

FORM - V

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2024

PART : A

- (i) **Name and Address of the Owner / Occupier of the industry, operation or process.**
- Mr. R. Mukundan**
Managing Director
Tata Chemicals Limited
Bombay House, 24, Homi Modi Street, 'Fort, Mumbai 400 001
- Mr. N Kamath**
Chief Manufacturing Officer and Site Head
Tata Chemicals Limited
Mithapur, Dist.- Devbhumi Dwarka, (Gujarat)- 361345
Contact Person: Sanjeev Jain, AGM-Environment Management System
02892-675270 Mobile: 9227194082
- (ii) **Industry Category :** Soda Ash, Captive Power Plant, Chloro-caustic, Vacuum Salt and Cement
Primary- (STC Code)
Secondary- (SIC Code)

(iii) Production Capacity-Units-

S. No.	Product	CCA/ CTE capacity
		Capacity/Year
1	Soda Ash	13,16,000 MT
2	Sodium Bi Carbonate (All grades)	3,50,000 MT (CCA Application)
3	Vacuum Salt & Pure Salt	16,00,000 MT
4	Caustic Soda	36,000 MT
5	Liquid Chlorine	18,000 MT
6	33% Hydrochloric acid	64,800 MT
7	Bromine	3,600 MT
8	Hydro bromic acid	37 MT
9	Sodium Hypochlorite	100 TPD
10	Poly aluminium chloride	60,000 TPA (CTE)
11	Gypsum	134,892 MT
12	Clinker	8,25,000 MT
	Cement (OPC/PPC)	7,87,000 MT/ 9,00,000 MT (CTE)
13	Desalination water	2,160,498 M3
14	Steam	1057 TPH
15	Power	125 MW

- (iv) **Year of Establishment :** 1939
- (v) **Date of last Environmental Statement submitted. :** Vide Letter No. A/WG/261/2023
Dated September 11, 2023

PART : B Water and Raw Material Consumption

(i) Water Consumption In M³ / Day

Category	2022-23		2023-24	
	Fresh Water	Sea Water	Fresh Water	Sea Water
Process	Nil	24,629	Nil	28,594
Cooling	Nil	1,71,316	Nil	1,73,515
Domestic	Nil	2,443	Nil	3,045

Internal sources

Name of Products	Process water consumption per unit of product output.			
	During the previous financial year 2022-23		During the current financial year 2023-24	
	Sea Water	Fresh Water	Sea Water	Fresh Water
Soda Ash Plant (KL/MT)	47.45	Nil	49.77	Nil
Cement Plant (KL/MT)	0.57	Nil	0.95	Nil
Captive Power Plant in (KL/MWh)	3.74	Nil	3.80	Nil
RO Plant (KL/KL of Product Water)	2.87	Nil	2.94	Nil
Others (KL/MT)	4.95	Nil	4.87	Nil

(ii) **RAW MATERIALS CONSUMED**

Name of Raw Materials	Name of Products	Unit per Ton of Product	Consumption of raw material per unit of output	
			During the previous financial year 2022-23	During the current financial year 2023-24
Salt As Such	Soda Ash	Tons	2.16	2.24
Limestone		Tons	1.35	1.31
Coke + Coal		Tons	0.10	0.10
Ammonia		Kg	2.32	2.00
Sod. Sulphide		Kg	1.45	1.50
Soda Ash		Tons	0.05	0.05
Soda Ash	Sodium Bicarbonate	Tons	0.71	0.71
Brine (KL)	Vac. Salt	KL	4.81	6.01
Potassium Iodate (Kg)		Kg	0.04	0.05
Sulfuric Acid	Liquid Chlorine	Tons	0.02	0.02
Chlorine	Hydrochloric Acid	Tons	0.26	0.28
Hydrogen		Tons	0.01	0.01
Salt	Caustic Soda	Tons	1.51	1.58
HCl		Tons	5.18	4.61
Liq. Chlorine	Bromine	Tons	0.81	0.83
Caustic Soda		Tons	0.94	0.82
Limestone (Fines)	Clinker/ Cement	Tons	1.36	1.50
Clay/ Sandstone/ Laterite/Marl		Tons	0.21	0.14
Bauxite/ Tailing Waste/ Iron sludge/ Blue dust		Tons	0.01	0.01
ESF Cake		Tons	0.09	0.05
Fly Ash/ JPF dust for Cement		Tons	0.03	0.01
		Tons	0.03	0.01

PART C

Pollution Discharged to environment/ unit of output
(Parameters as specified in the consent issued)

(a) WATER

Industrial treated waste water.

Pollutants	Quantity of pollutants discharged (mass/day) TPD	Concentration of pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons
pH	-	8.0	Well Within Limits
Temperature in Deg C	-	29	Well Within Limits
Ammonical Nitrogen in mg/l	0.35	1.9	Well Within Limits
Total Suspended Solids in mg/l	36.6	198	Well Within Limits
Color in Units	-	12	Well Within Limits
Oil & Grease in mg/l	-	BDL	Well Within Limits
Bio Assay Test	-	Pass	Well Within Limits

Domestic treated waste water.

Pollutants	Quantity of pollutants discharged (mass/day) TPD	Concentrations of pollutants discharges (mass/volume)*	Percentage of variation from prescribed standards with reasons
BOD for 3 days at 27°C, mg/l	Recycled	6	Well Within Limits
Suspended Solids, mg/l	Recycled	32	Well Within Limits
pH	Recycled	7.9	Well Within Limits
Faecal Coliform, MPN/100ml	Recycled	253	Well Within Limits

* Domestic effluent is treated in the Town Sewage Treatment plant and recycled to town toilets as flush water and for gardening.

(b) AIR

Pollutants	Quantity of pollutants discharged (mass/day) TPD		Concentrations of pollutants in discharges		Percentage of variation from prescribed standards with reasons
	Unit	mass/day	Unit	Mass/Volume	
Particulate Matter	TPD	1.52	mg/Nm3	22	Well Within Limits
Oxides of Sulphur	TPD	4.09	mg/Nm3	104	Well Within Limits
Oxides of Nitrogen	TPD	8.85	mg/Nm3	158	Well Within Limits
Chlorine		process vent	mg/nM3	1.1	Well Within Limits
Hydrochloric Acid		process vent	mg/nM3	3.4	Well Within Limits
Bromine		process vent	mg/nM3	ND	Well Within Limits

ND= Not detectable

PART : D

HAZARDOUS WASTES

(as Specified under Hazardous Waste (Management and Handling) Rules, 2016)

Sr. No	Hazardous Waste	Unit	Total Quantity		Characterisation as per HW Rules Schedule-I
			2022-23	2023-24	
(a) From Process, (b) From pollution Control facilities					
1	Used/ Spent oil (Sch-I, Cat 5.1)	KL	28.37	74.58	Cat 5.1
2	Waste/ Residue containing Oil (Sch-I, Cat 5.2)	MT	0.30	0.65	Cat 5.2
3	Spent Ion Exchange Resin (Sch-I, Cat 35.2)	MT	Nil	Nil	Cat 35.2
4	Discarded Containers (Sch-I, Cat 33.1)	Nos	1211	1063	Cat 33.1
5	Tarry residues and Still bottom from distillation TDI/coal Tar	MT	Nil	Nil	Cat 1.2
OTHER WASTE					
1	Used Lead Acid/Ni-Cd Batteries/Other	MT	10.2	5.95	-
2	E-waste	MT	3.7	19.15	-

Disposal through Approved Recycler and Co-processing in Cement Plant

PART: E

SOLID WASTES

Sr.No.	Solid Waste	Total Quantity in MT		
		2022-23	2023-24	
(a) From Process				
1	Milk of Lime Rejects	28,002	32,523	
2	Fly ash and boiler reject	88,861	1,05,696	Fly ash Annual Return
3	Effluent Filtration solids	2,78,272	2,32,850	
4	Static Salt Dissolver Wastes	79,353	76,259	
(b) From pollution Control facilities				
1	Solid waste generated from desulphurisation process of flue gas of power plant is included in fly ash reported as above			
C-1 Quantity recycled or re-utilized within the unit				
2	Milk of Lime Rejects	28,002	32,523	
3	Fly ash and boiler reject	11,727	9,074	Fly ash Annual Return- Cement use
4	Effluent Filtration solids	70,003	35,201	utilised in cement making
C-2 Quantity Sold				
	Fly ash and boiler reject	54,822	73,494	Fly ash Annual Return-supply to brick parties
	Effluent Filtration solids	1,102	1,273	
C-3 Disposed				
1	Fly ash and boiler reject	22,311	23,129	Bund making in salt works
2	Effluent solids	2,07,167	1,96,376	Greenbelt bunds/ Settling ponds
3	Static Salt Dissolver Wastes	79,353	76,259	Storage site within unit

PART : F

Please specify the Characterisations (in terms of composition and quantum) of Hazardous Waste as well as Solid wastes and indicate disposal practice adopted for both these categories of wastes

As mentioned in Part - D

PART : G

Impact of Pollution abatement Measures taken on Conservation of Natural Resources and on the cost of production:

1. Tata Chemicals- Mithapur site is certified for ISO 14001-2015 (Environment Management System).
2. Lime stone fines, Lime stone dust, Fly ash, Soda ash effluent solids are used as Raw materials for making Cement which significantly reduced the dependence on fresh natural resources i.e. fresh lime stone from mines
3. Use of Clean fuels (low ash and low sulfur coal) to meet the Sulphur Dioxide norms in the boilers where presently there is no use of any Desulphurization (dry lime stone dust) facility
4. Operation of the RO plant. RO water supplemented ground water and TCL has stopped withdrawal of ground water since 2007.
5. TCL is submitting its GHG emissions as per Carbon disclosure project
6. TCL is publishing sustainability Report as per GRI and BRSR guidelines.
7. TCL is publishing Business Responsibility and Sustainability Report as per SEBI guidelines.

PART : H

Additional measures / Investment Proposal for Environment Protection including Abatement

of Pollution/ prevention of pollution

1. Efficient Operation of pollution control devices like ESPs and Bag Filters
2. Utilisation of Effluent Solids in cement manufacturing and Greenbelt development
3. Increase Green cover by growing plantations and increase Carbon Dioxide sequestration
4. Sustained zero dependence of operations on Ground water and lake water
5. Promote awareness among employees for more reuse, recycle, reduce and replace where ever possible
6. Preventive maintenance of air pollution control devices

PART : I

Any other particulars for improving the quality of the environment

1 Environmental Management System

- Company is certified for ISO 14001 (Environmental Management System) and ISO 45001 (Occupational Health and Safety Management System). Environment Cell has a full-fledged Environmental Laboratory and skilled man power.
- Continual improvements have been done as per ISO 14001 Environment Management System.

2 Environmental Expenditures: Reported as per GRI - G4, EN-31 Indicator

GRI 4	Environmental Expenditures	(Rs. Crores)
EN 31	Cost towards Environment management System and ISO certifications, EMS)	3.17
EN 31	Operation and Maintenance, material and services, and related personnel costs for running ETP and STP	8.51
EN 32	Capital Expenditures for Environmental Improvements	105.94

3 Environment audit

- Environment audit for Financial Year 2023-24 completed by Schedule-I Auditor appointed by GPCB. Summary of Environment Audit Report is enclosed as Annexure-1.

4 Environment Events

- Organised Environment awareness events like World Environment day & Sustainability Month involving participation of employees, township residents and community members
- Various training programmes for employees were organised during the financial year.

5 CSR Activities:

Various CSR activities conducted in surrounding community by Tata Chemicals Society for Rural Development (TCSRSD) Details are available on TCSRSD website www.tcsrds.org.

6 Online Monitoring System

- Online emission monitoring system is provided in stacks attached to units in cement plant, power plant and chlor alkali plant as per CPCB guidelines

7 Recognitions

- Tata Chemicals clinches Gold at the ICAI Sustainability Reporting Awards 2023
- Tata Chemicals recognised for Innovation; secures CII Industrial Intellectual Property Awards 2023
- Tata Chemicals recognised as the Most Innovative Company at the prestigious CII Industrial Innovation Awards 2023

8 Sustainability Initiatives

- Company's sustainability initiatives are available on web portal <http://sustainability.tatachemicals.com>
- Activities and Awareness Campaign during Tata Sustainability Month 2023-24

9 Construction/ Commissioning Activities in Progress:

Construction activities are in progress for laying of treated wastewater pipeline system as per Consent to Establish CTE-70701 dated: 01.10.2015 and amended further as CTE-107843 dated: 02.06.2020 validity 16.04.2025.

Construction activities are in progress for conveying of spent sea water through closed conduit as per TCL action plan dated 23.11.2021.

Construction activities are in progress for relocation of MUW3 and MBR unit setup within existing consent capacity– installation of MUW Unit-7/8. TCL letter dated 25.07.2024 (XGN)

Commissioning of project activities as per GPCB XGN CCA Amendment Application Inward ID 309925 dated 28.03.2024 and CTE No. 112580 dated 07.06.2021 for expansion of Sodium Bicarbonate production capacity.

GPCB XGN CTE Amendment Application Inward ID 317377 dated 25.07.2024 for Expansion of Vacuum and Pure Salt capacity (from existing 1,600,000 TPA to 2,000,000 TPA).