unit, CT blowdown is treated in RO of capacity 1340 KLD and after expansion shall be treated along with partial ETP treated water in RO of capacity 2320 KLD. RO permeate is reused & RO reject is sent to MEE both in existing & after expansion. Domestic wastewater is treated in STP of 250 KLD both in existing & after expansion.

13. The PP reported that the For Unit 3 existing, total effluent generation is 251 KLD and after expansion shall be increased to 515 KLD. In the existing process High COD high TDS & RO Reject is treated in SEE of capacity 30 KLD and after expansion shall be treated in SEE of capacity 60 KLD. SEE concentrate is sent to the Nutsche filter & SEE condensate is reused in existing and the same shall be followed after expansion. In existing cogen boiler blowdown & CT blowdown is treated in ETP (primary treatment) of capacity 300 KLD and after expansion 504 KLD. ETP treated water is further treated in RO of 240 KLD capacity and after expansion 600 KLD capacity. RO permeate is reused & RO reject is sent to SEE both in existing & after expansion. Domestic wastewater is treated in septic tank followed by a soak pit in existing & after expansion it will be treated within STP of Unit 1 and 4

14. The connected load after expansion of 55.6 MW out of which 37.3 MW is existing and 18.3 MW proposed which will be met by Maharashtra State Electricity Transmission Company Limited (MSEDCL) & in house Cogeneration Power Plant of 4 MW based on coal & additional 2.4 MW based on waste heat recovery which after expansion will be increased to 11 MW coal based & additional 6.4 MW based on

waste heat recovery. After expansion there will be 11 DG Sets: 1510 X6 Nos. + 1250 X 5 Nos. with maximum stack height of approx. 7 m above roof level as per CPCB norms has been provided for existing and the same will be followed after expansion

15. In Existing Unit 1 & 4, an incinerator of 1.35 x 10^6 Kcal/Hr will be replaced with a new incinerator of 4.5 x 10^6 Kcal/ Hr capacity and will be installed with APCS spray cooler & venturi scrubber (alkali) with stack height of 40 m above ground level. R&D boiler & Hot oil unit with stack height of 16 m above ground level has been provided and will remain the same after expansion. Thermic fluid heater with stack height of 28.4 m above ground level has been provided and the same will remain after expansion. Existing Unit 3 has 40 & 46 TPH coal-based boilers along with Dust Collector followed by ESP and stack height of 65 m above ground level installed for controlling the particulate emissions within the statutory limit of 50 mg/Nm3. Additionally, 2 boilers of capacity 90 TPH (working and 90 TPH (standby) coal based and agro briquette (as per availability) will be installed for the proposed expansion. Dust collector followed by ESP with a stack of height of 78 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm^3. The sources of the stack, fuels, height of stack, pollution control measures with respect to their units are furnished in the **Annexure-4**.

16. Details of Process Emissions Generation and its Management are furnished in **Annexure-5.**

17. Details of Solid/Hazardous Waste Generation and its Management are furnished in **Annexure-6.**

18. The Budget earmarked towards the Environmental Management Plan (EMP) is 75565 lakhs (capital) and the Recurring Cost (operation and maintenance) will be about Rs.17138 Lakhs per annum. Industry proposes to allocate Rs.3245 Lakhs towards Corporate Social Responsibility.

19. Total green area of total 97,796.4 sqm green area (i.e. 44.3% of total plot area) will be developed after proposed expansion comprising 21.7% of total plot area inside the plot premises and 22.6 % of total plot area within MIDC. Out of 97,796.4 sqm of total green area, 57293.93 sqm (i.e. 26% of total plot area) is already developed & rest 40502.5 sqm (i.e. 18.3 % of total plot area) is balanced green area for development. Considering tree density @2,500 trees per Ha of green area, total 24,449 no. of trees (11,981 no. inside and 12,468 no. outside the plot) are required to be planted on a total green area of 44.3%. Out of 24,449 no. of trees, 8,443 no. of trees (7,448 inside and 995 outside the plot) are already planted and 16,006 no. of trees (4,533 no. of trees inside and 11,473 no. of trees outside the plot) are balanced no. of trees to achieve the desired density of trees. For balanced 16,006 no. of trees, 20,008 no. of saplings (5,666 no. of saplings inside and 14,342 no. of saplings outside the plot) are required to be planted considering 80% survival rate. Out of 20,008 no. of saplings, 16,244 no. of saplings have already been planted after the grant of TOR and 3,764 no. of saplings plantation is under process.

20. The PP reported that the as the unit lies in the notified industrial area of MIDC Lote Parshuram, Maharashtra established prior to 2006, declared by Maharashtra Govt. vide Gazette no. IDC.2173/151370IND-i-(B) dated 27.02.1974 the proposal is exempted from Public Consultation as per clause 7(i)(iii) of EIA notification 2006 (as per OM J-11011/321/2016-IA.II(I) dated 27th April 2018).

21. The PP proposed to set up an Environment Management Cell (EMC) by engaging site head- DGM EHS- Env Manager- VP EHS for the functioning of EMC.

22. The PP reported that the the During the peak operations, the total CO_2 emissions will be 3,82,559.6 MT/annum which is equivalent to 2.05 tonne CO2 eq / tonne Production. Through development of a green belt having a total area of 97796.4 m having 24449 trees, there will be natural sequestration of CO2

emissions. The Company will sequester 1,59,881.6 MT/annum eq. CO2 (41.7%) through green belt development within plant premises within every operational year. Therefore, at peak production the Residual Gate to Gate CO_2 emissions from the proposed plant will be 2,22,678 Tonne eq. CO_2 / annum which is about 1.20 tonne CO_2 eq. /tonne production

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

24. The estimated project cost after expansion is Rs.2004.05 Crores including existing investment of Rs.1535.05 Cr. and Proposed- Rs.469 Crore. Total Existing Employment is 2083 persons (Unit 1,4 &7 : 2001 and unit 3 : 82) as direct & indirect and after expansion will increase to 2216 (Unit 1,4 &7 : 2096 and unit 3 : 120).

25. 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 with the effect 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 Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

EAC deliberated on the Supporting documents of the compliance of OM dated 18.5.2023 regarding the verification of the consultant and found it to be satisfactory.

The EAC inter-alia, deliberated on the Greenbelt development plan, layout, corrective and preventive measures adopted after the recent accident, fuel, water balance and advised the PP to submit the following:

- Revised greenbelt development plan and its layout. (timeline along with number of saplings, number of rows)
- Corrective and preventive measures adopted after the recent accident along with root cause analysis.
- Action plan for use of cleaner fuel.
- Revised water balance.

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

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the implementation 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, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

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 Experts Members of the EAC found the proposal in order and recommended for the 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.

26. 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.**

27. Based on the proposal submitted by the project proponent and recommendations made by EAC in 63rd and 66th EAC meetings, Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the project "*Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their Intermediates Manufacturing Plant Capacity, Captive Co-generation Power Plant (CPP) and Installation of Chlor-alkali manufacturing plant upto the production capacity of 89190.0 TPA for Products & Intermediates, 27480.0 TPA for Non-EC products (Pesticide Formulations) & 900439.2 TPA for Byproducts/Co-products, 28000 TPA for Inorganic products, CPP- 4.0 MW to 11 MW and WHRS 2.4MW to 6.4 MW located at Plot Nos. B-1/6, B-1/7, D-1/2, OS-8 & F-1/1 MIDC, Lote Parshuram, Taluka Khed, District Ratnagiri, Maharashtra by M/s Gharda Chemicals Limited*" under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the Specific and General terms and conditions as mentioned at Annexure-1.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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 Kama 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. The District Collector, Office of District Collector-Ratnagiri, NH-204, Hatkhamba, To, Teli Aali, Rajiwada, Ratnagiri, Maharashtra 415612.
8. Guard File/Record File/Monitoring File/MoEF&CC Website.

Annexure 1

Specific EC Conditions for (Pesticides Industry And Pesticide Specific Intermediates (Excluding Formulations))

1. Specific Conditions

S. No	EC Conditions
1.1	1. The PP shall develop and maintain Greenbelt over an area of at least, 49924.7 m^2 (inside the plot + 60491.6 m^2 within MIDC by planting additional 7707 (inside and outside – 3402 inside and 4305 outside) numbe of saplings within a period of one year from the grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency

S. No	EC Conditions
	engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year. 2. A separate Environmental Management Cell (having qualified persons with Environmental 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 site head- DGM EHS- Env Manager- VP EHS. In addition to this one safety & 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&CC before 1st July of every year for the activities carried out during previous year. 3. 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 propose under EMP is Rs. 75565 lakhs (Capital cost) and 17138 Lakhs 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 & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year. 4. The total water requirement shall not exceed 7540 KLD out of which fresh water of 3612 KLD shall be sourced from MIDC, 85 KLD treated water from STP, 2051 KLD recycled condensate water, 63 KLD rainwater, 129 KLD recovered water from process and 1600 KLD treated water from MEE and RO. For Unit 3, the total water requirement for existing unit shall not exceed 2982 KLD out of which fresh water of 2656 KLD shall be sourced from MIDC, 28 KLD recycled condensate water, 57 KLD rainwater and 241 KLD treated water from RO & Single Effect Evaporator. After expansion the total water requirement is 5155 KLD out of which fresh water of 3185 KLD shall be sourced from MIDC. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year. 5. For Unit 1, 4 & 7, total wastewater generation in the existing unit is 1,526 KLD. Domestic sewage of 80 KLD is treated in STP and the treated water obtained is reused in gardening. Cooling tower blowdown of 221 KLD is treated in RO. RO reject is sent to MEE & RO Permeate of 177 KLD obtained is reused in cooling tower. A high concentration stream of 762 KLD including High COD-TDS process wastewater & scrubbing wastewater is treated in MEE. MEE condensate is partially sent to ETP for further treatment and rest for reuse in cooling towers and MEE concentrate is sent to ATFD. Low concentration stream of 463 KLD including R&D Lab effluent & Pilot plant, Low COD-TDS process wastewater, vessel cleaning effluent, pilot plant Boiler blowdown, steam condensate as effluent is treated in ETP. Treated water of 1084 KLD obtained from ETP is discharged to CETP. The existing capacity of wastewater treatment units is STP- 250 KLD, RO- 1340 KLD, MEE- 880 KLD & ETP- 1200 KLD. For Unit 1, 4 & 7, total wastewater generation after expansion will be 3,542 KLD. Domestic sewage of 90 KLD (85 from unit 1, 4 & 7 + 5 KLD from unit no. 3) will be treated in STP and the treated water obtained is reused in gardening. Cooling tower blowdown of 442 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 2154 KLD including High COD-TDS process wastewater & scrubbing wastewater will be treated in MEE. MEE condensate will be partially

S. No	EC Conditions
	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 861 KLD including R&D Lab & Pilot plant effluent, Low COD-TDS process wastewater, vessel cleaning effluent & pilot plant Boiler blowdown will be treated in ETP. Treated water of 1500 KLD obtained from ETP will be discharged to CETP & 1490 KLD will be sent to RO for further treatment. After expansion the capacity of treatment units will be STP- 250 KLD, RO- 2320 KLD, MEE- 3050 KLD & ETP- 3780 KLD. 6. For Unit 3, total wastewater generation in the existing unit is 251. Domestic wastewater of 4 KLD is currently treated in a septic tank followed by a soak pit. FGD High TDS effluent of 6 KLD is treated in Single Effect Evaporator. Single Effect Evaporator concentrate is sent to the Nutsche filter & Single Effect Evaporator condensate is reused in the Cooling Tower. Waste water of 241 KLD from Cogen boiler blowdown & Cooling Tower blowdown is treated in ETP. ETP treated water is further treated in RO & RO permeate is reused in Cooling Tower & RO reject is sent to Single Effect Evaporator. The existing capacity of wastewater treatment units is Single Effect Evaporator- 30 KLD, ETP- 300 KLD & RO- 240 KLD. For Unit 3, total wastewater generation after expansion will be 515 KLD. Domestic wastewater of 5 KLD will be treated in STP of unit 1, 4 & 7. FGD High TDS effluent of 6 KLD will be treated in Single Effect Evaporator. Single Effect Evaporator concentrate will be sent to the Nutsche filter & Single Effect Evaporator condensate is reused in the cooling tower. Waste water of 504 KLD generated from Cogen boiler blowdown & Cooling Tower blowdown will be treated in ETP. ETP treated water will be further treated in RO, RO permeate will be reused in cooling towers & RO reject will be sent to Single Effect Evaporator for further treatment. After expansion the capacity of treatment units will be Single Effect Evaporator- 60 KLD, ETP- 520 KLD & RO- 600 KLD. 7. 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. 8. As proposed, agro-briquettes shall be blended with coal upto 15% as per availability, for use as a fuel in the boilers of CPP and that natural gas shall be used as primary fuel in existing 40 TPH boiler as & when it is available and based on techno commercial viability. 9. The project proponent shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986. 10. The project proponent shall comply with the environment norms for Pesticide 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. 11. 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&CC in this regard. 12. 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. 13. 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. 14. 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.

S. No	EC Conditions
	15. 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 & employees shall be provided with required safety kits/mask for personal protection. 16. 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. 17. 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. 18. 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. 19. 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 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. 20. The MoEF&CC Notifications on Fly Ash Utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 as amended from time to time shall be complied. 21. Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO_2 emissions standard of 100 mg/Nm^3. 22. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm^3. 23. The project proponent shall prepare 100% fly ash and bottom ash utilization plan and implemented in stipulated time period. The PP shall comply with Ministry's latest Notification regarding fly ash utilization from first year of commissioning. Bottom ash shall be explored to utilized as a resource not as a waste. 24. The storage of toxic/hazardous raw material shall be bare minimum with respect to their quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.
1.2	**ANNEXURE-I** **<u>GENERAL EC CONDITIONS</u>** - • 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. • The PP 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

S. No	EC Conditions
	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. • The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment. • 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). • 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. • 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. • A copy of the clearance letter shall be sent by the PP to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. • The PP 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 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. • 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. • The PP 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 **https://parivesh.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. • 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. • 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. 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.
2. Dust collector followed by ESP alongwith common 78 m stack height shall be installed in the proposed Indonesian Coal/agro briquette fired Steam Boiler (90 TPH)(1 operational + 1 standby) to control the particulate emissions. Lime addition shall be for dry scrubbing to control SO2emissions.
3. Alkali scrubber shall be provided in processed stack to control process emissions viz Cl2, Br2, HBr, HBr, CN and H2S. Water and Alkali scrubber shall be provided in processed stack to control process emissions viz HF, SO and HCl. Water scrubber shall be provided in processed stack to control process emissions viz NH3.
4. Hazardous waste shall be managed and disposed of as per Hazardous and other waste (Management and Trans boundary) Rules 2016.
5. Fly ash shall be stored into silo with proper care and sold to cement/ RMC/ paver blocks/ building bricks manufacturer units. Fly ash shall be supplied to the other companies for land leveling, conditioning, road construction, etc after prior approval of SPCB.
6. New Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
7. 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

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>a.</td><td>Details of the Project</td><td>Expansion of Agrochemicals, Synthetic Organic Chemicals & their Intermediates manufacturing plant and Captive Co-generation Power Plant and installation of Chlor-alkali manufacturing plant by Gharda Chemicals Limited</td></tr>
<tr><td>b.</td><td>Latitude and Longitude of the project site</td><td>17.61700500144944,73.48053219734126 17.61819713068759,73.48165952707768</td></tr>
<tr><td>c.</td><td>Land Requirement (in Ha) of the project or activity</td><td>
<table>
<tr><th>Nature of Land involved</th><th>Area in Ha</th></tr>
<tr><td>Non-Forest Land (A)</td><td>20.1935</td></tr>
<tr><td>Forest Land (B)</td><td>0</td></tr>
<tr><td>Total Land (A+B)</td><td>20.1935</td></tr>
</table>
</td></tr>
<tr><td>d.</td><td>Date of Public Consultation</td><td>Public consultation for the project was held on</td></tr>
<tr><td>e.</td><td>Rehabilitation and Resettlement (R&R)</td><td>NO</td></tr>
</table>

S. No.	Particulars	Details
	involvement	
f.	Project Cost (in lacs)	200405
g.	EMP Cost (in lacs)	18405
h.	Employment Details	195840

Annexure – 3

The brief about configuration of products and by-products as submitted by the Project Proponent in form-1 (Part A, B and C)/ EIA & EMP Reports / presented during EAC are as follows:

Particulars	Unit	Existing Capacity	Proposed capacity	Total capacity
Products and intermediates (A)	**TPA**	**32,487.8**	**74702.2**	**1,07,190.0**
Products and intermediates including R &D products- 5(f) & 5(b)- A1	TPA	28,863.8	54,086.2	82,950.0
Products and intermediates- 5(f) only -A2	TPA	3,624.0	2,616.0	6,240.0
Chlor-alkali products- 4(d)- A3	TPA	0.0	18,000.0	18,000.0
Non- EC Products - B	**TPA**	**67,080.0**	**12,000.0**	**79,080.0**
Pesticide Liquid & Solid Formulations- B1	TPA	15,480.0	12,000.0	27,480.0
Inorganic Products- B2	TPA	28,000.0	0.0	28,000.0
Inorganic chemicals & purification of chemicals-B3	TPA	23,600.0	0.0	23,600.0
Byproduct/ Co-product -C	**TPA**	**1,47,410.9**	**7,53,028.3**	**9,00,439.2**
5(f) - C1	TPA	4,129.6	1,12,892.2	1,17,021.8
Non EC- C2	TPA	1,43,281.4	6,40,136.0	7,83,417.4
Captive Co-gen Power Plant (D)	**MW**			
Captive Co-generation based on coal - D1	MW	4.0	7.0	11.0
Captive Co-generation based on waste heat recovery - D2	MW	2.4	4.0	6.4
Nitrogen Gas (Recovered)- D3	TPA	55,468.8	0.0	55,468.8
Carbon Dioxide (Recovered) - D4	TPA	15,120.0	0.0	15,120.0

Product No.	Name of Product	Details	CAS No.	Activity as per EIA Notification	End Use	Existing (TPA)	Proposed (TPA)	Total (TPA)
1A	Bispyribac Sodium	Product	125401-92-5	5b	Herbicide	0	250	250
1B	Metolachlor & intermediates	Product	51218-45-2	5b	Herbicide	0	250	
1B-i	(2-Methyl-6-ethyl phenyl)-(2-Methoxy-1-methyl ethylidine) amine	Intermediate	118604-68-5	5b	Used as herbicide intermediates			
1B-ii	(2-Methyl-6-ethyl phenyl)-(2-Methoxy-1-methyl-ethyl) Amine	Intermediate	51219-00-2	5b				
1C	Metamitron	Product	41394-05-2	5b	Herbicide	25	225	
1(BP)-i	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	0	120.8	120.8
1(BP)-ii	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	753.4	753.4
1(BP)-iii	Ammonium hydroxide	Co-product	1336-21-6	Non-EC	Chemical	14.3	128.6	142.9
2A	Metazachlor & intermediates	Product	671-29-08	5b	Herbicide	11	2989	3000
2A-i	Azomethane	Intermediate	503-28-6	5f	Chemical			
2A-ii	Chloromethyl Acetanilide	Intermediate	1131-01-7	5f				
2B	Diuron and its intermediates	Product	330-54-1	5b	Herbicide	108	2892	
2B-i	N Methyl-N-(3,4 Dichloro) Phenyl Carbamate	Intermediate	1918-18-9	5b	Used as herbicide intermediates and also in other chemical industries			
2C	Aclonifen & intermediates	Product	74070-46-5	5b	Herbicide	0	3000	
2C-i	a. 2,3,4-Trichloro nitro benzene	Intermediate	17700-09-3	5f	Used as herbicide intermediates and also			

					in other chemical industries			
2C-ii	b. 2,3-Dichloro-6-nitro aniline (DICONA)	Intermediate	65078-77-5	5f	-			
2D	Cyprosulfamide & intermediates	Product	221667-31-8	5b	Herbicide	0	3000	
2D-i	p-Toluene sulfonyl chloride	Intermediate	98-59-9	5b	Used as herbicide intermediates and also in other chemical industries			
2D-ii	p-Toluene sulfonamide	Intermediate	70-55-3	5b				
2D-iii	p-Carboxy-benzene sulfonamide	Intermediate	138-41-0	5b				
2D-iv	d. Amid chloride	Intermediate	816431-72-8	5b				
2E	Anilophos & intermediates	Product	64246-01-0	5b	Herbicide	700	2300	
2E-i	Anilide	Intermediate	84012-61-3	5b	Used as herbicide intermediates			
2E-ii	Ammonium DMTA	Intermediate	1066-97-3	5b				
2F	Imazethapyr	Product	81335-77-5	5b	Herbicide	25	2975	
2G	Glufosinate Ammonium	Product	77182-82-2	5b	Herbicide	0	3000	
2H	Pyroxsulam	Product	422556-08-9	5b	Herbicide	0	3000	
2I	Oryzalin	Product	19044-88-3	5b	Herbicide	17	2983	
2I-i	4-Chloro-3,5-dinitrobenzene sulfonic acid	Intermediate	88-91-5	5b	Used as herbicide intermediates			
2I-ii	3,5-dinitro-4-(N,N-di n-propyl amine)benzene sodium sulfonate	Intermediate	515-42-4	5b				
2(BP)-i	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	328.42	4470.3	4798.71

2(BP)-ii	Methanol	Co-product	67-56-1	5f	Other chemical industries	20.151	420.8	441
2(BP)-iii	Ammonium chloride	Co-product	7446-70-0	Non-EC	Chemical	0	709.5	709.464
2(BP)-iv	Potassium chloride	Co-product	7447-40-7	Non-EC	Chemical	0	1327.1	1327.131
2(BP)-v	Sulfur dioxide compressed	Co-product	`9-5-7446	Non-EC	Chemical	0	1885.6	1885.59
2(BP)-vi	Manganese dioxide	Co-product	197667-28-0	Non-EC	Chemical	0	1551.0	1551.006
2(BP)-vii	Sodium sufide/sodium hydrosulfide	Co-product	1313-82-2	Non-EC	Chemical	157.5	517.5	675
2(BP)-viii	Diethyl-5-ethyl-pyridine-2,3-dicarboxylic acid (Diacid)	Co-product	105151-39-1	5f	Chemical	5.9	702.1	708
2(BP)-ix	Ethanol	Co-product	64-17-5	5f	Chemical	11.15	1326.9	1338
3A	Bromoxynil Octanoate & intermediates	Product	1689-99-2	5b	Herbicide	0	36000	36000
3A-i	p-Hydroxy benzonitrile	Intermediate	767-00-0	5f	Used as herbicide intermediates and also in other chemical industries			
3A-ii	2,6-Dibromo-4-cyano-phenol	Intermediate	1689-84-5	5f				
3A-iii	Octanoyl chloride	Intermediate	111-64-8	5f				
3B	Dicamba & intermedites	Product	1918-00-9	5b	Herbicide	7,000	29000	
3B-i	MCB	Intermediate	108-90-7	5f	Used as herbicide intermediates and also in other chemica			
3B-ii	PDCB	Intermediate	106-46-7	5f				
3B-iii	2,5 DCNB	Intermediate	89-61-2	5f				
3B-iv	2,5 DCA	Intermediate	608-27-5	5f				

3B-v	DCP	Intermediate	120-83-2	5f	l industries			
3B-vi	DCSA K2 Salt	Intermediate	68938-80-7	5f				
3B-vii	Methyl chloride	Intermediate	74-87-3	5f				
3B-viii	Dicamba ester	Intermediate	6597-78-0	5b	Used as herbicide intermediate			
3C	Bromoxynil Heptanoate & intermediates	Product	56634-95-8	5b	Herbicide	0	36000	
3C-i	p-Hydroxy benzonitrile	Intermediate	767-00-0	5f	Used as herbicide intermediates and also in other chemical industries			
3C-ii	2,6-Dibromo-4-cyano-phenol	Intermediate	1689-84-5	5f				
3C-iii	Heptanoyl chloride	Intermediate	111-64-8	5f				
3D	Triclopyr Acid Butotyl Ester R1 and its intermediates	Product	64700-56-7	5b	Herbicide	2,000	34000	
3D-i	TCAC	Intermediate	76-02-8	5f	Chemical			
3D-ii	3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL)	Intermediate	37439-34-2	5b	Used as herbicide intermediates and also in other chemical industries			
3D-iii	Triclopyr Acid Methyl Ester	Intermediate	60825-26-5	5b				
3D-iv	3,5,6-Trichloro-2-pyridinyloxy acetic acid (Triclopyr Acid)	Intermediate	3-06-55335	5b				
3E	Triclopyr Acid Butotyl Ester R2 and its intermediates	Product	64700-56-7	5b	Herbicide			
3E-i	TCAC	Intermediate	76-02-8	5f	Chemical			

3E-ii	3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL)	Intermediate	37439-34-2	5b	Used as herbicide intermediates and also in other chemical industries			
3E-iii	MCA BC Ester	Intermediate	5330-17-6	5b				
3F	Sulfentrazone and its intermediates	Product	122836-35-5	5b	Herbicide	0	36000	
3F-i	5-Methyl-2-phenyl-2,4-dihydro-[1,2,4]-triazol-3-one (PT)	Intermediate	22863-24-7	5f	Used as herbicide intermediates and also in other chemical industries			
3F-ii	4-Difluoromethyl-5-methyl-2-phenyl-2,4-dihydro-[1,2,4]-triazol-3-one (DFMPT)	Intermediate	133840-80-9	5b				
3F-iii	4-Difluoromethyl-5-methyl-2-(2,4-dichlorophenyl)-2,4-dihydro-[1,2,4]-triazol-3-one (DCPT)	Intermediate	111992-16-6	5b				
3F-iv	4-Difluoromethyl-5-methyl-2-(2,4-dichloro-5-nitrophenyl)-2,4-dihydro-[1,2,4]-triazol-3-one (DCNPT)	Intermediate	111992-17-7	5b				
3F-v	4-Difluoromethyl-5-methyl-2-(5-amino-2,4-dichlorophenyl)-2,4-dihydro-[1,2,4]-triazol-3-one (ADCPT)	Intermediate	111992-18-8	5b				
3G	Pinoxaden and its intermediates (Route 1)	Product	243973-20-8	5b	Herbicide	0	36000	
3G-i	2,6-diethyl -4-methyl bromo-benzene	Intermediate	314084-61-2	5f	Used as herbicid			

3G-ii	1-(2,6-diethyl -4-methyl phenyl)-malononitrile	Intermediate	314020-53-6	5f	e intermediates and also in other chemical industries			
3G-iii	1-(2,6-Diethyl-4-methyl-phenyl)-malonamide	Intermediate	314020-40-1	5b				
3G-iv	N,N'-diacetylhydrazine (DAH)	Intermediate	3148-73-0	5f				
3G-v	2,2'-Dichlorodiethyl ether (DCDEE)	Intermediate	111-44-4	5b				
3G-vi	4,5-Diacetyl-1,4,5-hexahydro-oxadiazepine (DAODAP)	Intermediate	83598-13-4	5b				
3G-vii	Hexahydro-1,4,5-oxadiazepine HCl (OXA.HCl)	Intermediate	405281-14-3	5b				
3G-viii	Pyrazole-oxadiazepine	Intermediate	314020-44-5	5b				
3H	Pinoxaden and its intermediates (Route 2)	Product	243973-20-8	5b	Herbicide	0	36000	
3H-i	heptylene-4-malononitrile	Intermediate	33296-20-7	5f	Used as herbicide intermediates and also in other chemical industries			
3H-ii	2-(2,6-diethyl -4-methyl phenyl)_-malononitrile	Intermediate	314020-53-6	5f				
3H-iii	1-(2,6-Diethyl-4-methyl-phenyl)malonamide	Intermediate	314020-40-1	5b				
3H-iv	N,N'-diacetylhydrazine (DAH)	Intermediate	3148-73-0	5f				
3H-v	2,2'-Dichlorodiethyl ether (DCDEE)	Intermediate	111-44-4	5b				
3H-vi	4,5-Diacetyl-1,4,5-hexahydro-oxadiazepine (DAODAP)	Intermediate	83598-13-4	5b				
3H-vii	Hexahydro-1,4,5-oxadiazepine HCl (OXA.HCl)	Intermediate	405281-14-3	5b				
3H-viii	Pyrazole-oxadiazepine	Intermediate	314020-44-5	5b				

3(BP)-i	Ammonium hydroxide	Co-product	1336-21-6	Non-EC	Chemical	420	11438.4	11858.4
3(BP)-ii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	7401.1	7401.132
3(BP)-iii	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	28323	104337.0	132660
3(BP)-iv	MDCB	Co-product	541-73-1	5f	Chemical	77	319.0	396
3(BP)-v	ODCB	Co-product	95-50-1	5f	Chemical	2128	8816.0	10944
3(BP)-vi	TCB	Co-product	120-82-1	5f	Chemical	84	348.0	432
3(BP)-vii	Potassium chloride	Co-product	7447-40-7	Non-EC	Chemical	6230	25810.0	32040
3(BP)-viii	2,6-DE-4-Me-Phenol	Co-product	128-37-0	5f	Chemical	0	8199.8	8199.792
3(BP)-ix	Bromine	Co-product	7726-95-6	Non-EC	Chemical	0	23077.5	23077.548
3(BP)-x	Methyl acetate	Co-product	79-20-9	5f	Chemical	0	16852.7	16852.68
3(BP)-xi	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	4334	37498.0	41832
3(BP)-xii	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	28116.0	28116
3(BP)-xiii	Ammonium chloride	Co-product	7446-70-0	Non-EC	Chemical	0	11579.7	11579.652
4A	Sulcotrione and its intermediates	Product	99105-77-8	5b	Herbicide	0	3000	3000
4A-i	4-Methyl sulfonyl toluene (MST)	Intermediate	3185-99-7	5f	Used as herbicide intermediates and also in other chemical industries			
4A-ii	2-Chloro-4-Methyl sulfonyl toluene (CMST)	Intermediate	1671-18-7	5f				
4A-iii	2-Chloro-4-Methyl Sulfonyl Benzoic Acid (CMSBA)	Intermediate	53250-83-2	5f				
4A-iv	2 Chloro-4-Methyl sulfonyl benzoic acid chloride (CMSBAc)	Intermediate	106904-10-3	5f				
4A-v	1,3-Cyclohexanedione (1,3 CHD)	Intermediate	504-02-9	5f				
4A-vi	Sulcotrione Ester	Intermediate	114911-83-0	5f				
4B	Clodinafop Propargyl & intermediates	Product	105512-06-9	5b	Herbicide	0	3000	

4B-i	FPDPA Preparation	Intermediate	114420-56-3	114420-56-3	Used as herbicide intermediates and also in other chemical industries			
4B-ii	FPDPAC Preparation	Intermediate	101053-90-1	101053-90-1				
4C	OR Mesotrione and its intermediates (MCB Route)	Product	104206-82-8	5b	Herbicide	12	2988	
4C-i	4-chloro benzene sulfonyl chloride (MCB sulfonyl chloride)	Intermediate	98-60-2	5f	Used as herbicide intermediates and also in other chemical industries			
4C-ii	1-Chloro-4-(methyl sulfonyl) benzene	Intermediate	98-57-7	5f				
4C-iii	1-Chloro-2-nitro4-(methyl sulfonyl) benzene (Chloro NMSB)	Intermediate	97-07-4	5f				
4C-iv	Methyl-2-Cyano-2-(4-(methyl sulfonyl)-2-Nitrophenyl) acetate Cyano NMSB)	Intermediate	1939104-66-1	5b				
4C-v	2-Nitro-4-methyl sulfonyl benzoic acid (NMSBA)	Intermediate	110964-79-9	5b				
4C-vi	2-Nitro-4-methyl sulfonyl benzoyl chloride (NMSBAc)	Intermediate	110964-80-2	5b				
4C-vii	1,3-Cyclohexane dione -sodium salt (1,3-CHD -Na salt)	Intermediate	504-02-9	5f				
4C-viii	3-(4'-methylsulfonyl-2'-nitro-benzoyloxy)-2-cyclohexene-1-one (Mesotrione enol ester)	Intermediate	226944-49-6	5b				
4D	Mesotrione and its intermediates (TSC Route)	Product	104206-82-8	5b	Herbicide	13	2987	

4D-i	4-Methyl sulfonyl toluene (MST)	Intermediate	3185-99-7	5f	Used as herbicide intermediates and also in other chemical industries			
4D-ii	2-Nitro-4-methyl sulfonyl toluene (NMST)	Intermediate	1671-49-4	5f				
4D-iii	2-Nitro-4-methyl sulfonyl benzoic acid (NMSBA)	Intermediate	110964-79-9	5f				
4D-iv	2-nitro -4-(methyl sulfony) benzoyl chloride (NMSBAc)	Intermediate	110964-80-2	5f				
4D-v	1,3-Cyclohexane dione -sodium salt(1,3-CHD -Na salt)	Intermediate	504-02-9	5f				
4D-vi	3-(4'-methylsulfonyl-2'-nitro-benzoyloxy)-2-cyclohexene-1-one (Mesotrione enol ester)	Intermediate	226944-49-6	5b				
4(BP)-i	Sulfur dioxide	Co-product	7446 - 09 - 5	Non-EC	Other chemical industries	12	786.1	798
4(BP)-ii	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Other chemical industries	0	4083.0	4083
4(BP)-iii	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	62	5948.4	6011
4(BP)-iv	Ammonium nitrate	Co-product	6484-52-2	Non-EC	Chemical	43	2536.6	2580
4(BP)-v	Nitric acid	Co-product	7697-37-2	Non-EC	Chemical	24	2859.0	2883
4(BP)-vi	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	84	10048.6	10133
4(BP)-vii	Sodium bicarbonate	Co-product	144-55-8	Non-EC	Chemical	586	48099.8	48686
4(BP)-viii	Methanol	Co-product	67-56-1	5f	Other Chemical Industries	7	405.4	412
5A	Penoxsulam & it's intermediate	Product	219714-96-2	5b	Herbicide	0	1,000	1,000

5A-i	Methyl3-hydroxy-2-methoxyacrylate sodium salt	Intermediate	(104151-54-4)	5f	Used as herbicide intermediates and also in other chemical industries			
5A-ii	2,5-dimethoxy-4-hydroxy pyrimidine	Intermediate	(370103-23-4)	5f				
5A-iii	2,5-dimethoxy-4-chloropyrimidine	Intermediate	(370125-25-6)	5f				
5A-iv	4-Hydrazino-2,5-dimethoxypyrimidine	Intermediate	(381666-22-4)	5f				
5A-v	3-amino-5,8-dimethoxy[1,2,4]trazolo[4,3-c]pyrimidine	Intermediate	(381666-24-6)	5f				
5A-vi	5,8-dimethoxy[1,2,4]trazolo[4,3-c]pyrimidin-2-amine Int-A	Intermediate	219715-62-5	5b				
5A-vii	4-Nitro-2-Chloro Benzotrifluoride	Intermediate	777-37-7	5f				
5A-viii	4-Nitro-2-(trifluoromethyl) Aniline	Intermediate	121-01-7	5f				
5A-ix	2-Bromo-4-Nitro-6-(trifluoromethyl) Aniline	Intermediate	400-66-8	5f				
5A-x	N-(2-Bromo-4-Nitro-6-(trifluoromethyl) Phenyl acetamide	Intermediate	85977-20-4	5f				
5A-xi	N-(2-Fluoro-4-Nitro-6-(trifluoromethyl) Phenyl acetamide	Intermediate	88288-14-6	5f				
5A-xii	N-(4-amino-2-Fluoro-6-(trifluoromethyl) Phenyl acetamide	Intermediate	88288-08-8	5f				
5A-xiii	N-(2-Fluoro-6-(trifluoromethyl) Phenyl acetamide	Intermediate	88288-08-8	5f				
5A-xiv	2-Fluoro-6-(trifluoromethyl) aniline	Intermediate	144851-61-6	5f				
5A-xv	2-Fluoro-6-(trifluoromethyl) Benzene sulfonic acid	Intermediate	NA	5f				
5A-xvi	2-Fluoro-6-(trifluoromethyl) benzene sulfonyl chloride Int-B	Intermediate	405264-04-2	5b				

5B	Tembotrione and its intermediates	Product	335104-84-2	5b	Herbicide	0	1000	
5B-i	Methane thiol	Intermediate	74-93-1	5f	Used as herbicide intermediates and also in other chemical industries			
5B-ii	3-Chloro-2-methyl phenyl methyl sulphide (CMTT)	Intermediate	82961-52-2	5f				
5B-iii	2-Chloro-3-methyl-4-methylthio acetophenone (Acyl CMTT)	Intermediate	181997-71-7	5f				
5B-iv	2-chloro-3-methyl -4-methyl sulfonyl acetophenone	Intermediate	181997-72-8	5b				
5B-v	2-chloro-3-methyl -4-methyl sulfonyl benzoic acid (CMMSBA)	Intermediate	106904-09-0	5b				
5B-vi	2-chloro-3-methyl -4-methyl sulfonyl benzoic acid methyl ester (CMMSBA Ester)	Intermediate	120100-04-1	5b				
5B-vii	Methyl-(2-chloro-3-bromomethyl-4-methyl sulfonyl benzoate (CBrMMSBA Ester)	Intermediate	120100-44-9	5b				
5B-viii	2-chloro-4-(methylsulfonyl)-3-[(2,2,2-trifluoroethoxy)methyl] benzoic acid (CTFEMMSBA)	Intermediate	120100-77-8	5b				
5B-ix	2-chloro-4-(methylsulfonyl)-3-[(2,2,2-trifluoroethoxy)methyl] benzoyl chloride (CTFEMMSBAc)	Intermediate	1118729-23-9	5b				
5B-x	1,3-Cyclohexane dione -sodium salt (1,3-CHD -Na salt)	Intermediate	504-02-9	5f				
5B-xi	3-oxo-cyclohexyl-2-chloro-4-(methyl sulfonyl)-3-((2,2,2-	Intermediate	263401-21-4	5f				

	trifluoro ethoxy)methyl) benzoate (Tembotrione enol ester)							
5C	Sulfosulfuron & intermediates	Product	141776-32-1	5b	Herbicide	0	1000	
5C-i	IPG Preparation	Intermediate	126202-06-0	5b	Used as herbicide intermediates and also in other chemical industries			
5C-ii	CIP Preparation	Intermediate	01-05-3999	5b				
5C-iii	CIPSA Preparation	Intermediate	112566-17-3	5b				
5C-iv	EIPS Preparation	Intermediate	112583-03-6	5b				
5C-v	EIPSO2 Preparation	Intermediate	141776-47-8	5b				
5C-vi	Carbamate Preparation	Intermediate	302-11-4	5b				
5(BP)-i	Acetic acid	Co-product	64-19-7	5f	Other chemical industries	0	226.4	226
5(BP)-ii	Potassium bromide	Co-product	7758-02-03	Non-EC		0	462.9	463
5(BP)-iii	Methanol	Co-product	67-56-1	5f	Other chemical industries	0	546.9	547
5(BP)-iv	Aluminium chloride 25%	Co-product	7446-70-0	Non-EC	Chemical	0	3867.4	3867
5(BP)-v	Chloroform	Co-product	67-66-3	5f	Chemical	0	693.6	694
5(BP)-vi	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	215.9	216
5(BP)-vii	Sodium bromide	Co-product	7647-15-6	Non-EC	Chemical	0	418.5	419
5(BP)-viii	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	2539.0	2539
5(BP)-ix	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	0	2042.4	2042

6A	Thiophanate methyl	Product	23564-05-8	5b	Fungicide	50	950	1000
6B	Propiconazole & intermediates	Product	23564-05-8	5b	Fungicide	25	975	
6B-i	2-(2,4-dichlorophenyl)-2-methyl-4-n-propyl-1,3- dioxolane (Ketal)	Intermediate	83833-32-3	5b	Used as Fungicide intermediates and also in other chemical industries			
6B-ii	2-(2,4-dichlorophenyl)-2-bromomethyl-4-n-propyl-1,3-dioxolane	Intermediate	60207-89-8	5b				
6C	Hexaconazole	Product	79983-71-4	5b	Fungicide	0	1000	
6C-i	Valeryl chloride	Intermediate	638-29-9	5f	Chemical			
6C-ii	Valerophenone	Intermediate	61023-66-3	5f	Chemical			
6C-iii	Oxirane	Intermediate	88374-07-6	5b	Used as Fungicide intermediates			
6D	Metalaxyl and its intermediates	Product	57837-19-1	5b	Fungicide	0	1000	
6D-i	Methoxy Acetyl Chloride	Intermediate	38870-89-2	5f	Used as Fungicide intermediates and also in other chemical industries			
6D-ii	Methyl (2,6-Dimethyl Phenylamino) Propanoate (Alaninate)	Intermediate	52888-49-0	5b				
6(BP)-i	Sodium bisulfite 30%	Co-product	7631-90-5	Non-EC	Chemical	0	1535.0	1535
6(BP)-ii	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	0	523.0	523
6(BP)-iii	Aluminium chloride	Co-product	7446-70-0	Non-EC	Chemical	0	4276.0	4276

6(BP)-iv	Sodium sulfite solution	Co-product	7757-83-7	Non-EC	Chemical	0	1312.0	1312
6(BP)-v	Calcium Chloride Brine (35%)	Co-product	10043-52-4	Non-EC	Chemical	0	789.0	789
7A	Chloronil & intermeiates	Product	118-75-2	5b	Fungicide	0	1000	1000
7A-i	Trichlorophenol	Intermediate	88-06-2	5f	Chemical			
7B	Tricyclazol & intermediates	Product	41814-78-2	5b	Fungicide	0	1000	
7C	Azoxystrobin and its intermediates	Product	131860-33-8	5b	Fungicide	25	975	
7C-i	3-Methoxymethylene benzofuran-2(3H)-one (MMB)	Intermediate	40800-90-6	5b	Used as Fungicide intermediates and also in other chemical industries			
7C-ii	Methyl2-(2-hydroxyphenyl)-3,3-dimethoxy propanoate (MMB inter)	Intermediate	175971-61-6	5b				
7C-iii	2-((6-chloropyrimidin-4-yl)oxy) benzonitrile (CPOB)	Intermediate	913846-53-4	5b				
7C-iv	Dimethoxy Azoxystrobin	Intermediate	NA	5b				
7(BP)-i	Sodium bisulfite 25%	Co-product	7631-90-5	Non-EC	Chemical	0	1631.0	1631
7(BP)-ii	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	0	1007.0	1007
7(BP)-iii	Calcium Chloride Brine (35%)	Co-product	10043-52-4	Non-EC	Chemical	0	1313.0	1313
7(BP)-iv	Acetic Acid	Co-product	64-19-7	5f	Chemical	15	603.2	619
7(BP)-v	Methyl acetate	Co-product	79-20-9	5f	Chemical	19	744.3	763
7(BP)-vi	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	84	3288.7	3373
7(BP)-vii	Sodium acetate	Co-product	127-09-3	5f	Chemical	6	246.1	252
7(BP)-viii	Potassium chloride	Co-product	7447-40-7	Non-EC	Chemical	21	812.8	834
8A	Pyraclostrobin and its intermediates	Product	175013-18-0	5b	Fungicide	25	975	1000
8A-i	Sodium salt of1-(4-chlorophenyl)-3-hydroxypyrazole	Intermediate	76205-19-1	5b	Used as Fungicide			

8A-ii	1-(4-chlorophenyl)-3-[2-(nitrophenyl)-methoxy]-1H-pyrazole (PNBE)	Intermediate	220368-29-6	5b	intermediates and also in other chemical industries			
8A-iii	MethylN-hydroxy-N-(2-{[1-(4-chlorophenyl)-1H-pyrazol-3-yl] oxymethyl} phenyl) Carbamate (PHABEC)	Intermediate	NA	5b				
8B	Trifloxystrobin and its intermediates	Product	141517-21-7	5b	Fungicide	0	1000	
8B-i	3-Bromo benzotrifluoride	Intermediate	401-78-5	5f	Used as Fungicide intermediates and also in other chemical industries			
8B-ii	3-Trifluoromethyl acetophenone	Intermediate	349-76-8	5f				
8B-iii	3-Trifluoromethyl acetophenone oxime	Intermediate	99705-50-7	5f				
8B-iv	Methyl -2-oxo-2-(o-tolyl) acetate	Intermediate	34966-54-6	5f				
8B-v	Methyl-2-(2'-bromoethylphenyl)-2-oxoacetate	Intermediate	126534-57-4	5b				
8B-vi	Methyl (E)-2-oxo-2-(2- ((((1-(3 (trifluoromethyl) phenyl) ethylidene) amino) oxy) methyl) phenyl) acetate	Intermediate	141493-05-2	5b				
8B-vii	Methyl(Z)-2-(hydroxyimino)-2-(2-(((((E)-1-(3 (trifluoromethyl) phenyl) ethylidene)amino)oxy) methyl)phenyl acetate (Oxime Product)	Intermediate	NA	5b				
8(BP)-i	Sodium bicarbonate 30%	Co-product	144-55-8	Non-EC	Chemical	28	1081.7	1109
8(BP)-ii	Calcium chloride 30%	Co-product	10043-52-4	Non-EC	Chemical	0	3465.2	3465
8(BP)-iii	Calcium fluoride	Co-product	7782-41-4	Non-EC	Chemical	0	130.6	131

8(BP)-iv	Hydrogen bromide 30%	Co-product	10035-10-6	Non-EC	Chemical	0	2723.2	2723
8(BP)-v	Benzotrifluoride (BTF)	Co-product	98-08-8	5f	Chemical	0	104.8	105
8(BP)-vi	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	0	1860.2	1860
8(BP)-vii	Magnesium sulfate	Co-product	7487-88-9	Non-EC	Chemical	0	1098.0	1098
8(BP)-viii	Bromine	Co-product	7726-95-6	Non-EC	Chemical	0	447.2	447
8(BP)-ix	Methanol	Co-product	67-56-1	5f	Chemical	0	160.0	160
8(BP)-x	Succinimide	Co-product	123-56-8	5f	Chemical	0	332.5	332
9A	Temephos	Product	3383-96-8	5b	Insecticide	108	892.0	1,000
9A-i	Dimethyl Thiophosphoryl Chloride (DMTC)	Intermediate	2524-03-0	5f	Chemical			
9B	Diflubenzuron and its intermediates	Product	35367-38-5	5b	Insecticide	108	892	
9B-i	2,6-Difluorobenzamide (2,6-DFBA)	Intermediate	18063-03-1	5f	Used as Insecticide intermediates and also in other chemical industries			
9C	Diafenthiuron & its Intermediates	Product	80060-09-9	5b	Insecticide	25	975	
9C-i	1-(2,6-Disisopropyl-4-Phenoxyphenyl) (Thiourea)	Intermediate	135252-10-7	5f	Used as Insecticide intermediates and also in other chemical industries			
9C-ii	4-phenoxy-2 ,6-diisopropylaniline isothiocyanate	Intermediate	80058-93-1	5f				
9C-iii	2,6-Difluorobenzamide (2,6-DFBA)	Intermediate	18063-03-1	5f				

9D	Acephate	Product	30560-19-1	5b	Insecticide	48	952	
9D-i	Intermediate 1	Intermediate	10265-92-6	5b	Used as Insecticide intermediates and also in other chemical industries			
9E	Thiamethoxam	Product	153719-23-4	5b	Insecticide	0	1,000	
9(BP)-i	Hydrogen bromide	Co-product	10035-10-6	Non-EC	Chemical	7.23	282.2	289.4
9(BP)-ii	Potassium bromide	Co-product	7758-02-03	Non-EC	Chemical	9.8	385.6	395.4
9(BP)-iii	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	40	793.3	833.3
9(BP)-iv	Ammonium hydroxide 10%	Co-product	1336-21-6	Non-EC	Chemical	6.77	134.4	141.1
9(BP)-v	Acetic acid	Co-product	64-19-7	5f	Chemical	21.74	431.3	453.0
10A	Cartap Hydrochloride and its intermediates	Product	15263-52-2	5b	Insecticide	108	17892	18000
10A-i	N,N-Dimethyl allyl amine	Intermediate	2155-94-4	5f	Used as Insecticide intermediates and also in other chemical industries			
10A-ii	2,3-Dichloro-N,N-Dimethyl propyl amine hydrochloride (DCDMPA.HCl)	Intermediate	50786-84-1	5f	Chemical			
10A-iii	2-N,N-dimethylanino-1-Sodium-3-thiosulphate propane (Monosultap)	Intermediate	29547-00-0	5b	Insecticide Intermediate			

10B	Chlorpyriphos methyl	Product	5598-13-0	5b	Insecticide	400	17600	
10C	Triazophos	Product	24017-47-8	5b	Insecticide	0	18000	
10D	Carbendazim	Product	10605-21-7	5b	Insecticide	0	18000	
10D-i	Ortho nitro aniline	Intermediate	88-74-4	5b	Used as insecticide and other chemical intermediate			
10D-ii	OPDA	Intermediate	95-54-5	5f	Chemical			
10D-iii	CMC	Intermediate	21729-98-6	5b	Used as insecticide and other chemical intermediate			
10E	Buprofezin	Product	69327-76-0	5b	Insecticide	0	18000	
10F	Imidacloprid and its intermediates	Product	138261-41-3	5b	Insecticide	0	18000	
10F-i	Nitro Guanidine	Intermediate	556-88-7	5f	Used as Insecticide intermediates and also in other chemical industries			
10F-ii	N-(Nitro-imono) imidazolidine (NIIMDA)	Intermediate	5465-96-3	5f				
10F-iii	2-Chloro-5-Methyl Pyridine (CMP)	Intermediate	18368-64-4	5f				
10F-iv	2-Chloro-5-chloromethyl pyridine (CCMP)	Intermediate	70258-18-3	5f				
10G	Profenophos & intermediates	Product	41198-08-7	5b	Insecticide	0	18000	
10G-i	BCP:DETC	Intermediate	3964-56-5	5f	Chemical			
10G-ii	PC -1	Intermediate	60731-55-7	5f	Chemical			

10H	Chlorpyriphos & intermediate	Product	2921-88-2	5b	Insecticide	13,000	5000	
10H-i	TCAC	Intermediate	76-02-8	5f	Chemical			
10H-ii	NaTCPOL	Intermediate	37439-34-2	5b	Used as Insecticide intermediates and also in other chemical industries			
10(BP)-i	Methyl chloride	Co-product	74-87-3	5f	Herbicide intermediate and also in other chemical industries.	48.6	8051.4	8100.0
10(BP)-ii	Bisultap	Co-product	52207-48-4	5f	Chemical	92.1	15255.1	15347.2
10(BP)-iii	Ammonium Sulphate	Co-product	7783-20-2	Non-EC	Chemical	0.0	12384.0	12384.0
10(BP)-iv	Dimethyl amine	Co-product	124-40-3	5f	Chemical	0.0	12829.1	12829.1
10(BP)-v	Benzyl Chloride	Co-product	100-44-7	5f	Chemical	0.0	11540.3	11540.3
10(BP)-vi	Acetic acid	Co-product	64-19-7	5f	Other chemical industries	0.0	6838.3	6838.3
10(BP)-vii	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	40820.0	15700.0	56520.0
10(BP)-viii	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	12870.0	4950.0	17820.0
10(BP)-ix	Ammonium hydroxide	Co-product	1336-21-6	Non-EC	Chemical	1248.0	480.0	1728.0
11A	Clothianidin and its intermediates	Product	210880-92-5	5b	Insecticide	0	1,200	1,200

11A-i	2,3 Dichloropropene (2,3-DCP)	Intermediate	78-88-6	5f	Used as Insecticide intermediates and also in other chemical industries			
11A-ii	2-Chloroallyl isothiocyanate	Intermediate	14214-31-4	5f				
11A-iii	2-Chloro-5-chloromethylthiazole (CCMT)	Intermediate	105827-91-6	5f				
11A-iv	Nitro guanidine	Intermediate	556-88-7	5f				
11A-v	N-methyl-N'-nitro guanidine	Intermediate	4245-76-5	5f				
11A-vi	1,5-dimethyl-2-nitroiminohexahydro-1,3,5-triazine (DMNITCH)	Intermediate	136516-16-0	5f				
11A-vii	1-(2-chloro-5-thiazolylmethyl)-3,5-dimethyl-2-nitroimino-hexahydro-1,3,5-triazine (DMNITCH + CCMT)	Intermediate	NA	5f				
11B	Acetamiprid and its intermediates	Product	135410-20-7	5b	Insecticide	0	1,200	
11B-i	a) Dry HCl gas	Intermediate	7647-01-0	5f	Used as Insecticide intermediates and also in other chemical industries			
11B-ii	b) Methyl-N-Cyano acetamide (NCMA)	Intermediate	5652-84-6	5f				
11B-iii	c)2-Chloro-5(Methylaminomethyl)Pyridine (CMPMA)	Intermediate	120739-62-0	5f				
11C	Quinalphos & intermediates	Product	13593-03-8	5b	Insecticide	0	1,200	
11C-i	Na-MCA solution	Intermediate	6926-62-3	5b	Insecticide Intermediate			
11C-ii	DQ mass	Intermediate	59564-59-9	5b				
11C-iii	Na-2-HQ mass	Intermediate	57381-25-6	5b				

11C-iv	2-HQ	Intermediate	1196-57-2	5b				
11C-v	QP mass	Intermediate	NA	5b				
11(BP)-i	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	0	3360.8	3360.8
11(BP)-ii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	689.5	689.5
11(BP)-iii	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	7713.6	7713.6
11(BP)-iv	Ammonia solution 20%	Co-product	921-933-8	Non-EC	Chemical	0	551.4	551.4
11(BP)-v	Potassium chloride 25%	Co-product	7447-40-7	Non-EC	Chemical	0	8032.0	8032.0
11(BP)-vi	N,N-bis (dichloromethyl) methyl amine	Co-product	51-75-2	5f	Chemical	0	614.4	614.4
11(BP)-vii	Methanol	Co-product	67-56-1	Non-EC	Other Chemical Industries	0	1833.7	1833.7
12A	Ethiprole R1 & it's intermediate or	Product	121587-01-9	5b	Insecticide	0	2,500	2,500
12A-i	Diethyl disulfide	Intermediate	110-81-6	5f	Used as Insecticide intermediates and also in other chemical industries			
12A-ii	Ethyl thiopyrazole	Intermediate	120068-56-6	5f				
12B	Ethiprole R2 & it's intermediate Or	Product	121587-01-9	5b	Insecticide	0	2,500	
12B-i	Diethyl disulfide	Intermediate	110-81-6	5f	Used as Insecticide intermediates and also in other chemica			
12B-ii	Ethyl thiopyrazole	Intermediate	120068-56-6	5f				

					l industries			
12C	Ethiprole R3 & it's intermediate	Product	121587-01-9	5b	Insecticide	0	2,500	
12C-i	APR Disulphide	Intermediate	130755-46-3	5f	Used as Insecticide intermediates and also in other chemical industries			
12C-ii	Ethyl thiopyrazole	Intermediate	120068-56-6	5f				
12D	Cyantraniliprole & it's intermediate	Product	736994-63-1	5b	Insecticide	0	2,500	
12D-i	Diisopropyl maleate	Intermediate	108-31-6	5f	Used as Insecticide intermediates and also in other chemical industries			
12D-ii	3-Chloro-2-hydrazinopyridine (CHPy)	Intermediate	22841-92-5	5f				
12D-iii	Isopropyl 2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPE)	Intermediate	1055071-81-2	5f				
12D-iv	Preparation of Isopropyl 3-bromo-1-(3-chloro-2-pyridinyl)-4,5-dihydro-1H-pyrazole-5-carboxylate (DHBrPy)	Intermediate	1055072-00-8	5f				
12D-v	Isopropyl3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BPE)	Intermediate	1045077-27-7	5f				
12Dvi	Preparation of 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Inter-B)	Intermediate	500011-86-9	5f				
12D-vii	8-Methylisatoic anhydride	Intermediate	66176-17-8	5f				

12D-viii	2-Amino-N,3-dimethylbenzamide (ADMBz)	Intermediate	870997-57-2	5f				
12E	Fipronil and its intermediates	Product	120068-37-3	5b	Insecticide	1,900	600	
12E-i	Trichloro methyl sulfenyl chloride	Intermediate	594-42-3	5f	Used as Fungicide intermediates and also in other chemical industries			
12E-ii	Thiophosgene	Intermediate	463-71-8	5f				
12E-iii	Ortho-Chloro benzyl trifluoromethyl sulfide (OCBTMS)	Intermediate	251926-48-4	5f				
12E-iv	Trifluoromethyl sulfinyl chloride (CF3SOCl)	Intermediate	20621-29-8	5f				
12E-v	Aminopyrazole	Intermediate	120068-79-3	5f				
12(BP)-i	Ethiprole sulfone	Co-product	120068-68-0	5f	Chemical	0	67.5	67.5
12(BP)-ii	Potassium bisulfate	Co-product	7646-93-7	Non-EC	Chemical	0	1745.5	1745.5
12(BP)-iii	Bromine	Co-product	7726-95-6	Non-EC	Chemical	0	2120.4	2120.4
12(BP)-iv	IPA	Co-product	67-63-0	5f	Chemical	0	385.0	385.0
12(BP)-v	Ammonium chloride	Co-product	12125-02-9	Non-EC	Chemical	638.4	201.6	840.0
12(BP)-vi	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Inorganic	12747.1	4025.4	16772.5
12(BP)-vii	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	3875.0	3875.0
12(BP)-viii	Potassium chloride	Co-product	7447-40-7	Non-EC	Chemical	4599.9	1452.6	6052.5
13A	Indoxacarb & intermediates	Product	173584-44-6	5b	Insecticide	230	770	1,000
13A-i	BCPAC	Intermediate	625-36-5	5f	Chemical			
13A-ii	5 - CI	Intermediate	42348-86-7	5f	Chemical			
13A-iii	5 - CIE	Intermediate	65738-56-9	5f	Chemical			
13A-iv	5-CIHE	Intermediate	144172-24-7	5f	Chemical			
13A-v	Urea derivative	Intermediate	144172-25-8	5f	Chemical			

13A-vi	Oxadizine	Intermediate	200568-74-7	5f	Chemical			
13B	Chlorantraniliprole R1 and its intermediates	Product	500008-45-7	5b	Insecticide	0	1,000	
13B-i	2,3-Dichloropyridine (DCP)	Intermediate	2402-77-9	5f	Used as Insecticide intermediates and also in other chemical industries			
13B-ii	3-Chloro-2-hydrazinopyridine (CHP)	Intermediate	22841-92-5	5f				
13B-iii	Ethyl-2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPy)	Intermediate	500011-88-1	5b				
13B-iv	Ethyl-3-bromo-1-(3-chloro-2-pyridinyl)-4,5-dihydro-1H-pyrazole-5-carboxylate (DHBrPy)	Intermediate	500011-91-6	5b				
13B-v	Ethyl-3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BrPy)	Intermediate	500011-92-7	5b				
13B-vi	3-Bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Intermediate-B)	Intermediate	500011-86-9	5b				
13B-vii	2-Hydroxyimino-N-o-tolyl-acetamide (Isonitroso)	Intermediate	1132-03-2	5b				
13B-viii	7-Methylisatin /7-Methylindole-2,3-dione	Intermediate	1127-59-9	5f				
13B-ix	5-Chloro-7-methylisatin/5-Chloro-7-methylindole-2,3-dione	Intermediate	14389-06-1	5b				
13B-x	6-Chloro-8-methylisatoic anhydride/6-chloro-8-methyl-1 H-benzo[d][1,3]oxazine-2,4-dione	Intermediate	120374-68-7	5f				

13C	Chlorantraniliprole R2 and its intermediates	Product	500008-45-7	5b	Insecticide			
13C-i	3-Chloro-2-hydrazinopyridine (CHP)	Intermediate	22841-92-5	5f	Used as Insecticide intermediates and also in other chemical industries			
13C-ii	Ethyl 2-(3-chloropyridin-2-yl)-5-oxo-pyrazolidine-3-carboxylate (DHPy)	Intermediate	500011-88-1	5b				
13C-iii	Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-4,5-dihydro-1H-pyrazole-5-carboxylate (DHBrPy)	Intermediate	500011-91-6	5b				
13C-iv	Ethyl 3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylate (BrPy)	Intermediate	500011-92-7	5b				
13C-v	3-bromo-1-(3-chloro-2-pyridinyl)-1H-pyrazole-5-carboxylic acid (Inter-B)	Intermediate	500011-86-9	5b				
13C-vi	Isonitroso	Intermediate	1132-03-2	5b				
13C-vii	7-Methylisatin	Intermediate	1127-59-9	5b				
13C-viii	5-Chloro-7-methylisatin (5-Chloro-7-methylindole-2,3-dione)	Intermediate	14389-06-1	5b				
13C-ix	2-Amino-5-chloro-3-methylbenzoic acid (ACMBA)	Intermediate	20776-67-4	5b				
13D	Tetrachlorantraniliprole	Product	1104384-14-6	5b	Insecticide	0	1,000	
13(BP)-i	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	1069.5	3580.5	4650.0
13(BP)-ii	Aluminium chloride	Co-product	7446-70-0	Non-EC	Chemical	5667.0	18972.0	24639.0
13(BP)-iii	Methanol	Co-product	67-56-1	5f	Chemical	97.8	327.3	425.0
13(BP)-iv	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	0	8275.0	8275.0

13(BP)-v	Ethanol	Co-product	64-17-5	5f	Chemical	0	489.4	489.4
13(BP)-vi	Phosphoric acid 85%	Co-product	7664-38-2	Non-EC	Chemical	0	110.3	110.3
13(BP)-vii	Potassium bisulfate	Co-product	7646-93-7	Non-EC	Chemical	0	763.6	763.6
13(BP)-viii	Potassium phenoxide	Co-product	100-67-4	5f	Chemical	366.85	1228.2	1595.0
13(BP)-ix	Ammonium sulfate	Co-product	7783-20-2	Non-EC	Chemical	0	777.0	777.0
13(BP)-x	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	41.4	3043.6	3085.0
13(BP)-xi	Methane sulfonyl chloride	Co-product	124-63-0	5f	Chemical	0	445.3	445.3
13(BP)-xii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	1623.0	1623.0
14A	Deltamethrin and its intermediates	Product	52918-63-5	5b	Pyrethroid	300	1,700	2,000
14A-i	RRCMA	Intermediate	55667-40-8	5b	Used as Pyrethroid intermediates and also in other chemical industries			
14A-ii	HBr	Intermediate	10035-10-6	Non-EC				
14A-iii	DBCMA	Intermediate	63597-73-9	5b				
14A-iv	DB ester	Intermediate	61775-87-9	5b				
14A-v	DBCMAC	Intermediate	55710-82-2	5b				
14B	Bifenthrin	Product	82657-04-3	5b	Pyrethroid	0	2,000	
14B-i	Bifenthrin Chloride	Intermediate	84541-46-8	5b	Pirethoroid Intermediate			
14C	Lambda Cyhalothrin and its intermediates	Product	91465-08-6	5b	Pyrethroid	0	2,000	
14C-i	3-(2 Chloro 3 Trifluoro Propenyl -2, 2- Dimethyl Cyclopropane Carbonyl Chloride (CHAC)	Intermediate	393870-46-7	5b	Used as Insecticide intermediates and also in other chemical			

					industries			
14D	Permethrin and its intermediates	Product	52645-53-1	5b	Pyrethroid	300	1700	
14D-i	Tetrachloro Butyronitrile (TBN)	Intermediate	41797-95-9	5f	Used as Insecticide intermediates and also in other chemical industries			
14D-ii	Tetrachloro Butyric Acid (TBA)	Intermediate	4387-77-3	5f				
14D-iii	Tetrachloro Butyric Acid Chloride (TBAC)	Intermediate	68121-36-8	5f				
14D-iv	2 Chlorobutanone (2-CB)	Intermediate	68697-08-5	5f				
14D-v	Cypermethric Acid (CMA)	Intermediate	59042-49-8	5b				
14D-vi	Cypermethric Acid Chloride (CMAC)	Intermediate	52314-67-7	5b				
14E	Fenvalerate	Product	51630-58-1	5b	Used as Insecticide	0	2000	
14(BP)-i	Bromine	Co-product	7726-95-6	Non-EC	Chemical	257	1455	1712
14(BP)-ii	Aluminium chloride	Co-product	12125-02-9	Non-EC	Chemical	542	3073.6	3616
14(BP)-iii	Sodium bisulfite 30%	Co-product	7631-90-5	Non-EC	Chemical	241	1366.8	1608
14(BP)-iv	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	321.4	321
14(BP)-v	Bromobenzene	Co-product	108-86-1	5f	Chemical	967	5477.4	6444
14(BP)-vi	Dibromobenzene	Co-product	583-53-9	5f	Chemical	161	909.5	1070
14(BP)-vii	Hydrochloric acid 30%	Co-product	7647-01-0	Non-E	Chemical	97	550.8	648
15A	Alphamethrin and its intermediates	Product	67375-30-80	5b	Pyrethroid	880	120	1000
15A-i	Tetrachloro Butyronitrile (TBN)	Intermediate	41797-95-9	5f	Used as Pyrethroid intermediates and also in other chemical			
15A-ii	Tetrachloro Butyric Acid (TBA)	Intermediate	4387-77-3	5f				
15-iii	Tetrachloro Butyric Acid Chloride (TBAC)	Intermediate	68121-36-8	5f				
15A-iv	2 Chlorobutanone (2-CB)	Intermediate	68697-08-5	5f				

15A-v	Cypermethric Acid (CMA)	Intermediate	59042-49-8	5b	industries			
15A-vi	Cypermethric Acid Chloride (CMAC)	Intermediate	52314-67-7	5b				
15A-vii	Cypermethrin	Intermediate	52315-07-8	5b				
15B	Cypermethrin and its intermediates	Product	52315-07-8	5b	Pyrethroid	880	120	
15B-i	Tetrachloro Butyronitrile (TBN)	Intermediate	41797-95-9	5f	Used as Insecticide intermediates and also in other chemical industries			
15B-ii	Tetrachloro Butyric Acid (TBA)	Intermediate	4387-77-3	5f				
15B-iii	Tetrachloro Butyric Acid Chloride (TBAC)	Intermediate	68121-36-8	5f				
15B-iv	2 Chlorobutanone (2-CB)	Intermediate	68697-08-5	5f				
15B-v	Cypermethric Acid (CMA)	Intermediate	59042-49-8	5b				
15B-vi	Cypermethric Acid Chloride (CMAC)	Intermediate	52314-67-7	5b				
15(BP)-i	Ammonium chloride 11%	Co-product	12125-02-9	Non-EC	Chemical	5251	-1635.1	3616
15(BP)-ii	Sodium bisulfite 30%	Co-product	7631-90-5	Non-EC	Chemical	2583	-804.4	1779
15(BP)-iii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	479	-149.1	330
15(BP)-iv	Hydrochloric acid 30%	Co-product	7647-01-0	Non-EC	Chemical	2085	-649.6	1435
16A	Pyriproxyfen	Product	95737-68-1	5b	Insecticide	40.8	459.2	500
16B	Mepiquat Chloride	Product	24307-26-4	5b	Growth Regulator	50	450	
17A	3,5,6 Trichloro Pyridinol Sodium Salt (NaTCPOL)	Product	37439-34-2	5f	Synthetic Organic Chemical intermediates	1000	4,500	5,500
17A-i	TCAC	Intermediate	76-02-8	5f				
17B	R,R-Sodium salt of Cypermethric Acid (Na-CMA)	Product	128241-41-8	5f	Used as pesticide intermediates	0	5,500	
17B-i	Tetra Chloro Butyro Nitrile	Intermediate	41797-95-9	5f				

17B-ii	Tetra chloro Butyric Acid	Intermediate	4387-77-3	5f	and also in other chemical industries			
17B-iii	Tetra chloro Butyric Acid Chloride	Intermediate	68121-36-8	5f				
17B-iv	2-Chloro Butanone	Intermediate	68697-08-5	5f				
17B-v	Cypermethric Acid	Intermediate	59042-49-8	5b				
17C	5-Chloro Indanone Ester (5-CIE)	Product	65738-56-9	5f		5	5,495	
17C-i	5-CI	Intermediate	42348-86-7	5f	Chemical			
17(BP)-i	Ammonium chloride	Co-product	12125-02-9	Non-EC	Chemical	0	8971.3	8971.3
17(BP)-ii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0	482.4	482.4
17(BP)-iii	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	3793.5	15505.4	19298.9
17(BP)-iv	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	1048.6	15059.8	16108.5
17(BP)-v	Aluminium chloride	Co-product	7446-70-0	Non-EC	Chemical	14.2	15617.3	15631.5
17(BP)-vi	Ammonium hydroxide	Co-product	1336-21-6	Non-EC	Chemical	126.0	20642.0	20768.0
17(BP)-vii	Methanol	Co-product	67-56-1	5f	Other chemical industries	1.5	1638.1	1639.6
18A	5-Chloro Indanone (5-CI)	Product	42348-86-7	5f	Used as Insecticide intermediates and also in other chemical industries	5	3995	4000
18B	Aminopyrazole (APR)	Product	120068-79-3	5f		80	3920	
18C	2,5-Dichlorophenol (DCP)	Product	[583-78-8]	5f		860	3140	
18D	ANDPA	Product	15299-99-7	5f	Chemical	25	3975	
18(BP)-i	Hydrochloric acid	Co-product	7647-01-0	Non-EC	Chemical	20.5	16357.1	16377.6
18(BP)-ii	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	17.1	13653.0	13670.1

18(BP)-iii	Aluminium chloride	Co-product	7446-70-0	Non-EC	Chemical	16.6	13248.7	13265.3
18(BP)-iv	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	0.6	492.9	493.5
19A	RR Cypermethric Acid (RRCMA)	Product	55667-40-8	5f	Used as pesticide intermediates and also in other chemical industries	440	1060.0	1500.0
19B	2,3 Dichloro Aniline (DCA)	Product	608-27-5	5f		0	1500.0	
19B-i	MCB	Intermediate	608-27-5	5f	Chemical			
19B-ii	ODCB	Intermediate	95-50-1	5f	Chemical			
19B-iii	3, 4 Dichloro Nitro Benzene	Intermediate	99-54-7	5f	Chemical			
19C	Cypermethric Acid Chloride (CMAC) & its Cis & Trans isomers	Product	Cis: 68539-75-3 Trans: 61914-47-4	5b	Pesticide Intermediate	440	1060	
19C-i	Tetra Chloro Butyro Nitrile	Intermediate	41797-95-9	5f	Used as Pyrethroid intermediates and also in other chemical industries			
19C-ii	Tetra chloro Butyric Acid	Intermediate	4387-77-3	5f				
19C-iii	Tetra chloro Butyric Acid	Intermediate	68121-36-8	5f				
19C-iv	2-Chloro Butanone	Intermediate	68697-08-5	5f				
19C-v	Cypermethric Acid	Intermediate	59042-49-8	5b				
19D	5-Amino salicylic acid (5-ASA)	Product	89-57-6	5f	Chemical	96	1404	
19(BP)-i	Hydrochloric acid (30%)	Co-product	"7647-01-0	Non-EC	Chemical	734	10407.1	11141
19(BP)-ii	Para dichloro benzene	Co-product	106-46-7	5f	Chemical	0	4947.3	4947
19(BP)-iii	Meta dichloro benzene	Co-product	541-73-1	5f	Chemical	0	59.4	59
19(BP)-iv	Trichloro benzene	Co-product	120-82-1	5f	Chemical	0	64.3	64

19(BP)-v	2,5 Dichloro nitro benzene	Co-product	89-61-2	5f	Chemical	0	245.4	245
19(BP)-vi	Ammonium chloride 11%	Co-product	12125-02-9	Non-EC	Chemical	1848	4451.8	6300
19(BP)-vii	Sodium bisulfite 30%	Co-product	7631-90-5	Non-EC	Chemical	909	2189.7	3099
19(BP)-viii	Sulfur dioxide gas (compressed)	Co-product	7446 - 09 - 5	Non-EC	Chemical	168	405.8	574
20A	Oxalic acid	Product	144-62-7	5f	Chemical	44	956	1000
20B	Glyoxalic acid	Product	298-12-4	5f	Chemical	44	956	
20B-i	Oxalic acid	Intermediate	144-62-7	5f	Chemical			
20C	Ethyl chloride	Product	75-00-3	5f	Chemical	47	953	
20(BP)-i	Oxygen (Compressed)	Co-product	7782-44-7	Non-EC	Chemical	11	240.9	252
21A	MPBA	Product	13826-35-2	5f	Chemical	5	995	1000
21B	Polymer : PMMA	Product	9011-14-7	5f	Polymer & intermediate	75	925	
21C	Co- Polymer of Acrylonitrile	Product	9003-18-3	5f	Polymer & intermediate	75	925	
21D	Poly Ether Sulfone (PES)	Product	25608-63-3	5f	Polymer & intermediate	127	873	
21E	Poly sulfone	Product	25667-42-10	5f	Polymer & intermediate	127	873	
21 (BP)-i	Sodium carbonate	Co-product	497-19-8	Non-EC	Chemical	157	1080	1237
22A	Poly Ether Nitrile	Product	113506-36-8	5f	Polymer & intermediate	90	150	240
22B	Poly Aryl Ketone (PAEK) acid	Product	88049-73-4	5f	Polymer & intermediate	60	180	

22B-i	CMDPE (4-chloro-4'-methyl diphenyl ether)	Intermediate	7005-72-3	5f	Polymer & intermediate			
22B-ii	MPPB (4-methyl-4'phenoxyphenxoy benzene)	Intermediate	24038-82-2	5f	Polymer & intermediate			
22C	Poly Ether Ketone - PEK & its monomer & Polymer	Product	27380-27-4	5f	Polymer & intermediate	90	150	
22C-i	PCBC	Intermediate	104 83 6	5f	Polymer & intermediate			
22C-ii	PCHB	Intermediate	42019-78-3	5f	Polymer & intermediate			
22(BP)-i	Oxygen (compressed)	Co-product	7782-44-7	Non-EC	Chemical	9.9	29.7	40
23A	Vanillin	Product	121-33-5	5f	Chemical	300	200	500
23A-i	Oxalic acid	Intermediate	6153-56-6	5f	Chemical			
23A-ii	GOA (100%)	Intermediate	298-12-4	5f	Chemical			
23A-iii	Intermediate-1 : GUA	Intermediate	90-05-1	5f	Chemical			
23A-iv	MHPGA	Intermediate	55-10-7	5f	Chemical			
23B	Phase Transfer Catalyst (PTC)	Product	63393-96-4	5f	Chemical	29	471	
23C	Pyrazol	Product	288-13-1	5b	Pesticide intermediate	10	490	
23(BP)-i	Oxygen (compressed)	Co-product	7782-44-7	Non-EC	Chemical	53.9	35.9	90
23(BP)-ii	Sodium bicarbonate	Co-product	144-55-8	Non-EC	Chemical	790.9	527.3	1318
23(BP)-iii	Ammonium sulfate	Co-product	7783-20-2	Non-EC	Chemical	13.1	641.9	655
23(BP)-iv	Sodium bisulfite	Co-product	7631-90-5	Non-EC	Chemical	80.3	3934.7	4015

23(BP)-v	Sodium sulfite	Co-product	7757-83-7	Non-EC	Chemical	19.5	955.5	975
24	Potassium hydroxide	Product	1310-58-3	4(d)	Chemical	0.0	18000.0	18000.0
24(BP)-i	Chlorine	Co-product	7782-50-5	Non-EC	Chemical	0.0	11574.0	11574.0
24(BP)-ii	Hydrogen	Co-product	1333-74-0	Non-EC	Chemical	0.0	324.0	324.0
25	Calcium sulfate	Product	7778-18-9	Non-EC	Chemical	7500.0	0.0	7500.0
26	Thionyl chloride	Product	`9-7-7719	Non-EC	Chemical	1000.0	0.0	1000.0
26 (BP)-i	Sodium hypochlorite	Co-product	7681-52-9	Non-EC	Chemical	1396.0	0.0	1396.0
27	Dicalcium phosphate	Product	7757-93-9	Non-EC	Chemical	1000.0	0.0	1000.0
28	Potassium sulfate	Product	7778-80-5	Non-EC	Chemical	1000.0	0.0	1000.0
29	Potassium carbonate	Product	584-08-7	Non-EC	Chemical	1000.0	0.0	1000.0
30	Potassium bicarbonate	Product	298-14-6	Non-EC	Chemical	3000.0	0.0	3000.0
31	Sodium bromide	Product	7647-15-6	Non-EC	Chemical	1000.0	0.0	1000.0
32	Potassium bromide	Product	`7758-02-3	Non-EC	Chemical	3000.0	0.0	3000.0
33	Sodium sulfite	Product	7757-83-7	Non-EC	Chemical	7500.0	0.0	7500.0
34	Sodium bisulfite	Product	7631-90-5	Non-EC	Chemical	2000.0	0.0	2000.0
35	Potassium Sulfate	Product	7778-80-5	Non-EC	Chemical	2000	0.0	2000.0
36	Potassium Bicarbonate (Unit 7)	Product	298-14-6	Non-EC	Chemical	1000	0.0	1000.0
37	Potassium Chloride	Product	7447-40-7	Non-EC	Chemical	12000	0.0	12000.0
38	Amid Chloride (Purification)	Product	816431-72-8	Non-EC	Chemical	5000	0.0	5000.0
39	Chlorantraniliprole (Purification)	Product	500008-45-7	Non-EC	Insecticide	1200	0.0	1200.0
40	Bromoxynil Heptanoate (Purification)	Product	56634-95-8	Non-EC	Herbicide	1200	0.0	1200.0
41	Bromoxynil Octanoate (Purification)	Product	1689-99-2	Non-EC	Herbicide	1200	0.0	1200.0

42	Pesticide Liquid & Solid Formulations (Formulations from own technical products or by procuring technical products from outside)	Product	-	Non-EC	Pesticide Formulations	15480.0	12000.0	27480.0
43	Products from R&D activities	Product	NA	NA	Pesticides & its intermediates	0.0	2000.0	2000.0

Annexure-4

The sources of the stack, fuels, height of stack, pollution control measures with respect to their units are furnished as follows:

Unit	Source		Fuel (MT/A)	Height of Stack in Mtr	Pollution Control Measure
	Existing and to be replaced after expansion				
Unit 1,4 & 7	Utility Stack 01 (Incinerator 1.35 x 10^6 Kcal/hr- to be replaced after expansion with 4.5 x 10^6 Kcal/ Hr)		LDO- 2332.8	50 m above GL	Spray Cooler & Venturi scrubber (alkali)
	Existing and to be continued after expansion				
Unit 1,4 & 7	**Utility Stack 02 (R&D Boiler- 0.2 TPH & Hot Oil Unit- 50000 kcal/hr)		LDO- 198.72	16 m above GL	None
	*Utility Stack 03 (Thermic Fluid Heater- 10 Lakh Kcal/hr)		LDO- 1296	28.4 m above GL	
	Utility Stack 04 (DG set 1, 1510 KVA)		HSD- 1284.48	7 m (above roof level)	None
	Utility Stack 05 (DG set 2, 1510 KVA)			7 m (above roof level)	
	Utility Stack 06 (DG set 3, 1510 KVA)			7 m (above roof level)	
	Utility Stack 07 (DG set 4, 1510 KVA)			7 m (above roof level)	
	Utility Stack 08 (DG set 5, 1250 KVA)			7 m (above roof level)	
	Utility Stack 09 (DG set 6, 1250 KVA)			7 m (above roof level)	
	Utility Stack 10 (DG set 7, 1250 KVA)			7 m (above roof level)	
	Utility Stack 11 (DG set 8, 1250 KVA)			7 m (above roof level)	
	Existing and to be continued after expansion				
Unit 3	Utility Stack 12 (40 & 46 TPH Boilers)		Existing- Imported coal with Lime addition for dry scrubbing - 109439.42	65 m above GL	Dust Collector followed by ESP

	Utility Stack 13 (DG set 1, 1510 KVA)		HSD- 436.32	7.1 m (above roof level)	None
	Utility Stack 14 (DG set 2, 1250 KVA)			7.1 m (above roof level)	None
	Additional after expansion				
Unit 1,4 & 7	Utility Stack 15 (DG set 9, 1510 KVA)		HSD- 175.68	30 m above GL	None
Unit 3	Utility Stack 16 (90 TPH working and 90 TPH Standby Boiler)		After expansion- coal with Lime addition for dry scrubbing and on availability of bio-briquette in the area, will gradually increase the bio briquette blending with coal in 1:10 ratio Capacity of fuel- 114524.23 MT/A	78 m above GL	Dust Collector followed by ESP
	****Note- In thermic fluid heater, R&D boiler and hot oil Unit, Natural gas will be used when available**				

Annexure-5

Details of Process Emissions Generation and its Management are furnished as follows:

Unit	Source	Height of Stack in Mtr above Ground	Pollution Control Measure	Emission Parameters
Existing and continued after expansion				
Unit 1,4 & 7	Process Stack 1	36 m above GL	Water & Alkali scrubber	HCl, SO2
	Process Stack 2	36 m above GL	Water scrubber	Existing - NH3 After Expansion- NH3, DMA, CO2
	Process Stack 3	36 m above GL	Alkali scrubber	Cl2
	Process Stack 4	36 m above GL	Methanol & Alkali scrubber	Methyl Chloride, DME
	Process Stack 5	36 m above GL	Alkali scrubber	CN
	Process Stack 6	36 m above GL	Alkali scrubber	H2S
	Process Stack 7	36 m above GL	Alkali scrubber	Br2, HBr
Unit 3	None			
Proposed for Expansion				
Unit 1,4 & 7	Process Stack 8	36 m above GL	Water & Alkali scrubber	HF
	Process Stack 9	36 m above GL	Acid scrubber	NOx (Acidic gases)
	Process Stack 10	36 m above GL	Flame arrestor followed by blowdown tank	Hydrogen

Annexure-6

Details of Solid/Hazardous Waste Generation and its Management are furnished as follows:

Solid Waste Management

Category	Type of Waste										Treatment/ Disposal Method
		Total Existing (Unit 1, 4, 7 & 3) in TPA	Existing (Unit 1, 4, 7) in TPA	Existing (Unit 3) in TPA	Total of Proposed Quantity (Unit 1, 4, 7 & 3) in TPA	Proposed Quantity (Unit 1, 4, 7) in TPA	Proposed Quantity (Unit 3) in TPA	Total Quantity (Unit 1, 4, 7 & 3) in TPA	Total Quantity (Unit 1, 4,& 7) in TPA	Total Quantity (Unit 3) in TPA	
Biodegradable	Organic Waste	70.2	54	16.2	23.4	18	5.4	93.6	72	21.6	OWC
Non-Biodegradable	Recyclable Waste (Plastic, paper, wood, glass, etc)	108	104.4	3.6	30.6	28.8	1.8	138.6	133.2	5.4	Authorized vendor
	Total	**178.2**	**158.4**	**19.8**	**54**	**46.8**	**7.2**	**232.2**	**205.2**	**27**	

Non- Hazardous Waste Management

Type of Waste	Existing			Proposed			Total After Expansion			Treatment / Disposal Method
	Total Existing (Unit 1, 4, 7 & 3) in MT/A	Existing (Unit 1, 4, 7) in MT/A	Existing (Unit 3) in MT/A	Total of Proposed Quantity (Unit 1, 4, 7 & 3) in	Proposed Quantity (Unit 1, 4, 7) in MT/A	Proposed Quantity (Unit 3) in MT/A	Total Quantity (Unit 1, 4, 7 & 3) in MT/A	Total Quantity (Unit 1, 4,& 7) in MT/A	Total Quantity (Unit 3) in MT/A	

				MT/A						
Non metallic waste (Paper, Plastic and wood)	63	50	13	0	0	0	63	50	13	Incineration/ sale to authorization
Insulation material	300	295	5	-285	-285	0	15	10	5	Sale to Auth. Vendor
MS Scrap	1825	1775	50	0	0	0	1825	1775	50	Sale to Auth. Vendor
Rubber Hand Gloves	37	37	0	-20	-20	0	17	17	0	Incineration/ Sale to Auth. Vendor
Civil Debris	500	450	50	0	0	0	500	450	50	Landfilling
Waste wooden pellets	1	0	1	0	0	0	1	0	1	Sale to Auth. Vendor
Boiler fly ash/ bottom ash	11100.5	0.5	11100	11616	0	11616	22716.5	0.5	22716	Sold to brick/cement manufacturers for lifting ash from the factory and using for ash brick and cement paver

										blocks/road construction

Hazardous Waste Management											
Name of Waste	**Category**	**Unit**	**Existing**			**Proposed**			**After Expansion**			**Disposal**
			Total Existing	**Existing (Unit 1, 4 & 7)**	**Existing (Unit 3)**	**Total Proposed**	**Proposed (Unit 1, 4 & 7)**	**Proposed (Unit 3)**	**Total after expansion**	**Total After expansion (Unit 1, 4 & 7)**	**Total After expansion (Unit 3)**	
Used or Spent oil (Onsite)	5.1	MT/A	176.0	126.0	50.0	0.0	0.0	0.0	176.0	126.0	50.0	Unit 1,4,7- Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor
Used or Spent oil received from other	5.1	MT/A	58.4	58.4	0.0	0.0	0.0	0.0	58.4	58.4	0.0	Incineration (Rotary Kiln Type) within premises

units (Unit-2,3,5,6, GCL Kherdi Unit, GCL Domb. Unit												
Wastes or residues containing oil (Onsite)	5.2	MT/A	8.5	3.5	5.0	11.5	6.5	5.0	20.5	10.5	10.0	Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor
Wastes or residues containing oil from other units (Unit-2,3,5,6, GCL Kherdi Unit, GCL Domb. Unit)	5.2	MT/A	10.3	10.3	0.0	0.0	0.0	0.0	10.3	10.3	0.0	Incineration (Rotary Kiln Type) within premises
Discarded Asbesto	15.2	MT/A	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.0	To be given back to supplier /

s (Onsite)												recycler/ Secured Landfill at CHWTSDF
Spent Solvents (Onsite)	20.2	MT/A	395.0	395.0	0.0	-100.0	-100.0	0.0	295.0	295.0	0.0	Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor
Spent Solvents (Unit-2,3,5,6, GCL Kherdi Unit	20.2	MT/A	2.4	2.4	0.0	997.6	997.6	0.0	1,000.0	1,000.0	0.0	Incineration (Rotary Kiln Type) within premises
Contaminated aromatic, aliphatic or naphthenic solvents may or may not be fit for reuse from GCL Dombivli Unit	20.1	MT/A	1,000.0	1,000.0	0.0	-1,000.0	-1,000.0	0.0	0.0	0.0	0.0	Incineration (Rotary Kiln Type) within premises

Distillation Residues (Onsite)	20.3	MT/A	420.0	420.0	0.0	0.0	0.0	0.0	420.0	420.0	0.0	Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor
Distillation Residues from other units (Unit-2,3,5,6, GCL Domb. Unit)	20.3	MT/A	80.0	80.0	0.0	0.0	0.0	0.0	80.0	80.0	0.0	Incineration (Rotary Kiln Type) within premises
Spent carbon generated from process (Onsite)	28.3	MT/A	35.8	35.8	0	2.5	2.5	0	38.3	38.3	0	Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor

Spent activated carbon (Onsite)	36.2	MT/A	47.9	47.9	0.0	0.0	0.0	0.0	47.9	47.9	0.0	Own Incineration (Rotary Kiln Type) within premises / Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor
Spent activated carbon (Unit-2,3,5,6, GCL Domb. Unit)	36.2	MT/A				-47.9	-47.9	0.0	0.0	0.0	0.0	Incineration (Rotary Kiln Type) within premises
Spent activated carbon from waste water treatment	35.2	MT/A	0.0	0.0	0.0	5.0	0.0	5.0	5.0	0.0	5.0	Incineration at main unit on Plot No. D 1/2 (unit no.1) or sale to authorized recycler / Pre-processor / Co-processor / or incineration at CHWTSDF.
Concentration or evaporat	37.3	MT/A	36,650.0	36,500.0	150.0	89,090.0	88,780.0	310.0	125,740.0	125,280.0	460.0	For 1,4,7-Sale to End user

ion residues (Recovered solids from Evaporation)												having permission under Rule 9 of HW Rules 2016 / will be consumed in house in proposed electrolysis plant /Secured Landfill at CHWTSDF
Spent Ion Excahnge resin from water treatment	35.2	MT/A	2.0	0.0	2.0	8.0	0.0	8.0	10.0	0.0	10.0	Secured Landfill at CHWTSDF
Contaminated Liners/bags (Onsite)	33.1	MT/A	50.0	50.0	0.0	100.0	50.0	50.0	150.0	100.0	50.0	Reuse after decontamination/ Sale to authorized recycler after decontamination/ to authorized decontamination facility/ Incineration at own facility/ Incineration at CHWTSDF

Contaminated Liners/bags (Unit-2,3,5,6, GCL Kherdi Unit)	33.1	MT/A	12.0	12.0	0.0	60.0	60.0	0.0	72.0	72.0	0.0	Incineration (Rotary Kiln Type) within premises
Empty contaminated barrels/containers/ carboys/ drums (Onsite)	33.1	MT/A	1,000.0	1,000.0	0.0	25.0	0.0	25.0	1,025.0	1,000.0	25.0	Reuse after decontamination/ Sale to authorized recycler after decontamination/ to authorized decontamination facility/CHWTSDF
Contaminated / used filter clothes	29.1	MT/A	0.0	0.0	0.0	5.0	0.0	5.0	5.0	0.0	5.0	Incineration at main unit on Plot No. D 1/2 (unit no.1) or sale
Chemical sludge from wastewater treatment.	35.3	MT/A	8,000.0	8,000.0	0.0	8,125.0	8,000.0	125.0	16,125.0	16,000.0	125.0	Secured Landfill at CHWTSDF
Process wastes or residues (Onsite)	29.1	MT/A	5.0	5.0	0.0	0.0	0.0	0.0	5.0	5.0	0.0	Own Incineration within premises/ Incineration at CHWTSD

												F/ Sent to authorize pre-processor or co-processor.
Process wastes or residues (Other units and GCL Domb. Unit)	29.1	MT/A	4.8	4.8	0.0	0.0	0.0	0.0	4.8	4.8	0.0	Incineration (Rotary Kiln Type) within premises
Date-expired & Off Specification Pesticides (Onsite)	29.3	MT/A	327.0	327.0	0.0	-100.0	-100.0	0.0	227.0	227.0	0.0	Own Incineration (Rotary Kiln Type) within premises /Incineration at CHWTSDF
Date-expired & Off Specification Pesticides (Unit-2,3,5,6, GCL Kherdi Unit, GCL dom. Unit)	29.3	MT/A	25.0	25.0	0.0	100.0	100.0	0.0	125.0	125.0	0.0	Incineration (Rotary Kiln Type) within premises
Empty containers/	33.1	MT/A	100.0	100.0	0.0	100.0	100.0	0.0	200.0	200.0	0.0	Reuse after decontami

carboys contaminated with hazardous chemicals / waste (Onsite)												nation/ to authorized decontamination facility / Incineration at own facility/ Incineration at CHWTSDF
Empty containers/ carboys contaminated with hazardous chemicals / waste ((Unit-2,3,5,6, GCL Kherdi Unit)	33.1	MT/A	0.0	0.0	0.0	25.0	25.0	0.0	25.0	25.0	0.0	Incineration (Rotary Kiln Type) within premises
Contaminated cotton rags or contaminated saw dust from GCL Kherdi unit	33.2	MT/A	2.4	2.4	0.0	0.0	0.0	0.0	2.4	2.4	0.0	Incineration (Rotary Kiln Type) within premises
Sludge from wet scrubbers	37.1	MT/A	200.0	200.0	0.0	500.0	500.0	0.0	700.0	700.0	0.0	Secured Landfill at CHWTSDF

Ash from incinerator and flue gas cleaning residue	37.2	MT/A	250.0	250.0	0.0	110.0	110.0	0.0	360.0	360.0	0.0	Secured Landfill at CHWTSDF
Inorganic Salt Mixture (Mainly NaCl + Na2SO4)	--	MT/A	2,520.0	2,520.0	0.0	-2,520.0	-2,520.0	0.0	0.0	0.0	0.0	Sent to authorized re-cycler or re-processors or pre-processor / co-processor /Sale to End user having permission under Rule 9 of HW Rules 2016 / will be consumed in house in proposed electrolysis plant/ Secured Landfill at CHWTSDF
Inorganic spent acids	29.6	MT/A	50,433.8	50,433.8	0.0	344,035.6	344,035.6	0.0	394,469.4	394,469.4	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016.
Sodium bicarbonate	29.1	MT/A	0.0	0.0	0.0	4,554.0	4,554.0	0.0	4,554.0	4,554.0	0.0	Reuse in other processes/

												Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
Sodium carbonate	29.1	MT/A	3.0	3.0	0.0	50.0	50.0	0.0	53.0	53.0	0.0	Reuse in other processes/ Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
Sodium chloride	29.1	MT/A	752.0	752.0	0.0	17,970.0	17,970.0	0.0	18,722.0	18,722.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/ will be consumed in house in proposed electrolysis plant /Secured Landfill at CHWTSDF
Sodium sulfite	29.1	MT/A	122.0	122.0	0.0	12,264.0	12,264.0	0.0	12,386.0	12,386.0	0.0	Sale to End user having permission under Rule 9 of

												HW Rules 2016/CH WTSDF
Processed chlorobutanone	29.1	MT/A	613.0	613.0	0.0	903.0	903.0	0.0	1,516.0	1,516.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/pre-processor / co-processor/ Incineration (Rotary Kiln Type) within premises
Methane sulfinic/ sulfonic acid sodium salt	29.1	MT/A	0.0	0.0	0.0	171.0	171.0	0.0	171.0	171.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
Calcium carbonate – palladium	29.1	MT/A	0.0	0.0	0.0	9,962.0	9,962.0	0.0	9,962.0	9,962.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
CP as hazardous waste	29.1	MT/A	0.3	0.3	0.0	3.4	3.4	0.0	3.7	3.7	0.0	Sale to End user having permission under Rule 9 of HW Rules

												2016/CH WTSDF
Cupric chloride	29.1	MT/A	634.0	634.0	0.0	497.0	497.0	0.0	1,131.0	1,131.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
DMSO alongwith Methane Thiol	29.1	MT/A	0.0	0.0	0.0	259.0	259.0	0.0	259.0	259.0	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/pre-processor /co-processor/ Incineration (Rotary Kiln Type) within premises
Spent Catalyst	29.5	MT/A	1,644.1	1,644.1	0.0	970.4	970.4	0.0	2,614.5	2,614.5	0.0	Sale to End user having permission under Rule 9 of HW Rules 2016/CH WTSDF
Process organic and inroganic Residues	29.1	MT/A	4,107.5	4,107.5	0.0	26,061.3	26,061.3	0.0	30,168.8	30,168.8	0.0	Own Incineration (Rotary Kiln Type) within premises /

												Incineration at CHWTSDF/ Sent to authorized recycler or pre-processor or co-processor

E-Waste, Battery Waste and Bio-Medical Waste

Type of Waste	Existing			Proposed			Total After Expansion			Treatment / Disposal Method
	Total Existing (Unit 1, 4, 7 & 3) in Kg/day	Existing (Unit 1, 4, 7) in Kg/day	Existing (Unit 3) in Kg/day	Total of Proposed Quantity (Unit 1, 4, 7 & 3) in Kg/day	Proposed Quantity (Unit 1, 4, 7) in Kg/day	Proposed Quantity (Unit 3) in Kg/day	Total Quantity (Unit 1, 4, 7 & 3) in Kg/day	Total Quantity (Unit 1, 4,& 7) in Kg/day	Total Quantity (Unit 3) in Kg/day	
Battery waste	17	12	5	10	8	2	27	20	7	To manufacturer/ Authorized Recycler
E-waste	4	3	1	0	0	0	4	3	1	To Authorized Recycler
Biomedical waste	1.572	1.572	0.0	0	0.428	0	2.0	2	0	To CBWTF

Signature Not Verified

Digitally Signed by : Mr A N Singh
Member Secretary, MoEFCC (EC)

Date: 02/01/2024