Cipla

Letter No.: KSPCB/24-25/19

Date: 30.09.2024

To,
The Member Secretary
Karnataka State Pollution Control Board,
Parisara Bhavan,
4th & 5th Floor, Church Street,
BANGALORE – 560001.

Sub: Submission of annual water, air, Hazardous waste Returns (Form-V- Environmental Audit Statement) for the year April-2023 to March- 2024 - Reg.

Dear Sir,

With reference to the above subject, please find enclosed here with Annual returns of water, air, and Hazardous waste returns (Form-V – Environmental Audit Statement) in the prescribed format for the year April- 2023 to March -2024.

Kindly acknowledge the receipt of the same.

Thanking you,

Yours faithfully,
For CIPLA LIMITED.

Pradeep Gupta
Designation: Site Head

CC: The Regional Officer,
Mahadevapura- KSPCB, 3rd Floor,
Nisarga Bhavan, Thimmaiah road,
7th 'D' cross, Shivanagar,
BANGALORE – 560010.

Encl : As above.

Received 30.09.2024

**Cipla Ltd.**

Virgonagar, Old Madras Road, Bangalore - 560 049, India.
P +91 80 46912363, 46912401

**Regd. Office** - Cipla House, Peninsula Business Park, Ganpatrao Kadam Marg, Lower Parel, Mumbai 400013, India.
P +91 22 24826000 F +91 22 24826120 W www.cipla.com **E-Mail** contanctus@cipla.com **Corporate Identity Number** L24239MH1935PLC002380

# ENVIRONMENTAL AUDIT

# STATEMENT

# 2023- 2024

# CIPLA Ltd
# BANGALORE

# INTRODUCTION

## 1. PREFACE:

**M/s. Cipla Limited** is a professionally managed Public Limited Company established in 1935. It manufactures and markets a wide range of Pharmaceutical Formulations and Bulk Drugs.

The Corporate headquarters is located in Mumbai Central, where senior qualified corporate personnel are available for providing support to the manufacturing plants in the areas of Technology, Research and Development, Manufacturing, Engineering projects, Quality Control, Quality Assurance and Safety, Health & Environment

### 1.1 BRIEF DESCRIPTION OF THE SITE:

Cipla limited Bangalore plant started manufacturing activities 1977. It is situated on the Old Madras Road highway at a distance of about 18 km from Bangalore city and is about half an hour drive from the city.

The total area of the site is 60,986 square meters (15.1 acres) with a built-up area of 38,628 square meters. There are separate buildings for the manufacture of bulk drugs. The bulk drug manufacturing area is around 19,709 square meters. Adequate open space is provided between various buildings. No activity other than manufacturing of bulk drugs is carried out at the site.

The immediate environment comprises of engineering, chemical, packaging, and electronic industries.

The factory has strength of about 469 employees, approx. 455 of which are in the management category, the rest being workmen, contractor employees around 298 numbers work inside premises.

The atmospheric temperature varies from 23.0ºC to 40.0ºC. The difference of maximum and minimum temperature is more or less constant throughout the year except in rainy seasons.

### 1.3 PROCESSING:

Manufacturing is done in batch quantities. Batches are planned as and when required for captive consumption or export. Reactions are carried out in closed reactors. Final stages of manufacture such as drying, milling or blending are carried out in closed cubicles under appropriate environmental controls.

### 1.4 QUALITY CONTROL:

Quality Control performs complete analysis to specifications on input raw materials, inter-mediates, finished products and components using classical analytical "wet chemistry" techniques as well as sophisticated instrumentation such as TGA, DSC / TGA, TOC, HPCL with DPA, HPLC, FTIR, GC, Head Space, IR, UV/VIS Spectrophotometers, dissolution apparatus and auto filtrates. The laboratory is also provided with the necessary equipment including incubators, stability ovens, laminar air flow units, isolators etc., to handle microbiological testing.

### 1.5 RESEARCH AND DEVELOPMENT:

Cipla Bangalore has R&D Center, which conducts research on product development of bulk chemicals. In addition, a major objective of the R&D Division is in improvement of existing processes and products as well as trouble shooting.

### 1.6 ENVIRONMENT, HEALTH, AND SAFETY:

Protecting the health of all personnel and others and ensuring safety at work is one of the prime objectives of the company.

Safety is the responsibility of individual departments supported by a team of specialists in Safety Management. The site is provided with firefighting facilities including fire hydrant systems. Personnel are continuously trained in all aspects of safety. Smoke detector, ammonia gas detector, HC detector, Heat detector, PA system, MCP, Hydrogen gas leak detectors, oxygen analyzer system, etc. are provided to tackle emergency situations.

# ENVIRONMENTAL AUDIT STATEMENT 2023 - 2024

F O R M – V
(SEE RULE 14)
Environmental Statement for the financial year ending the 31st of March 2024.

PART – A

i) Name and address of the owner / occupier of the industry in operation or process:

Mr. Pradeep Gupta
Factory Manager
Cipla Limited
Virgonagar Post
Bangalore – 560 049
Phone: 080-46912363

ii) Industry category primary - (STC) code, Secondary – (SIC code) ----: RED
iii) Production capacity: 370 MT/Annum
iv) Year Of Establishment: 1972
v) Date of the last environmental statement submitted: - 29th September 2023 for the year 2022–2023.

| SL.NO. | PRODUCT | UNIT | PRODUCTION CAPACITY (Per annum) | PRODUCTION DURING the current financial year |
|---|---|---|---|---|
| 21. | Lansoprazole New Process | KG | 5000 | 849 |
| 22. | Lansoprazole Old Process | KG | 3000 | 0 |
| 23. | Leflunomide | KG | 2500 | 988 |
| 24. | Levofloxacin Hemihydrate | KG | 40000 | 931 |
| 25. | Linagliptin | KG | 500 | 99 |
| 26. | Lopinavir | KG | 3000 | 0 |
| 27. | Nintedanib Esylate | KG | 1000 | 0 |
| 28. | Omeprazole | KG | 30000 | 13724 |
| 29. | Omeprazole Magnesium | KG | 2300 | 0 |
| 30. | Omeprazole Sodium | KG | 2000 | 1058 |
| 31. | Oxaliplatin | KG | 40 | 0 |
| 32. | Pantoprazole sodium | KG | 10000 | 504 |
| 33. | Pregabalin | KG | 3000 | 0 |
| 34. | Risperidone | KG | 1500 | 961 |
| 35. | Ritonavir | KG | 10000 | 0 |
| 36. | Saxagliptin | KG | 300 | 0 |
| 37. | Sitagliptin Phosphate | KG | 1000 | 0 |
| 38. | Tenofovir Alafenamide Fumarate | KG | 5000 | 44 |
| 39. | Topiramate | KG | 60000 | 32819 |
| 40. | Vildagliptin | KG | 2000 | 0 |
| 41. | R&D products (non-commercial) | KG | 2000 | 0 |
| | **Total quantity** | **KG** | 370000 | 124421 |

**LIST OF TABLETS –QUANTITY IN LAKHS /YEAR**

| Sl.No. | PRODUCTS | UNITS | PRODUCTION CAPACITY (Per annum) | PRODUCTION DURING THE CURRENT FINANCIAL YEAR |
|---|---|---|---|---|
| 1. | Anagaralide Hcl (capsules 0.5 mg) | Lakhs | 250 | 0.00 |
| 2. | Anagaralide Hcl (capsules 1.0 mg) | Lakhs | 100 | 0.00 |
| 3. | Fincar 5 mg tablets | Lakhs | 400 | 0.00 |
| 4. | Finasteride 1 mg tablets | Lakhs | 400 | 0.00 |
| 5. | Leflunamide tablets 10/20 mg | Lakhs | 200 | 0.00 |
| 6. | Leflunamide tablets 100 mg | Lakhs | 10 | 0.00 |
| 7. | Mycophenolate Mofetil 250 mg tablets | Lakhs | 50 | 0.00 |
| 8. | Mycophenolate Mofetil 500 mg tablets | Lakhs | 50 | 0.00 |
| 9. | Tamsulosin hydrochloride capsules 0.2 mg | Lakhs | 500 | 0.00 |
| 10. | Tamsulosin hydrochloride capsules 0.4 mg | Lakhs | 8500 | 0.00 |
| | **Total quantity** | **Lakhs** | **10460** | **0.00** |

| Sl. No. | PRODUCT | Water consumption per unit of product | |
|---|---|---|---|
| | | During the previous financial year | During the current financial year |
| | | Process water consumption per unit of product output. (Lt / Kg) | Process water consumption per unit of product output* (Lt / Kg) |
| 1. | Amlodipine Besylate New Process | 13.44 | 13.43 |
| 2. | Amlodipine Besylate Old Process | 91.58 | 92.04 |
| 3. | Amlodipine Mesylate | 173.20 | 178.57 |
| 4. | Anagrelide Hydrochloride | 0.0 | 158.54 |
| 5. | Aprimilast | 0.0 | 121.39 |
| 6. | Azidothymidine (Zidovudine) | 0.0 | 0.00 |
| 7. | Bicalutamide | 93.37 | 0.00 |
| 8. | Capecitabine | 0.0 | 0.00 |
| 9. | Carboplatin | 0.0 | 0.00 |
| 10 | Cisplatin | 0.0 | 0.00 |
| 11. | Dexlansoprazole | 0.0 | 0.00 |
| 12. | Donepezil Hydrochloride | 25.86 | 26.67 |
| 13. | ES Omeprazole Magnesium (Di) | 12.89 | 12.65 |
| 14 | ES Omeprazole Magnesium (tri) | 0.00 | 29.92 |
| 15. | Etoposide | 147.47 | 145.86 |
| 16. | Felodipine | 0.00 | 0.00 |
| 17. | Flutamide | 0.00 | 0.00 |
| 18. | Granisetron Base | 29.40 | 27.3 |
| 19. | Granisetron Hydrochloride | 66.01 | 57.27 |
| 20. | Lamotrigine | 0.0 | 0.00 |
| 21. | Lansoprazole New Process | 80.71 | 69.92 |
| 22. | Lansoprazole Old Process | 0.0 | 0.00 |
| 23. | Leflunomide | 105.26 | 106.38 |
| 24. | Levofloxacin Hemihydrate | 25.72 | 23.20 |
| 25. | Linagliptin | 0.00 | 135.68 |
| 26. | Lopinavir | 0.0 | 0.00 |
| 27. | Nintedanib Esylate | 0.0 | 0.00 |
| 28. | Omeprazole | 39.35 | 38.80 |
| 29. | Omeprazole Magnesium | 0.0 | 0.00 |
| 30. | Omeprazole Sodium | 0.32 | 0.33 |
| 31. | Oxaliplatin | 0.0 | 0.00 |
| 32. | Pantoprazole Sodium | 59.86 | 52.79 |
| 33. | Pregabalin | 0.0 | 0.00 |

| Name of raw material | Name of Product | Raw material consumptic | |
|---|---|---|---|
| | | Consumption of Raw material per unit output | |
| | | Previous yea | Current year |
| Amlodipine | Amlodipine Besylate (New) | 0.80 | 0.79 |
| Benzene Sulphonic Acid | Amlodipine Besylate (New) | 0.32 | 0.31 |
| Methanol | Amlodipine Besylate (New) | 1.69 | 1.67 |
| IPA | Amlodipine Besylate (New) | 6.37 | 6.30 |
| Phthaloyl amlodipine | Amlodipine Besylate (New) | 1.99 | 1.97 |
| Monomethyl amine 40% | Amlodipine Besylate (New) | 9.75 | 9.63 |
| Amlodipine | Amlodipine Besylate (Old) | 0.88 | 0.89 |
| Benzene Sulphonic Acid | Amlodipine Besylate (Old) | 0.35 | 0.36 |
| Methanol | Amlodipine Besylate (Old) | 3.53 | 3.56 |
| IPA | Amlodipine Besylate (Old) | 12.06 | 12.17 |
| Phthaloyl amlodipine | Amlodipine Besylate (Old) | 1.76 | 1.78 |
| Monomethyl amine 40% | Amlodipine Besylate (Old) | 7.32 | 7.38 |
| Phthaloyl amlodipine | Amlodipine Mesylate | 1.37 | 1.41 |
| sodium sulphate | Amlodipine Mesylate | 0.14 | 0.14 |
| activated charcoal | Amlodipine Mesylate | 0.14 | 0.14 |
| sodium chloride | Amlodipine Mesylate | 0.18 | 0.19 |
| Methane sulphonic acid | Amlodipine Mesylate | 0.25 | 0.25 |
| Monomethyl amine | Amlodipine Mesylate | 6.69 | 6.90 |
| IPA | Amlodipine Mesylate | 3.69 | 3.81 |
| Ethyl Acetate | Amlodipine Mesylate | 36.46 | 37.59 |
| Methanol | Amlodipine Mesylate | 1.41 | 1.46 |
| MDC | Amlodipine Mesylate | 15.50 | 15.98 |
| AO4 compound | Anagrelide HCL | 0.00 | 3.46 |
| Stannous Chloride | Anagrelide HCL | 0.00 | 10.75 |
| Potassium Carbonate powder 40mesh | Anagrelide HCL | 0.00 | 8.65 |
| Sodium Sulphate anhydrous | Anagrelide HCL | 0.00 | 2.88 |
| Cyanogen bromide Lr | Anagrelide HCL | 0.00 | 1.30 |
| Hyflo Supercel | Anagrelide HCL | 0.00 | 2.31 |
| Hydrochloric acid Ar Grade | Anagrelide HCL | 0.00 | 85.06 |
| Toluene | Anagrelide HCL | 0.00 | 67.47 |
| Apt Sulfonamine | Apremilast | 0.0 | 2.69 |
| N-acetyl-L-Leucine | Apremilast | 0.0 | 1.45 |
| Methanol | Apremilast | 0.0 | 64.46 |
| APT Sulfonamine Leucine Salt | Apremilast | 0.0 | 1.81 |
| Triethyl amine | Apremilast | 0.0 | 2.63 |

| | | | |
|---|---|---|---|
| Benzyl Bromide | Donepezil HCL | 0.86 | 0.89 |
| Izl-02 | Donepezil HCL | 1.15 | 1.19 |
| OI compound | Es Ome Magnesium. Di | 1.74 | 1.73 |
| Sodium sulphate anhydrous | Es Ome Magnesium. Di | 0.29 | 0.29 |
| Potassium hydroxide flakes | Es Ome Magnesium. Di | 0.98 | 0.97 |
| Acetic acid | Es Ome Magnesium. Di | 0.49 | 0.48 |
| Acetone | Es Ome Magnesium. Di | 7.92 | 7.87 |
| Cumene hydroperoxide | Es Ome Magnesium. Di | 1.26 | 1.25 |
| Methanol | Es Ome Magnesium. Di | 8.27 | 8.22 |
| Methylene chloride | Es Ome Magnesium. Di | 19.98 | 19.86 |
| N,N- diisopropylethylamine | Es Ome Magnesium. Di | 0.10 | 0.10 |
| ITIP | Es Ome Magnesium. Di | 0.12 | 0.12 |
| Toluene | Es Ome Magnesium. Di | 9.28 | 9.22 |
| Diethyl D(-) tartarate | Es Ome Magnesium. Di | 0.17 | 0.16 |
| Esomeprazole K | Es Ome Magnesium. Di | 1.74 | 1.73 |
| Magnesium chloride hexahydrate | Es Ome Magnesium. Di | 0.40 | 0.40 |
| Ethyl acetate | Es Ome Magnesium. Di | 4.96 | 4.93 |
| OI compound | Es Ome Magnesium Tri | 0.0 | 2.74 |
| Sodium sulphate anhydrous | Es Ome Magnesium Tri | 0.0 | 0.46 |
| Potassium hydroxide flakes | Es Ome Magnesium Tri | 0.0 | 1.54 |
| Acetic acid | Es Ome Magnesium Tri | 0.0 | 0.77 |
| Acetone | Es Ome Magnesium Tri | 0.0 | 1.14 |
| Cumene hydroperoxide | Es Ome Magnesium Tri | 0.0 | 1.98 |
| Methanol | Es Ome Magnesium Tri | 0.0 | 4.33 |
| Methylene chloride | Es Ome Magnesium Tri | 0.0 | 31.46 |
| N,N- diisopropylethylamine | Es Ome Magnesium Tri | 0.0 | 0.16 |
| ITIP | Es Ome Magnesium Tri | 0.0 | 0.19 |
| Toluene | Es Ome Magnesium Tri | 0.0 | 14.61 |
| Diethyl D(-) tartarate | Es Ome Magnesium Tri | 0.0 | 0.26 |
| Esomeprazole K | Es Ome Magnesium Tri | 0.0 | 2.74 |
| Magnesium chloride hexahydrate | Es Ome Magnesium Tri | 0.0 | 0.36 |
| Ethyl acetate | Es Ome Magnesium Tri | 0.0 | 4.32 |
| Liquor Ammonia 0.9s | Es Ome Magnesium Tri | 0.0 | 0.01 |
| 4-Dimethyl Epipodophyllotoxin | Etoposide | 1.82 | 1.82 |
| Sodium bicarbonate commercial | Etoposide | 0.45 | 0.45 |
| Sodium sulphate anhydrous | Etoposide | 0.36 | 0.36 |
| Methylene chloride | Etoposide | 138.60 | 138.47 |
| Pyridine | Etoposide | 0.45 | 0.45 |
| Benzyl chloroformate | Etoposide | 2.50 | 2.50 |
| Toluene | Etoposide | 23.94 | 23.92 |

| | | | |
|---|---|---|---|
| Activated Charcoal | Granisetron Base | 0.10 | 0.09 |
| Hyflo Supercel | Granisetron Base | 0.49 | 0.45 |
| Thionyl Chloride | Granisetron Base | 2.45 | 2.27 |
| Dimethyl Formamide | Granisetron Base | 0.93 | 0.86 |
| N-Heptane | Granisetron Base | 10.73 | 9.95 |
| Hydrochloric Acid | Granisetron Base | 0.96 | 0.89 |
| Triethylamine | Granisetron Base | 1.47 | 1.36 |
| Methylene Chloride | Granisetron Base | 31.18 | 28.91 |
| Liquor Ammonia | Granisetron Base | 1.47 | 1.37 |
| Toluene | Granisetron Base | 4.25 | 3.94 |
| Isopropyl Alcohol | Granisetron Base | 10.71 | 9.93 |
| 1-Methyl L-1h-Indazole-3 Carboxylic | Granisetrone HCL | 1.11 | 1.00 |
| [GNB-4] | Granisetrone HCL | 1.11 | 1.00 |
| Sodium Bicarbonate | Granisetrone HCL | 0.56 | 0.50 |
| Sodium Sulphate | Granisetrone HCL | 0.89 | 0.80 |
| Activated Charcoal | Granisetrone HCL | 0.11 | 0.10 |
| Hyflo Supercel | Granisetrone HCL | 0.56 | 0.50 |
| Thionyl Chloride | Granisetrone HCL | 2.78 | 2.50 |
| Dimethyl Formamide | Granisetrone HCL | 1.05 | 0.95 |
| N-Heptane | Granisetrone HCL | 12.09 | 10.88 |
| Hydrochloric Acid | Granisetrone HCL | 1.09 | 0.98 |
| Triethylamine | Granisetrone HCL | 1.67 | 1.50 |
| Methylene Chloride | Granisetrone HCL | 35.33 | 31.80 |
| Liquor Ammonia | Granisetrone HCL | 1.67 | 1.50 |
| Toluene | Granisetrone HCL | 4.81 | 4.33 |
| Isopropyl Alcohol | Granisetrone HCL | 20.80 | 18.72 |
| IPA + Hcl 20% | Granisetrone HCL | 1.23 | 1.10 |
| [Lan chloro] | Lansoprazole | 1.03 | 0.88 |
| Methanol | Lansoprazole | 0.81 | 0.69 |
| Activated charcoal commercial | Lansoprazole | 0.08 | 0.07 |
| Sodium hydroxide flakes | Lansoprazole | 0.41 | 0.35 |
| 2-mercapto benzimidazole | Lansoprazole | 0.56 | 0.49 |
| Stage-1 Lan Sulphide | Lansoprazole | 1.23 | 1.06 |
| Sodium hypo chlorite solution 7% | Lansoprazole | 4.93 | 4.24 |
| Sodium hydroxide flakes | Lansoprazole | 0.58 | 0.49 |
| Acetonitrile | Lansoprazole | 2.93 | 2.52 |
| Sodium thiosulphate | Lansoprazole | 0.10 | 0.08 |
| Ammonium acetate commercial | Lansoprazole | 1.85 | 1.59 |
| Activated charcoal sx ultra | Lansoprazole | 0.12 | 0.11 |
| Activated charcoal commercial | Lansoprazole | 0.12 | 0.11 |

| | | | |
|---|---|---|---|
| Omeprazole USP | Omeprazole Sodium | 1.34 | 1.37 |
| Sodium hydroxide flakes | Omeprazole Sodium | 0.16 | 0.16 |
| Methanol | Omeprazole Sodium | 3.80 | 3.90 |
| Diiso propyl ether | Omeprazole Sodium | 6.79 | 6.96 |
| [PZL chloride] | Pantoprazole Sodium.Sesq. | 0.90 | 0.79 |
| [PZL thiol] | Pantoprazole Sodium.Sesq. | 0.90 | 0.79 |
| Tetrabutylammonium bromide | Pantoprazole Sodium.Sesq. | 0.04 | 0.03 |
| Sodium hypo chlorite solution 7% | Pantoprazole Sodium.Sesq. | 4.50 | 3.97 |
| Sodium hydroxide flakes | Pantoprazole Sodium.Sesq. | 0.99 | 0.87 |
| Sodium Thiosulphate | Pantoprazole Sodium.Sesq. | 0.14 | 0.13 |
| Ammonium acetate commercial | Pantoprazole Sodium.Sesq. | 2.16 | 1.90 |
| Liquor ammonia 0.9 s.p gravity | Pantoprazole Sodium.Sesq. | 0.00 | 0.01 |
| Activated charcoal commercial | Pantoprazole Sodium.Sesq. | 0.14 | 0.12 |
| Acetone | Pantoprazole Sodium.Sesq. | 5.83 | 5.14 |
| Methylene chloride | Pantoprazole Sodium.Sesq. | 13.60 | 11.99 |
| Ethyl acetate | Pantoprazole Sodium.Sesq. | 3.16 | 2.79 |
| IPA + HCl 20% W/W | Risperidone | 0.78 | 0.79 |
| Potassium Hydroxide Flakes | Risperidone | 1.13 | 1.14 |
| Sodium Sulphate Anhydrous | Risperidone | 0.19 | 0.19 |
| Toluene | Risperidone | 8.44 | 8.57 |
| [IRS 05] | Risperidone | 1.13 | 1.14 |
| Acetonitrile | Risperidone | 14.01 | 14.22 |
| Activated Charcoal Commercial | Risperidone | 0.22 | 0.22 |
| Alumina Neutral | Risperidone | 0.17 | 0.18 |
| Ethyl Acetate | Risperidone | 9.22 | 9.37 |
| Methanol | Risperidone | 12.13 | 12.32 |
| Methylene Chloride | Risperidone | 13.36 | 13.57 |
| Potassium Carbonate Powder 40mesh | Risperidone | 1.08 | 1.09 |
| Potassium Iodide LR Grade | Risperidone | 0.05 | 0.05 |
| Sodium Sulphate Anhydrous | Risperidone | 0.22 | 0.22 |
| [RS- 06] | Risperidone | 0.86 | 0.88 |
| [RS-8]. | Risperidone | 0.88 | 0.90 |
| TP -1 Compound | Topiramate | 1.09 | 1.11 |
| Sodium Sulphate Anhydrous | Topiramate | 0.22 | 0.22 |
| Sulphuryl Chloride | Topiramate | 0.68 | 0.69 |
| Triethylamine | Topiramate | 0.55 | 0.56 |
| Hydrochloric Acid - Cp | Topiramate | 1.31 | 1.33 |
| Ethyl Acetate | Topiramate | 11.67 | 11.81 |
| Acetic Acid | Topiramate | 0.27 | 0.28 |
| Methylene Chloride | Topiramate | 3.28 | 3.32 |

## PART - C

**Pollution discharged to environment / unit of output parameters as specified in the consent issued.**
Monitoring carried out by NABL /MOEF approved laboratory.
**Water:**

| **Pollutants** | **Quantity of pollutants discharged (mass/day)** Unit -kg/day | **Concentrations of pollutants in discharges (mass/volume)** Unit - (mg/l) | **Percentage of variation from prescribed standards with reason** |
|---|---|---|---|
| Suspended solid | 0.07 | 0.53 | Well within the prescribed limits |
| pH value | 7.20 | | |
| Bio-chemcial Oxygen Demand | 0.28 | 2.14 | |
| Total Dissolved solid (Inorganic) | 22.60 | 171.49 | |
| Chemical Oxygen Demand | 1.97 | 14.92 | |

| **Pollutants** | **Quantity of pollutants discharged/day (mass/day)** | **Concentration of pollutants discharged (mass/volume)** * | **Percentage of variation from prescribed standards with reason** |
|---|---|---|---|
| **Location 3- Near Third Gate** | **Kg/day** | **µg/m³** | |
| Particulate matter - PM $_{10}$ | 0.000068 | 43.2 | Well within the prescribed limit. |
| Particulate matter - PM $_{2.5}$ | 0.000029 | 18.2 | |
| Sulphur Dioxide | 0.000015 | 9.3 | |
| Nitrogen Dioxide | 0.000029 | 18.1 | |

| **Pollutants** | **Quantity of pollutants discharged/day (mass/day)** | **Concentration of pollutants discharged (mass/volume)** * | **Percentage of variation from prescribed standards with reason** |
|---|---|---|---|
| **Location 4-Near Car parking area** | Kg/day | µg/m³ | |
| Particulate matter - PM $_{10}$ | 0.000071 | 44.8 | Well within the prescribed limit. |
| Particulate matter - PM $_{2.5}$ | 0.000026 | 16.3 | |
| Sulphur Dioxide | 0.000015 | 9.4 | |
| Nitrogen Dioxide | 0.000029 | 18.6 | |

Note: Stack monitoring is carried out as per the consent and values are within the limits (Results submitted month on month)

## PART - E
## SOLID WASTES

Other waste generation and disposal details

SOLID WASTE

| SL.NO | Solid Waste | Total quantity (Kg) | | | |
|---|---|---|---|---|---|
| | | During the previous financial year | | During the current financial year | |
| | | Generation | Disposal | Generation | Disposal |
| (a) | **From process and Maintenance activity** | | | | |
| 1 | Glass waste in non-dispersible form | 18988 | 19133 | 21360 | 21420 |
| 2 | Ceramic waste in non-dispersible form | 0 | 0 | 0 | 0 |
| 3 | Waste electrical & electronic assemblies | 10817 | 10817 | 3310 | 3310 |
| 4 | Spent activated carbon | 0 | 0 | 0 | 0 |
| 5 | Rubber Waste | 0 | 0 | 370 | 370 |
| 6 | Resins, Latex, Plastizers, Glues & adhesives | 0 | 0 | 0 | 0 |
| 7 | Iron & steel scrap | 170532 | 175394 | 125910 | 125910 |
| 8 | Paper, Paperboard, & Paper Product wastes | 75134 | 75244 | 93590 | 93590 |
| 9 | Untreated cork & wood waste | 7969 | 7969 | 5970 | 5970 |
| (b) From Pollution control facility -Nil | | | | | |
| (c ) (1) Quantity recycled or re utilized within the unit – Nil<br>(c) (2) Sold – All the material mentioned above which are generated at site sold to authorized KSPCB approved vendors<br>(c) (3) Disposed - Nil | | | | | |

**PART - F**

**Please specify the characterization in terms of composition and quantum of hazardous as well as solid waste indicate disposal practice adopted for both these categories of wastes.**

| Sl. No | Type of hazardous waste | Category of wastes | Characterization | Treatment |
|---|---|---|---|---|
| 1. | Distillation residues | 20.3 | Semi solid & Flammable | Incinerated at KSPCB Authorized Common Incinerator/Co-processing |
| 2. | Process residue & waste | 28.1 | Solid & Flammable | Incinerated at KSPCB Authorized Common Incinerator/ Co-processing |
| 3. | Spent catalyst. | 28.2 | Solid & Flammable | Spent catalyst is sent for regeneration/Job work/recycle |
| 4. | Spent carbon | 28.3 | Solid & Flammable | Spent carbon Incinerated at KSPCB Authorized Common Incinerator/ Co-processing |
| 4. | Off specification products | 28.4 | Solid & Flammable | Incinerated at KSPCB Authorized Common Incinerator/ Co-processing |
| 5. | Date-expired products | 28.5 | Solid & Flammable | Incinerated at Authorized Common Incinerator/ Co-processing |
| 6. | Spent organic solvents generated from antimicrobial products(lts) | 28.6 | Liquid & Flammable | Incinerated at Authorized Common Incinerator |
| 7. | Used spent oil | 5.1 | Liquid & reusable | Disposed to KSPCB authorized re-processors. |
| 8. | Spent solvent. | 28.6 | Liquid, Flammable & Recyclable | Sold to KPCB authorized recycler. |
| 9. | Empty Barrels /containers/liners contaminated with hazardous chemicals/ wastes | 33.1 | Recyclable | |
| 10. | Chemical Sludge From Wastewater Treatment (ETP Sludge (Agitated Thin Film Drier) ATFD powder from MEE plant) | 35.3 | i) biological sludge ii)Solid, organic and inorganic | Disposed to TSDF for Landfill. |
| 11. | Contaminated cotton rags Or other cleaning | 33.2 | Solid & Flammable | Incinerated at KSPCB Authorized Common Incinerator/ Co-processing |
| 12. | Sludge from wet scrubber | 37.1 | Solid & Flammable | Incinerated at KSPCB Authorized Common Incinerator/ Co-processing |

## PART - G

**Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.**

| S. No. | Particulars of the investment on environment /Audit | Gross block Value Rs. (in Lakhs) |
|---|---|---|
| 1. | Recertification Audit ISO:14001 & ISO :45001 | 0.65 |
| 2. | RO Membrane | 6.0 |
| 3. | Green belt area | 1.0 |
| 4. | Online Ambient air quality monitoring station | 1.5 |
| 5. | Solvent closed handling system | 20.0 |
| 6. | Measurable instrument (Flow meters) | 1.2 |
| 7. | Noncorrosive Painting at ETP | 4.0 |
| 8. | Maintenance and fabrication work at ETP | 14.0 |
| 9. | Closed Hazardous waste containers | 15.0 |
| 10. | Safety meshes to open ponds at ETP | 1.2 |
| 11. | Safety System implementation at HW storage area | 2.0 |
| 12. | Spiral RO elements | 11.0 |
| 13. | STP system installation | 44.0 |
| **Grand Total** | | **121.55** |

No natural resources are extracted at the premises for the production and no destruction is done to the natural resources.

The company has developed & maintained 37% of lush green belt around the boundary & also maintained a good garden inside the premises on the available open area.

The treated effluent water is used for cooling tower make up in factory premises.

The company implemented the latest technology in wastewater treatment like Membrane Bio Reactor and Reverse Osmosis Plant, followed by Triple Effect Evaporation System to recycle the treated water is utilizing for cooling towers.

## PART - I

**Any other particulars for improvising the quality of the environment.**

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1. Environment Management System (ISO 14001:2015) and Occupational Health and Safety Assessment System (ISO 45001:2018) implemented and Re-certified by AFNOR Group, France in August -2023

2. Operation such as solid raw material charging to reactor is done by closed loop by installing 3 numbers of Powder Transfer System (PTS) to minimize the chemical exposure to humans as well as Environment.

3. Water jet pumps procurement done for the cleaning of reactors to minimise the water consumption.

4. Liquid Raw materials storage cupboards are connected to scrubber.

5. Retrofitting of the DG sets done with partial gas & HSD

6. Installed solar lights at safety assembly points.

7. 95.4% renewable energy used for the manufacturing operations.

8. Water conservation initiative started to reduce the intake water.

9. Water sprinklers installed at Hazardous waste storage area.

10. ETP sludge dryer installed at ETP with screw conveyor.

11. Sewage treatment plant erecting and commissioning done to minimize the cost reduction.

12. AHU and air conditioners condensate collected and reused for utilities -1800 KL/Annum.

13. Total 800 Numbers of saplings planted nearby schools and our inside the premises.